





Jersey Marine Spatial Plan

Priorities and Actions Plan



Government of Jersey



Boat at Les Écrehous.

Acknowledgements

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Prepared by Fiona Fyfe Associates, Countryscape and Karin Taylor for Government of Jersey Marine Resources





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Executive Summary

Open sea and offshore reefs cover 95% of Jersey's territory, and are fundamental to the island's identity, economy and connectivity. The coast and sea are used for both work and leisure, forming an ever-changing backdrop to islanders' lives. Below the surface is a hidden world of underwater habitats supporting a wealth of marine life, and a rich archaeological legacy. Examples of the benefits provided by Jersey's marine environment include fish to eat, storage of carbon in plants and sediments, absorption of wave energy, cycling of water and pollution capture. The vitality of Jersey is therefore intrinsically linked to the health of its seas. However, despite its importance, Jersey's marine environment is under pressure, from climate change and human activities.

Marine spatial planning provides a means of managing Jersey's coasts and seas in a coordinated manner which enables them to thrive, and takes account of the many different ways in which they are used. It covers all parts of the marine environment: the sea bed, the water column, the sea surface and the air above. Many coastal nations have already prepared marine spatial plans, or are in the process of doing so, so the Jersey Marine Spatial Plan (JMSP) brings Jersey into line with international best practice.

The vision of the JMSP is for *a thriving marine environment providing environmental, economic, cultural and social benefits.* It was proposed in the 2022 Bridging Island Plan (BIP), and has four key purposes:

- To provide a framework for organising human and marine resources and activities in Jersey's territorial waters.
- 2) To develop a network of Marine Protected Areas.
- 3) To inform the policies of the next iteration of the Island Plan.
- To support co-ordinated development and decision-making on all aspects affecting the marine environment.

The JMSP forms an overarching strategic framework setting the approach for a range of tools, including land use planning, marine resource management and fishing regulation. The JMSP is not a statutory document, but will give direction to other legislative and policy tools, which will be used to deliver the actions set out in the JMSP. Implementing the JMSP will involve different government departments and organisations working together.

The JMSP will help Jersey to fulfil its international obligations, such as the 2022 Kunming-Montreal Global Biodiversity Framework, which requires 30% of the marine environment to be protected by 2030. It will also contribute to efforts to address the climate and biodiversity crises; help to promote sustainable fishing practices; reduce conflicts between different users of the marine environment, and increase the resilience of services and infrastructure.

The Government of Jersey Marine Resources team has worked in partnership with external specialist consultants and many local stakeholders to produce the JMSP. The result is a document which reflects the wide-ranging concerns and aspirations of Jersey's residents with regard to the marine environment. Everyone involved shares a desire to see Jersey's seas thriving, and delivering benefits to people and to nature.

From sweeping sands to jagged rocks, and from busy harbours to empty wildernesses, Jersey's spectacular and diverse seascapes encompass many natural and human-made features. The JMSP contains priorities to maintain this diversity of seascapes, and the offshore landmarks which form focal points in views from the coast and sea.





Jersey's waters contain an extra-ordinary range of habitats within a relatively small area. Each habitat plays a different role within the overall ecosystem of Jersey's marine environment. There are some existing nature conservation designations, including Ramsar sites, Marine Protected Areas, Sites of Special Interest, Areas of Special Protection and a No-Take-Zone. Some of the most valuable habitats (kelp forests, maerl beds and seagrass meadows) are listed for protection under international convention. The JMSP contains priorities for the protection of the natural environment through existing and new designations, including the expansion of the Marine Protected Area network.

People have been fishing in Jersey's waters since prehistoric times, and fishing continues to contribute to the island's economy and identity. Today, potting for lobster and crab dominates, with other metiers including dredging, diving, trawling, netting and angling for species such as scallops and various finfish. Intertidal aquaculture of oysters and mussels also contributes to the island's economy. The JMSP proposes a three-tier framework with different levels of protection in each tier: Regulated Fishing Zone, Seabed Protection Zone, and highly-protected No Take Zones. Centuries of habitation and use have left their marks on Jersey's coastal and marine environment, from early prehistoric sites through to 20th Century fortifications. On the seabed are wreck sites, some of which are known to divers, but many of which are not yet recorded. The JMSP contains priorities to increase understanding and protection of maritime cultural heritage sites, particularly within intertidal and marine environments.

Recreation and tourism are a vital part of Jersey's economy, and also very important for the health, wellbeing and enjoyment of local people. Activities involve powered and non-powered craft, as well as those without craft. Coastal and marine recreation supports many coastal businesses, and is concentrated in the most popular beaches and bays. The JMSP contains priorities to promote coastal and marine recreation in ways which are safe, accessible, enjoyable, and minimise impacts on wildlife.

The sea forms an integral part of Jersey's transport network. Around Jersey's coast, beaches, harbours, slipways and piers allow connectivity between land and sea, and coastal defences help to manage the risks of coastal flooding. Larger vessels access the port at St Helier and travel through Jersey's waters using shipping lanes. On the seabed, cables provide power and communication to the island, and it is likely that in the future the marine environment will become a source of renewable energy. The JMSP contains priorities to increase the resilience of infrastructure and promote sustainable use of marine resources.





Seymour Tower.

Paul Chambers

PART A: Introducing the Jersey Marine Spatial Plan



1.1 Introduction

The coast and surrounding seas are fundamental to the identity, economy and connectivity of Jersey. They are used for both work and leisure, and form an ever-changing backdrop to islanders' lives. Below the surface is a hidden world of underwater habitats supporting a wealth of marine life, and the vitality of Jersey is intrinsically linked to the health of its marine environment. However, Jersey's marine environment is under pressure, including from climate change and human activities. There is a need to manage Jersey's coasts and seas in a coordinated manner which enables them to thrive, and takes account of the many different ways in which they are used.

1.2 Purposes of the JMSP

The Jersey Marine Spatial Plan (JMSP) was proposed in the 2022 Bridging Island Plan, and has four key purposes:

- 1) To provide a framework for organising human and marine resources and activities in Jersey's territorial waters.
- 2) To develop a network of Marine Protected Areas.
- 3) To inform the policies of the next iteration of the Island Plan.
- 4) To support co-ordinated development and decision-making on all aspects affecting the marine environment.

Jewel Anemones.

🔘 Samantha Blampied



The JMSP forms an overarching strategic framework setting the approach for a range of tools, including land use planning, marine resource management and fishing regulation. The JMSP is not a statutory document, but will give direction to other legislative and policy tools, which will be used to deliver the priorities and actions set out in the JMSP. In this way the JMSP will contribute to the strategic direction of future iterations of the Island Plan and other related documents, and will inform decision-making across all topics relating to the marine environment. Government of Jersey Ministers, their departments and agencies that hold relevant powers will, therefore, be expected to make decisions in line with the priorities and actions set out in the JMSP, in order to help achieve its purposes. The breadth and the integrated nature of the JMSP enables complex issues to be addressed efficiently and effectively. The priorities and actions set out within it will require direct resourcing from the responsible bodies (reference *Appendix A*).

1.3 Vision and aims of the JMSP

The vision of the Jersey Marine Spatial Plan (JMSP) is for *a thriving marine environment providing environmental, economic, cultural and social benefits.* This vision is supported through six aims, as shown in *Fig. 1a.*

Vision:	A thriving marine environment providing environmental, economic, cultural and social benefits	
	Seascapes are valued and their character is retained and enhanced	
	The natural environment is restored and biodiversity is thriving	
Aims:	Commercial fishing and aquaculture are sustainable and profitable	
	Cultural heritage is understood and protected	
	Recreation and tourism are flourishing, diverse and safe	
	Infrastructure, energy and transport are resilient and efficient	

Fig. 1a: Vision and aims of the JMSP

Each of these aims is the subject of a topic-based chapter in **Part C.** These chapters provide more detail on each topic, and present priorities and actions to achieve the relevant aim.



Because the JMSP is a strategy without a formal statutory basis, its implementation will rely on other legislation, regulatory processes and mechanisms. Therefore, whilst the JMSP sets the 'direction of travel', the process of delivering change will be made through established mechanisms and procedures for implementing legislation and policy. These will bring all the established protocols and procedures for engagement and consultation on the detail of the proposed change. Implementing the JMSP will involve a number of different Government Ministers and their departments, as well as other organisations. *Appendix A* contains an implementation table which sets out who will be responsible for delivering each action. In many cases, different departments/ organisations will need to work together to deliver actions. *Appendix A* also sets out the current status of each action, for example whether it is something which is already happening and should be continued, or whether it is an entirely new idea.

The JMSP covers the entire Bailiwick of Jersey, as shown in *Fig. 1b.*



The hidden underwater world of Jersey's seas.

🔟 Samantha Blampied





1.4 Why the JMSP is needed

Addressing the climate and biodiversity crises

The climate and biodiversity crises are already beginning to have consequences on the marine environment, including sea level rise, increased storm intensity, warming of sea water temperature, and a decline in abundance and diversity of marine species. These consequences are likely to become more severe in the future. It is therefore important that the most valuable and vulnerable habitats (and the species which depend on them) are protected from damaging actions. The JMSP will also help to address global warming (for example through supporting measures to enhance carbon storage in the marine environment) and make habitats more resilient. Sustainable use of marine resources is essential when addressing such profound environmental challenges.

Enabling Jersey to fulfil its international obligations

Jersey is a signatory to a number of international conventions which oblige it to protect its marine environment. Examples include the '30 by 30' target (i.e. 30% of the marine environment protected by 2030) agreed through the 2022 Kunming-Montreal Global Biodiversity Framework, and the OSPAR (Oslo and Paris) Convention, which identifies a series of threatened habitats and species which should be protected.

Promoting sustainable fishing practices

Jersey's fishing industry has a long history, constantly adapting in response to changing markets and availability of fish. Recent years have seen declines in the sizes, numbers and diversity of some commercial species, particularly lobster and brown crab. The JMSP aims to promote sustainable fishing practices, where habitats which provide nursery and spawning grounds are protected, and stocks are able to recover.

Minimizing conflicts between different users of the marine environment

The JMSP provides an opportunity to help to resolve existing and potential conflicts between different uses of the marine environment which are not compatible. Examples include recreational activities which disturb wildlife, and potentially dangerous combinations of water uses such as swimming and net fishing.

Applying international best practice within Jersey's waters

Marine spatial planning is a fairly recent approach, but it is widely seen internationally as a positive tool to create and establish co-ordinated use of marine space. MSPs have been/are being prepared by coastal nations around the world, including in Europe, where Directive 2014/89/EU requires coastal member states to participate in a European framework for maritime spatial planning. Although Jersey is not within the EU, French and UK waters are covered by marine spatial plans, and it is, therefore, in Jersey's interest to have its own.



1.5 Structure of the Jersey Marine Spatial Plan

Fig. 1c shows the elements which constitute the JMSP, and how they fit together.

Fig. 1c: Elements of the JMSP



The *base layer* comprises the Evidence Base and the findings of stakeholder workshops and public consultation. Together, these provide a wideranging resource to support the JMSP. The full list of items within the Evidence Base is included in *Appendix B.* They are available on the JMSP website. The Evidence Base includes technical reports, academic papers, examples of good practice from elsewhere, workshop outputs, consultation submissions, and digital datasets. Some knowledge gaps were already identified prior to commencement of the JMSP process, and specific research was commissioned for the Evidence Base to fill these gaps and inform the JMSP. Where a further review of the Evidence Base at the start of the JMSP process showed baseline information to be lacking, information was sought through the public consultation process. There remain a small number of topics where additional information is required to confirm future priorities and actions (for example on recreational fishing, and on the extent of some seabed habitats). In these cases, obtaining this information has been added to the actions in the JMSP.



The *JMSP Digital Atlas* is an online mapping tool containing numerous datasets which provide information on a wide range of marine environment topics. It will be accessed through the JMSP website, although datasets which directly support priorities are also included as maps within this Priorities and Actions Plan.

This *Priorities and Actions Plan* is in three parts as described below, and can be downloaded as an accessible pdf from the JMSP website. Alongside the Priorities and Actions Plan is the *JMSP Map*. This shows the areas covered by the recommendations within the Priorities and Actions Plan, as well as the key features within Jersey's marine environment. The JMSP Map can be downloaded as a pdf from the Jersey MSP website, but is also available as a printed sheet for display.

This Priorities and Actions Plan has three parts:

- **PART A** introduces the JMSP: its purposes, vision and aims, why it is needed, what it covers, the guiding principles which it follows, and its relationship to statutory documents.
- PART B provides background information on marine spatial planning, the JMSP's methodology and consultation process, its marine and terrestrial planning context, Jersey's seas and coasts, and the benefits from nature which the marine environment can provide.
- PART C contains a series of topic-based chapters one for each of the aims shown above. Each provides background information, highlights issues, and presents priorities and actions to help achieve the relevant aim.

Supporting information is provided in the *Appendices*. These comprise: *Appendix A:* Implementation table setting out responsibilities for implementing the actions identified in the JMSP; *Appendix B:* Evidence Base; *Appendix C:* Legislative and policy background; *Appendix D:* Changes to Marine Protected Area boundaries following public consultation; *Appendix E:* Further information on seawater quality monitoring; *Appendix F:* List of acronyms.



1.6 Guiding principles

The following principles have guided development of the JMSP. They have been informed by international best practice in preparing MSPs, and also by local consultation.

- The JMSP will provide a spatial framework for the sustainable use of marine resources.
- The JMSP will take a holistic ecosystem-based approach, identifying environmental, cultural, social and economic benefits from the marine environment.
- The JMSP will consider benefits for people, and for marine life in its own right.
- The JMSP will have a clear link from evidence to policy, and a robust methodology for drawing boundaries of designation zones. Some designations may be temporal.
- The JMSP will ensure that there is no loss of protection from existing protected areas, and that habitats, species and cultural heritage covered by international conventions are appropriately protected.
- The JMSP will allow for the fact that some parts of the marine environment are currently in a degraded state, and that the current damaged condition of some habitats should not be assumed to be their future condition if they are allowed to recover.
- The JMSP will consider the full lifecycle of commercially valuable wild species to support their sustainable use.
- The JMSP will contain actions for accompanying regulatory and management frameworks and a linked education programme. This will enable key issues which are beyond the scope of marine spatial planning to be addressed.
- The JMSP will be subject to review and monitoring, and will be updated as required.

It is important to note that this is the first iteration of the JMSP, and through its purposes as set out in *section 2.2* — has a particular emphasis on the conservation of the marine environment and its resources. Future iterations of the JMSP may have different emphases. Some matters (such as defence and border control) are outside the remit of the JMSP.

The JMSP is in accordance with current Governmental policy objectives, and directly contributes to the long-term vision for Jersey in 2037, produced by the Future Jersey consultation and captured by the following vision statement in the Proposed *Common Strategic Policy 2024–2026*.

"An Island loved for its beautiful coast and countryside, rich heritage, diverse wildlife and clean air, land and water. An island where a sense of community really matters — a safe place to grow up and enjoy life. An island that offers everyone the opportunity to contribute to, and share in, the success of a strong, sustainable economy."¹

The *Common Strategic Policy 2024–2026* was approved by the States Assembly in May 2024. It sets out priorities for meeting the three Sustainable Wellbeing Themes and ten Island Outcomes identified in the *Future Jersey* long-term vision for the Island (endorsed by the States Assembly in 2022). The following table shows how the JMSP contributes to these themes and outcomes.

1 Proposed Common Strategic Policy 2024–2026 p.11



Sustainable wellbeing theme	Examples of how the JMSP contributes to Island Outcomes
Community Wellbeing	Children: Promoting diverse opportunities for high-quality recreation and education at the coast and in the marine environment enables children to enjoy the best start in life. Health and wellbeing: Appreciating and engaging with the coast and sea brings mental and physical benefits and enables Islanders to enjoy long, healthy and active lives.
Economic Wellbeing	Affordable living: Encouraging people to make the most of the coast for free or low cost recreation contributes to Islanders' standard of living. Jobs and productivity growth: Supporting the fishing and aquaculture industries, supporting resilient infrastructure, and looking ahead to future opportunities for energy, technology, research and logistics, contributes to a strong economy and rewarding job opportunities.
Environmental Wellbeing	 Built environment: Protecting cultural heritage at the coast, in the intertidal area and under water enables Jersey's built and historic environment to be valued and enjoyed. Natural environment: Raising awareness of the importance and diversity of Jersey's coasts and seas, and protecting seascapes and island identity help to ensure that Jersey's unique natural environment is protected for future generations. Sustainable resources: Recommending areas for additional protection to encourage thriving marine habitats and wildlife enables Jersey's natural resources to be managed and used responsibly.



1.7 Legislative background

The need for a Jersey Marine Spatial Plan has been recognised for a number of years. In March 2022 the States of Jersey approved the Bridging Island Plan (BIP), in which Strategic Proposal 3 proposes the creation of a Marine Spatial Plan for Jersey, to be delivered by 2025. The JMSP would be the responsibility of the Minister for the Environment and should 'organise human and marine resources in Jersey's territorial waters, and, in particular, to develop a network of marine protected areas which will be consistent with overall environmental. economic and social objectives. The work will inform the policies of the next iteration of the Island Plan and support co-ordinated development and decision making on all aspects affecting the marine environment'².

Ministerial Delivery Plans are a key part of the Government programme, and set out Ministers' key priorities on an annual basis. The Minister for the Environment's Plan (2023) states that *'protecting and enhancing Jersey's natural environment and heritage by:... Developing a Marine Spatial Plan to ensure the sustainable management of the Island's marine environment'*³ is a priority.

Preparing a Marine Spatial Plan for Jersey is also a policy within Jersey's *Economic Framework for the Marine Environment* (2022) and the *Carbon Neutral Roadmap* (2022).

1.8 Authorship and consultation

In Autumn 2022 the Government of Jersey commissioned a consultant team (led by Fiona Fyfe Associates, with Countryscape and Karin Taylor) to prepare the JMSP, working in partnership with members of the Jersey Marine Resources team (Paul Chambers, Francis Binney, Samantha Blampied and Katie Bacquet). Through the extensive engagement process, the consultants have worked collaboratively with a very wide range of Jersey-based stakeholders who have in-depth local knowledge of many different aspects of the marine environment and the services which it supports. These stakeholders have included Governmental officials (Place and Spatial Planning and Natural Environment Teams), Ports of Jersey, fishers, owners of marine-dependent recreation businesses, Channel Islands utility companies, conservation organisations and heritage bodies.

The result is a document which reflects the wide-ranging concerns and aspirations of many people with regard to the marine environment. Everyone involved shares the collective desire to see Jersey's seas thriving, and delivering benefits to people and to nature.

2 Jersey Bridging Island Plan (March 2022) Strategic Proposal 3, p.31

3 Government of Jersey Delivery Plan: Minister for Energy and Environment, January 2023 p.6



PART B: Background



Introduction to Marine Spatial Planning

2.1 What is a Marine Spatial Plan?

Put simply, a Marine Spatial Plan (MSP) sets out 'what goes where' in the marine environment. It is a spatial framework which aims to ensure sustainable use of marine resources and to achieve an appropriate balance between environmental, commercial, economic, cultural and social needs.

A public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic and social objectives that have been specified through a political process.¹

Marine spatial planning is not an end in itself, but a practical way to create and establish a more co-ordinated use of marine space. It considers the interactions between different users, balances demands for development with the need to protect the environment, and supports social and economic outcomes in an open and planned way.

🔟 Cover image, Samantha Blampied

1

International Guide on Marine/Maritime Spatial Planning MSP Global/UNESCO p.11



2.2 What a Marine Spatial Plan covers

All parts of the marine environment are covered by marine spatial planning: the seabed (the benthic environment), the water column (the pelagic environment), the water surface, and the air above.

It is important to note that a MSP does not have a regulatory, management or educational function, although it can set out the areas in which specific regulations or management regimes could occur. It can also provide an opportunity for public engagement, and through this, raise awareness and appreciation of the marine environment. Therefore, within this Priorities and Actions Document, actions include both spatial recommendations, and regulatory, management and educational measures.

2.3 History of Marine Spatial Planning

Marine spatial planning is a relatively recent concept, but has quickly caught on at local, regional and national levels. Most coastal countries have now gone through (or are going through) the process. The first UNESCO Intergovernmental Oceanographic Commission (IOC) marine spatial planning workshop was held in 2006. Since then, the IOC has promoted the concept and published a number of documents to aid the process, including *Marine Spatial Planning: A Step-by-Step Approach Towards Ecosystem-Based Management* (2009) and the *International Guide on Marine/Maritime Spatial Planning* (2021). Jersey's marine spatial planning process began in 2017, and so has been shaped by both of these documents.

Fig. 2a: The marine en $\dot{}$





2 https://www.mspglobal2030.org/msp-roadmap/msp-around-the-world/europe/france/



3.1 General approach

MSP core principles require that any MSP is transparent, inclusive, and considers the views and needs of stakeholders. It must also integrate with all applicable laws, regulations, policies and agreements.

The JMSP seeks to find an appropriate balance between ecological, economic, social and cultural requirements, and to deliver outputs which are practical, sustainable, and can be implemented. To do this, it follows accepted best practice for MSPs, and is informed by extensive stakeholder and public consultation (see MSP Global International Guide on Marine Spatial Planning, UNESCO 2021 — **Evidence Base document EB/G/8).**

Local consultation has been a vital part of the evidence-gathering process which underpins the JMSP. It is particularly important in helping to understand how the marine environment is valued by local people. This qualitative information often supplements quantitative surveys and data. The outputs from the consultation workshops and submissions through the public consultation portal have contributed to the vision, principles, aims, priorities and actions of the JMSP.

As explained in **Chapter 1.0**, the JMSP is supported by an evidence base, and demonstrates a logical and transparent process between evidence and the priorities being recommended. It is accompanied by a *Business Impact Assessment* which quantified the economic impact of the proposed Marine Protected Areas on mobile gear vessels.



3.2 Stages of work

The timescale for producing the JMSP ran from December 2022 to December 2024, although early research and compilation of the Evidence Base began several years before this. *Fig. 3a* shows the stages of work involved in the production of the JMSP.



JMSP Workshop, St Helier Town Hall, February 2023.



JMSP Workshop with the Jersey Youth Parliament, February 2023.



Fig. 3a: JMSP stages of work





3.3 Consultation

Absolute Adventures

3.3.1 Consultation Phase 1: Stakeholder workshops and public consultation portal

A series of themed in-person and online workshops took place in February/March 2023, near the start of the JMSP process. These workshops enabled a wide range of stakeholders and experts in Jersey's marine environment to find out more about the JMSP, and to contribute to its direction. Following the workshops, an online public consultation portal was open for several weeks where workshop attendees and members of the public could submit their thoughts and ideas. It was also possible to submit longer documents through the online portal, and several organisations and individuals did this.

The following organisations attended the workshops and/or submitted material through the online public consultation portal. Private individuals who contributed are not listed.

Aquamar
Blue Marine Foundation
Bouley Bay Dive Centre
Chamber of Commerce
Chamber of Commerce tourism
Channel Island Group Professional Engineers
Commercial seaweed harvesters
Condor Ferries
Earth Project Jersey
Écréhous Residents Association
Flotation Energy
Genuine Jersey
Geomarine
GoJ Engineering
GoJ Marine Resources
GoJ Natural Environment
GoJ Place and spatial planning
GoJ Retail and visitor lead
GoJ Revenue Office — audit team
GoJ Rural Economy Staff
Gorey Boat Owners Association
Guernsey Electricity Company
Hartigan
IE Technical Team

Independent recreational fisher
Island Rib Voyages
Jersey Aquaculture Association
Jersey Biodiversity Centre
Jersey Canoe Club
Jersey Dive Team
Jersey Electricity plc
Jersey Fishermen's Association
Jersey Heritage
Jersey Hospitality Association
Jersey Inshore Fishermen's Association
Jersey Kayak Adventures
Jersey Lifeboat Association
Jersey Marine Conservation
Jersey Met Office
Jersey National Park
Jersey Oil
Jersey Seafaris
Jersey Specimen Hunters Group
Jersey Telecoms
Jersey Tour Guides Association
Jersey Walk Adventures
Jersey Youth Parliament
Jenna Dee Scallops
Kayak Nomad

La Rocque Boat Owners Association
Le Mourier
Littlefeet Environmental
Local artist
MIRA
National Trust for Jersey
Ocean Culture Life
PJ News and Publishing
Ports of Guernsey
Ports of Jersey
PwC
Rozel Shipping company
Sangan Conservation
Save Our Shoreline Jersey
Seymour Hotels
Sinkers Sea Fishing Club
Société Marine Biology
SOS Jersey
Splash Surf Centre
St Aubin's Boat Owners Association
St Helier RNLI
St Helier Yacht Club
Terra Mare
UPL Ltd
Visit Jersey



Each workshop began with an introduction to the JMSP. Attendees then formed groups around tables and were asked to complete feedback cards answering the following questions:

- What do you value about Jersey's marine environment?
- What are your concerns regarding Jersey's marine environment?
- What should be the future priorities in the management of Jersey's marine environment?
- What ideas do you have to improve Jersey's marine environment?
- Are you aware of any sources of information/ evidence which should feed in to the JMSP?

The process was made as spatial as possible, with attendees marking up locations on maps and using numbered stickers to cross-reference them to their feedback forms. This enabled the values and issues to be tied to places and features in the marine environment. Maps showing background information (for example locations of existing marine designations, coastal facilities and habitats) were provided to each table.

The following table shows the number of attendees and responses at each of the workshops. The number of attendees and responses reflect the high level of importance which local people attach to Jersey's marine environment, and the strength of local feeling regarding the JMSP.

Workshop	No. of attendees	No. of response cards
Youth Parliament	12	11
Natural Environment and Biodiversity	37	130
Commercial Fishing and Aquaculture	35	67
Recreation and tourism	28	107
Energy and Infrastructure	34	82
General workshop (online)	12	N/A (submitted through online portal)
TOTAL	158	397



Some organisations and individuals requested in-person meetings, so whilst the consultants were in Jersey for the workshops, fact-finding meetings were also held.

Summaries of the workshops and the key themes which emerged from each are provided below. As would be expected given the wide range of opinions amongst those consulted, there is not always a clear consensus.

Youth Parliament

It is important to protect and maintain marine resources for future generations, and so it is necessary and valuable to understand and take account of the opinions of younger members of Jersey's population. While this session had a relatively small number of attendees, the values and issues raised were helpful. Key themes to emerge included:

- Enjoying beaches and watersports is relatively difficult for many younger islanders, with most watersports requiring hire or purchase of equipment, and transport being expensive or complicated.
- Beaches are highly valued for swimming and watersports such as surfing and scuba diving.
- Pollution (such as plastic waste) and the disturbance of marine life is a concern.

Natural environment and biodiversity

This was a particularly well-attended workshop, with comments relating to concerns for sustainable use of marine resources and appropriate protection for seabed habitats to maintain biodiversity. Key themes from this workshop included:

- The importance of reaching the '30 by 30' target, whereby 30% of Jersey's waters are protected by 2030.
- Concerns over disturbance of marine wildlife such as seals and birds.

- Water quality in relation to the impact on marine life.
- A need for more protection for key habitats such as seagrass, maerl and kelp, primarily in relation to reducing dredging or anchoring pressure on these habitats.
- Concerns over increasing footfall at the offshore reefs having a negative impact on wildlife.
- A need to improve fisheries sustainability and to reduce pollution from lost fishing gear.
- Conflict between dogs and coastal wildlife, in particular birds.

Cultural heritage

For logistical reasons this workshop was combined with the Natural Environment and Biodiversity workshop, but a clear set of themes emerged relating to cultural heritage, including:

- Concerns over lack of protection for shipwreck sites.
- The diversity of cultural heritage within the intertidal reef areas.
- A need to identify and appropriately manage marine archaeology sites, given that there has been very little underwater survey to date.
- A need to capture the voices of different generations.
- The importance of the connection to the sea as part of islanders' identity.

Commercial fishing and aquaculture

This workshop was well attended and served to highlight the needs of the fishing community. Originally this workshop included recreational fishers but it was later decided that this sector was better included in the recreational chapter. Key themes from this workshop included:

• Importance of maintaining access to fishing grounds or access to financial support if fishing grounds are reduced in size.

- Concerns over the impact of renewable energy development such as wind farms.
- A need to better regulate inshore netting to reduce conflict with other marine users and to reduce bycatch.
- The importance of including the voice of young fishers.
- A need to improve the sustainability of fishing, and recognition for fishing sustainably.
- Some attendees suggested that more seabed needs to be protected, particularly around nursery areas. However, the overall consensus was that fishers do not want additional protected areas.
- A need for better infrastructure, in particular a way of disposing of old fishing gear appropriately.

Recreation and tourism

As this sector is relatively unmonitored, this session was vital in order to document the areas most used by recreational users, and to understand their concerns and ideas. Some of the key themes from this workshop included:

- Inshore water safety between watercraft and swimmers.
- Inshore water safety with regard to entanglement of swimmers and divers in fishing nets.
- Concerns over water quality in St. Aubin's Bay.
- A need for more infrastructure to help improve accessibility of watersports.
- The importance of maintaining ports and associated facilities; impacts of anchoring and fishing on sensitive habitats.
- Conflicts with dogs in terms of fouling and bird disturbance.
- Increasing use of the offshore reefs leading to degradation of their natural beauty and disturbance of wildlife.

- A need for better access to beaches and the sea, with more parking, more bike racks and better bus routes.
- Concerns over the impacts that some recreational activities have on wildlife, in particular wading and over-wintering birds.
- Concerns over conflict between recreational fishers and commercial fishers, particularly in relation to nets.

Energy and infrastructure

The island relies on its connections to other jurisdictions for energy and communications, and routes to and from the island require appropriate infrastructure. This was therefore a critical workshop to engage local organisations that deal with Jersey's energy and communications needs and shipping logistics. Some of the key themes from this workshop included:

- The importance of maintaining ports infrastructure and navigation markers.
- A need to develop renewable energy infrastructure, both offshore and inshore.
- The importance of maintaining and protecting subsea cables that supply Jersey's electricity and telecommunications.
- A need to consider flood mitigation in low lying areas.
- Maintaining coastal areas in a good condition by managing the activities that occur there.
- Development of eco-moorings in areas with sensitive seabed (particularly seagrass).



3.3.2 Review of Consultation Phase 1, and writing 'Direction of Travel' report

Following a review of the consultation responses and the Evidence Base, a *Direction of Travel Report* for the JMSP was published in May 2023. This 'work in progress' document set out the guiding principles for the JMSP and summarised its likely content. Feedback on the *Direction of Travel Report* informed the preparation of the Consultation Draft version of the JMSP.

3.3.3 Consultation Phase 2: Review of Consultation Draft

The Consultation Draft was open for public consultation between October 2023 and January 2024. During the public consultation phase there was a campaign to raise awareness of the JMSP and to explain how the public could comment on its content. The campaign involved a series of social media posts, posters and banners put up in areas of high footfall and flyers distributed amongst stakeholder groups to give to their associated communities. There were also opportunities to drop into sessions at parish halls where members of the Marine Resources team were present to answer any questions. Those wishing to comment were directed to a dedicated webpage where comments could be submitted in relation to specific chapters or as general comments on the JMSP.

Over 300 responses were received through the public consultation process, the vast majority of which were supportive of the MSP and the actions being proposed. The greatest number of concerns raised related to the Marine Protected Area proposals, although these were supported by a large number of other respondents. The feedback received through the public consultation process informed the final version of the JMSP, lodged and reviewed by the Scrutiny Panel in Summer/ Autumn 2024, and debated and approved by the States Assembly on 23rd October 2024. More detailed analysis of the comments received can be found in the *Jersey Marine Spatial Plan Public Consultation Response Summary* [Evidence Base document EB/G/25].

Following incorporation of comments from the public consultation process, the JMSP was given further editorial review by internal governmental officers and related organisations. This resulted in a small number of additional changes to ensure compatibility with current government policy.

3.3.4 Future Consultation

Following publication of the final version of the JMSP in December 2024, dialogue will continue particularly with the fishing community (including the French fishing community) and other commercial users of the marine environment — in order to inform how the priorities and actions are implemented.



Marine and Terrestrial Planning Context

4.1 Introduction

The JMSP sits within a framework of international and Jerseybased legislation and policy, which forms its planning context and is summarised in this chapter. The legislative and policy framework is likely to evolve during the lifespan of the JMSP.

Section 4.2.1 introduces the relevant international obligations to which Jersey is a signatory, and which the JMSP helps to fulfil. These include a number of treaties relating to nature conservation, such as the 2023 Kunming-Montreal Global Biodiversity Framework, which committed governments to protect 30% of their coastal areas and ocean by 2030. Section 4.2.2 describes the marine spatial planning context of Jersey's waters, including the ecological units identified within the French waters which surround Jersey. Jersey has unique arrangements relating to its territorial waters and the cross-boundary agreements which are in place within them, which are described in Sections 4.2.3 and 4.2.4.

The second half of this chapter covers the existing Jersey legislative and policy framework in which the JMSP sits. The JMSP is not a statutory document, so these legislative and policy tools will be used to deliver the actions set out in the JMSP. There are summaries of relevant policies within key statutory planning documents including the *Bridging Island Plan* (2022) and the *Shoreline Management Plan* (2020).



4.2 International legislative and policy context of Jersey's marine waters

4.2.1 Treaties and conventions

Jersey's marine waters are covered by international treaties and conventions, relating to various aspects of the marine environment and its uses. These are set out in full in the *Legislation and Policy Review for JMSP* [Evidence Base document EB/G/21]. Those which are particularly relevant to the JMSP are listed below, and summarised in Appendix C.

Oceans:

• United Nations Convention on the Law of the Sea (UNCLOS)

Biodiversity:

- Kunming-Montreal Global Biodiversity Framework (COP 15)
- Paris Agreement on Climate Change
- Convention on Wetlands of International Importance (RAMSAR)
- Agreement on the Conservation of Africa-Eurasian Migratory Waterbirds
- Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas

- Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS)
- Bern Convention on the Conservation of European Wildlife and Natural Habitats
- International Convention on Biological Diversity
- Convention on the Conservation of Migratory Species of Wild Animals
- Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)

Cultural heritage

- Convention on the Protection of the Archaeological Heritage of Europe
- European Convention on the Protection of the Archaeological Heritage (The 'Valletta Convention') (Revised)

Trade:

• EU-UK Trade and Cooperation Agreement



4.2.2 Marine Spatial Plans Surrounding Jersey's Waters

The waters adjacent to Jersey's territorial seas are within the jurisdictions of Guernsey and France. Guernsey is in the process of developing a Marine Spatial Plan. However, French waters surrounding Jersey's territorial waters are already covered by Marine Spatial Plans¹ which were adopted in April/ May 2022. The sectors within the French Marine Spatial Plans correspond to the ecological units identified along the French coast and within the channel waters **(shown on Fig. 4a).**

As explained in the *Sea Basin Strategy Document for East Channel — North Sea*², the territorial waters of France have been divided into vocational zones. These zones were established as 'ecological units' in 2017 by the French Agency for Biodiversity (AFB) predecessor to the current French Office for Biodiversity (OFB). They were marginally modified following public consultation and are used in the French Marine Spatial Plans (Document Strategique de la Façade). The aim of these zones is to create an agreed, unified approach to dividing the geographical space which works from both an ecological and environmental perspective. In February 2017, France published a National Strategy for the Sea and Coast (*Stratégie Nationale pour la Mer et le Littoral, (SNML)*), setting out its long-term goals in this area. This document forms the baseline for environmental protection, optimisation of marine resources and the integrated, consensus-based management of activities relating to the sea and coast. The SNML sets out four longterm objectives: achieving the essential ecological transition; developing a sustainable blue economy; restoring good environmental status, and upholding France's influence as a maritime nation.

France has developed its maritime and coastal strategy to meet the obligation to implement two European framework directives: EU Directive 2008/56/EC of 17 June 2008, known as the Marine Strategy Framework Directive, which aims to achieve or maintain good marine environmental status by 2020. EU Directive 2014/89/EU of 23 July 2014 established a Framework for Maritime Spatial Planning, which calls upon Member States to coordinate their activities at sea.

Both Guernsey and France are in the process of developing or updating their MSPs, and the next iteration of the JMSP will, therefore, need to take into account cumulative marine management measures across the Normano-Breton Gulf.

1 Marine Spatial Plans covering North Atlantic – West Channel and East Channel – North Sea

2 https://www.dirm.memn.developpement-durable.gouv.fr/IMG/pdf/en_dsfsynthetique_memnor_v1-4_vu_dirm.pdf






The principal characteristics of the adjacent French territorial waters are described in the following ecological units:

Secteur 6 — Golfe Normand-Breton (Ouest Cotentin)

This sector experiences an exceptional tidal regime with strong currents swirling around the islands, archipelagos and rocky shoals and accelerating near headlands. There is a great variety of landscapes including cliffs, hydraulic dunes, and subtidal and intertidal reefs. Heterogenous subtidal sediment dominates two thirds of the seabed and bivalves, such as oysters, clams, scallops as well as gastropods (whelks) are found here. Crustaceans such as lobster and spider crabs can be found on the rocky seabed and reef areas. Honeycomb worm reefs and seagrass beds can be found in the sedimentary foreshore. There are also estuaries in this sector which are an essential interface zone for fish which live in fresh and salt water, such as salmon. Coastal nurseries for seabass, plaice and sole exist here, as well as spawning grounds for sole along the coast. Spawning areas for cuttlefish attract a population of resident bottlenose dolphins. These foreshores are home to particularly rich and diversified birdlife, particularly during wintering. The Bay of Mont Saint Michel has a colony of harbour seals at the edge of it.

Secteur 7 — Mer Celtique et Manche Ouest

There is a dominant thermal front in this sector which forms in the spring until the end of the summer. This front (Ushant) forms between the cold turbulent waters on the coast and the warmer sea waters offshore. This sector is a site of primary and secondary production which can be at very high levels north of the front in late summer. The seabed is characterised by coarse sediments forming large hydraulic dunes. In the northeast is the central plateau of 'Roches Douvres'. A rich trophic network exists due to the front and the sector is an important summer feeding area for megafauna: birds (gannet, fulmar and sea gull), small cetaceans (porpoise and common dolphin) and elasmobranch fish including sharks (Blue and basking) and skates. This sector is an important spawning area for several species of fish and concentrations of leatherback turtles are seen in the west in the summer.

Secteur 8 – Nord Cotentin

This is the location in the Channel of the strongest tidal currents. The result of this mixing and swirling of water is threefold: significant microbial activity, the availability of nutrients and the strong oxygenation of the water. This allows an intense regeneration of phytoplankton which is distributed fairly evenly from the surface to the bottom, despite relatively low chlorophyll-a production. Near the coast the coarse sediment alternates with rocky sea floors, which, at shallow depths provide rich environments and spawning nurseries for many species of fish and crustaceans. The kelp in the north of this sector is the only location where they have been assessed as being in a 'very good' state. The Pointe du Contentin forms a bottleneck for migrating or hunting marine mammals. The passage area between the Eastern Channel and the Western Channel is also regularly frequented by bottlenose dolphins.

Secteur 9 — Golfe Normand-Breton (côte d'Emeraude et baie de St-Brieuc)

This sector is subject to a macrotidal regime, the waters of the bay are mixed by powerful currents which accelerate near the headlands. The coast alternates wide sandy bays and coast with cliffs, hydraulic dunes of shell sands and subtidal reefs. The underwater landscape is equally varied. Species living on the seabed are organised according to the size of the sediment and their ability to adapt to the mobility of the seabed. Two thirds of this zone is covered by coarse sediment which is a favourable environment for bivalves such as scallops. A few localised sites of maerl have been found in nearshore areas. Seagrass can be found in the bottom of some sandy bays. This sector has a very high production potential and the generation of a significant biomass of invertebrates feeds aquatic fauna (crabs and fish) at high tide and birds at low tide. There are nurseries here too and a large population of sedentary bottlenose dolphins. This is an important feeding ground for birds, notably the Balearic Shearwater, common guillemot, and the razorbill.

Secteur 10 — Sept – Iles – Trégor Goelo

This coastal area is dotted with more than 280 islands and islets. The seabed is made up of a mixture of coarse sediment, reefs and boulders and is home to a large population of crustaceans. Maerl beds exist in nearshore areas but have been reduced due to both industrial exploitation (until 2013) and the invasive slipper limpet species. Seagrass exists in certain bays.

The islets and rocky coastline are favourite locations for many bird species: northern gannets, torda penguins, English shearwaters, Atlantic puffins, common guillemot and roseate terns. This sector is home to one of the main grey seal colonies in Brittany. The Trieux and Jaudy estuaries are important for migratory fish (Atlantic salmon). Between 10–15% of the French population of common ringed plover nest in the Sillon de Talbert and Bréhat archipelago.

4.2.3 Jersey's territorial waters

The Territorial Sea Act 1987 (Jersey) Order 1997 established Jersey's territorial waters to the internationally-agreed 12 nautical mile limit or the median point between Jersey and France. Its boundary with Guernsey is also defined using the equidistance methodology to define the midpoint between the islands. Jersey's rights and responsibilities in its territorial waters are those set out in United Nations Convention on the Law of the Sea (UNCLOS). These include the right of innocent passage, and responsibilities regarding the protection and preservation of the marine environment.

Jersey's territorial waters cover 2,455km², which is over 95% of the Bailiwick's total area. They are bordered by France to the east, south and south-west, and by Guernsey to the north-west. The maritime borders with France were not fixed until 1997. Prior to this Jersey possessed an exclusive fishing area that stretched from low water to three nautical miles offshore, and the sovereignty of three offshore reefs (internationally recognised in 1953), but not the seas around them which were designated as *mer commune* between Jersey and France.

The Crown gifted the foreshore and seabed to the public of Jersey in 2015. These areas (which include all of Jersey's beaches and the seabed beneath its territorial waters) are now managed by the Government of Jersey on behalf of the public of Jersey. The only exception is the reefs of Les Écréhous and Les Minquiers above the highest spring tides which remain in Crown ownership.



4.2.4 Cross-boundary agreements relating to the management of Jersey's marine environment

The Government of Jersey's management of its marine area is overseen by the States of Jersey using legislation relating to fisheries, planning and development, extraction, pollution and other activities.

From 2001 a portion of Jersey's seas were managed through the Bay of Granville Agreement (GBA) which provisioned cross-border access for a list of Jersey and French vessels. From 2004 the GBA oversaw a joint management framework which included a committee-based decision-making process that, whilst primarily concerned with fisheries management, impacted on wider aspects of marine governance.

In 2021 the UK exited the European Union (EU) following a 2016 referendum to which the Channel Islands were not party. Under Protocol 3 of the UK's 1972 Accession Treaty, Jersey had been part of the EU for the purposes of free trade in goods. The UK's departure terminated Protocol 3, and from 1st February 2021 the relationship between Jersey and the EU was managed via a Trade and Cooperation Agreement (TCA) negotiated during 2020.

The TCA terminated the GBA, and in its place ceded vessel licencing and fisheries management to the States of Jersey. The TCA management framework includes processes, objectives and principles that did not exist under the GBA, but are taken into account in the JMSP.

Under the TCA, Jersey has full control over its marine management within the three nautical mile limit from the island's coast. Outside of this limit, any measure that may impinge on commercial fishing is subject to the terms of the TCA.

4.3 Jersey legislative and policy context

4.3.1 Existing legislation and policy framework

The JMSP sits within an existing framework of Jersey legislation and policy. These legislative and policy tools can be used to give effect to the strategic direction set by the JMSP.

Relevant legislative and policy tools are listed in *Appendix C,* and cover a range of topics including administration, infrastructure, harbours and transport, climate change, biodiversity and natural environment, environmental management, history and culture, tourism and leisure, fisheries and aquaculture. Many of these laws and documents have a much wider scope than marine spatial planning. They are described in more detail in the *Legislation and Policy Review* [Evidence Base document EB/G/21].

4.4 Key related planning documents

4.4.1 Jersey Bridging Island Plan (BIP) 2022

This document is the primary consideration in any planning-related decision-making during the plan period (2022–2025). It sets out a planning framework to create homes, strengthen the economy, protect and improve the environment, provide for a good quality of life, and enhance what is special about Jersey. It aims to achieve the sustainable development of Jersey, with a balance between social, environmental and economic considerations. As mentioned above, Strategic Proposal 3 of the BIP requires the creation of a JMSP. The JMSP shares the same aspiration for a holistic approach to sustainable development.



The coverage of the BIP extends out to Jersey's territorial limits, but contains relatively little detail within the offshore parts of the Bailiwick compared to Jersey itself.

With regard to development in the marine environment, the BIP states (pp 78–79):

The long-term, prudent use of marine resources is essential in the management of Jersey's unique, fragile and environmentally and economically important shores and waters.

Development proposals located in the marine environment will not generally be supported except where a marine location is demonstrated to be essential and generally accords with other policies of the plan. This Island Plan provides a more focused policy regime for activities in the marine environment by providing some spatial definition of areas or sites where different marine-related land uses may be supported such as offshore utility scale renewable energy development, aquaculture and shoreline management. Other essential uses here could provide for navigation; access to water; and power and communications supplies. There is a need to ensure that the impact of development on areas of high marine biodiversity and seascape value is given sufficient weight in the decision-making process.

The Protected Coastal Area embraces parts of the marine environment below the high-water mark including the unique intertidal zones and offshore reefs, together with their surrounding shallow waters, where development opportunity will be limited. Development proposals will need to protect or improve the essential and sensitive landscape and seascape character and rich biodiversity of these places.



The following BIP Policies and Planning Zones (*shown on Figs. 4b and 4c*) relate to the intertidal and marine parts of the Bailiwick and, therefore, also have direct relevance to the JMSP:

Policy	Planning Zone	Where located (intertidal and offshore only)
ER4 Daytime and evening economy uses	Tourist destination area	St Brelade's Bay; St Aubin's Harbour; Havre des Pas; Gorey Harbour
WER8 Safety zones for hazardous installations	Safety zone for hazardous installations	La Collette
C15 Sports, leisure and cultural facilities	Sports and leisure enhancement area	St Helier Harbour and eastern side of St Aubin's Bay
WER11 Airport public safety zones	Airport public safety Zone 2	St Ouen's Bay
Proposal 37 — Aircraft noise and public safety zone review	Airport noise zone 3	St Ouen's Bay
ERE8 Fishing and Aquaculture	Intertidal aquaculture box	Royal Bay of Grouville
PL5 Countryside, Coast and Marine Environment	Coastal national park	Corbière; L'Île au Guerdain (Portelet Bay); Minquiers; Écréhous
	Protected coastal area	Intertidal areas; Ramsar sites; coastal settings
ME5 Offshore utility-scale renewable energy proposals	Potential area for utility scale offshore wind	Western edge of Bailiwick









Fig 4c. BIP Policies and Planning Zones in the intertidal and marine environment - Jersey

PLS Protected Coastal Area PLS Coastal National Park ERE8 Intertidal aquaculture box C15 Sports and leisure enhancement area

WER8 Safety zone for hazardous installations ER4 Tourist destination area Proposal 37 Airport noise zone 3 WER11 Airport public safety zone 2

Figs. 4b and 4c: BIP Policies and Planning Zones in the intertidal and marine environment

In addition, the shoreline zone (as detailed within policy GD9 — Skyline, views and vistas) represents the area where the built environment meets the sea. It covers that part of the built-up area which lies seaward of the coast road in St Brelade's Bay; St Aubin's Bay; La Collette to Le Hurel and Longbeach to Gorey Harbour.

Other policies such as NE3 (Landscape and Seascape Character) and HE1 (Protecting listed buildings and places, and their settings) are not limited to a particular spatial location, but are still relevant to the marine and coastal environment. Policy NE1 (Protection and improvement of biodiversity and geodiversity) gives particular emphasis to the protection of marine biodiversity, and presents a spatial dimension related to marine defined areas such as Ramsar sites and Marine Protected Areas.

Looking ahead, there is an aspiration to have more detailed and refined marine policy elements in forthcoming iterations of the Island Plan. The JMSP will help in this process through informing future policies.

4.4.2 Shoreline Management Plan (2020)

In order to remain resilient to the impacts of climate change (especially the risk of coastal flooding as a result of rising sea levels and increasing frequency and severity of storm events) the Island Plan and the JMSP need to enable the implementation of the Shoreline Management Plan. The Shoreline Management Plan sets out policy options for Jersey's entire coastline, over three epochs covering a 100–year period, and essentially seeks to protect the existing developed parts of the island's coastline at risk of coastal flooding.

Along some parts of the coastline it is proposed that new coastal defences are developed in front of the existing coastal structures (known as the advance-theline option). More information on coastal defences is provided in the 'Energy and Infrastructure' chapter *(chapter 12)* below. Where this option is pursued along the St Helier coastline, land reclamation may also present development opportunities.

4.4.3 Economic Framework for the Marine Environment (2022)

This document sets out a strategy for Jersey's marine economy. It has been prepared by Jersey's Marine Economy Advisory Group (MEAG) which brings together Jersey's commercial fishers, aquaculture producers and merchants. The vision articulated by the MEAG is for Jersey to have a vibrant and sustainable marine sector, providing employment and economic opportunity, and maintaining fisheries and aquaculture as an integral part of the island's cultural identity.

Policy 9 relates directly to marine spatial planning, and states: GoJ will develop a Marine Spatial Planning Strategy, using standardised methodologies and principles, to enable a coordinated plan to manage the marine environment.

Other policies which are relevant to the JMSP include:

- Policy 8: Blue Ecosystem Services
- Policy 15: Marine Built Infrastructure
- Policy 16: Marine Leisure
- Policy 17: Carbon Neutral Agenda



4.4.4 Carbon Neutral Roadmap (2022)

The *Carbon Neutral Roadmap* was approved by the States Assembly on 29 April 2022. It builds on the progress made through the Pathway 2050: An Energy Plan for Jersey and supersedes the Carbon Neutral Strategy 2019. It describes Jersey's carbon neutral pathway to net-zero by 2050.

The Carbon Neutral Roadmap includes both the mandate to establish Jersey's Citizen's Assembly on Climate Change and to set out a plan for delivery of both short term and long-term goals, broken down into five strategic policies:

- 1. Net zero transition pathway
- 2. Island energy market
- 3. Financing strategy
- 4. Policy programme and development
- 5. Becoming carbon neutral

The Roadmap sets out the first delivery plan for the period 2022–2025 and milestones for future key decisions and future policies that will need to be updated at the start of each new term of Government.

Two policies within the Carbon Neutral Roadmap are particularly relevant to the marine environment:

Policy TR11: Emissions from aviation and maritime transport

Work with Ports of Jersey to reduce emissions from aviation and marine transport, in line with... obligations under the MARPOL treaty.

Policy EN5: Blue Carbon, Biodiversity and sequestration

Promote Jersey as a centre of excellence for blue carbon sequestration, with an ambition to double the extent of seagrass beds and recognise that tackling the climate emergency by using nature-based solutions that also address the biodiversity crises provides multiple benefits for our land, air and sea.

SMART objectives include:

Develop a Carbon Sequestration Framework and Marine Spatial Plan by the end of 2023. Protect Jersey's carbon sinks to prevent stored greenhouse gasses from being emitted back into the atmosphere and safeguard the estimated 6,000 tonnes of CO₂ being sequestered annually. Maximise co-benefits for biodiversity where possible.

NOTE: The area of seagrass around Jersey's coast has roughly doubled over the past 10 years. Monitoring has shown that during this time, the extent of intertidal seagrass has fluctuated, whilst sub-tidal seagrass has consistently expanded. Looking ahead, the most effective way of increasing the extent of seagrass beds is through management allowing natural regeneration to occur, rather than through direct seeding/planting. Such management includes preventing mobile fishing gear from damaging the seabed, and installing seagrass-friendly boat moorings. It is not possible to put a precise figure on how quickly, or how far, seagrass will spread. It is important that seagrass extent continues to be monitored. This monitoring also provides a useful picture of the health of the marine environment in terms of wider environmental factors such as water quality.



Introduction to Jersey's seas and coasts

5.1 Geographical context

5.1.1 The Normano-Breton Gulf

The Bailiwick of Jersey is an enclave of the English Channel formed by the coastlines of western Normandy and northern Brittany **(See Fig. 5a).** This L-shaped area is known as the Normano-Breton Gulf, and, as well as Jersey, hosts the other British Channel Islands (Guernsey, Alderney, Sark and Herm), the French archipelago of Chausey, and several large uninhabited offshore reefs. Four of these offshore reefs (Les Minquiers, Les Écréhous, Les Dirouilles and Paternosters) are within the Bailiwick of Jersey.

5.2 Geology

5.2.1 Introduction to Jersey's marine geology

Jersey's offshore and intertidal areas contain outstandingly varied and complex geology. This ranges from some of the oldest rocks visible in the British Isles (approx. 640 million years old) through to deposits laid down since the end of the last ice age, approx. 10,000 years ago. There are examples of all the three rock types: igneous (rocks which have formed from volcanic magma); sedimentary (rocks formed by deposition or as a chemical precipitate), and metamorphic (rocks formed by changes in the earth's crust due to heat and/or pressure). Each rock type has different qualities in terms of its resistance to erosion, and the seabed, sediments and habitats associated with it. Geology is therefore closely linked to bathymetry, sediments and habitats. A simplified geology map of Jersey's intertidal and offshore areas is shown in *Fig. 5b*.









The reefs (both those offshore and surrounding Jersey) are generally associated with harder igneous rocks. The oldest rocks within the Bailiwick are found on the offshore reefs and date from the Neoproterozoic period (over 540 million years ago). At Les Maisons on Les Minquiers, some of the oldest rocks in the British Isles can be seen, in layers which have been bent and twisted by extreme pressure. The rocks of the offshore reefs create excellent building stone, and Les Minquiers was quarried to construct Fort Regent. The basins between the reefs generally contain softer sedimentary rocks. The youngest of these is limestone, which is located under the sea on the western side of the Bailiwick and extends around to the north-east, between Jersey and Les Écréhous. The limestone was laid down in the Eocene period (approx. 55 million years ago) when the area was a warm, tropical, shallow sea.



Neoproterozoic rocks (layers of granodiorite and pegmatite) at Les Maisons on Les Minquiers. Fiona Fyfe



A large rock pool at Grève d'Azette. It is in landscape hollows such as this that the Pleistocene clays and gravels are preserved. Often they are only visible after storms have shifted the modern beach sediments

🔟 Paul Chambers

5.2.2 Buried land surfaces

The Pleistocene period (approx. 2 million – 10,000 years ago) saw many climatic fluctuations which affected sea levels. During times of low sea level, the Channel Islands would have been elevated land within a broad open plain which connected them with what is now France. The Ruau channel (between Jersey and Les Écréhous) would have been a river valley. Sediments from the Pleistocene period are found across Jersey, and also occur on the seashore, where they take the form of clays and gravels buried below more recent beach sediments. The middleshore intertidal deposits are likely to have been laid down in what would have been hollows in the landscape, and are now rock pools. Other buried land surfaces include sub-surface peat deposits in St Ouen's Bay, which contain evidence of the plants growing in Jersey when the peat beds were formed.

The latter part of the Pleistocene period overlaps with the Palaeolithic archaeological period. The caves on today's coastline at La Cotte de St Brelade and La Cotte à La Chèvre are two of Europe's most important Palaeolithic sites. At the start of their occupation, the caves would have been on a hillside, looking out over a broad plain of land crossed by sediment-rich rivers, and occupied by roaming herds of animals such as rhinoceros and woolly mammoth. The former land surface now forms the bed of the shallow seas around Jersey, and it is therefore highly likely that the seabed contains palaeo-environmental and prehistoric anthropological evidence.

Sea levels gradually rose and fell during the Palaeolithic, Mesolithic and Neolithic periods, with the land corridor to France being most recently flooded approx. 8000 years ago. Early Neolithic material has been found on both Les Minquiers and Les Écréhous reefs, and more is presumed to exist below today's sea level. More information on marine and intertidal prehistoric archaeology is provided in *Chapter 10 — Cultural Heritage.*



Prehistoric hand-axe found at Les Écréhous Photo Paul Chambers

5.3 Bathymetry and sediments



(Vertical scale exaggerated). Sea level = 0

5.3.1 Shallow sea areas

As explained above, the regional undersea topography of the Normano-Breton Gulf reflects an ancient drainage network which was drowned by the rising sea at the end of the last Ice Age. This episode of marine flooding created three distinct basins lying wholly or partially within Jersey's territorial borders (Les Écréhous Basin, between Jersey and Les Écréhous reef; Canger Basin, between Les Anquettes Reef and Les Minquiers reef; and Sauvages Basin, east of Les Minquiers reef). These basins are accumulating sediment, with geotechnical surveys reporting seabed thicknesses of 40+ metres between the east coast of Jersey and Normandy (*see Fig. 5d*). The basins (and the reefs which separate them) are shallow, productive and fragile, but their importance to regional biodiversity and ecology, and their contribution to the storage of carbon, has only recently been recognised.

5.3.2 Deeper sea areas

The seabed area to the west of Jersey (dominated by limestone geology) is flatter and less complex, with a greater exposure to high energy weather, waves and currents. Water depths are greater but remain relatively shallow (<50m) with a westward-sloping seabed that is flatter and dominated by bedrock and cobble which, in places, is covered by patches of mobile sand and gravel. In these areas a predominance of rocky seabed and mobile course sediments creates a different ecology to Jersey's sedimentary basins, with a different role in the regional ecological framework. The sediment types found across the Bailiwick are shown in *Fig. 5e.*



Fig. 5d: Sediment thickness. CREDIT: UK Renewables Atlas



Fig 5e: Sediment type. CREDIT: UK Renewables Atlas



5.4 Tides, currents and wave patterns

5.4.1 Water circulation patterns

Additional to Jersey's subsea topography is an unusual oceanographic regime controlled by the island's location in relation to the Normandy and Brittany coastlines. The L-shape formed by the Normandy and Brittany coasts creates a dead end for tidal waters entering from the English Channel. This causes the incoming tidal wave to push up against the French coastline, producing some of the largest tidal ranges in the world (12.2m in St Helier, but up to 13m at Les Minquiers and St Malo on the French coast). The squeeze of sea water towards the Bay of Mont St Michel and the presence of so many islands and reefs create strong tidal currents (>5knots) and a complicated circulation pattern around the reefs and islands.



Fig. 5f: Gyre currents as seen on satellite images (NASA Worldview).



For sea water to navigate its way into, across and then out of the Normano-Breton Gulf it must pass through a network of gyres and eddies generated around topographic features such as the offshore reefs and islands. Computer modelling and water surveys suggest that sea water entering the Jersey area from the English Channel may circulate around the island for several weeks to a year before being pushed back out into the Channel. This long residency time has practical impacts on the ecology. For example, scallops (including their larvae) stay within the Normano-Breton Gulf for their entire life-cycle. The same may be true for other invertebrates such as lobsters and whelks.

5.4.2 Water characteristics

The combination of long residency times, complex currents, high tidal range and lack of fresh water from rivers all serve to homogenise the salinity and temperature of the marine waters around Jersey. They form a distinct and largely separate body of water which is demarcated by a sharp tidal divide (sometimes called the Guernsey Front) which almost exactly follows the sea border between Jersey and Guernsey. This division of sea waters is well defined by differences in temperature, productivity and turbidity, and the two water bodies are clearly visible on satellite images (*Fig. 5f*). The northern water body around Guernsey is deeper, clearer, colder and more stratified, whilst the southern water body around Jersey and the Bay of Granville is warmer, more turbid and without stratification. This division and its associated oceanographic properties influence regional sedimentary, productivity and biodiversity patterns.

5.4.3 Wave patterns

As shown on *Figs. 5g and 5h,* the highest and most powerful waves are found in the north-west of the Bailiwick. The sheltered waters to the east of Jersey have notably lower wave heights and wave power than elsewhere. The variation in wave height and power is reflected in Jersey's coastal exposure index *(Fig. 5i),* which shows the highest levels of coastal exposure in the north-west (from the middle of St Ouen's bay round to Ronez Point), followed by the south coast, then the north-east from Ronez round to Fauvic. The lowest levels of coastal exposure are found around La Rocque, due to the relatively sheltered water, and the absorption of wave energy by the extensive intertidal reefs.

5.5 Wind strength and direction

5.5.5 Wind data

Meteorological data shows that the greatest wind speeds and wind power densities are found in the west and south-west of the Bailiwick, reflecting the prevailing south-westerly winds. *(see Fig. 5j).* As would be expected, the area to the north-east of Jersey, which is sheltered by the landmass from the prevailing winds, has the lowest wind speeds and wind power densities.





Fig. 5g wave height (annual average). CREDIT: UK Renewables Atlas



Fig. 5h wave power (annual average). CREDIT: UK Renewables Atlas



Fig. 5i Coastal exposure index.

CREDIT: Paul Chambers, using open access data



Fig 5j. Mean wind speed at 100m

7.1 m/s

Fig. 5j Wind speed (annual average). CREDIT: Global Wind Atlas 9.7 m/s

5.6 The diversity of Jersey's marine environment

5.6.1 Seascapes and views

From sweeping sands to jagged rocks, and from busy harbours to empty wildernesses, Jersey's spectacular and diverse seascapes encompass many natural and human-made features. They are constantly changing in response to tides, weather, season and the movements of a wide variety of craft. The diversity of coastal and offshore areas is expressed through the various seascape character areas found across the Bailiwick. These — together with the offshore landmarks which form focal points in views from the coast and sea — are described in **Chapter 7: Seascapes.**

5.6.2 Marine and intertidal habitats and species

The diversity of geology, bathymetry, sediments, tidal conditions, wind energy and exposure across Jersey's waters results in an extra-ordinary range of habitats within a relatively small area. Each habitat plays a different role within the overall ecosystem of Jersey's marine environment. As well as supporting different marine species, they also contribute to marine functions such as carbon storage and pollution entrapment. More detail on the habitats found in Jersey's waters, and the functions which they perform, is found in Chapter 8: The Natural Environment and Biodiversity. There are some existing nature conservation designations, including Ramsar sites, Marine Protected Areas (MPAs), Sites of Special Interest, Areas of Special Protection and a No-Take-Zone. Some of the most valuable habitats (kelp forests, maerl beds and seagrass meadows) are covered by the OSPAR convention.

A number of species protected under the OSPAR Convention also live in Jersey's waters, including dog whelk, flat oyster, Balearic shearwater, Roseate tern, European eel, spotted ray, long and short-snouted seahorses, porbeagle shark, bluefin tuna and harbour porpoise.

5.7 Human influences on Jersey's marine environment

5.7.1 Making a living from the coast and sea

People have been fishing in Jersey's waters since prehistoric times, and fishing continues to contribute to the island's economy and identity. The last few centuries have seen various phases of fishing, including for mackerel, conger eels and oysters.

The 19th Century oyster fishery in particular contributed to development of harbours and piers which are still in use. Today, there are several fishing metiers (types) covering shellfish and wetfish. Today, potting for lobster and crab dominates, with other metiers including dredging, diving, trawling, netting, and angling for species such as scallops and various finfish. Often boats will contain different types of fishing gear. Intertidal aquaculture of oysters and mussels also contributes to the island's economy. Further information about fishing is provided in *Chapter 9: Commercial fishing and aquaculture.*



5.7.2 Cultural Heritage

Centuries of coastal habitation and use have left their mark on Jersey's coastal and marine environment. The earliest traces are found on the prehistoric land surfaces now flooded by the sea or buried by sand. The intertidal reefs contain a rich collection of fish traps, vraicing (seaweed gathering) tracks and other features. There is a legacy of coastal defence sites ranging from prehistoric coastal forts, through medieval castles and Napoleonic fortifications, to structures built by the occupying German forces in the Second World War. Marine navigation features such as lighthouses and beacons are an important cultural layer of Jersey's maritime heritage. On the seabed are wreck sites, some of which are known to divers, but many of which are not yet recorded. Some of these cultural heritage sites are protected through designation as Listed Buildings or Listed Places. More detail is provided in Chapter 10: Cultural Heritage.

5.7.3 Enjoying the coast and sea

Recreation and tourism are a vital part of Jersey's economy, and very important for the health, wellbeing and enjoyment of local people. Coastal and marine recreation takes many forms. It includes activities without craft such as swimming, snorkelling, diving, dog walking, coasteering and low-water fishing. It may include non-powered craft such as surf boards, stand-up paddleboards and sailing dinghies, or powered craft such as rigid inflatable boats (RIBs), jet-skis and yachts. Coastal and marine recreation supports many coastal businesses, and is concentrated in the most popular beaches of St Ouen's Bay, St Brelade's Bay, St Aubin's Bay, the Royal Bay of Grouville, St Catherine's Bay and Bouley Bay. Recreation also takes place offshore, with Les Écréhous reef a particularly popular destination for sailors, kayakers and RIB trips. Various races and events also take place within Jersey's waters. More information is provided in Chapter 11: Recreation and Tourism.

5.7.4 Practical uses of the sea

Because Jersey is an island, the sea forms an integral part of its transport network. All around the coast are harbours, slipways and piers which allow connectivity between land and sea. Commercial shipping lanes allow larger vessels to access the port at St Helier and to travel through Jersey's waters. On the seabed, a network of cables provides power and communication to the island, and it is likely that in the future, the marine environment will also become a source of renewable energy. See **Chapter 12: Infrastructure, Energy and Transport** for more information.

Benefits from nature (ecosystem services) and Blue Carbon

6.1 Introduction

This section introduces the concept of benefits from nature (also known as 'ecosystem services') delivered by the marine environment.

Benefits from nature can be described as 'the goods and services provided by ecosystems'.

Protecting and enhancing benefits from nature is a principle of the JMSP, and is a fundamental consideration with regard to the identification of areas to be designated as Marine Protected Areas.

This chapter provides a short general introduction to benefits from nature. The specific benefits from nature provided by different habitats within Jersey's waters are described in **Chapter 8**. The benefits are environmental, cultural, social and economic, and considering them all enables a holistic approach to marine spatial planning. The JMSP takes into account the benefits from nature felt by people, and by marine life in its own right.



6.2 Types of benefits from nature

Benefits from nature may be divided into four categories, as shown in *Fig. 6a* below. Provisioning benefits are products obtained from ecosystems, such as food. Regulating benefits are processes such as pollution capture which keep the environment stable. Cultural benefits are non-material things such as education and well-being. These three categories are underpinned by supporting benefits (such as photosynthesis) which enable the other benefits to happen.

Fig. 6a: Types of benefits from nature provided by the marine environment

PROVISIONING BENEFITS

Products obtained from ecosystems

(e.g. food from fish; fertilizer from seaweed)

REGULATING BENEFITS

Benefits obtained from the regulation of ecosystem processes

(e.g. pollution capture; beach replenishment)

CULTURAL BENEFITS

Non-material benefits people obtain from ecosystems

(e.g. appreciating nature; education & research)

SUPPORTING BENEFITS

Services that are necessary for the production of all other ecosystem services

(e.g. water cycling; photosynthesis)



6.3 Blue Carbon

Blue carbon is a recent term which collectively describes the processes associated with the capture and storage of carbon within the marine environment. Blue carbon is of particular relevance to small coastal states and island nations such as Jersey that may have a small land area in relation to that of their territorial seas. Jersey's marine area includes habitats of potential blue carbon significance such as seagrass meadows (Zostera spp.), maerl beds, kelp forests and species-rich accreting sedimentary habitats. The island therefore has potential for carbon offsetting using Blue Carbon held in its surrounding territorial seas. Carbon may be organic (stored within living plants and animals) or inorganic (held in the carbonate which forms shells, tests and other organicallyderived debris).

The Blue Carbon potential of different habitats is a consideration in the designation of Marine Protected Areas within the JMSP, and is described in more detail in *Section 8.6.6.*

Fig. 6b: A simplified diagram showing the principal sources, sinks and interactions associated with the natural carbon cycle. The green arrows represent uptake of carbon through photosynthesis (plants) and growth. The blue arrows represent release of carbon dioxide and oxygen through respiration and decomposition. Brown arrows show the burial (sequestration) of carbon. Yellow labels show where carbon is stored in living organisms. The orange arrows show the transport of carbon in the form of particulate or dissolved debris/detritus. Taken from "Blue Carbon Resources: An assessment of Jersey's territorial seas" p. 9





Seascapes

7

Aim: Seascapes are valued and their character is retained and enhanced



Aim: Seascapes are valued and their character is retained and enhanced

7.1 Introduction

7.1.1 Background

This section covers the character and special qualities associated with Jersey's coasts and marine environment, as well as coastal landmarks and viewpoints.

As a relatively small island, the sea is integral to Jersey's identity. It is never far away, appearing on the horizon in many views from all around the island. It is literally the backdrop to life in Jersey, in terms of views, but also in terms of everyday life, with people, goods and services needing to cross the sea to get to and from the island. Coastal landmarks such as Corbière lighthouse, Mont Orgueil and round towers frequently appear in illustrative and marketing materials and form part of Jersey's visual identity.

The sense of proximity to the sea, the spectacular and varied seascapes, and the opportunities to enjoy and experience coastal and marine environments are key reasons why people choose to live in or visit Jersey. The seas and coast are extremely important to people's wellbeing, and to the Island's economy. Therefore, there are close ties between seascapes and recreation and tourism (enjoyment of the coast), and with cultural heritage (particularly historic coastal landmarks). Coastal views can be appreciated from the sea, and from numerous viewpoints around the island which can be accessed from the coastal footpath. Many viewpoints also have road access and carparks.

🔟 Cover image, Fiona Fyfe





Fig 7a. Visibility of the sea in views from land Visibility of the sea



Figure 7a shows the visibility of sea in views from land. The darker the shading, the more sea can be seen. The darkest shading, from where the largest amount of sea is visible, is on the highest land in the north of Jersey, followed by the headlands and escarpment. It is interesting to note that visibility of the sea is not at its greatest by the coast. This is because the lower ground level at the seashore limits the amount of sea which can be seen. In reality, the presence of trees and buildings means that views of the sea are considerably more restricted than shown on this theoretical map.



7.1.2 Key Evidence Base documents for this topic:

- Bridging Island Plan (BIP)
- Jersey Integrated Landscape and Seascape Character Assessment (ILSCA) (Fiona Fyfe Associates for Government of Jersey, 2020)

7.1.3 Legislative and policy context

In recognition of their value to local people and visitors, the BIP introduces specific zones of Protected Coastal Area and Coastal National Park and seeks to protect seascapes and their settings primarily through the provisions of policies PL5 (Countryside, coast and marine environment) and NE3 (Landscape and seascape character).

The Protected Coastal Area covers the parts of the Bailiwick which are of outstanding landscape/ seascape quality. It covers 35km² of the coast, its inland setting, the intertidal zone, and the shallow waters around the offshore reefs (the latter defined using the boundaries of the Ramsar designation). The inclusion of the Protected Coastal Area in the BIP recognises the importance of Jersey's coastline and seascapes, and the critical need to protect their special character and setting.

The Coastal National Park sits within the Protected Coastal Area, as a sub-set. It does not include intertidal waters around Jersey's coast, but it does include them at the offshore reefs and, therefore, has some overlap with the JMSP. The Coastal National Park enjoys the same high level of protection for landscape and seascape character as the Protected Coastal Area, but development within the Coastal National Park is also required to be compatible with the purposes of the park, without undermining its special qualities. The purposes of the park include:

- a) the conservation and enhancement of the natural beauty, wildlife and cultural heritage of the park, and
- b) the public understanding and enjoyment of its special qualities.

BIP Policy PL5 — Countryside, coast and marine environment states:

Development proposals in the countryside, around the coast and in the marine environment should protect or improve its character and distinctiveness. They should also protect or improve the special landscape and seascape character of the Protected Coastal Area.

In the Coastal National Park, they should similarly protect or improve its special landscape and seascape character and special qualities of the Coastal National Park and its setting, and be compatible with the purposes of the park...

The development of sites and infrastructure that help meet the island's strategic needs for minerals, waste management, energy and water will be supported... around the coast and in the marine environment, where it is demonstrated to be in the island's strategic interest, and where its impact can be avoided, minimised, mitigated or compensated.

Development proposals located in the marine environment will not be supported except where a marine location is demonstrated to be essential.

Further information on the Protected Coastal Area and Coastal National Park can be found in pages 74–79 of the BIP. They are shown in *Fig. 7b.*

As explained in *Section 1.2*, the JMSP forms an overarching strategic framework setting the approach for a range of tools, including land use planning, marine resource management and fishing regulation. The JMSP is not a statutory document, but will give direction to other legislative and policy tools, which will be used to deliver the priorities and actions set out in the JMSP.





7.1.4 Pen portraits



Young people resident in Jersey

1st Jersey (St Ouen) Sea Scout Group:

Mark: "The sea around Jersey is beautiful, the coastline is very well taken care of and pretty. The sea makes me happy because it's usually a nice environment, sometimes you find litter, but people are working on that. Being near the sea makes me feel calmer, I love St Ouens; it's really close to home and there are loads of water activities. It's always different down there so it's really interesting."

Renzo: "The sea is really linked to our identity because we're surrounded by it. My favourite beach is probably St Brelade's, it's just down the hill from home. I love it when it's really quiet there, it's just such a nice place. Last week we anchored in the bay and there were so many boats there. I went out on my paddleboard, and I felt uncomfortable, it was too crowded, it meant it wasn't much fun. We sometimes go surfing at St Ouens and that's a completely different mood to St Brelade. We've all got different sides to us, and the Island has too."

Poppy: "I love Le Braye beach because loads of people surf and bodyboard there and it's a good place to meet friends and have fun. I am so lucky having this beach so close to home, but in Jersey you can't not be near a beach. The only thing that bothers me is the littering and the bins when they aren't secured properly. I've done kayaking with the sea scouts and it's brilliant, you can explore new places, like at Noirmont we found a beach you can only get to by the sea. That's really cool. It makes me feel special and I really love my Island."

Emily, Eco Captain, Jersey College for Girls:

"Since my earliest days, the ocean has been my constant companion: riding the waves on a surfboard, paddle boarding and scuba diving. To me, the ocean isn't just water. It's a home to countless forms of life, a source of inspiration, and a reminder of nature's intense power. In its depths, there are mysteries waiting to be discovered, and in its waves, there are stories of life's natural ebb and flow. Looking out for it isn't just something we all need to do, it is more than that. It is about ensuring that we leave this incredible legacy intact for generations to come."



Jim Hopley, Honorary Chair of the Jersey National Park Like the vast majority of people in Jersey, I believe our marine and coastal environment has an immensely positive effect, not only on myself, but on a growing proportion of the wider population. This boost in health and wellbeing comes not only from the recreational opportunities available, but simply from exposure to all that is on offer.

Despite its relatively small size, the Island's coastline can offer views to match any emotion. On a big scale the dramatic north coast cliffs or, contrastingly, the romantic long sandy vistas with the ocean as a backdrop. Then, if you take the time to stop and take in the detail, to smell the heady fragrance of coconut from the gorse, or to sit and examine each grain of sand, you cannot help but reconnect with yourself. Jersey's coast can ground you and inspire you and help you to see where you are in your journey, locals, and visitors alike.

It must be evident to all however, that the 'health' of our seas is under mounting strain through growing population, and climate and environmental changes. Working with the team to establish Jersey's National Park means it has become obvious to me that we need to connect with the public. By engaging people and partners, it increases the willingness of so many to preserve not only our terrestrial coastline, but the wider marine environment where, if we act in time, we can literally 'turn the tide'. The potential benefits this will bring are immeasurable, not only in terms of environmental impact but on the personal wellbeing of so many Islanders. We need to care.



7.2 The diversity and special character of Jersey's seascapes

7.2.1 Seascape Character Assessment

Seascape Character Assessment is a means of analysing and describing seascapes to understand their diversity, and what it is which makes them unique and special. This then enables their special qualities to be protected and enhanced through future actions and decision-making.

The process involves careful consideration of natural, cultural and perceptual qualities of the seascapes being studied, as shown in *Figs 7c* and *7d*. Natural features include bedrock geology, sediment depth, bathymetry, tidal forces, habitats, etc. Cultural features are those added by people, and include buildings, harbours, navigation markers, archaeological sites, shipwrecks, etc. Perceptual qualities are the intangible, sometimes invisible, things which are so fundamental to how seascapes are experienced. It may be the joy of watching a spectacular sunset from St Ouen's Bay, or the sense of wildness and tranquillity felt amongst the intertidal reefs, or it may be the stimulation of other senses — the smell of seaweed or coastal gorse; the sound of seabirds or tapping halyards; the soaking from a crashing wave during a storm, or the pleasant coolness of a swim or paddle on a summer's day.

Seascape Character Assessments then identify and map the distinctive patterns of seascape found within the study area.



Fig. 7c: The 'Seascape Wheel' summarising what constitutes seascape ¹

1 An Approach to Seascape Character Assessment (Natural England, 2012) p.9





7.2.2 The Jersey Integrated Landscape and Seascape Character Assessment (ILSCA)

The Jersey ILSCA *[Evidence Base doc. EB/SC/1]* formed part of the Evidence Base for the BIP, and has now been adopted by the Ministers as supplementary planning guidance² used in the assessment of planning applications. It describes in detail the character of Jersey's landscapes and seascapes. It identifies five distinctive coastal and marine character types, shown in *Fig. 7e.* Summary information for each character type is provided on the following pages, with information on forces for change, strategies and guidelines provided in *Appendix B.* Readers of the JMSP are encouraged to consult the ILSCA directly if they require information on a specific topic or place.

² Landscape and seascape character guidance (gov.je)









Character Type F: Rocky Shores and Bays

Description

This Character Type comprises the intertidal area along the north coast of Jersey, and around the south-west headlands at St Brelade and Noirmont. It occurs at the base of steep cliffs, and therefore the intertidal zone is often very narrow where the steepest cliffs plunge into the sea. Elsewhere, narrow rocky platforms, rocks, islets, sea caves and small bays are exposed at low tide. A key feature of this Character Type is the relatively steep marine-land interface. It is therefore closely associated with the adjacent Cliffs and Headlands, and Shallow Sea Character Types.

This is a dramatic interface between land and sea, particularly in stormy weather, when waves crash against the base of the cliffs. At other times, the small bays which are revealed at low tide (including Plémont beach, Bonne Nuit, Bouley, Rozel, Fliquet and Beauport) are idyllic, and greatly valued for their beauty and tranquillity.



Although it is relatively small in area, the Rocky Shores and Bays Character Type is important for biodiversity, and contains a number of intertidal habitats, including rock platforms and small patches of seagrass which support a range of seaweeds, crustaceans and other intertidal species. Its outstanding and complex geology is reflected in the number of geological SSI sites.

Sensitive Special Qualities

- Remote stretches of dramatic coastline which retain their natural form and are free from man-made structures or interference.
- Attractive small bays with an intimate feel, popular for recreation with tourists and locals, and where adjacent tourist infrastructure (where it exists at all) is relatively low key.
- A relatively narrow, high energy intertidal zone with a high tidal range, containing a range of intertidal habitats including seagrass beds and diverse rock platforms.





Character Type G: Bays with Intertidal Flats and Reefs

Description

This Character Type comprises the extensive and spectacular intertidal seascapes which are revealed at low tide around Jersey's western, southern and eastern coasts. It includes sweeping sandy beaches and rocky reefs, covering an area of approximately 30km².

The Bays with Intertidal Flats and Reefs are one of Jersey's most distinctive and unique features, resulting from the combination of geology, topography, currents and large tidal range. They are teeming with life and provide habitats for an exceptional range of birds, fish, seaweeds, saltwater plants, sand-dwellers and shellfish, including ormers. Humans have exploited these intertidal environments for millennia through activities such as low-water fishing, and gathering seaweed for fuel and fertilizer. These actions have left subtle traces within the intertidal seascape, along with the more prominent cultural heritage sites of defensive towers. The Bays with Intertidal Flats and Reefs have been described as 'Jersey's last wilderness.' They are dramatic, remote and wild areas where visitors are always acutely aware of changing elements - tides, waves, wind and weather. They are elemental and potentially dangerous places, but their raw beauty is scenically stunning.

There are five distinctive Character Areas within the Bays with Intertidal Flats and Reefs, each with a unique 'sense of place' resulting from its particular combination of seascape elements.

Sensitive Special Qualities

- Reefs form rare, sensitive and important intertidal and shallow water marine habitats.
- An elemental landscape/seascape with a very strong sense of wildness and remoteness.
- Expansive sandy beaches which are popular for recreation.
- Strong visual inter-relationships with the surrounding coast.
- Towers, lighthouses and beacons are prominent structures and form focal points in views.






Character Type H: Offshore Reefs and Islands

Description

The Offshore Reefs and Islands are often described as the 'Jewel in Jersey's crown'. They comprise a vast, extraordinary and dramatic world of rocks, reefs, islets and sandbanks which emerge from the sea at low tide. They are unique to Jersey, and include Europe's largest reef system. There are three main reef systems located around Jersey: Les Minquiers to the south; Les Anquettes to the south-east; and Les Écréhous (including Les Dirouilles and the Paternosters) to the north.

Les Minquiers is the most southerly extent of UK territory within Europe, and although the Offshore Reefs and Islands have strong cultural connections with Jersey, they are also isolated from it, creating a sense of 'a place apart'. People visit the reefs to experience remoteness, tranquillity, and closeness to nature, as well as to enjoy their raw and everchanging beauty. There is relatively little human interference, although there is a long history of human engagement with the reefs, resulting in rich archaeology and distinctive built heritage in the form of fishermen's huts. These structures, clinging to the islets which remain uncovered at high tide, are now used for recreation. There are also many beacons, warning shipping of the dangers of submerged rocks. The submerged rock plateaux contain many different marine habitats, including rocks, sandbanks, maerl beds, rock platforms, flooded gully complexes, kelp forests and seagrass beds. Together, these habitats support a vast range of marine life, with outstanding biodiversity and geodiversity.

Sensitive Special Qualities

- Dramatic, unique and vast-scale seascapes of reefs, islets, shingle and sandbanks which emerge at low tide. They include the largest reef systems in Europe.
- A completely natural, wild and tranquil environment, much of which is entirely devoid of human interference and enables a deep connection with marine surroundings.
- Elemental and isolated seascapes which offer physical and psychological detachment from the Jersey mainland, and an opportunity to escape into what feels like another world. They are therefore highly valued for the recreation opportunities they offer and their contribution to well-being.
- An array of diverse and valuable marine habitats of international importance for their bird and marine life.
- Important cultural heritage, including prehistoric archaeology, distinctive beacons, and some of the last surviving traditional Jersey vernacular buildings.





Character Type I: Shallow Sea

Description

This offshore Character Type comprises the marine areas on the eastern side of the Bailiwick. It borders the intertidal Character Types around the coast of Jersey (Character Types F and G), and also the reefs of Les Écréhous, Les Minquiers, and Les Anquettes. The western boundary follows the 30m depth contour (where it meets the *Deep Sea* Character Type), and the eastern boundary follows the Bailiwick boundary, which adjoins French territorial waters.

This Character Type has a strong physical and visual association with the *Offshore Reefs and Islands* Character Type. Even at high tide, some of the reefs remain visible, along with the numerous associated navigation features — beacons, lighthouses and buoys. As would be expected in such shallow and hazardous seas, there are a number of shipwrecks. The proximity of the area to both Jersey and France, and the popular destinations of the *Offshore Reefs* and *Islands*, mean that Character Type I is used for recreational sailing (for both Jersey-based and French boats), as well as fishing. Most fishing within the *Shallow Sea* Character Type is potting, netting or line fishing, rather than trawling. Diving for scallops also takes place within this Character Type.



The seafloor is complex in terms of its geology, and contains a wide range of habitats and energy levels. It also contains a palaeochannel from times of lower sea levels, when much of the area was dry land.

Sensitive Special Qualities

- Contributes to the setting of Jersey through its role in views from the coast, and when approaching by ferry.
- Close visual and physical relationship with the *Offshore Reefs and Islands* Character Type.
- Coastal waters contributing to wider ocean circulatory system and associated climatic and marine functions.
- Valuable and varied benthic and pelagic habitats for fish and marine organisms, including dolphins and many different fish and shellfish species. Key habitats include maerl beds and subtidal seagrass beds.







Description

This Character Type is located offshore, and comprises the deeper seas (below the 30m depth contour) on the western side of the Bailiwick of Jersey. The depth of the water means that there is relatively little light penetration, and therefore less growth of seaweed on the sea floor. In addition, this is a relatively high energy environment, so there is less sediment deposition and a rockier seabed.

Fishing boats and ferries are regularly seen within this Character Type, and there are also larger freight vessels as well as occasional sailing boats in these open waters. Sense of place and orientation is enhanced by distant views of land in some directions. However, views south-west are open, with the sea stretching to the horizon. *NOTE: Since publication of the ILSCA, the construction of the St Brieuc Windfarm to the south of Jersey's waters has added a new feature to this part of the seascape.*

The Character Type is used for fishing (primarily trawling and dredging, but also some netting), and recreational craft. Ferries connecting Jersey to Guernsey and the UK also regularly pass through this Character Type, and so form part of the seascape.



Sensitive Special Qualities

- Exposed open water. Views of land are generally distant, particularly in the south.
- Deep sea water contributing to a wider circulatory system and associated climatic and marine functions.
- Exposed, high energy circalittoral seabed substrates (including rock, coarse sediment and mixed sediment). These, together with the pelagic environment, provide habitats for a range of fish species.

7.2.3 Issues

The ILSCA raises numerous ways in which seascape character can potentially be undermined through poorly located and/or designed development, and by unsympathetic management or uses. These include (for example) renewable energy development, cable landings, sea defences, recreation and aquaculture.

7.2.4 Proposed Actions

The impact of development on seascape character is a material consideration in the application of BIP policy and supplementary planning guidance (SPG). The substance of the ILSCA has been adopted as SPG (available through the Government website). It should therefore continue to inform planning and management decisions going forward, and landowners should be encouraged to adopt relevant management guidelines.

Priority SC1: Seascape Character

To maintain the diversity and special character of coastal and marine areas.

Action SC1a: The special qualities of coastal and marine character types should be maintained through application of the strategy and relevant management guidelines for each character type as set out in the Jersey Integrated Landscape and Seascape Character Assessment.



7.3 Views and marine landmarks

7.3.1 Background

Coastal landmarks and seamarks form features within broader seascapes. The largest and most prominent coastal landmarks are visible over a wide area and can be seen from land and sea. The ILSCA identified Corbière lighthouse, Elizabeth Castle and Mont Orgueil as key landmarks which form part of Jersey's identity, combining an impressive sense of history with spectacular coastal scenery. Views of these landmarks are protected through policy in the BIP (Policy GD9 — Skyline, views and vistas).



Corbière Lighthouse. **(i)** Fiona Fyfe



Elizabeth Castle.



Mont Orgueil. iona Fyfe



Whilst acknowledging the importance of these key landmarks (and other coastal features) the JMSP also considers offshore features which form focal points in views from the coast and sea. These are shown in *Fig. 7f* and include the offshore towers (Seymour Tower, Icho Tower, St Aubin's Fort, La Rocco Tower, Portelet Tower and Demie de Pas); Green Island; St Catherine's Breakwater; the offshore reefs which are visible from the north coast (Les Écréhous, Les Dirouilles and the Paternosters), and Maîtresse Ile on Les Minquiers, which is visible from ferries to St Malo. All these offshore features make important contributions to the seascape and add greatly to Jersey's sense of place.



Les Écréhous from the coast near Rozel. **(1)** Fiona Fyfe



Les Minquiers at high tide. Fiona Fyfe



Seymour Tower from the coast at La Rocque. **(19)** Fiona Fyfe



St Aubin's fort, from St Aubin's harbour. (i) Fiona Fyfe







7.3.2 Issues

Marine landmarks (and their settings) are not explicitly identified as landmarks (although they are designated as heritage assets, and would be identified in visual assessment associated with a planning application). There is therefore a risk that new offshore developments or structures may compete with these marine landmarks in views from the coast, drawing the viewer's eye away from the marine landmark and diminishing the quality of the seascape.

7.3.3 Proposed Actions

The planning system should offer particular protection to marine landmarks. Proposals for new offshore developments/structures should consider their potential impact in views, particularly when the proposal will affect (or be seen in the context of) offshore marine landmarks. It will also be necessary to consider the levels of effect at different stages of the tide.

Key landmarks (including Corbière Lighthouse, Mont Orgueil and Elizabeth Castle) and their settings, where they are visible from the intertidal bays, must also be considered under the provisions of BIP Policy GD9.

Priority SC2: Marine landmarks

To protect marine landmarks in views from land and sea.

Action SC2a: Key marine landmarks that form focal points or features in views from the coastline or within the marine area should be identified, designated and safeguarded and potential impacts on these should be taken into account when proposals for new developments or activities are considered. Key landmarks should be safeguarded through the application of BIP policies and supplementary planning guidance.



The Natural Environment and Biodiversity

8

Aim: The natural environment is restored and biodiversity is thriving



The Natural Environment and Biodiversity

Aim: The natural environment is restored and biodiversity is thriving

8.1 Introduction

8.1.1 Background

Jersey's waters contain an extraordinarily rich and diverse range of habitats, which provide many different benefits. As well as their benefits to people, the habitats also support a wide range of plants, birds, fish, invertebrates and mammals at various stages of their lifecycles, and these creatures are therefore also users of Jersey's marine environment.

The JMSP takes account of the symbiotic relationship between different marine habitats and species, and the fact that it is a dynamic environment, constantly changing in response to the prevailing environmental conditions. Further important considerations include the need to balance environmental, economic and social needs (explained further in **Chapter 1**), and the potential of damaged habitats to recover once threats are removed. The connectivity between marine and terrestrial areas is key; many species (notably birds and seals) rely on both marine and terrestrial environments, and there are numerous examples of habitats within the intertidal areas which support both terrestrial and marine species.

🔟 Cover image, Samantha Blampied



Several of Jersey's marine habitats are internationally recognised for their importance to global ecosystems. These habitats are recognised as threatened under international agreements such as OSPAR, Ramsar, and Convention on Biological Diversity. They include kelp forests, maerl beds and seagrass meadows. The habitat data for Jersey's waters does not currently distinguish between kelp forest (which is recognised under the OSPAR convention) and other kelp habitats. However, all kelp habitats are of importance for the marine ecosystem and are therefore considered to be a priority for protection.

Jersey's waters also provide habitats for a range of species that are regarded as internationally significant, including flat oyster, Balearic shearwater, roseate tern, European eel, spotted ray, long and shortsnouted seahorses, porbeagle shark, bluefin tuna and several species of marine mammal such as dolphins, porpoises and seals. These species are covered by a range of Jersey laws and international environmental agreements including OSPAR, ASCOBANS, and the Bern and Bonn Conventions **(See section 4.2).** Existing environmental designations within Jersey's waters, plus the habitats listed under the OSPAR convention, are shown in *Fig. 8a.* Existing designations include a No Take Zone (NTZ) (where no fishing or removal of aquatic resources is permitted); Marine Protected Areas (MPAs) (where mobile gear is excluded to protect seabed habitats); Ramsar sites (wetland sites designated for their international importance); Areas of Special Protection (ASPs) (temporary designations under wildlife law), and Sites of Special Interest (SSIs) (designated for their special ecological or geological interest). The designations are described in more detail later in this chapter. A principle of the JMSP is that there will be no loss of marine protection, so the existing designations will be retained, with no diminution. Additionally, the JMSP was established to develop a network of MPAs in Jersey's waters consistent with the island's environmental, economic and social objectives. Expansion of MPAs is, therefore, proposed where there is strong evidence to support this.





8.1.2 Key Evidence Base documents

Key Evidence Base documents for this chapter:

- A baseline description of the benthic assemblages of Les Sauvages reef, Jersey Blue Marine Foundation (2023)
- A valuation of Jersey's Marine Habitats in Providing Ecosystem Services (Blue Marine and New Economics Foundation, 2023)
- An Outline of the Ecology and Sensitivity of Marine Habitats in Jersey (2023)
- Blue Carbon Resources: An Assessment of Jersey's Territorial Seas (2022)
- *East Coast No Take Zone Report* by Société Jersiaise (2022)
- Ecosystems Service Assessment of Jersey's Marine Habitats (2023)
- Information provided to public consultation by Jersey SeaSearch, Société Jersiaise and Blue Marine
- Invasive Non-Native Species: Challenges for the water environment Environment Agency, (2021)
- Jersey Geodiversity Audit British Geological Survey (2020)
- Marine Protected Areas Assessment Methodology (2023)
- NBN Atlas species records (website)
- Ramsar Sites Management Plans
- Seasearch Marine Surveys in Jersey (NBN website)

8.1.3 Legislation and Policy Context

One of the primary purposes of the JMSP, as set out in the Ministerial Delivery Plan is *protecting* and enhancing Jersey's natural environment and heritage by: ... Developing a Marine Spatial Plan to ensure the sustainable management of the Island's marine environment. Strategic Proposal 3 of the Bridging Island Plan states that the JMSP should organise human and marine resources in Jersey's territorial waters, and, in particular, to develop a network of marine protected areas. This desire for improved environmental protection results from both Jersey's acknowledgement of the climate and biodiversity crises, and from international commitments to provide '30 by 30' protection of marine waters, when 30% of waters will be protected by 2030.

As explained in *Section 1.2*, the JMSP forms an overarching strategic framework setting the approach for a range of tools, including land use planning, marine resource management and fishing regulation. The JMSP is not a statutory document, but will give direction to other legislative and policy tools, which will be used to deliver the priorities and actions set out in the JMSP.



8.1.4 Pen Portraits



Marion Walton MA Anthrozoology, Société Jersiaise I have been happiest; sparked alive even, by the sudden breaching of a sea mammal beside the boat and their fluid intelligence as they ride the bow wave. I am in love with their silver grey as it spins out of the water as they play. I have watched in awe as a group of garfish form a glimmering bait ball as a dolphin glides by. I have bubbled in bliss through my snorkel whilst rocking in the clear shallows with sparkling smelt and retreated terrified and joyous at the appearance of a curious seal. I have tried to be invisible as a huge green and orange wrasse has fed below me.

I have cried as a child trying to untangle crabs from a huge net that had ghost fished its way into the bay. I remember my first snorkel as a nine year old and the thrill as a cat shark wound through the water. I remember beautiful fat lipped and enormous goby in our sandpools when we were tiny; they have gone. I have felt huge anger trying to free an eel attached to a weight and broken line under the pier at Grève de Lecq. I bit the line holding it to the weight but there was a huge hook in its mouth and it washed up dead the next day. I have felt anger at the rare ray thrown into the water with its wings cut away. I felt fury when I watched a man throw a small living fish into a plastic bag to die and another who did not know what he had caught.

I feel an increasing sense of loss as the rocks green and the animals disappear. We are losing our life support system and the stunning biodiversity that we and the other animals on this planet need to live. I do not have hope anymore.





Andy and Courtney Farmer, Littlefeet Environmental In Jersey we are always close to the sea, and we gain so much from it — the sound of the waves, the smell of the ocean, sunsets, dog walks, surfing, diving, snorkelling, beers with friends, BBQs with friends, making new friends, remembering old ones, a place to reflect, to mourn, to celebrate or to just sit in peace. The sea shapes where we live, how we work and is a critical component in our everyday lives here and around the globe. It's imperative that our duty to preserve and enhance such a valuable resource is maintained and supported.

With Littlefeet Environmental we have over a decade of beach cleaning under our belts. In that time, we've seen a decrease in domestic waste indicating that the Jersey public, and those visiting our island, are generally proud and responsible individuals who appreciate the diversity of our coastal areas. However, we have seen an increase in mismanaged fishing gear and other aquaculture related waste.

Education is key for us. It is essential that everyone understands the purpose of the work that is being undertaken in Jersey, and on a global scale, to ensure coastal and open water preservation and protection. We need to make certain that data being collected is transmitted through local communities and adapted so that it is understandable and easily implemented into our day-to-day activities, to encourage stewardship and accountability.





Kevin McIlwee, Chair of Jersey Marine Conservation and Seasearch Co-ordinator Exploring Jersey's sub-tidal world is a privilege. Few people, even divers, visit our extraordinary sub-tidal reef systems full of unique and colourful wonders such as Pink Sea Fan coral. Our cameras take only images of artefacts from wreck skeletons, symbolizing our rich maritime history or capturing what a pristine seabed actually looks like. More isolated places reveal ancient riverbeds, glacial deposits, even molluscs that have changed little in physical appearance since early life formed. I peer through the window of my lens at relics of our past times. Fortunately, these snapshots visualize anthropogenic impacts on our marine species and habitats, supporting the protection of seabed areas that could have been destroyed.

Since starting the Jersey Seasearch project, our data has mounted in testimony to the effects of climate change, the impacts of overfishing, pollution and the diminishing biodiversity. Jersey's waters are shallow and subject to tidal flows, contributing to spikes in temperature, oxygen diminishment, microplastics and toxicity. The surveys provide evidence of bleaching, disease and invasive species domination.

There is a growing volume of plastic accumulating in coves and bays and the intensity of potting that targets specific areas is leading to increasing ghost fishing debris. Dumping of scallop shells and chain mooring systems are changing the benthic communities of harbours too. Lastly, the growing boat community and influx of visitors to reef and coast areas, is disturbing mammal and seabird breeding sites and our project now includes the monitoring of isolated outlying communities.





8.2 No Take Zones

8.2.1 Background

A No Take Zone (NTZ) has the highest possible level of protection, where all fishing and the removal of any aquatic resources (defined as any living creature, plant or seaweed) are forbidden. Designation of a NTZ is an extreme measure which must be supported by substantive evidence, and only happens in exceptional circumstances where there is a compelling reason.

At present, the only NTZ in Jersey's waters is at Portelet Bay. It was established in 2022, following a campaign by the Marine Biology Section of the Société Jersiaise, which states:

The objective of having a NTZ in Portelet is to create a natural laboratory that can be used by universities, schools, community groups, visiting researchers and local organisations. It is hoped that the NTZ will facilitate a measurable change in the environmental and ecological health of the bay.

The Portelet NTZ is intended to be a 'natural laboratory' for local and visiting scientists (amateur and professional) but also has a recreation function such as its well-publicised and popular snorkel trail. Recreational craft are still permitted to anchor in the bay.

It is presently too early to tell how the designation of a NTZ at Portelet has affected marine life in the vicinity. However, evidence from longer-established NTZs outside Jersey's waters indicates increased size and abundance of species biodiversity within NTZs, which spills over into the adjoining seas, helping to replenish stocks of fish and crustaceans, and potentially enhancing the ecosystem's resilience to climate change.

8.2.1 Issues

Biodiversity information was provided for three areas, with recommendations for additional protection. These areas were: Les Sauvages (information provided by Blue Marine, Bouley Bay Dive Centre and Jersey Marine Conservation); Archirondel and Anne Port Bays on the east coast of Jersey (information provided by the Société Jersiaise), and Rigdon Bank, to the west of Jersey (information provided by Jersey Marine Conservation and Bouley Bay Dive Centre). All are rich and diverse environments containing habitats and species protected under Jersey and/or international law. However, they have varying levels of available evidence, and reasons for designation. Proposals for each of these areas — given these variations - are set out in the 'Proposed Actions' section below.

8.2.2 Proposed Actions

There is to date limited evidence from Rigdon Bank in terms of the species found there, although dives by Jersey Seasearch and Jersey Marine Conservation have identified diverse algal communities on the plateau, and unique habitats created by the geology of the steep north side. It has similarities with Les Sauvages in that there are crusts of sponges and jewel anemones, some pink sea fans, and it provides habitat for spiny lobster. Rigdon Bank it is not considered to be vulnerable to most types of fishing activity but, as a reef feature with sensitive habitats and species, it is proposed for inclusion within the expanded MPA network *(see section 8.6).*

Similarly, it is suggested that while Archirondel and Anne Port bays have sensitive species and habitats, these are not materially threatened by the fishing activities permitted to occur within these bays. The area is already within (and will stay within) the MPA network, and the JMSP is proposing a new Seagrass Habitat Management Area *(see section 8.7)* which should result in improved management and protection of the bays' most vulnerable habitat.



Les Sauvages Reef has 10 years' worth of survey evidence collected by divers from Jersey Marine Conservation/Jersey Seasearch. It has an outstanding range of species (*described in Evidence Base document EB/NB/11*) including rare and slow-growing species such as sea fans and corals, as well as potential for submerged prehistoric archaeological sites. The steep walls, canyons and overhangs provide habitats for mature pink sea fans, sunset cup corals and suitable breeding sites for crawfish (European spiny lobsters). The reef is visited by larger shark and ray species. The abundance of marine life on the reef is threatened by potting activity in the vicinity, as the pots and lines snag seabed flora and fauna. This forms a compelling reason for its designation as a NTZ under this JMSP, without waiting for further analysis of the Portelet NTZ. The location of the proposed NTZ at Les Sauvages is shown on *Fig. 80*, at the end of this chapter.



*Kelp habitat at the western side of Les Sauvages Reef.*Paul Chambers



Pink sea fan, Les Sauvages Reef.



Detailed bathymetric model of Les Sauvages Reef. Jersey Marine Resources





Priority NB1: No Take Zones

To support current and future No Take Zones for the most important and valuable marine resources.

Action NB1a:	The existing No Take Zone at Portelet Bay will be retained, and will continue to be monitored. Monitoring will include assessment of damage to the seabed from current anchoring practices, and recommendations to minimise damage will be made accordingly.
Action NB1b:	A new No Take Zone will be designated at Les Sauvages, with the boundary determined following a review of the evidence against agreed criteria.
Action NB1c:	Subject to the impacts and effects of the Portelet Bay and Les Sauvages No Take Zones being found to be positive, further No Take Zones will be considered within Jersey's waters. These should be targeted to achieve social and biodiversity goals.

8.3 Ramsar Sites

8.3.1 Background

Ramsar Sites are wetlands designated for their international importance under the Ramsar Convention. Within Jersey's territorial limits there are Ramsar sites in the south-east reefs, Les Écréhous, Les Pierres de Lecq (Paternosters) and Les Minquiers **(shown in Fig. 8a).** Each has a Management Plan which is intended to promote 'conservation and wise use' of the wetlands and their resources.

8.3.2 Issues

Although Ramsar sites are internationally recognised for their importance, and are also identified in the Bridging Island Plan (BIP), they do not have statutory protection. In addition, the Ramsar Site boundaries were based on the evidence available at the time (the late 1990s) and so do not include all areas since identified as being valuable habitats listed under the OSPAR convention. There is currently a discontinuity of management between the Ramsar sites and the MPA, and the Ramsar sites are particularly vulnerable to recreational disturbance and removal of vegetation and soil. The south-east reefs may also be affected by shoreline management, specifically coastal defence measures in and around Havre des Pas.

8.3.3 Proposed Actions

The existing Ramsar Sites should be retained, and given legal protection through the encompassing MPA designation. They should also be integrated into the surrounding MPAs in terms of their management.



8.4 Sites of Special Interest (SSIs)

8.4.1 Background

Ecological and geological Sites of Special Interest (SSIs) are legally protected as the best examples of Jersey's natural heritage. As shown in *Fig. 8a,* some coastal Sites of Special Interest (SSIs) extend into the intertidal zone, as follows.

Le Petit Étacquerel (geology) Les Landes de l'Est (ecology) La Cotte à la Chèvre (geology) Île Agois (geology) Sorel Point (geology) Giffard Bay (geology) Belle Hougue Caves (geology and ecology) Les Rouaux (geology)

Bouley Bay and Les Hurets (geology)
L'Islet (geology)
La Tête des Hougues (geology)
Anne Port Bay (geology)
Mont Orgueil (ecology)
La Motte (Green Island)
Le Croc and Le Nez (geology)
Portelet Bay (geology)

A recent Geodiversity Audit for Jersey (2020) undertaken by the British Geological Survey identified additional sites that qualify for listing as geological SSIs. Intertidal/Coastal sites proposed for listing in 2025 include:

St Ouen's Bay Peat Beds

- Fliquet Bay
- Noirmont Point
- **Bonne Nuit Bay**



8.4.2 Issues

The main concern at present is the lack of consistent monitoring of SSI condition, particularly for ecological and archaeological SSIs, including those which extend into the intertidal area. This is an especial concern in SSIs which are in private ownership. Without this monitoring it is not possible to know whether additional management is required. Nor is there currently any co-ordination of ecological, geological or archaeological expertise within the management of the SSIs.

8.4.3 Proposed Actions

A programme of co-ordinated monitoring should be put in place for SSIs within the intertidal area, with input from geologists, ecologists and archaeologists. Management should reflect the findings of this monitoring.

Note *Priority CH3* (Coastline adjacent to prehistoric coastal sites) also relates to coastal SSIs.

Priority NB3: Intertidal Sites of Special Interest

To promote sound and sustainable management of intertidal Sites of Special Interest (SSIs), and to consider the expansion of the SSI network.

Action NB3a:	Existing SSI designations will be retained and protected through the appropriate management and regulation of potentially damaging activities.
Action NB3b:	The SSI network should be reviewed by Government against agreed criteria, and expanded to include further suitable sites and/or extensions of existing sites.
Action NB3c:	Condition monitoring should be put in place for all SSIs not currently monitored, including those in private ownership.

8.5 Marine mammals and birds, and Areas of Special Protection (ASPs)

8.5.1 Marine Mammals

Cetaceans (whales, porpoises and dolphins) including harbour porpoises, and seals, are found within Jersey's waters. All are protected species under the Jersey Wildlife Law and covered by several international agreements including the ASCOBANS and OSPAR Conventions. Recorded dolphin and porpoise activity, and seal haul sites, are shown on *Fig. 8b.* Jersey has the largest pod of bottlenose dolphins in Europe which lives permanently in the region and this is a selling point for tourist companies offering Rigid Inflatable Boat (RIB) trips. Recent hydrophone research suggests that the Paternosters and Les Minquiers are areas where dolphins seasonally aggregate, probably to breed.



Porpoise activity is highly seasonal with an annual winter influx occurring along the north and west coasts. High recorded frequencies of porpoises were noted in locations close to the coast in St Brelade's Bay, Bonne Nuit Bay and Fliquet Bay.

Coastal seal haul sites (where seals haul out of the water to rest) are primarily associated with remote or isolated rocks located in St Ouen's Bay, south-east reefs, and below Mont Orgueil.



Dolphin. Paul Chambers



There are also numerous seal haul sites at Les Écréhous, Les Minquiers and the Paternosters.

Seal haul sites within the offshore and south-east reefs are largely within the Ramsar designation areas. The main threat to marine mammals within Jersey's waters is disturbance from recreation (for example noise, physical disturbance and drones), particularly in areas which are popular with visitors such as Les Écréhous. These activities are, therefore, controlled in some locations through ASPs.



Seals, Les Écréhous.



Fig. 8b Marine mammal activity (based on hydrophones and sightings) Note — These maps are based on the current available data



8.5.2 Marine Birds

Jersey's waters provide a home to migratory and non-migratory seabirds, including protected species such as brent geese, Balearic shearwater and roseate tern.

Breeding bird species include oystercatcher, common tern, herring gull, great black-backed gull and rock pipit. *Fig. 8c* shows the recorded locations of bird resting sites and roosting sites, and areas visited by wading birds, within the intertidal and sub-tidal areas. Bird roosting sites include around Elizabeth Castle, parts of the south-east reefs, Les Écréhous, Les Minquiers, and isolated cliffs. Breeding birds are generally found in locations where they are not disturbed by human activity or by avian or mammalian predators. Bird resting sites are more common, and occur throughout the offshore reefs and around Jersey's coast.

Although bird nesting sites on cliffs are above the high tide mark (and, therefore, technically outside the scope of the JMSP), these birds spend much of their time within the adjacent marine environment, and rely on it for food. There is, therefore, a very strong association between the marine and terrestrial environments in this regard. The 'Birds on the Edge' project focuses on the creation of a Seabird Protection Zone covering the nesting sites of puffin and other key species on the cliffs between Grève de Lecq and Grosnez, involving the proposed construction of a rat-proof fence running along the cliff and down to the sea through the intertidal area.

Wading birds are particularly associated with the shallow sandy bays of St Aubin's Bay, the Royal Bay of Grouville, St Catherine's Bay, Anne Port, Archirondel, Havre des Pas, and sandy patches within the southeast reefs. Birds found here include oystercatcher, sanderling, turnstone, grey plover and curlew.



Puffins.
Mick Dryden

Many of these wading birds are migratory, with brent geese, sanderling, turnstone and grey plover all examples of species which over-winter in Jersey, but return to the arctic in the summer to breed. Other migratory species pass through in the autumn, including sooty shearwater, Manx shearwater, Balearic shearwater, storm petrel, sandwich tern, common tern, kittiwake and little gull. Migratory passerine (perching) birds — including goldcrest, firecrest, chiffchaff and willow warbler — use patches of tree mallow vegetation on the offshore reefs for cover whilst they rest. They also feed on the many insects found in and around the flowers and leaves of the tree mallow.

8.5.3 Areas of Special Protection

Areas of Special Protection (ASPs) are designated by Order under the Wildlife (Jersey) Law 2021 in order to provide protection within a given area for named species of wild bird, animal or plant. The effect of designation may be to restrict access to the area and/or to prohibit certain activities likely to cause disturbance. ASPs can be seasonal, rather than permanent, and may be used, for example, as a means to protect the breeding activities and young of protected species.



At present, ASPs are designated to protect wild birds such as common tern, roseate tern, oystercatcher, European shag and great cormorant. ASPs on Les Écréhous and Les Minquiers currently apply for the nesting season (from February/April until the end of August). During this time only authorised people are permitted to enter a designated breeding area. Each breeding area is clearly marked on the ground with signage and information advising of the restrictions on access. A range of recreational or commercial activities that risk causing disturbance to the nesting birds are restricted within the ASPs. These activities include:

- operating a vessel at a speed of 5 knots or more (except in the case of an emergency)
- bringing a dog onto land (unless authorised in writing by the Minister)
- using or operating an unmanned aerial vehicle (unless authorised in writing by the Minister)
- using or operating a laser
- discharging a firearm or ceremonial gun
- lighting fireworks
- lighting fires (except barbecues)
- playing any recordings of bird songs and calls or other sounds which may attract, alarm or otherwise disturb a protected wild bird
- playing music at a volume which may alarm or otherwise disturb a protected wild bird

8.5.4 Issues

Localised disturbance of both seabirds and mammals is an ongoing issue, with concerns including disturbance of wading birds by dogs, disturbance of nesting birds by coastal recreation, and disturbance of birds and seals by drones. Nesting birds are also threatened by rats, which increase predation pressures on eggs — hence the 'Birds on the Edge' project. A further area of concern is death or injury to marine birds following entanglement in nets, particularly when the nets are not used correctly. This issue was raised frequently throughout the public consultation on the MSP, and there have been recent high-profile incidents in which birds have become entangled in nets. There have also been reported issues of seabirds becoming entangled in lost/abandoned fishing gear such as monofilament line.

Marine mammals and birds are likely to be particularly affected by climate change. Warming seas support different species of fish, and this in turn affects the availability of food for cetaceans and seabirds. The changing climate may also impact on migratory patterns. This is a particular concern given that many of Jersey's marine species are at the northern or southern edge of their ranges. It is likely that some species may leave Jersey's waters, but also that new species may come in. There are, for example, around twenty fish species that have either arrived in Jersey waters in the past 50 years or have gone from seasonally to permanently resident. Whilst addressing these wider issues is beyond the scope of the JMSP, it is important to acknowledge the background stress on many marine populations. This stress makes them more vulnerable, and, therefore, more in need of protection through measures that are in our control. It is also important that birds and mammals which use both land and sea do not 'fall between the gaps' of terrestrial and marine planning and understanding.

8.5.5 Proposed Actions

ASPs have only been introduced recently (at Les Écréhous and Les Minquiers), and so there is no data yet on their effectiveness. There are currently three further areas which are experiencing very localised disturbance of wildlife, and which have been identified as priority areas for ASP designation. These are shown on *Fig. 80* (at the end of the chapter) and comprise:

- Puffin and auk nesting sites on the cliffs west of Grève de Lecq (associated with the Birds on the Edge project) which are being disturbed by people using the area for recreation.
- Petit Port, where roosting birds and shelduck are being disturbed by inshore fishing.
- Seal haul sites on Les Écréhous, where seals are being disturbed by people using the area for recreation.

Enforcement of ASPs largely relies on public co-operation, so a comprehensive programme of public education is also required regarding appropriate behaviours around wildlife. Relevant user groups (for example reefs residents' associations and boat trip operators) should be consulted when ASPs are being considered.

Priority NB4:	Priority Areas for designation as Areas of Special Protection (ASPs)					
To identify priority areas for the further protection of wildlife through the designation of additional Areas of Special Protection						
Action NB4a:	Sites at Petit Port, Les Écréhous and at the proposed Seabird Protection Zone should be considered as priorities for designation as Areas of Special Protection in order to counter the threats to wildlife. Relevant user groups (for example reefs residents' associations and boat trip operators) should be consulted when ASPs are being considered					
Action NB4b:	The effectiveness of ASP designation should be monitored and reviewed.					

See also **Priority RT5 in Chapter 11** regarding regulations governing dogs on beaches, **Priority RT6 in Chapter 11** regarding education of coastal users, and **Priority FA2 in Chapter 9** regarding potting and netting equipment.



8.6 Marine habitats and Marine Protected Areas

8.6.1 Background

The variety of conditions (geology, sediment, water depth, tides and currents) means that Jersey's waters contain an extraordinarily rich diversity of habitats. *Fig. 8d* is a simplified habitats map of Jersey's waters, showing the habitats grouped into 14 categories. These habitats are described in the following pages. Seagrass beds, maerl beds and kelp forests (found within some parts of the rock-kelp habitats shown on *Fig. 8d*) are priority habitats under the OSPAR Convention and should be protected according to the requirements of Annex V of the Convention. Ross worm habitats are also listed under the OSPAR Convention. Historically, ross worm habitats have been present within Jersey's waters, but their current extent and state is unknown.

Intertidal habitats	Predominantly shallow sea habitats	Predominantly deep sea habitats
• Rock – barnacle communities	• Sediment – seaweed	• Sediment – robust fauna
• Rock – seaweed communities	 Sandmason worms 	• Hard ground – unstable
 Rock pool communities 	• Seagrass beds	• Hard ground – stable
	• Sediment – sparse fauna	
	• Sediment – rich fauna	
	• Rock – kelp	
	• Maerl beds	
	 Slipper limpet beds 	

As can be seen in *Fig. 8d,* the habitats form an intricate pattern. In many cases, their precise boundaries and location fluctuate over time, in response to changing environmental conditions. The habitats are closely interrelated and all play a different role in the overall functioning of the marine ecosystem. Each habitat provides a unique combination of benefits from nature.





8.6.2 Intertidal habitats

Rock – barnacle communities

This habitat is primarily intertidal and consists of exposed rock surfaces that are dominated by barnacle communities, typically *Semibalanus balanoides*. Limpets, dog whelks and sparse seaweed communities are also associated with this habitat.





Rock – seaweed communities

This habitat covers large areas of the reefs around Jersey's coast, as well as the offshore reefs. It is primarily intertidal and occurs where dense seaweed communities cover rock surfaces. Typically, this habitat is characterised by fucoid seaweeds (wracks) but there is also a high diversity of red and green seaweeds. Other species associated with this habitat are limpets, barnacles, winkles and beadlet anemones.



Rock pool communities

This habitat is found within the reefs around Jersey's coastline, and at the offshore reefs. Rockpools are seawater filled depressions in the intertidal zone and consist of pools in a variety of shapes, depths and sizes. These pools support a range of intertidal species and are typically characterised by seaweeds such as *Corallina officinalis*, encrusting algae, *Furcellaria lumbricalis*, and wracks (*Fucus* spp.). Some rockpools may have a layer of sediment at the bottom in which burrowing species, such as the daisy anemone, can be found.



8.6.3 Shallow sea habitats

Sediment - seaweed

The most extensive areas of this habitat are found in Les Minquiers. Smaller areas are found at Les Écréhous and the coastal reefs. This habitat is composed of mixed sediments and is typically found in the shallow subtidal area (from the sublittoral fringe to approx. 5m below chart datum). *Sargassum muticum* is strongly associated with this habitat where, in areas of shallow standing water over sediment, it anchors to small rocks and pebbles in the sandy sediment. Species such as bootlace weed, sugar kelp and various red algaes are also associated with this habitat.





Sand mason worms

This habitat is mainly found around Jersey's coast, particularly in (or just offshore from) sandy bays, with a small amount also found at the offshore reefs. It comprises coarse, medium and fine sands that are characterised by the tube building sand mason worm *(Lanice conchilega)*. This habitat can be found in both intertidal and subtidal sediments. The ecosystem services of sand mason worms are similar to that of basin sand and gravel (see above) as this is the substrate they are found on. However, the presence of sandmason worms stabilises sediments and increases the flow of many services, such as primary production, nutrient cycling and biodiversity.



Seagrass beds

Seagrass is found in a small number of sheltered bays around Jersey's coast. The most extensive areas are found in St Catherine's Bay, Archirondel and Anne Port, and off the south-east reefs. There are also smaller patches in St Aubin's Bay and Portelet Bay, and at Les Écréhous and Les Minquiers Reefs. Seagrass is an angiosperm (flowering plant) that has adapted to live in the ocean, growing in intertidal and shallow subtidal areas that are relatively sheltered. *Zostera noltii* grows in the intertidal area and *Zostera marina* grows in the shallow subtidal area. The root structures of the seagrass help to stabilise the sediment and the canopy formed by the blades provides shelter for many species. *Section 8.7* provides more information on the threats to seagrass habitats, and sets out priorities and actions to protect it through the establishment of Seagrass Habitat Management Areas.



Sediment – sparse fauna

This habitat occurs in relatively small extents over much of Jersey's waters (though less in the southwest and central parts). It is associated with high energy environments. It comprises clean mobile sands (coarse, medium and fine) supporting a limited range of species. This habitat group includes barren, highly mobile sands and shingle at one end of the spectrum and relatively stable, clean sands at the other that support communities of isopods, amphipods and some polychaetes.



Sediment – rich fauna

This habitat is found in the shallower waters on the eastern side of the Bailiwick. It is primarily associated with sandy coastal bays and undersea basins. It comprises moderately exposed and sheltered subtidal sediments (fine sands and muds with gravel and pebbles) that are characterised by a diverse assemblage of burrowing polychaetes, bivalves, amphipods. Many of the burrowing species are tube building filter or deposit feeders.





Rock – kelp

Kelp habitats are found around Jersey's north and west coasts, off the south-east reefs, and the shallow seas around Les Écréhous, Les Minquiers, Les Anquettes and the Paternosters. Rock substrate is dominated primarily by kelp (Laminaria spp.) but also associated seaweed species. Kelp is a fastgrowing brown algae that creates habitat for other species. Kelp forest (dense kelp areas) and kelp park (patchy kelp areas) have been grouped for this assessment as they provide similar ecosystem services. Further work is needed to groundtruth the habitat map and understand the variations within kelp habitats. Kelp forest is an OSPAR priority habitat due to its role in supporting biodiversity and its role in the carbon cycle.



Maerl beds

Maerl beds occur primarily in shallow waters off the south coast of Jersey, and along the edges of the offshore reefs. The largest known area is associated with Les Anquettes reef. Maerl is a free growing, coralline red alga that forms nodular and branched structures on the sea floor. These nodules create dense accumulations on the seafloor that provide structure and habitat for many other species. This habitat is characterised by diverse burrowing communities, in particular bivalves, including the commercially important king scallop (*Pecten maximus*). Maerl Beds are an OSPAR priority habitat due to their role in supporting biodiversity.







Slipper limpet beds

The largest area of slipper limpet beds is found in the south-eastern corner of the Bailiwick, east of Les Minquiers. Smaller beds are found to the south of St Aubin's Bay and to the east of Jersey. The American slipper limpet (*Crepidula fornicata*) is an invasive non-native species which colonises medium and coarse sand or gravels on moderately exposed coasts. The slipper limpets grow in chains on the seabed and can rapidly colonise an area, altering the biotope. Ascidians and anemones may grow on the shells of dead slipper limpets.

8.6.4 Deep sea habitats

Sediment – robust fauna

This habitat is generally found in Jersey's deeper waters. It is associated with relatively high energy sedimentary environments, where it covers quite large areas of the seabed. It comprises moderately exposed or tide swept subtidal coarse sand and gravel that is characterised by robust burrowing species such as bivalves, polychaetes and mobile crustacea. Certain species of sea cucumber may be prevalent in areas of this habitat.





Hard ground – unstable

This habitat is generally found in relatively deep and high energy waters, where the seabed contains little sediment. The greatest extent of this habitat is found between Jersey and Les Minquiers. This habitat is very different in its faunal assemblages compared to stable hard ground (below) as the unstable nature of this habitat limits colonisation to fast-growing and robust species. This biotope is typically characterised by a few robust, fast-growing species that are able to colonise pebbles and cobbles that are regularly moved by tidal currents. The calcareous tube worm, *Pomatoceros triqueter,* is a dominant species on this habitat.



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Hard ground – stable

This habitat is found in relatively deep, high-energy waters with a seabed formed of relatively stable bedrock and boulders. The greatest extents are in the south-west part of the Bailiwick. It comprises moderately exposed circalittoral bedrock and boulders dominated by encrusting sponges, ascidians, hydroids and bryozoans. This habitat also supports a diverse number of anemones, echinoderms, crustaceans and soft corals such as pink seafan (*Eunicella verrucosa*) and dead man's fingers (*Alcyonium digitatum*).



8.6.5 Benefits from Nature

As explained in *Chapter 6* above, benefits from nature (also known as 'ecosystem services') can be classified into three groups (provisioning benefits, regulating benefits and cultural benefits), underpinned by supporting benefits. The following table shows the many different benefits provided by Jersey's marine environment.

Table 8a Benefits from nature provided by Jersey's marine environment.

Type of benefit	Examples of benefits				
Supporting benefits	 Formation of habitats Nutrient cycling Water cycling Photosynthesis (production of oxygen) Primary production (supporting the complex food web through marine biomass) 				
Regulating benefits	 Formation of barriers to currents or wave actions (e.g. kelp habitats) Pollutant capture Regulation of water and sediment quality Carbon sequestration Healthy climate and climate regulation Beach replenishment and prevention of coastal erosion 				
Provisioning benefits	 Food (fish and shellfish, at all stages of their lifecycles) Fertilizer Medicines and blue biotechnology Renewable energy 				
Cultural benefits	 Tourism/recreation/nature watching Spiritual/cultural wellbeing Aesthetic benefits Education Archaeology and heritage 				



Each of the habitats described in *section 8.6.4* above provides different combinations of benefits to people, and to the marine ecosystem. These are summarised in the following table (ranked in order, with the highest overall score first) and in *Figs. 8e–8i*. The scoring basis is explained in full in the *Ecosystem Services Assessment of Jersey's Marine Habitats [Evidence Base document EB/NB/8]*

Table 8b: Benefits from nature scores for Jersey's marine habitats. OSPAR listed habitats are shaded in blue.

Habitat type	Supporting benefits score/12	Regulating benefits score/12	Provisioning benefits score/8	Cultural benefits score/8	Total benefits score/40	Notes
Seagrass beds (OSPAR listed habitat)	12	9	5	8	34	The importance of this habitat means it is protected under the OSPAR convention. Of all Jersey's marine habitats, it scores the highest in terms of the benefits it provides, with maximum scores for supporting and cultural benefits, and also high scores for regulating benefits. The roots of the seagrass help it to trap and recycle nutrients (and carbon), and stabilise sediments. The canopy of blades provides food and shelter for many species (including juveniles of commercial species such as bream). These in turn attract foraging wading and migratory birds. Seagrass creates a unique and rich seascape on what would otherwise be bare sediment. Its blades also help to dissipate wave energy and trap sediment. Seagrass habitats attract recreational divers, snorkelers and spear fishers, as well as bird watchers. The jade green colour of seagrass is very distinctive.
Rock – seaweed	12	5	6	8	31	This habitat has the second highest score overall for benefits from nature. Its contributions are particularly high for supporting and cultural benefits. It is also important for its regulating and provisioning benefits. Historically it has played an important role providing seaweed to use as fertilizer, and it remains an environment for low water fishing.
Sediment – seaweed	11	5	4	8	28	This habitat is particularly important for supporting and cultural benefits. The seaweed floats in shallow water, creating a canopy under which many species of fish and invertebrates will shelter and forage. The number of species living in the seaweed attracts intertidal birds, with opportunities for birdwatching. Snorkelling offers further recreational (and educational) opportunities.



Habitat type	Supporting benefits score/12	Regulating benefits score/12	Provisioning benefits score/8	Cultural benefits score/8	Total benefits score/40	Notes
Rock – kelp (OSPAR listed habitat)	11	3	5	6	25	This is a relatively high-scoring habitat in terms of the benefits it provides, particularly for supporting, provisioning and cultural benefits. It makes an important contribution to nutrient cycling and carbon storage, and provides structure on the sea floor which helps to support higher levels of biodiversity. Kelp fronds stand around a metre tall above their rocky bases, and support seaweeds and encrusting organisms, creating a unique assemblage, and enabling high levels of photosynthesis. Kelp habitats are important nurseries and foraging grounds for commercial fish and shellfish species, and kelp has historically been used as a fertilizer. It is a popular and attractive environment for snorkelling, and also for education, where it is used as an example of an 'ecosystem engineer'.
Maerl beds (OSPAR listed habitat)	11	4	4	6	25	Maerl beds provide many benefits, particularly supporting and cultural benefits. Maerl is an ecosystem engineer which forms a complex 3D structure on the seafloor, creating habitat for many infaunal and epifaunal species, which in turn support greater overall biodiversity. Maerl creates a unique and attractive seascape, with a dominance of pink/purple colour. It is associated with algal and burrowing species, some of which are visible from the surface. Maerl can build up into a dense layer, trapping sediments below. It can also absorb high levels of phosphorous, and supports filter feeding organisms which improve water quality. It supports the commercially important king scallop in all stages of its life-cycle as well as other bivalve species which may be consumed as food. Maerl beds are also popular with recreational divers, due to the colourful and attractive underwater seascapes created by the maerl and the species living on it.
Rockpool communities	11	1	3	8	23	This habitat scores highly for supporting and cultural benefits. It provides a habitat for many different species, and some of these (such as lobsters, ormers and seaweeds) are suitable for human consumption. It is also important for tourism, recreation and education.


Habitat type	Supporting benefits score/12	Regulating benefits score/12	Provisioning benefits score/8	Cultural benefits score/8	Total benefits score/40	Notes
Hard ground – stable	10	3	3	7	23	This habitat creates a complex and diverse seascape where substrates are colonised by a multitude of encrusting and filter-feeding species which create a 3D structure which supports many other species. Some of Jersey's rarer species are found here, such as sunset cup corals and pink sea fans, both of which are protected species. Adding to the rich colours of the underwater seascape are jewel anemones and sponges. Many species live in the crevices in the bedrock and in gaps between boulders, including the commercially-important lobster. Crab and lobster will both forage and seek shelter in this habitat and it is targeted by static gear fisheries. The filter-feeding organisms aid in the filtration of water, and its fauna are a food species for many other species, including black bream. Several of Jersey's most spectacular dive sites occur on this habitat, such as Les Sauvages and Rigdon Bank. In addition to supporting local fishery species, it provides an opportunity to educate the public about marine biodiversity, and its sponges could potentially contribute to future biotechnology and/or medicines.
Sand mason worms	9	5	1	6	21	This habitat is particularly important for the supporting and cultural benefits which it provides. Epifaunal and mobile species live amongst the tubes created by the sand mason worms, including daisy anemones, spider crabs and gobies.
Sediment – rich fauna	8	6	2	4	20	This habitat makes a notable contribution to supporting, regulating and cultural benefits. It harbours many infaunal species, including filter feeders and bioturbators (which contribute to water and sediment quality) and is an important component connecting other habitats. It is located in areas associated with carbon storage, and may also play a part in replenishing beaches. The habitat also contributes to provisioning services, as it supports scallops, whelks, spider crab, brown crab, flat fish and rays. It is targeted by scallop dredgers and divers, and whelk potters, to supply local markets.

Habitat type	Supporting benefits score/12	Regulating benefits score/12	Provisioning benefits score/8	Cultural benefits score/8	Total benefits score/40	Notes
Rock – barnacle	6	2	0	6	14	This habitat is important for dissipating wave energy, and creates a distinctive and varied seascape. It contributes to Jersey's visual beauty, and also to education and research. It therefore scores most highly for supporting and cultural benefits.
Sediment – robust fauna	5	3	1	4	13	This habitat scores relatively low for the benefits it provides. The wide areas of gravelly sand form a very basic underwater seascape with few features to provide complexity or shelter, and relatively low biodiversity. However, it connects other habitats, and may also contribute to beach replenishment. It also provides habitat for sand eels, which are food for many other species (including commercial species) and attract diving seabirds such as gannets and puffins. Some areas of this habitat may support dense aggregations of King scallop that are commercially important locally. It also contains a moderate amount of inorganic carbon and is of importance in the carbon cycle. The habitat has been the focus of several research projects, including one to increase understanding of how the habitat is supporting the local puffin population.
Sediment – sparse fauna	5	2	1	4	12	This habitat has a relatively low score for its provision of benefits. Because this habitat is highly mobile there is little opportunity for species to colonise the sediments. However, it does provide habitat for species such as sand eel, which in turn are a prey source for other species, including commercial species such as bass. The habitat may also play a part in replenishing beaches, and has been the focus of several recent research projects.



Habitat type	Supporting benefits score/12	Regulating benefits score/12	Provisioning benefits score/8	Cultural benefits score/8	Total benefits score/40	Notes
Slipper limpets	5	2	1	2	10	This habitat has a low benefits score, and poses a threat to other habitats. Slipper limpets are filter feeders, so have a role in nutrient cycling, but they can compact sediments, preventing the transport of nutrients to and from the sediments. Slipper limpets can render the substrate uninhabitable for species previously living there, particularly when they colonise maerl beds. They can complete with other molluscs such as the commercially important King scallop, and also negatively impact on the density of juvenile common sole. They are a classic example of invasive species colonisation (useful as an educational example) and do not create an aesthetically-pleasing seabed environment.
Hard ground – unstable	5	0	1	1	7	This habitat has the lowest overall benefit score of any of the habitats in Jersey's waters. It has relatively low biodiversity, with most species being robust and fast-growing. In Jersey it is typically characterised by barnacles, encrusting coralline algae and bryozoans. It forms a very basic seabed environment, but is known to be used by black seabream to build nests in which eggs are laid. Scallops are also associated with this habitat, but are dived (in shallower areas) rather than dredged due to the rough terrain.

* OSPAR listed habitat Note — current available evidence for Jersey's waters does not distinguish between kelp forest (listed under the OSPAR Convention) and other kelp habitats, but all have high biodiversity value.





Fig. 8e: Distribution of Supporting benefits from nature.



Fig. 8g: Distribution of Regulating benefits from nature.



Fig. 8f: Distribution of Provisioning benefits from nature.

Fig. 8h: Distribution of Cultural benefits from nature.

All maps from the Ecosystem Services Assessment of Jersey's Marine Habitats [Evidence Base document EB/NB/8]





Fig. 8i: Combined benefits from nature.





8.6.6 Blue Carbon

Blue carbon refers to the capture and storage of carbon within the marine environment. Introductory information is provided in *Chapter 6.*

Jersey's Carbon Neutral Strategy recognises that Blue Carbon resources may have a role to play in the island's long-term planning, and therefore commissioned the report titled *Blue Carbon Resources: An Assessment of Jersey's Territorial Seas* (2022) *[Evidence Base document EB/NB/7].* The information presented in this section of the MSP is taken from the *Blue Carbon Resources* report. It is important to note that the report only relates to the offshore marine area, and does not cover intertidal areas.

Carbon may be organic (stored within living plants and animals) or inorganic (held in the carbonate which forms shells, tests and other organicallyderived debris). In Jersey's territorial seas, the estimated stock of inorganic carbon is over 100 times greater than the estimated stock of organic carbon. This reflects the high carbon content of local sediments which, in turn, reflects a high rate of biological productivity and strong tidal currents (which may transport shell material and debris considerable distances). Within Jersey waters it is only sedimentary habitats that can effectively accumulate carbon as areas of bedrock, boulders and cobble have little or no sediment cover to bury and preserve carbon.

The *Blue Carbon Resources* Report identifies and maps four different classes of blue carbon resources, based on the habitats found in Jersey's waters. These are shown on *Fig. 8k* (taken from the *Blue Carbon Resources* Report) and summarised below.



Fig 8j The geographic distribution of the four Blue Carbon classes. The dashed line represents the 15m depth contour. From Blue Carbon Resources — An Assessment of Jersey's Territorial Seas (2022) p. 38



Table 8c: Blue Carbon classes within Jersey's marine environment.

Class	Summary	Associated habitats (subtidal only)
BC1: High production; low accumulation	Habitats with high productivity/standing stock for organic carbon, but a low productivity/ standing stock for inorganic carbon, and a low accumulation potential. This class is dominated by biotopes that are rich in large, fast-growing seaweed species (e.g. kelps and wracks) which require sunlight and therefore shallow water. Notably important areas are Jersey's coastal rock fringe (especially the north and west of the island) and the offshore reefs.	• Rock-kelp
BC2: High organic carbon accumulation; moderate inorganic carbon accumulation	This class is dominated by stable sedimentary habitats with moderate to high carbonate content, Sediment Accumulation Rate (SAR) and productivity. They may be notably diverse and include important biogenic habitats. Most are within Jersey's sedimentary basins and the stable sedimentary areas to the north of Les Écréhous and Dirouilles. All have a mix of high energy sand and gravels with may have a high carbon content due to shell debris.	 Maerl Seagrass Sediment – rich fauna Sediment – robust fauna (within basins)
BC3: Low production and stock of organic carbon, but high standing stock of inorganic carbon	Sedimentary habitats which contain the greatest standing stock of carbon (by weight) in Jersey waters, almost all of which is inorganic in nature and mostly derived from legacy and/or reworked carbonate material. Class B3 areas represent a major repository (temporary and permanent) of inorganic carbon. They need to be managed to maintain their standing stock of carbon and their functioning to ensure that historic inorganic carbon is not released back into the atmosphere.	 Sediment – robust fauna (outside basins); Sediment – sparse fauna; Slipper limpet beds
BC4: Low productivity; low accumulation	These areas cover the largest geographic area, and generally include areas of deeper water with fewer plants. The hard seafloor and lack of permanent sediment restricts the potential for blue carbon accumulation.	 Hard ground (stable); Hard ground (unstable)



The *Blue Carbon Report* concludes that the geographic distribution of the four Blue Carbon classes suggest that Jersey's territorial waters contain a coherent and integrated Blue Carbon pathway. Within this, the offshore reefs and sedimentary basins play a particularly important role in terms of carbon production and burial.

A list of potential threats and pressures to Blue Carbon resources was identified, including hydrological changes, physical damage, pollution, biological threats, fisheries and other changes. The threats from fisheries were assessed in more detail, with results suggesting that static fishing using pots is localised, with a probably minimal impact on some sedimentary habitats. In contrast, mobile gear fishing activity is more widespread and offers a higher possibility of seabed disruption, including in some potentially valuable Blue Carbon areas. The destruction or disruption of habitats with a high carbon accumulation potential (e.g. maerl beds and seagrass) will not only reduce the potential for greenhouse gas reduction, but possibly resuspend buried carbon, allowing it to return to the atmosphere.

It may well be that in the future, Blue Carbon resources can become commercialised through 'carbon offsetting' schemes. This is acknowledged in *Jersey's Carbon Neutral Roadmap* (Approved by the States Assembly April 2022), specifically in Strategic Policy 5, and Enabling Policy EN5, as set out below. In introduction to the *Carbon Neutral Roadmap* is provided in *section 4.4.4*.

Carbon Neutral Roadmap — Strategic Policy 5: Becoming Carbon Neutral

International markets in offsets are still evolving, and the costs, potential benefits and availability of offsets that would fulfil local aspirations are currently uncertain.

Having committed to a science-led emissions trajectory (*Carbon Neutral Roadmap* strategic policy 1), becoming carbon neutral in 2023 (or at a different date) remains a legitimate step on the pathway to net-zero.

The Carbon Neutral Roadmap will:

- set out the steps that government will take to ensure that Jersey can become carbon neutral.
- provide support for sequestration projects that use local carbon sinks in the terrestrial or marine environment (blue carbon), before the purchase of off-Island offsets; and require funded sequestration projects to contribute to improvements in biodiversity.

Carbon Neutral Roadmap — Enabling Policy EN5: Blue carbon, biodiversity and sequestration

The Government of Jersey will promote Jersey as a centre of excellence for blue carbon sequestration, with an ambition to double the extent of sea grass beds and recognise that tackling the climate emergency by using nature-based solutions that also address the biodiversity crisis provides multiple benefits for our land, air and sea.



8.6.7 Issues

This section summarises the vulnerabilities of the various habitats found within Jersey's marine environment. Full details can be found in *An Outline of the Ecology and Sensitivity of Marine Habitats in Jersey* (2023) *[Evidence Base document EB/NB/10].* Future iterations of the JMSP may consider other factors such as fish disease, water acidification and freshwater input.

The diversity of conditions and habitats within Jersey's marine environment, and the range and variable locations of human activities, mean that there are many different factors at work, and the distribution of these factors is not consistent. It is also important to remember that the various habitats are interrelated, so loss or damage of one can lead to negative effects on another. The habitats support many different species of plants, fish, crustaceans, birds and mammals at different times in their lifecycles, and so the abundance of these species is likely to be affected by loss or damage to the habitats which support them.

Intertidal habitats

Intertidal habitats can be vulnerable to damage by deliberate or careless behaviour by people. If practised sensibly, low water fishing has a relatively low impact, although an issue raised several times during the consultations was people not returning turned stones. It can take five to ten years for a rock to recover its biodiversity after being left the wrong way up. Raking for praire and sandeels can also damage fragile intertidal habitats such as seagrass. Litter (for example monofilament fishing lines, plastic and lost fishing gear) can cause problems, particularly where they entangle or trap fish, crustaceans and birds. Inshore netting can also cause problems for birds and create conflicts with recreational users. Recreation-related threats are addressed more fully in *Chapter 11*.

Pollution is an ongoing threat. Intertidal habitats are vulnerable to one-off incidents (such as oil slicks) and to ongoing activities, such as discharges into the sea. One of the most dramatic current consequences of this is the profusion of sea lettuce in St Aubin's Bay during the summer months, which is associated with organic enrichment from nitrogen-enriched water flowing into St Aubin's Bay from outfalls and streams (in combination with the shape of the bay and patterns of sediment movement within it).

There are further potential threats to intertidal environments from aggregate extraction from sandbanks, and from non-native invasive species. Intertidal aquaculture could potentially threaten intertidal habitats if it is undertaken in areas particularly sensitive to physical disruption.

Shallow water habitats

Many subtidal habitats are threatened by activities which disturb the seabed. The rich shallow water sedimentary habitats containing fragile structures and species (for example seagrass, maerl and kelp forest, all of which are listed under the OSPAR Convention) are particularly vulnerable to damage from mobile fishing gear (trawling and dredging) which scrapes the seabed and disturbs its surface and its subsurface. This destabilises sediment and overturns rocks, burying animals and plants, and killing organisms such as seaweeds, molluscs, crustaceans and sponges. If done repeatedly or in sensitive locations, it can take years for the seabed to recover. If disruption is regular over a prolonged period then some habitats will be unable to recover fully.

Some habitats are also vulnerable to disturbance of the seabed surface, for example through the use of static fishing gear or mooring ropes which can lead to abrasion or damage to surface fauna such as sponges and sea fans. Generally, this impact is localised, but swing moorings can damage seagrass over relatively large areas.

Chemical pollution and mineral extraction are potential threats, but are currently thought to be minimal within Jersey's waters.

There are further threats to subtidal habitats from climate change (including rising sea temperatures, changes in salinity and oxygenation, and rising sea levels). The potential effects of these within Jersey are currently being quantified through a series of research projects. Natural processes, such as the movement of sediment by storms or currents can create major changes to the seabed, which in turn may impact on habitats. A further threat comes from the spread of non-native invasive species such as slipper limpets, which can form 100% coverage of the sea floor and crowd out other species. Other non-native species such as *Sargassum* seaweed and leathery sea squirt can impact some shallow sub-tidal habitats, but to a lesser extent than slipper-limpets. Invasive Non-Native Species are beyond the scope of the JMSP, but are an important issue to be addressed through marine and terrestrial management. More information on Invasive Non-Native Species is provided in *Evidence Base document EB/NB/6.*

Deep water habitats

The deeper water habitats are generally less vulnerable, although they are still threatened by seabed changes. Two of them — sediment with robust fauna, and unstable hard ground, contain relatively few seabed species, are less diverse, and contribute fewer benefits. The third — stable hard ground, contains a much greater diversity of species (including rare and protected species such as sponges and pink sea fans) but it is usually avoided by mobile gear fishers because equipment can snag and be damaged on the rough and rocky seabed.



The following table sets out the sensitivity of the main habitats to the principal threats which have been identified.

- **H** = High sensitivity
- **M** = Medium sensitivity
- L = Low sensitivity
- **X** = Not sensitive
- = insufficient data available
- * OSPAR protected habitat

Table 8d: Habitat sensitivity. Blue shaded columns are actions which can be addressed through marine spatial planning.

	Human actions			Natural/climate related processes					
Habitat	Organic enrichment	Disturbance of seabed surface	Disturbance of seabed subsurface	Invasive non-native species	Seabed change	Sea level rise	Water temperature change	Water salinity change	Water de-oxygenation
Intertidal habitats									
Rock – barnacle	X	-	-	н	н	-	X	-	X
Rock – seaweed	Μ	н	Н	Н	Н	Μ	Μ	Μ	X
Rockpool communities	X	Μ	L	н	н	-	X	Μ	Μ
Shallow water habitats			<u> </u>			<u>.</u>			
Sediment – seaweed	L	Μ	Μ	н	н	-	Н	Μ	Μ
Sand mason worms	X	н	н	н	н	-	Μ	Μ	L
Seagrass *	Μ	н	н	н	н	Μ	Μ	Μ	X
Sediment – sparse fauna	X	L	L	н	н	X	L	L	L
Sediment – rich fauna	X	Μ	Μ	н	н	-	L	Μ	L
Rock – kelp *	Μ	Μ	-	н	н	X	Н	Μ	Μ
Maerl beds *	Н	н	н	н	н	-	Μ	-	Н
Slipper limpet beds	X	L	L	-	н	-	L	-	X
Deep water habitats									
Sediment – robust fauna	X	L	Μ	н	н	-	L	Μ	Μ
Hard ground – unstable	X	L	L	X	н	-	L	L	-
Hard ground – stable	X	L	-	-	н	-	L	-	X



The JMSP focusses on responding to the threats from human actions rather than from natural/climaterelated processes. However, it is recognised that habitats (and the populations which they support) are likely to be stressed by environmental factors, and therefore be more vulnerable to damage from human activities.

Of the human actions identified, the JMSP can only address those which can be reduced through marine spatial planning or management measures (i.e. disturbance to the seabed surface and sub-surface). Organic enrichment is primarily a result of nutrientenriched water flowing into the sea from streams and outfalls, and should therefore be dealt with through land-based planning and management, as set out in the *Bridging Liquid Waste Strategy 2023–26.* [Evidence Base document EB/IT/3].



Fig. 8k: sensitivity to disturbance of the seabed surface.

Figures 8k and 8l below show the sensitivity of the seabed surface and seabed subsurface respectively according to the Marine Evidence based Sensitivity Assessment (MarESA) index. This does not show the current pressures on a particular habitat; rather, it shows the habitats' sensitivity to pressures were they to occur. Although all areas are sensitive to disturbance of the seabed surface to some degree, the most sensitive areas are found in the four shallow water habitats of rock - seaweed, sand mason worms, seagrass and maerl. These four habitats are also the most sensitive to disturbance of the seabed subsurface. Seagrass and maerl are habitats which should be protected under the OSPAR convention. The areas of lowest sensitivity to seabed disturbance are the areas of hard ground, slipper limpets, and sediment with sparse fauna.

Maps from An outline of the ecology and sensitivity of marine habitats in Jersey, Channel Islands, figs. 5.10 and 5.11.



Fig. 81: sensitivity to disturbance of the seabed subsurface.



8.6.8 Marine Protected Areas

Marine Protected Areas currently cover Jersey's north and east coasts, the south-east reefs, St Aubin's Bay, St Brelade's Bay, Les Écréhous and Les Minquiers. The purpose of the MPAs is to protect valuable and vulnerable habitats by preventing damage from mobile fishing gear. This allows the seabed to function naturally, and protects fish populations by allowing spawning grounds and nurseries to thrive.

The existing MPAs do not cover all the relevant priority habitats and species protected under the OSPAR convention, nor do they consider the full range of benefits from nature, or the potential of Jersey's waters for carbon storage, as described in *sections 8.6.5* and *8.6.6* above.

The process of MPA designation under the OSPAR convention is set out in *Fig. 8m* below.

Fig. 8m: Process of MPA designation under the OSPAR Convention.



As a contracting party to the OSPAR convention, the Government of Jersey is prioritising the aims of the OSPAR network of MPAs, which are:

- To protect, conserve and restore species, habitats and ecological processes which have been adversely affected by human activities;
- To prevent degradation of, and damage to, species, habitats and ecological processes, following the precautionary principle; and
- To protect and conserve areas that best represent the range of species, habitats and ecological processes in the maritime area.

8.6.9 Proposed Actions

A key action arising from the JMSP is the creation of a network of MPAs in Jersey's waters consistent with the island's environmental, economic and social objectives. These should also be consistent with the aims of the OSPAR network of MPAs, and in accordance with the recognised process for their designation. The process is supported by robust data, including the analysis of habitats, benefits from nature, blue carbon potential, habitat sensitivity, threats, and economic implications.

The full methodology for assessing the proposed MPA boundaries up to the Public Consultation Draft (stage 8 below) is set out in the Jersey MPA Assessment Methodology (2023) [Evidence Base document EB/ NB/12]. The series of maps below show how the proposed MPA network has been built up. Stage 9 is explained in more detail in the JMSP Public Consultation Response Summary [Evidence Base document EB/G/25].



Fig. 8n: How the proposed Jersey MPA network has been identified.

Stage 1:

Existing MPAs and NTZ (shown in blue)

JMSP principle that there will be no loss of protection from existing levels.



Stage 2:

Ramsar Sites (shown in blue)

Designated and managed as wetlands of international importance, but currently without statutory protection.



Stage 3:

Potential OSPAR habitats (shown in blue)

Areas of seagrass, maerl and kelp (containing areas of kelp forest) which are internationally recognised for their importance to biodiversity



Stage 5:

Drying rocks and islets (shown in blue)

Rich habitats associated with reefs, shoals and channel complexes, and supporting nursery habitats for fish as well as diverse fauna.



Stage 6:

Blue Carbon

Areas of greatest potential to produce and store blue carbon. (The darker the colour, the greater the blue carbon potential).



Stage 7:

Scores for secondary features

Combined results of scoring process for benefits from nature, marine biodiversity and seabed depth (The darker the colour, the higher the score).



Stage 8:

Proposed MPA network from Public Consultation Draft (shown in blue)

The map in **Appendix D** shows how these MPA boundaries were subsequently changed to reflect comments and submissions received through the public consultation process.



Stage 4:

Intertidal and nearshore zone (shown in blue)

Areas of diverse habitat which require close management due to the range of activities being undertaken in the area.





Stage 9:

Post consultation

Proposed MPA taking into account comments and submissions made on the Public Consultation Draft, and including the Jersey-France submarine cable mandatory exclusion corridor. The MPA map is shown at a larger size in **Fig. 80**, along with the areas for



further survey for future MPA designation. Please see **Chapter 9** for seasonally-restricted mobile fishing areas.

The ecology-based part of the classification process shows a concentration of higher-scoring areas around Jersey's coast and in the eastern part of Jersey's territorial seas, with a particular concentration around the offshore reefs, and the sedimentary basin areas between them. The inshore area and the offshore reefs generally score higher in relation to threatened habitats, complexity, depth and benefits from nature, whereas the basin areas often score highly in relation to blue carbon resources and benefits from nature. In reality of course, the areas are closely linked physically and in terms of their functions.

Higher ecological priority for inclusion within the MPAs was given to:

- Areas which scored well in multiple fields
- Seabed areas with a high coverage (>30% of threatened habitats)
- Connectivity to existing MPA sites, Ramsar areas or proximity to drying rocks
- Proximity/connectivity to other high value grid squares
- Proximity/connectivity to shallow water reef areas.

Lower ecological priority for inclusion within the MPAs was given to:

- Areas which score highly in just one or two fields
- Areas with a low coverage of threatened habitats
- Areas whose principal scoring was only for blue carbon, as research in this area remains ongoing

An assessment of marine activities occurring within the proposed MPAs identified high usage for watersports and tourism (especially around Jersey's coastline and during the summer months), leisure boating and recreational fishing (boat and shore based). These activities have a generally low impact on intertidal and subtidal habitats with the exception of permanent moorings which can degrade seagrass areas **(see section 8.7).**

Subtidally, the dominant marine activity within MPAs is commercial fishing. The association of sensitive habitats with rocky reef areas means that the dominant fishing activity in the MPAs is potting, especially for crab and lobster. Additionally, some netting/angling for fish occurs as does diving for scallops. These static gear activities have a low impact on the seabed except at Les Sauvages where ropes, lines and nets have damaged delicate, slow-growing species such as sea fans, sponges, hydroids, cup corals and bryozoans *(see section 8.2).* Issues around ghost fishing and netting are covered in *section 9.5.*

Some parts of the proposed MPAs that are sediment dominated are associated with dredging either for scallops or clams such as praire. These activities are most often concentrated on the reef fringes where maerl, sand mason worms and other sensitive habitats accumulate against rocky outcrops and shoals. These seabed areas have a high benefits from nature (ecosystem services) value but a low resilience and resistance to the surface and subsurface disturbance caused by dredging and other mobile gear. In common with Jersey's existing MPAs, the use of mobile gear presents the biggest threat to the integrity and viability of key habitats such as maerl, seagrass and other sedimentary habitats. It is recognised that the exclusion of mobile gear from the proposed MPAs will require a change in fishing patterns by some vessels. However, it should be noted that in comparison to static gear, mobile gear is the minority fishing activity within the proposed MPAs and that it will remain permitted in 76.7% of Jersey's waters for all or part of the year, including those offshore areas where the majority of dredging and trawling activities occur. It should also be noted that the establishment of MPAs demonstrably builds resilience into stocks leading to wider benefits inside and outside the protected areas.

Detailed economic analysis is provided in A valuation of Jersey's marine habitats in providing ecosystem services Blue Marine and NEF (2023) [Evidence Base document EB/NB/9]. This document needs to be used with care because its calculations don't cover the exact MPA scenario which is being proposed in the final version of the JMSP. but it concludes that over time, there is increased economic benefit from enhanced ecosystem services, even when factoring in a decline in income from mobile gear fishing. A Business Impact Assessment [Evidence Base document EB/FA/8] can be used as a basis to consider economic support for diversification. If diversification is not possible, compensatory measures will be considered for affected fishers within the mobile fishing sector impacted by the expansion of MPAs.

The proposed MPAs are shown in *Fig. 80* at the end of this chapter. They cover 55,265ha, or 23.3% of Jersey's marine area. The MPA network includes the intertidal and nearshore zone, the offshore reefs, and outlying areas at Les Sauvages (also a NTZ), Rigdon Bank and Banc Desormes. In two specific areas within the MPA (on the south-eastern edges of Les Écréhous and Les Minquiers), protection should be phased in to give the fishing community time to diversify their fishing methods and/or find alternative fishing grounds. The offshore boundaries of the MPAs are based on navigable points, so that the boundaries are relatively straightforward to identify at sea.

Two specific inshore areas (off the North Coast and the Corbière banks) will have seasonal restrictions on mobile gear. In these areas, use of mobile gear will only will be permitted in the winter. Due to their noncontinuous closure to mobile gear, these areas are excluded from the MPA. Areas of seasonal restriction are described in **Chapter 9.**

Recognising both Jersey's commitment to 30% MPA coverage by 2030 ('30 by 30'), and the importance of further research (into migratory fish species, seabed habitats, and into the effectiveness of the new MPAs), a number of additional areas are put forward for future consideration for MPA designation prior to 2030. These are also shown on *Fig. 80*, and include the area east of Les Écréhous; part of the basin between Les Écréhous and Les Anquettes, and areas to the east and west of Les Minguiers. Together the areas for further survey total 8,539ha (3.7% of Jersey's waters). More research of these areas — particularly related to migratory fish species, and the location of sensitive habitats such as ross worm habitats, kelp habitats and maerl - is needed to inform decisions on which areas become MPAs in the future. There is also potential to explore the use of biodiversity aids such as artificial reefs to enhance biodiversity within the MPA.

Monitoring of MPAs will be essential to determining their effectiveness and in identifying future areas for MPA designation.





Priority NB5: Marine Protected Areas (MPAs)

To protect the most ecologically-valuable marine habitats through the expansion of the network of Marine Protected Areas, and to support the international obligation to protect at least 30% of Jersey's territorial area by 2030.

Action NB5a: The existing Marine Protected Areas (MPAs) will be extended and linked to cover the inshore area; the offshore reefs (Les Écréhous, Les Minquiers, the Paternosters and Les Anquettes); and parts of the sedimentary basins which contain a high coverage of OSPAR listed habitats. No mobile fishing gear will be permitted to be used within the MPAs.

Action NB5b: Legislation will be revised to give the MPAs a statutory basis.

- Action NB5c: Further research will be undertaken in order to inform the future expansion of the Marine Protected Area network. This will include gaining greater understanding of the distribution of migratory fish species and sensitive habitats and species, as well as the potential consequences of the changed MPA boundaries on habitats and species.
- Action NB5d: Compensatory measures and/or alternatives will be considered for fishers within the mobile fishing sector affected by the MPAs, where considered appropriate, having regard to economic impact assessments.
- Action NB5e: The potential will be explored for using biodiversity aids such as artificial reefs in order to enhance biodiversity within the MPA.
- Action NB5f: Ongoing monitoring of the effectiveness of the MPA will be undertaken, including collaborative working between relevant organisations.

8.7 Seagrass

8.7.1 Background

As mentioned above, seagrass is an extremely important habitat, scoring highest in terms of the benefits from nature which it provides, and also contributing to carbon storage. It supports a wide range of different marine species of fish, crustaceans and — in turn — the birds and mammals which feed on them.

8.7.2 Issues

Seagrass grows in shallow waters, and where it grows close to shore, it is vulnerable to damage by human influences. A particular problem is damage to seagrass from individual boat moorings, where chains can remove seagrass plants over a diameter of 10 to 19m as they swing across the seabed as the tide changes. In St Catherine's Bay, analysis of aerial photography suggests boat moorings have resulted in a cumulative loss of around 6000m² of seagrass¹. Seagrass is also damaged by boat anchors.

Various alternative designs of boat moorings are now available which keep the chain off the seabed as it swings with the tide, either through use of additional floats, or a pole which stands taller than the seagrass and prevents the mooring chain dragging across the seagrass.

Ports of Jersey and Jersey Marine Conservation are currently involved in research to identify the optimum types of seagrass-friendly moorings to use given Jersey's extreme tidal range. It is intended that moorings within seagrass areas will be replaced with seagrass-friendly moorings, and that new visitor moorings of this type will be provided, thereby removing the need to use anchors.

8.7.3 Proposed Actions

Extensive areas of inshore seagrass should be designated as seagrass habitat management areas. There are four locations around Jersey's coast where extensive areas of inshore seagrass occur: St Catherine's Bay, Anne Port and Archirondel; Royal Bay of Grouville; the South-east reefs, and St Aubin's Bay. In these areas (shown on Fig. 80), anchoring should be avoided, and (once research is complete) moorings should be replaced with seagrass friendly moorings. Other management could include restrictions on driving vehicles at low tide, digging, horse riding, and dumping of seaweed. The establishment and enforcement of seagrass habitat management areas would require co-operation between PoJ, Government and other bodies, and may require the updating of existing or new legislation.



Priority NB6: Seagrass Habitat Management Areas

To designate Seagrass Habitat Management Areas in order to promote the protection and regeneration of seagrass.

Action NB6a:	Seagrass Habitat Management Areas should be established in St Catherine's Bay, Archirondel and Anne Port, the Royal Bay of Grouville, South-East Reefs and St Aubin's Bay, where damaging activities will be restricted. It will be necessary to explore options to achieve this objective through change or enhancement of the existing legal framework.
Action NB6b:	Subject to the positive findings of research into seagrass-friendly moorings, their use should be promoted within Seagrass Habitat Management Areas.

Blue Carbon Resources, an Assessment of Jersey's Territorial Seas p.50.



8.8 Marine Environment Visitor Centre

8.8.1 Background

As explained elsewhere in the JMSP, Jersey's marine environment is fundamental to the identity and wellbeing of Jersey's residents, and to the Island's economy and infrastructure. The passion of local people (of all ages) for their marine environment, and their desire to know and understand more about it, shone through in the JMSP public consultation process.

8.8.2 Issues

At present there is no dedicated and public place which people can visit to find out more about Jersey's marine environment. This means that it is not understood or appreciated as much as it could be. In the longer term this could lead to a lack of awareness which affects Jersey's ability to look after its seas, and their associated habitats and marine life.

8.8.3 Proposed Actions

It is suggested that a suitable site is sought for a 'Marine Environment Visitor Centre'. This could function as a focal point for education on all aspects of Jersey's marine environment (for example fishing, seabed and intertidal habitats, cultural heritage and maritime infrastructure). It would cater for visitors to Jersey, and also local residents including school children and local interest groups. The centre should ideally be in a coastal location with parking, and accessible by public transport. Potential partners could include Ports of Jersey, Jersey Heritage, the Jersey Fishermen's Association and the National Trust for Jersey.

Priority NB7: Marine Environment Visitor Centre

To promote a marine environment visitor centre to act as a focus for education for residents and visitors.

and fur	nding identified.
Action NB7b: A suita visitor	ble site should be sought for a marine environment centre.



Commercial Fishing and Aquaculture

Aim: Commercial fishing and aquaculture are sustainable and profitable



Commercial Fishing and Aquaculture

Aim: Commercial fishing and aquaculture are sustainable and profitable

9.1 Introduction

9.1.1 Background

Jersey has a long and proud fishing tradition, and fishing is a core part of the island's culture and identity. Different types of fishing take place across Jersey's waters, with fishing metiers include potting, netting, line fishing, scallop dredging, scallop diving and static oyster farming (aquaculture). Most fishing uses nets or lines within the water column or static pots on the seabed, but there are also boats using mobile fishing gear (trawls or dredges) which are towed across the seabed. Recreational fishing (including angling, low-water fishing and spear fishing) also takes place around Jersey's coastline, and is covered in the Recreation and Tourism chapter (Chapter 11). The priorities and actions in this chapter are primarily concerned with commercial fishing and aquaculture, but where they are also relevant to recreational fishing this has been highlighted. Local seafood (particularly shellfish) is enjoyed in homes and restaurants across Jersey, and is also exported as a high-end product.

However, now is not an easy time for Jersey's commercial fishing community, due to a combination of declining stocks, increased costs and post-Brexit export regulations. There is concern amongst the fishing community that the JMSP will add to their challenges and it is, therefore, particularly helpful that the fishing community has engaged with the process and shared their concerns and their hopes for the future. The JMSP aims to strike a balance between protecting the marine environment and the fish stocks it supports, to ensure there is still a viable living to be gained as a Jersey-based fisher. The recommendations in this chapter aim to facilitate the shared aim of sustainable and profitable fisheries.

🔟 Cover image, Matt Sharp



9.1.2 Key Evidence Base Documents

Key Evidence Base documents for this chapter:

- A People of the Sea: The Maritime History of the Channel Islands Alan G. Jamieson (1986)
- A valuation of Jersey's marine habitats in providing ecosystem services Blue Marine and NEF (2023)
- An Outline of the Ecology and Sensitivity of Marine Habitats in Jersey (2023)
- Blue Carbon Resources: An Assessment of Jersey's Territorial Seas (2022)
- Datasets provided by Jersey Fishermen's Association
- Economic Framework for the Marine Environment (2023)
- Marine Protected Areas Assessment Methodology (2023)
- Marine Resources Annual Report (2021)
- *The Fishing Industry of Jersey* Portsmouth College of Technology (1967)
- *The socio-economic impact of Marine Protected Areas in Jersey: A fishers' perspective* Fisheries research 259 (2023) 106555. Blampied *et al.* (2023)
- Value of coastal habitats to commercial fisheries in Jersey, English Channel, and the role of marine protected areas Fisheries Management and Ecology (2022) 00:1–11. Blampied *et al.* (2022)

9.1.3 Legislation and Policy Context

Jersey's Economic Framework for the Marine Environment (2022) was prepared by the Marine Economy Advisory Group (MEAG) comprising representatives from Jersey's commercial fishers, aquaculture producers and merchants. MEAG's vision is to have a vibrant and sustainable marine sector, providing employment and economic opportunity, and maintaining fisheries and aquaculture as an integral part of the island's cultural identity.

Policy 9 of the Economic Framework for the Marine Environment states:

Government of Jersey will develop a Marine Spatial Planning Strategy, using standardised methodologies and principles, to enable a coordinated plan to manage the marine environment.

The Island Marine Spatial Plan will capture evidence relating to key physical, environmental and socioeconomic aspects of Jersey's coastal and marine area. This will include sectors such as biodiversity, food/energy security, fishing/aquaculture, public utility, climate change, tourism and recreation.

Data will be analysed and assessed to determine how individual areas are used (and by whom), their value (economic, environmental and otherwise) and how they might best be utilised going forwards.

The objective of the plan will be to develop zonal systems (integrated with other GoJ strategies and plans) which are defined by their usage and which identify potentially compatible and incompatible activities.

This will produce an evidence-based spatial model which can be interrogated to assist with decision making in relation to development and management.

As explained in *Section 1.2*, the JMSP forms an overarching strategic framework setting the approach for a range of tools, including land use planning, marine resource management and fishing regulation. The JMSP is not a statutory document, but will give direction to other legislative and policy tools, which will be used to deliver the priorities and actions set out in the JMSP.

9.1.4 Pen Portraits

Members of the Jersey fishing fleet have built up a respected wealth of knowledge of the sea. This comes from their own experience, and from information handed down from generation to generation.

Yannick Pingeon Inshore fisher (lobster and bass) I've been fishing for 17 years. My Dad was a fisherman, so I spent most of my weekends, holidays out with him, I have seen a lot of changes during this time, and a lot more rules and legislation. Some good years and some bad. The sea matters to me as it's part of Jersey's heritage and part of mine. It should be protected, and, with good management, I believe it can be. However, closing off areas and stopping us from targeting certain species only adds more pressure on the other areas and species. There are plenty of areas that are non-fishable during certain times of the year, due to the weather, the swell, the conditions, which therefore naturally protects these zones. In my opinion our fleet needs diversification and as much room as possible for it to thrive. Closing more areas is only going to bury the small industry we have.



Steve Viney and Kevin Singleton — *Scallop fishers* **Steve:** "You've got 60 years of experience here with me and Kevin and I never thought I'd stop fishing but with all these constraints I question whether I will see my career out. It's been a roller coaster last few years, with Brexit and Covid. Following Brexit we have been put in an impossible position as we aren't allowed to land our catch in France anymore and, simply put, we can't compete with the French. On the positive side the reaction of the locals has been incredible, there has been so much support and people have really got behind the point of buying local. It's strange to say but thanks to Covid the number and frequency of fish stalls all across the Island has increased significantly, meaning people are now seeing the fish we catch and that naturally makes it easier for them to then buy local fish. The Jersey Seafood Alliance has been fundamental in this happening it just shows what you can achieve when you work together.



9.2 A short history of fishing in Jersey

9.2.1 Early history

Jersey's fishing industry has a long and varied history, and has constantly adapted in response to changing markets and availability of fish. Over the centuries, dominant catches have included mackerel, conger eel, cod (in Newfoundland), oysters and crustaceans.

People have been fishing in Jersey's waters since prehistoric times, as evidenced by archaeological finds of flint tools used for hunting seals and fish, and oyster shells found in caves. Fish traps — used to catch wetfish on the falling tide — within the intertidal area have been used since at least medieval times although some could be prehistoric in date.

There are records from the 12th Century relating to the export of fish from Jersey (primarily conger eels and mackerel). In 1332 a quarter of customs revenue was taken from fisheries. Salted or dried fish was sold to various Catholic countries where a fish-based diet was obligatory on certain days or seasons. A 17th Century account states that most Jersey farmers had a boat and fished occasionally, and there were also full-time fishermen. Conger eels were a key export of the island at the time.

From the 16th to the 19th Centuries, fishing was dominated by Atlantic cod. In 1581, 18 ships left St Helier for Canada. The cod trade fluctuated, but in 1732, 27 large vessels, carrying over 2000 people sailed to Newfoundland founding large companies that were in Jersey ownership. The industry gradually declined, but dried cod from Newfoundland remained a feature of Jersey trade until the early 20th Century.



Jersey Harbour, Newfoundland. Philip John Ouless (1817–1885) Reproduced with permission from Jersey Heritage



Extract from 1694 map of Jersey, showing oyster bed off the Royal Bay of Grouville



9.2.2 The 19th Century

The 19th Century oyster fishery involved exploitation of the natural oyster beds between Jersey and France, but no cultivation. In 1810 an oyster fishery was established at Gorey to supply Kent and Sussexbased oyster companies serving the London market. By 1830 250 oyster vessels worked the bed, plus 70 vessels from other English ports. At its height, it involved around 400 boats, each with up to five crew, for six months over the autumn and winter seasons. Thousands more were employed on shore as basket fillers, carriers, lifters and oyster washers. Port facilities were improved to accommodate the needs of the industry, with new piers built at Gorey, Bouley Bay, Rozel and La Rocque. Rows of cottages were built for immigrant workers, and a new Englishspeaking church was constructed at Gorey, which also served the British garrison at Mont Orgueil. Disputes with the French over rights to the oyster beds led to the Jersey industry being concentrated into a smaller area. The stock collapsed under fishing pressure in 1862 so that by 1871 only six oyster vessels were left. Today the Jersey oyster industry is completely supplied by aquaculture of the Pacific oyster.

The late 19th Century saw a rapid change in the island's economy from being primarily sea-based, to primarily land-based, as steamships made possible the export of perishable crops such as tomatoes and potatoes. The traditional wooden boat-building industry declined, but tourism started to grow.

9.2.3 The 20th Century

The 1911 census recorded 194 full-time Jersey fishermen. In the early 20th Century fishing gradually became inshore and short-range, largely limited to Les Minquiers and Les Écréhous reefs. Boats would sail out to the reefs and stay there for a week potting for lobster and crab. The industry was hit hard by the First World War — the wetfish industry (which was primarily flatfish) collapsed, and by around 1930 there were only a handful of full-time fishermen.



The 'Chiders' and another vessel tied to a buoy off Gorey Harbour.

Philip John Ouless (1817–1885) Reproduced with permission from Jersey Heritage



Restored 19th Century fishermen's huts, Les Minquiersio Fiona Fyfe

During the Second World War, some fishing licences were issued by the occupying German forces, but minefields severely restricted the fishing areas. Much of the landed fish found its way onto the black market, where it provided much-needed protein for the malnourished population.

In the 1950s, crab and lobster fishing began to pick up but by 1967 there were still only 15 full-time fishing boats. The fleet expanded in the 1970s and 80s as markets improved and vessels fished offshore in the English Channel. Some 227 licenced Jersey fishing boats were recorded in 2000, most of which were smaller inshore vessels fishing with static gear.

9.3 Current fishing trends

9.3.1 Fish landings and stocks

Today there are around 130 Jersey-registered boats licensed to fish in Jersey's waters, plus 137 French vessels. Roughly 50% of the Jersey fishers work full-time (i.e. fishing 50 days-at-sea or more per year). Jersey's fleet employs a mixture of metiers (types of fishing), with many vessels equipped to operate several different fishing gears. Jersey's waters are also fished by French fishers under the terms of a post-Brexit fishing agreement with the EU. *Fig. 9a* shows the route density of 30 fishing vessels over four weeks in 2022 within Jersey's waters.



Fig. 9a: Route density of 30 fishing vessels over a four-week period within Jersey's waters (no. of vessels per km^2)



Jersey's Economic Framework for the Marine Environment (2022) provides the following overview of the island's commercial fisheries.

Commercial landings — shellfish

- Whelks, brown crab, scallops, lobsters, spider crab, cuttlefish.
- Economically dominated by shellfish especially lobster and crab — around 70% (by financial value) of landings, and whelks and scallops account for around 22% of landed value.
- The annual landed weight for lobster and brown crab is declining which, given their economic dominance, is a concern. Spider crab landings have increased steeply due to their abundance and because they are becoming a substitute for picked brown crab meat.
- Cuttlefish landings have also increased, perhaps in response to increased prices and declines in other stocks.

Commercial landings — wetfish

- Blonde ray, wrasse, dogfish, black sea bream, mackerel and bass.
- Jersey's commercial wetfish industry is relatively small and has recently suffered from problems related to stock health, logistics, facilities and markets.
- The local fishery is mostly low impact (hook and line, nets, etc.) and several species are targeted but often in quite low numbers.
- Annual landings are variable often because of individual vessels entering or leaving the fishery or because of regional factors (such as overfishing) that occur outside of Jersey waters.

Aquaculture production

- Production remains focused on the Pacific oyster *(Crassostrea gigas)* and mussels.
- Production has remained steady over recent years as has the area of seashore occupied by aquaculture concessions.
- The Island's main aquaculture area is in Grouville Bay (224 hectares) and is covered by a single planning consent held by the Government of Jersey.
- In 2020 an emergency holding bed was established on the upper shore of Grouville Bay to allow oysters that were nearing market size to be held for longer at slower growing speeds while markets were depressed due to Covid restrictions.



The following graphs (from the Marine Resources Annual Report 2021) shows the landings of different types of fish recorded for Jersey-licenced vessels since 2007.



Commercial fish landings 2007–2021

Landed quantities (Kg) of: (A) Whelks; (B) Brown Crab; (C) Scallops; (D) Lobster; (E) Spider crab; (F) Cuttlefish



Landed quantities (Kg) from 2007–2019 of: (A) Blonde Ray; (B) Dogfish/catsharks [all species]; (C) Wrasse; (D) Black Sea Bream; (E) Mackrel; (F) Bass



(A) Production weight (kgs) of farmed Pacific Oyster. (B) Landed weight (kgs) of farmed mussels



For shellfish, the graphs show a sharp decrease in landed weight of crab and lobster, and a gradual decrease in scallops. This reflects several factors including Brexit and Covid. There is a sharp increase in spider crab and a gradual increase in cuttlefish. Whelks show a gradual increase then decrease back to the starting level, reflecting changes in boat numbers.

For wetfish, wrasse, ray and dogfish have a general upward trend in landed weight but with big variations. Bream, mackerel and bass have a general downward trend in landed weight but with big variations. For aquaculture, production of pacific oysters has a gradual upward trend.

Fishing effort has increased for diving and dredging, with an overall slight reduction for potting. Landings per unit effort (LPUE) have declined slightly for whelk and lobster, declined steeply for brown crab, and risen slightly for spider crab, as shown in the graphs below. LPUE is an important consideration as it is independent of variables such as weather, fleet capacity, and regulations, and so gives a better indication of stock health.



Landing Per Unit Effort (LPUE) for A) Wheik, B) Lobater, C) Brown Crab, D) Spider Crab, LPUE of crab and locater is calculated using a combined total for creets, D-pots, ink wells, and partour pots. LPUE for whelk is calculated using just wheik pots.

Fishing Effort 2007–2021

Overall, there is currently considerable concern about the decline in catches and stocks, particularly lobster, brown crab and whelk. For further information see the annual reports published by Marine Resources (available on the Government website).



Fishing boat returning to St Helier Harbour. **(i)** Fiona Fyfe



Lobster pot. Fiona Fyfe

9.3.2 Current spatial fishing patterns

Different fish and shellfish require different conditions in terms of water depth, sediment type and seabed habitats, and so different metiers are often concentrated in different parts of Jersey's waters. Figs 9b-9i show the different locational patterns of fishing activity using data from AIS tracking, fisheries inspections, data provided by Jersey fishers, and French VMS (Vessel Monitoring Systems) data. These maps are taken from the Marine Activities Assessment [Evidence Base document EB/G/22]. While these maps show predominant fishing activity, without VMS for Jersey vessels, it is not possible to accurately map all fishing activity and the maps shown will therefore not show 100% of fishing activity. The maps also only show a snapshot of fishing activity in recent years.

In general, potting for crustaceans takes place in shallower, rocky seabed areas, Jersey's inshore zone, and around the reefs. Whelk potting occurs on sediment dominated seabed along the eastern edge of Jersey's territorial seas, to the west of Les Minquiers and to the north of the northern reefs. Dredging for clams mostly takes place on the south-eastern edge of the Bailiwick, and with a small amount in the north. Scallop dredging is focused on some inshore areas, such as the bays of St Aubin and Grouville, but is mainly offshore, including an extensive area to the west of Jersey. Similarly, bottom trawling is generally an offshore activity that occurs along the western edge of Jersey's seas with very little occurring inshore. Netting for spider crab occurs in the south-west while small-scale fish related metiers (netting; hook and line) is predominantly inshore. Scallop diving also takes place inshore, as well as at the offshore reefs.





Fig. 9b: Crustacean potting area



Fig. 9c: Whelk potting area



Fig. 9d: Clam dredging area



Fig. 9e: Scallop dredging area





Fig. 9f: Bottom-trawling area



Fig. 9g: Crustacean netting area



Fig. 9h: Fish netting area



Fig. 9i: Hook and line fishing area



9.4 Proposed fishing zones

9.4.1 Background

There are a number of different environmental, socioeconomic, legal and practical considerations governing the spatial management of fishing activity. These include conflict reduction (other fisheries, habitats and species, infrastructure and maritime activity), stock conservation, international agreements and economic management. Finding a workable balance between these parameters is rarely easy and it is often not possible to please all interests simultaneously.

Particularly controversial has been the creation of marine protected areas (MPAs) in order to reduce or remove specific activities (usually related to fishing or mineral extraction) from areas of higher biodiversity, productivity or sensitivity. Although usually created for conservation purposes, an invariable side effect of well-managed MPAs is the enhancement of stocks within and — via spillover — adjacent to their borders. This provides economic and stock resilience to local fisheries, but selling such benefits during the planning phase of MPAs can be difficult as the discussion will often focus on any short-term loss rather than the long-term gain. MPAs are discussed further in *Sections 8.2 and 8.6.*

9.4.2 Issues

There is a need to be able to distinguish easily between areas where fishing of all types is permitted and those areas where fishing metiers are spatially managed. A requirement of the system must be that it is easy to understand, use and enforce.

There is concern amongst the fishing community that the expansion of the MPA network will result in some metiers (especially mobile gear related) being concentrated in smaller areas than at present, resulting in over-exploitation and stock damage. Any potential impacts and benefits derived from spatial planning must therefore be quantified and balanced against management objectives, so that a balance can be struck between environmental and socioeconomic sustainability.

The fishing industry is of great importance to Jersey's cultural identity, as well as contributing to the Island's economy. There is concern amongst the mobile gear fishing community that both of these benefits may be negatively affected by proposals to limit the physical extent of mobile fishing.



9.4.3 Proposed Actions

Jersey's fishing industry will continue to be supported through the Marine Economy Framework, with a particular emphasis on sustainable fishing practices, and the provision of facilities to improve the quality of products, such as cold stores. A *Business Impact Assessment [Evidence Base document EB/FA/8]* can be used as a basis to consider economic support for diversification. If diversification is not possible, compensatory measures will be considered for affected fishers within the mobile fishing sector impacted by the expansion of Marine Protected Areas (MPAs).

The JMSP proposes the introduction of a three-tier framework, with different levels of protection in each tier. This will allow different fishing regimes to be introduced, with all of Jersey's waters falling within one of the three tiers. These fishing zones are shown in *Fig. 9j.*

Fishing Zone A (Regulated Fishing Zone) covers the largest extent of Jersey's waters (76.7%). All types of fishing are permitted here, in line with contemporary fisheries and other regulations (some restrictions/ regulations may be temporal). It includes offshore areas where most trawling, dredging, benthic netting and whelk potting activity occurs.

Within Fishing Zone A there are already multiple seasonal access fishing zones under current management. Three new seasonal access areas have been proposed through the JMSP public consultation process which are shown on *Fig. 9j.* These are:

- North coast inshore area (winter trawl fishery access that will have no conflict with summer recreational use of the area);
- Corbière Banks (winter trawl fishery access that will have no conflict with summer recreational use of the area); and
- North edge of Les Minquiers (seasonal mobile gear closure during the bream nesting season)

Fishing Zone B (Seabed Protection Zone) covers approx. 23.2% of Jersey's waters. It includes MPAs and existing mandatory exclusion corridors around undersea power cables. The MPAs cover those habitats which are internationally recognised as threatened, provide the greatest benefits from nature (including acting as fish nurseries and spawning grounds), and/or have a high Blue Carbon potential. Fishing Zone B therefore creates an MPA network in accordance with Jersey's local and international commitments which will assist with the long-term sustainability of Jersey's fisheries. The exclusion corridors/zones around undersea cables protect essential infrastructure. For both the proposed MPA areas and undersea cables the fishing activity most in conflict is mobile fishing gear. For this reason, the use of mobile fishing gear (trawling and dredging) is not permitted within Fishing Zone B. In two specific areas within the MPA (on the south-eastern edges of Les Écréhous and Les Minguiers), protection will be phased in to give the fishing community time to diversify their fishing methods and/or find alternative fishing grounds.

Fishing Zone C (No Take Zones) covers approx. 0.1% of Jersey's waters. It includes small sites at Portelet and Les Sauvages which are of exceptional importance for the variety of the habitats and species which they support. No removal of fish, seaweed or other aquatic resources is permitted in Fishing Zone C at any time. Divers will still be permitted to access Fishing Zone C, but are not allowed to remove anything.




Priority FA1:	Fishing zones
To introduce a	n area-based, three-zone system comprising:
Fishing Zone A	(Regulated Fishing Zone)
Fishing Zone B	(Seabed Protection Zone)
Fishing Zone C	(No Take Zones)
Action FA1a:	Fisheries regulations will be updated to reflect the new zonal system, in line with government procedures and in consultation with local and neighbouring fishing fleets.
Action FA1b:	A programme of public engagement will be undertaken with the Jersey and French fishing fleets and the recreational fishing sector to make sure that all are aware of the new system following its introduction.

9.5 Potting and netting equipment

9.5.1 Background

A wide range of fishing gear is used by commercial and recreational fishers in Jersey's waters, including various types of pots and nets. Within Jersey's waters there are currently about 45,000 ¹ crustacean pots from Jersey boats. Use of commercial nets inshore is currently regulated on a seasonal basis, but these regulations have not been updated for 15 years.

9.5.2 Issues

The public consultation for the JMSP raised a number of concerns relating to fishing gear, particularly inshore.

Lost/abandoned gear is a particular concern, as lost gear and 'ghost nets' which become detached from buoys and/or anchors pose a risk to wildlife and recreational users of the water (particularly swimmers, divers and spear fishers), who can become entangled. Lost fishing gear is one of the main contributors to beach litter on Jersey, and adds to the problem of marine plastic waste. Some types of pots continue to fish, even once they have been lost, with trapped crustaceans unable to escape, and becoming bait which attract more crustaceans, which become trapped in their turn.

As explained in *Section 8.5.4*, there is widespread concern over the death/injury of marine birds following entanglement in inshore nets, especially when nets are not used correctly (for example leaving a net inshore during daytime hours). There is particular concern over the improper use of gillnets, and the relationship between rising use of gillnets and declining seabird numbers.

Incorrect marking of netting equipment was raised as a concern, particularly by swimmers and divers. It is fundamental to these people's safety that nets are correctly marked, so that the nets can be avoided.

Potting and netting are not permitted within harbour areas, but there is currently a lack of awareness of the extent of harbour limits, due — in part — to a lack of signage. This in turn means that members of the public do not feel able to report illegal fishing activity in harbours.



¹ Figure provided by Marine Resources

9.5.3 Proposed Actions

There are opportunities to reduce adverse effects on swimmers, divers and marine life through changes to the way in which potting and netting equipment is manufactured and used within Jersey's waters. *Recreational fishing is covered by priority RT6a (Chapter 11).*

Priority FA2: Potting and netting equipment

To promote safe and responsible use of potting and netting equipment, in order to avoid entrapment or injury to people, or to marine fauna and birds.

Action FA2a:	Netting regulations within the proposed MPA areas will be reviewed in order to minimise entrapment or injury to people or to marine fauna and birds. This review will include consultation with fishers. Commercial and recreational fishers will be made aware of any resultant changes.
Action FA2b:	The visible marking of all commercial fishing equipment to indicate the type of gear being used will be trialled.
Action FA2c:	Workable solutions to minimise ghost fishing will be promoted. Onshore fishing gear disposal facilities (as established in 2023) should be enhanced.
Action FA2d:	Initiatives to minimise marine littering and to promote beach cleans will be encouraged.
Action FA2e:	A review of commercial potting and netting in proximity of angling spots will be undertaken.
Action FA2f:	Signage in harbours will be improved to show harbour extents where potting and netting are prohibited.

9.6 Aquaculture

9.6.1 Background

Jersey's aquaculture industry is focussed on Pacific oyster and mussels. Oysters are grown on trestles within the intertidal area, and mussels are grown on poles. They are a premium product in demand from local restaurants and are also exported, primarily to England and France. Prior to 2017, applications for aquaculture concessions were made on an ad-hoc basis, with each application (or extensions/ adjustments to existing beds) requiring a separate planning permission. Often the sites were not appropriate for ecological or aesthetic reasons, and the planning permission was refused, costing the applicants in both time and money.



In 2017 Marine Resources applied for and received planning permission for a single large intertidal aquaculture site (224ha) in the Royal Bay of Grouville, for which they issue licences. Since then, all new concessions have been within this area. The area is included in the BIP as Policy ERE8: Intertidal aquaculture box. Within the aquaculture box there is presumption in favour of further aquaculture. The principle of aquaculture in other areas is not supported.



Oyster trestles in the Royal Bay of Grouville. **(19)** Fiona Fyfe

9.6.2 Issues

The present location and licencing system is generally working well, although the public consultation for the JMSP raised some concerns about increased beach litter (for example rubber bands from the oyster trestles) and localised beach compaction by vehicles. Marine Resources have found little evidence that aquaculture is modifying the local ecology, and have found that intertidal habitats (such as seagrass) are generally in good condition within the aquaculture area. In future, there is likely to be a demand for seaweed farming (phytoculture) which will require regulation, and research into best practice. Commercial seaweed extraction is currently limited to a hand harvesting system with licenses for commercial gatherers and tailored bag limits for both commercial and recreational practitioners.

9.6.3 Proposed Actions

The location of aquaculture is covered by the Bridging Island Plan (BIP). For convenience, the current BIP policy is set out below.



BIP Policy ERE8: Intertidal aquaculture

Proposals for new or extended aquaculture facilities outside the built-up area must be accompanied by a business plan which justifies the location of the development, and demonstrates its contribution to the rural economy. This will need to demonstrate why existing premises or buildings in the locality are unsuited to the proposed use(s). Where the supporting information is insufficient proposals will not be supported. The aquaculture box in the Royal Bay of Grouville will be safeguarded from other forms of development which might harm the integrity of this area for the purposes of aquaculture. The development of new, or the extension of existing, aquaculture infrastructure in the Royal Bay of Grouville aquaculture box will be supported.

The development of new, or the extension of existing, aquaculture infrastructure in other parts of the inter — or sub-tidal zone will only be supported where:

- it is required to meet a proven need, which cannot be met elsewhere; and
- it would not harm marine biodiversity value.



To promote sustainable methods of aquaculture.

Action FA3a:	Sustainable methods of aquaculture will be promoted and
	the industry will be encouraged to reach for recognised
	professional standards in environmental sustainability ² , and
	to monitor and mitigate local impacts of farming practices.

Priority FA4: Phytoculture

To ensure that any future seaweed farming (phytoculture) is undertaken in a responsible and sustainable manner.

Action FA4a:	A review should be undertaken into the potential for phytoculture in Jersey including its suitability and effect on the marine environment.
Action FA4b:	Based on the outcome of FA4a, a licencing and regulatory framework will be considered for phytoculture activity in Jersey's waters.

2 Sustainability in the aquaculture industry would most easily be benchmarked under the Aquaculture Stewardship Council (ASC) scheme



9.7 Encouragement and promotion of sustainable fishing

9.7.1 Background

Jersey's fishing strategy is set out in the *Economic Framework for the Marine Environment* (MEAG, 2023) *[Evidence Base document EB/G/14].*

Making Jersey's fishing industry as sustainable as possible will bring environmental and economic benefits, and help to ensure its long-term survival through replenishment of fish stocks. All fishers should, therefore, be encouraged to take up sustainable fishing practices, ideally through market (and therefore economic) recognition for sustainably-caught products.

9.7.2 Issues

At present, sustainable techniques are not always the most cost-effective. Ideally this situation would be reversed, so fishers are rewarded for sustainable fishing practises through a buoyant market and good financial returns. The Bridging Island Plan (BIP) provides support for the principle of further fishing development. Fishing for wet fish, shellfish and fish farming are important economic activities which need to be safeguarded and supported. As such, it is important that the industry is assisted in terms of its landbased needs such as access, servicing, processing, packing facilities, and cold storage. The majority of the commercial fishery fleet is based at St Helier harbour, where there is a presumption in favour of development which is related to port activities, including fishing and ancillary activity. However, at present, the current lack of facilities for safe processing and freezing of fish is an impediment to marketing and to efficient utilization of catch.

9.7.3 Proposed Actions

There should be support to encourage the adoption of demonstrably sustainable practices. Some suggestions for promoting sustainable fishing were received through the consultation process, which are included in the actions below, even though some fall outside the remit of the JMSP.

Priority FA5: Sustainable fishing

To support and promote facilities and actions which support sustainable fishing.

Action FA5a:	The marketing of sustainably-caught fish should be promoted by the creation of a sustainability mark or similar mechanism to indicate high quality and sustainability in Jersey's fisheries.
Action FA5b:	The provision of appropriate marine and onshore facilities for sustainable fishing will be encouraged.



Cultural Heritage

Aim: Cultural heritage is understood and protected



Cultural Heritage

Aim: Cultural heritage is understood and protected

10.1 Introduction

10.1.1 Background

Jersey's coastline and marine environment contain evidence of diverse cultural heritage spanning thousands of years from pre-history to the present day. Heritage sites range from inaccessible seabed and wrecks, through to prominent coastal castles visited by tens of thousands of people every year. Some of the sites are designated as Listed Buildings or Listed Places, but others (including wrecks) are unprotected. Area of Archaeological Potential (AAP) is another form of designation which is often used to highlight where heritage interest may exist, and where additional research or information may be required to inform development decisions. There are currently no AAPs within the intertidal or marine areas.

Historically, the coast has been a natural place for people to settle and take advantage of the sea for transport and resources. Many of Jersey's settlements developed adjacent to harbours or beaches, associated with fishing, trade, boat-building and tourism.

🔟 Cover image, Fiona Fyfe



Although these settlements are above the high-water mark (and therefore technically outside the scope of the JMSP) there remains a close relationship between coastal cultural heritage, seascapes, tourism and recreation, and the island's economy. These inter-relationships are demonstrated by the visitor numbers to ticketed coastal heritage sites: In 2022, 50,466 people visited Mont Orgueil, and 49,592 people visited Elizabeth Castle.¹ Another connection between cultural heritage and tourism is the use of historic coastal defensive structures for holiday accommodation. Structures now used in this way include the 6-storey Radio Tower at Corbière (constructed by occupying German forces), and earlier buildings such as Seymour Tower, La Rocco Tower and L'Étacquerel Fort. Some of these sites are on the coast, whilst others are intertidal, only accessible on foot at low tide.



Gorey developed as a fishing village below Mont Orgueil castle, with the beach used for boat building. The harbour was expanded to accommodate oyster cutters in the 19th Century and is now primarily used for recreational craft. Fiona Fyfe



La Rocco Tower, St Ouen's Bay, constructed for defence in the late 18th Century, and now used as holiday accommodation. Fiona Fyfe

Visitor number data provided by Jersey Heritage



10.1.2 Key Evidence Base documents

Key Evidence Base documents for this chapter:

- A Heritage Strategy for Jersey (2022)
- Archaeological Seabed Mapping around Jersey (Fjordr 2022)
- Conservation Management Plan for German Military Sites on Jersey (2023)
- GIS Datasets (in JMSP Atlas) showing archaeology points, Historic Buildings, Listed Buildings, Listed Places
- Jersey Historic Environment Record
- Jersey LiDAR Survey 2020
- Wrecked on the Channel Islands (David Couling, 1982)

10.1.3 Legislative and Policy Context

Several international treaties are relevant to this chapter, including the Underwater Cultural Heritage Convention (the 'Valletta Convention') 2001, and the European Convention on the Protection of the Archaeological Heritage (Revised) 2000. More information is provided in Chapter 4.

The Bridging Island Plan (BIP) affords protection to historic assets within the marine environment through policy HE1 (Protecting Listed Buildings and Places, and their settings). Government of Jersey is currently considering appropriate policy instruments and legal designations to protect all (including subtidal) cultural heritage assets in line with international conventions. AAPs do not restrict activities in the same way as Listed Buildings or Listed Places, but do ensure that known or likely archaeological interest is considered in any planning application. SSIs, including Listed Buildings and Places, can be designated on the basis of evident values.

The Heritage Strategy for Jersey 2022 [Evidence Base document EB/CH/5] has a number of programmes and actions which are relevant to the marine environment. These include surveying underwater heritage assets as a precursor to protection; creating a network of Marine Protected Areas; conservation management of ice-age sites (through the Ice Age Island project); conservation management of coastal and offshore heritage buildings (through the Forts and Towers project), and realising the value of intangible cultural heritage in island identity.

All these *Heritage Strategy for Jersey* projects are supported by the priorities and recommendations proposed below.

As explained in *Section 1.2*, the JMSP forms an overarching strategic framework setting the approach for a range of tools, including land use planning, marine resource management and fishing regulation. The JMSP is not a statutory document, but will give direction to other legislative and policy tools, which will be used to deliver the priorities and actions set out in the JMSP.

10.1.4 Pen Portraits



Millie Butel, Landscape Engagement and Geopark Development Curator at Jersey Heritage Jersey's marine environment offers a true sense of 'islandness' and holds so much heritage for people to explore. Since the pandemic, there has been increased engagement with heritage and the outdoors, including more people enjoying the marine environment. There are still lots of stories to be uncovered about the drowned landscape that surrounds our Island, and knowledge to gain from researching Jersey's marine environment, because it contains so many layers of history.

Recent positive changes have been conservation (and rehabilitation) of marine historical sites such as Seymour Tower and La Rocco Tower, and a growing awareness of intertidal and submerged archaeology such as the Violet Bank drowned landscape. Alongside this is concern about the vulnerability of some sites such as La Cotte de St Brelade and the other coastal sites of special interest, to climate change.

My work role involves developing Aspiring Jersey Island Geopark which includes all of Jersey's territorial waters and marine environments. Our Island's seascapes are an important part of our heritage (geological, natural, cultural and intangible) and therefore a vital part of our UNESCO Global Geopark application. Achieving this internationally acclaimed, non-statutory designation will highlight to a wider audience just how special Jersey's marine environment is within our Island's story.





Bob Tompkins, Société Jersiaise

My name is Bob Tompkins and from the age of 8 I have had the pleasure of exploring Jersey's incomparable marine habitats; be it while making a living or just indulging in the pure pleasure of exploring its intertidal zones as an amateur marine biologist and archaeologist. Warm, shallow nutrient rich waters, large tidal range, wide sandy bays, and maze-like reef systems create and harbour such a diverse abundance of marine organisms and archaeological mysteries that if I had my time twice over it would never be enough to discover and understand all its hidden secrets. Long rock sided gullies create unique marine mini worlds filled with a microcosm of sea life. Trackways cut across reef systems by quarrymen to extract granite and then utilised by farmers and fishermen over hundreds of years cross-cross the intertidal area, adding to the surreal experience of exploring what to some may appear as a Lunar landscape, but in fact is crammed with life. Rock pools filled with hundreds of species of seaweeds, abundant healthy eelgrass and oyster beds, fish nurseries, shellfish, sponges and anemones all watched over by offshore fortifications that encapsulate Jersey's rich marine heritage. Welcome to my world.



10.2 Coastal structures

10.2.1 Background

Around Jersey's coastline are many structures relating to trade, fishing, navigation and recreation. Some are right on the coast, whilst others are within the intertidal area.



Fig 10a. Designated cultural heritage sites

There are a great many slipways, harbours and piers around Jersey, enabling access to the sea for a variety of craft. It is likely that many of the slipways and shallow anchorages such as Le Hocq are of considerable age, but have been constantly repaired and rebuilt to facilitate their use, probably over centuries. All the historic slipways are Listed Buildings (Grade 2 or 3). The historic harbours at St Brelade, St Aubin, St Helier, La Rocque, Gorey, Rozel, Bouley Bay and Bonne Nuit are also designated as Listed Buildings (Grade 1 or 2) and are shown on *Fig. 10a.* Many of Jersey's harbours are of considerable age, but have been much modified over the years. For example, Rozel and Bouley harbours were recorded as ports in the 13th Century, but their present piers date from the 19th Century, when they were rebuilt to accommodate oyster fishing vessels. Construction of the present St Aubin's Harbour began 1680, and Gorey Harbour was described as 'the most ancient port on the island' in 1685. St Helier harbour was started in the 18th Century and continues to evolve. All tell parts of the story of Jersey's maritime heritage, and continue to contribute to the island's maritime facilities.

Recreational structures in the intertidal area include the 19th Century recreational lidos at Havre des Pas (Listed Building Grade 2) and Victoria Marine Lake in St Aubin's Bay.





Historic slipway at St Ouen's Bay. Fiona Fyfe



*19th Century lido at Havre des Pas.*Fiona Fyfe



Remains of priory on Les Écréhous. (i) Fiona Fyfe



Vernacular huts on Les Minquiers.



10.2.2 Issues

Where historic structures (such as slipways) are in use on a daily basis, there is a risk that repairs may be made in an ad hoc way, without due regard for historic fabric. However, the fact that most of these structures are Listed Buildings reduces this risk, as materials and construction techniques should be approved prior to commencement of work. Nevertheless, there is particular concern over monitoring and reporting of inappropriate changes; on the reefs this is exacerbated by remoteness. It can result in repairs to the huts on the reefs using unsympathetic modern materials such as plastic window frames. These erode the vernacular character and can quickly have a cumulative impact. There are also challenges where structures are in multiple uses (for transport, recreation, etc.), or where there are tensions between operational efficiency and historic character. These tensions are managed through the planning process.

10.2.3 Proposed Actions

These civilian 'working structures' are an important part of Jersey's maritime heritage and should be protected accordingly. Sometimes, this may require variations to the current management arrangements. As with the military sites described below, most should be protected through their status as Listed Buildings or Listed Places.

Priority CH1: Coastal structures

To protect working coastal infrastructure and landscapes of historic or cultural interest, and their settings.

Action CH1a:	Working coastal infrastructure, including harbour and berthing facilities, slipways, recreational structures and offshore huts should continue to be surveyed and assessed in terms of its contribution to coastal cultural landscapes.
Action CH1b:	Consideration will be given to extending or introducing measures to protect coastal cultural landscapes, their infrastructure, specific features and settings, using existing or by introducing new protective measures.



10.3 Coastal military heritage

10.3.1 Background

Jersey contains a rich legacy of coastal fortifications dating from prehistory until the end of the Second World War. The vast majority of these are Listed Buildings or Listed Places and are shown on *Fig. 10a.* Prehistoric coastal defensive structures include the Iron Age coastal promontory forts along the north coast (for example Le Câtel and La Tête de Plémont, both of which are Listed Places).

The medieval coastal castle of Mont Orgueil was started in 1204 and embellished over the following 300 years. However, its defences were poor against the evolving threat of cannon fire, and in the mid-16th Century Elizabeth Castle (named after Queen Elizabeth I) was constructed as a state-of-theart fortress to protect St Helier. Elizabeth Castle complemented St Aubin's Fort on the opposite side of St Aubin's Bay. Later, Elizabeth Castle was further expanded by King Charles II who stayed in Jersey as an exile following the English Civil War. Mont Orgueil, Elizabeth Castle and St Aubin's Fort are all Listed Buildings (Grade 1) with parts of their designations extending into the intertidal area.

The next generation of defensive structures date from the late 18th and early 19th Centuries, and are associated with the threat from Napoleonic France. These structures include the offshore towers (Seymour Tower, La Rocco Tower, Icho Tower) and the network of distinctive coastal 'Conway Towers' and Martello Towers which defended bays. Today some of these distinctive round towers have broad red and/or white stripes painted on their seaward side so they can be seen from the sea and used as daymarks. St Catherine's Breakwater was constructed as the northern pier of a new deep water anchorage intended to shelter the entire British Navy in the event of war with France. The threat receded and the project was abandoned before the southern pier at Archirondel was completed. The offshore towers and breakwaters are Listed Buildings (Grade 1).

Jersey was under German occupation during the Second World War, and this period has left a coastal landscape legacy of concrete structures which formed part of the German 'Atlantic Wall'. These include gun batteries, bunker networks and anti-tank structures (which were often modifications of existing sea walls, and still contribute to coastal defence). Existing defensive structures were utilised and modified, for example through adding concrete gun emplacements onto existing castle towers. The most prominent German structures are the coastal range-finding towers, with their slit windows looking out to sea. The German structures are generally located above the high-tide line and so are outside the scope of the JMSP. However, they do contribute to coastal views and seascapes, and to sea defence. They are the subject of the Conservation Management Plan: German Military Sites in Jersey (Jersey Heritage 2024) [Evidence Base EB/CH/8]



Jersey's historic defensive structures are designated as Listed Buildings or Listed Places as appropriate. As such they have statutory protection. New development or infrastructure projects can have impacts on them which may be positive or negative, and the planning process requires that potential impacts are assessed, that potential harm is minimised, and that appropriate mitigation measures are included in proposals. Bridging Island Plan Policy HE1 supports appropriate re-use of Listed Buildings. It also extends protection to the settings of Listed Buildings and Places, defining setting as the way in which a building or place relates to its surroundings and in which it is understood, appreciated and experienced by people within its context. This can apply both on land and within the marine area, and in the coastal and intertidal zones setting frequently extends into both environments. The extent of setting is not fixed as it changes over time and in extent as buildings, places and their surroundings evolve over time, or in relation to different potential impacts.



Elizabeth Castle from St Aubin's Fort.



Seymour Tower on the south-east reefs.

10.3.2 Issues

In general, historic structures which have an appropriate use are generally less vulnerable to falling into disrepair and being lost than those which don't. The 'Forts and Towers' project within the *A Heritage Strategy for Jersey* (2022) is addressing this issue by utilising historic military structures as holiday accommodation, enabling their conservation management and generating income. There are a number of bunkers in Jersey maintained by charities, sports groups and clubs which have proven to be a good use of these coastal spaces. There are also organisations such as the Channel Islands Occupation Society who maintain bunkers and represent them to the public. It can be challenging to retain structures in good repair which do not have an obvious alternative use. Some may occupy a complex ethical space and be considered memorials, and therefore need to be treated with particular sensitivity. There is a need to be very sensitive around the commemoration of war dead, and around human remains.

Unexploded ordnance may pose potential hazards at former military sites. These remnants of the occupation can be unstable and dangerous if disturbed, making it crucial to address unexploded ordnance as part of any site restoration or redevelopment efforts.

10.3.3 Proposed Actions

Military heritage sites are a key part of Jersey's heritage and should be protected appropriately. Suitable alternative uses for sites should be sought which enable them to be kept in good repair.

Priority CH2: Military heritage sites

To protect military heritage sites in the coastal and marine environment, and their settings.

Action CH2b: Sympathetic alternative uses for military sites and redundant buildings should be explored, including use by the communit to optimise conservation and public value.	Action CH2a:	Assessment of heritage value of military sites should be kept under review and new sites added as appropriate.
	Action CH2b:	Sympathetic alternative uses for military sites and redundant buildings should be explored, including use by the community to optimise conservation and public value.



10.4 Coastal prehistoric occupation sites

10.4.1 Background

Jersey contains a rich resource of palaeoenvironmental and archaeological sites which tell the story of environmental change and human occupation over millennia. The oldest known occupation sites on the Jersey mainland are today within caves in coastal cliffs, but would originally have been on hillsides looking out over a wide plain. The caves at La Cotte de St Brelade and La Cotte à La Chèvre are two of Europe's most important Palaeolithic sites, and contain deposits from over 250,000 years of occupation. Finds include flint tools, bones of rhinoceros and woolly mammoth and Neanderthal remains. These sites are of international significance because of the quality and quantity of material found there, and repeated periods of occupation over hundreds of thousands of years. Other coastal prehistoric sites include Green Island, Le Pinacle, and the caves at Belle Hougue. These prehistoric sites are designated as Listed Buildings, Listed Places, and/or Sites of Scientific Interest (the latter for their geological interest). The Heritage Strategy for Jersey includes the 'Ice Age Island' project focussing on conservation management of the island's major Quaternary sites.



La Cotte de St Brelade, St Brelade's Bay. i Fiona Fyfe



Green Island. i Fiona Fyfe

10.4.2 Issues

Although the coastal prehistoric sites are largely above the high-water mark, they extend into the intertidal and marine environments. Cliff edge sites are vulnerable to coastal processes, particularly as sea levels rise in the future. Sea incursion into La Cotte de St Brelade has been a major issue, requiring the construction of a gabion wall to protect the deposits of material which may otherwise be lost to coastal erosion. In addition to their vulnerability to coastal erosion, the more accessible sites such as Green Island can be damaged by people clambering on them. Recreational activities such as coasteering may also damage vulnerable sites. The less accessible sites have their own issues, as it is more difficult to access them for maintenance. Although the sites themselves are protected by existing designations, the designations do not extend into the adjacent marine environment and there is a risk that coastal works or activities could cause inadvertent or indirect damage to the prehistoric sites.



10.4.3 Actions

Vulnerable prehistoric coastal sites are shown on *Fig. 10c.* They include La Cotte de St. Brelade, La Cotte à la Chèvre, Green Island, Le Pinacle, and the caves at Belle Hougue. Through designation as Listed Places, these sites, and their settings, should be protected from physical damage, inappropriate development and damaging activities.

Priority CH3	Coastline adjacent to prehistoric coastal sites
To protect pr heritage valu them approp	ehistoric coastal sites, acknowledging the e of the sites and their settings, and affording riate protection.
Action CH3a:	The condition of the coastal margins of important prehistoric sites (La Cotte de St. Brelade, La Cotte à la Chèvre, Green Island, Le Pinacle, and Belle Hougue caves) should be surveyed and any current or potential activities which may be harmful identified; and any harm mitigated through the appropriate regulation of proposals for development or other activities which might harm their special interest and settings.

10.5 Intertidal areas and offshore reefs

10.5.1 Background

Jersey's extensive intertidal areas include the beaches and reefs around the coast, and offshore rocks and reefs (Les Minquiers, Les Écréhous, Les Dirouilles and Les Pierres de Lecq (Paternosters). There is a growing awareness and understanding of historical/ archaeological features within the intertidal areas, although many are inaccessible and further features therefore remain to be discovered. Some features can be broadly dated, but others are more ambiguous in terms of their age and purpose. *Fig. 10b* shows known non-designated archaeological sites and finds locations within the intertidal area.

Palaeo-environmental features

The oldest intertidal features are the peat deposits from the Holocene era (from approx. 10,000 years ago) containing palaeo-environmental material such as pollen and plant fragments which can be analysed to understand past environments. These deposits have been buried by later sediments. The most extensive known deposits are the peat beds under the sand at St Ouen's Bay, but there are also ancient clay and peat deposits within the intertidal reefs. The peat deposits would have formed initially in marshy freshwater environments, before becoming inundated by the sea. The extensive peat beds under St Ouen's Bay beach are designated as a Listed Place (Grade 2), but the other intertidal palaeo-environmental sites do not currently have any designation or protection.

An exposure of ancient peat on Les Écréhous containing fossilised plant material, including root structures. At the end of the last Ice Age it would have been a freshwater marshy area, protected from waves and rising sea levels by a shingle bank. The shingle would have isolated the marsh, but rising sea levels overtopped the bank, creating saltmarsh. Eventually the rising seas pushed the shingle banks together, burying the peat underneath.





Fig 10b. Non-designated intertidal archaeology sites

Artefact

Paul Chambers

- Habitation Site
- Prehistoric Land Surface
- Seashore Wall Features

- **Burial Site**
- Nourice
- · Quarry
- Vraic Cart Track

Prehistoric features

Today's intertidal areas (around the coast and the offshore reefs) would have been dry land until roughly 9000 years ago and they contain prehistoric artefacts including flint flakes, flint tools and standing stones. A spear dating to the bronze-age (approx. 5300–3200 years ago) was found in the Royal Bay of Grouville. Prehistoric burial sites have been found at Green Island and by Icho Tower. These burial sites, together with the menhir in the bay at Grève d'Azette, are Listed Places (Grade 1 or 2), but otherwise the prehistoric features and findspots below the high water mark have no designation or protection.

Extensive and substantial wall-like structures exist across gullies within the south-east reefs (both in the intertidal area and within the area now permanently submerged). The date and purpose of these structures have not yet been established. It has been suggested that they may be fish traps or perhaps prehistoric sea defences that were constructed in response to rising sea levels, which would have been catastrophic for local communities.

Medieval and post-medieval features

Numerous features within the intertidal area can be roughly dated to the medieval and post-medieval periods, although their use may well have continued for longer. Such features include the stone bases of V-shaped fish traps, which used stakes and wattle panels to trap fish on the outgoing tide. These are found around the south-east coast of Jersey between Noirmont and St Catherine's Bay. None are currently designated. Vraicing, (gathering seaweed to use as fertilizer) has been practiced in Jersey for centuries. Many of the reefs, including those at the north and south ends of St Ouen's Bay, the south-east reefs and St Catherine's Bay, contain relict vraicing tracks, used to get carts as close to the sea as possible when gathering seaweed at low tide. Some remained in use until relatively recently. None are currently designated.

The granite rock of Jersey's reefs makes excellent building stone, and therefore the reefs contain numerous historic quarry sites. These include substantial quarries on Les Minquiers, where building stone for Fort Regent was extracted.

Other non-designated features on the reefs around Jersey's coast include netting stones (used to hold nets in place when low-water fishing), orthostats (upright stone slabs) and nourrices (sites of containers used for the storage of shellfish).



Vraicing (seaweed gathering) track near La Rocque harbour.





Oregon Fishtrap.Paul Chambers

10.5.2 Issues

Some prehistoric and later features on the reefs are at risk from coastal processes, and/or from deliberate or inadvertent damage by people. They currently have no legal protection, and there is relatively little public understanding of their cultural value or the historic/ archaeological features found within them. There is still a lot to be researched and understood about the intertidal archaeology, particularly in the most inaccessible areas. LiDAR surveys are particularly helpful in identifying features of interest, but much detailed analysis remains to be done.

10.5.3 Proposed Actions

In light of its archaeological interest, the entire intertidal area on the west, south and east of Jersey **(shown on Fig. 10c),** along with the offshore reefs, should be designated as an Area of Archaeological Potential. Within this there may be areas where further designation (such as Listed Place) would be appropriate.

Priority CH4: Intertidal archaeology

To protect the cultural heritage of intertidal areas and offshore reefs.

Action CH4a:	The intertidal areas of the west, south and east of Jersey, along with the offshore reefs, should be considered for designation as Areas of Archaeological Potential.
Action CH4b:	Arrangements for the management of the cultural heritage of intertidal areas and offshore reefs should be reviewed and strengthened where necessary.
Action CHcb:	Further studies and survey work will be undertaken to investigate the potential for parts of the intertidal areas and offshore reefs to be given additional statutory designations, such as Listing.





Protection of coastline adjacent Proposed Areas of

to prehistoric coastal sites

Archaeological Potential



10.6 Submerged landscapes

10.6.1 Background

There have been few underwater surveys around Jersey so information on subtidal sites is limited. However, the surveys undertaken so far indicate that the seabed around Jersey contains evidence from times of lower sea levels, when the area would have been dry land and river systems. These include buried sediments (such as peat), former land surfaces, and evidence of early human occupation. Underwater surveys have the potential to identify subtidal sites of potential importance such as:

- Palaeochannels indicating former watercourses that may have been a focus for human activity and where fine-grained deposits may have preserved artefacts, palaeo-environmental evidence and datable material.
- Topographic highs and steep slopes which might have been a focus for human activity, with good views across the landscape.
- Hard-rock features analogous to features on land where prehistoric material is present.
- Modern seabed features such as sand waves which may preserve prehistoric landscape features beneath them.
- Areas where current processes are causing the erosion of prehistoric deposits, exposing them for study.

10.6.2 Issues

The lack of understanding of submerged landscapes around Jersey means that locations of many ancient features remain unknown. Indeed, in some areas of the Bailiwick, the only seabed surveys to date were done in the 19th Century using lead soundings. The resulting lack of detailed information about the seafloor means that features are vulnerable to loss or damage by underwater processes (such as the accretion of sediments) and from human activities on the seabed such as use of mobile fishing gear and laying undersea cables.

10.6.3 Proposed Actions

Underwater seabed survey would increase understanding of the sub-tidal environment, and complement the LiDAR data gathered for inter-tidal areas. The results of the seabed mapping survey would provide a baseline dataset to inform the understanding, appreciation and management of historic wrecks, submerged prehistoric landscapes and other related marine heritage assets. It would therefore highlight places for future research/ protection. Multi Beam Echo Sounder (MBES) survey has internationally recognised standards and specifications which makes it suitable for a wide range of archaeological purposes, and previous specialist reports recommend this form of survey for Jersey's underwater seabed survey (See Archaeological Seabed Mapping around Jersey (Fjordr 2022 [Evidence Base document EB/CH/7]).

Priority CH5: Submerged landscapes survey

To undertake a seabed survey of the subtidal area.

Action CH5a: In accordance with Jersey Heritage's existing research framework, further studies and Multi Beam Echo Sounder survey work of the subtidal seabed should be undertaken. This will inform priorities for further detailed investigation and facilitate the protection of important and sensitive features from inappropriate or harmful activities.

10.7 Navigation markers

10.7.1 Background

The treacherous nature of Jersey's waters means that many navigation markers are needed to warn ships of dangers, and to mark safe passages.

The most famous of these is Corbière lighthouse, just off Jersey's south-west corner. Corbière is one of the iconic landmarks/seamarks described in **Chapter 7** — **Seascapes,** featuring in views which are particularly spectacular at sunset (as shown in the cover image for this chapter). The lighthouse (and the islet on which it sits) is a Listed Building (Grade 1). It is accessible to the public via a causeway at low tide.

Within the last ten years, many of the older and more distinctive navigation markers within Jersey's waters have been removed and replaced with more standard features. The new markers are in line with current international navigation protocols, but the loss of the older markers (which were well known by local sailors) removed a layer of Jersey's cultural history. Similarly, the ceasing of the Corbière foghorn, and removal of clanging bell buoys has changed the soundscape of Jersey's seas and coasts. Many distinctive navigation markers remain, and are important for their function and also for their design, which is often unique and in response to the local environmental conditions or history. They contribute to Jersey's distinctive sense of place, and reflect its history (for example through association with the sovereignty battles of the 1950s). At present, with the exception of Corbière, there is no statutory legal recognition of the cultural heritage value of Jersey's offshore navigation markers.

In addition to the offshore markers, there are also other seamarks to assist with navigation, such as: painted rocks or seawalls (for example Jument, La Conière and White Rock); flagpoles on Les Écréhous and Les Minquiers, and transit markers that are used by fishers but which are on land (pierheads, slipways, various houses, chimneys, flagpoles, trees, etc.).



'Etats de Jersey' beacon on Les Maisons, Les Minquiers.



*Jété des Fontaines de Bas beacon.*Paul Chambers



10.7.2 Issues

The move towards modern, standardised structures for navigation markers is likely to continue in the future, particularly as navigation practice changes towards more GPS-based systems. There is therefore a risk that some navigation markers will become redundant and be removed, particularly given the lack of recognition of their cultural heritage value.

Transit markers on land may also be lost as part of redevelopment of sites.

10.7.3 Proposed Actions

Navigation markers within Jersey's waters should be surveyed to identify the location and condition of markers of cultural or historic importance. These should then be retained, although it would still be necessary to allow for modification in the interests of safety at sea. It is likely to involve some form of management agreement with Ports of Jersey; a precedent for this would be the work done with Jersey Post to retain redundant post boxes. The following are particularly good examples of navigation markers which remain in situ and should be priorities for survey.

East Coast:

- L'Équerrière (Visible from shore. Distinctive design which has given the nick-name Fishtail Rock)
- Karamé (Visible from Seymour Tower. Minor tourist attraction with the rock being part of guided walks)
- Grande Anquette (A distinctive beacon off the south-east coast)

Les Minquiers:

- Jété des Fontaines de Bas (Distinctive isolated beacon on Les Minquiers sandbank).
- Puffin Beacon (Iconic beacon directly opposite the main island.)
- Les Maisons (The États de Jersey beacon is symbolic of the sovereignty claims pre-1950s. Cormorants use the rock for nesting and it is also visited by seals).

Priority CH6:	Culturally-significant navigation markers
To identify and	d conserve culturally-significant navigational markers.
Action CH6a:	A survey should be carried out to identify the locations and condition of navigational markers of cultural or historic importance.
Action CH6b:	Subject to the outcomes of survey work, conservation plans should set out measures for the most important markers recommending retention in situ, relocation or recording. They should allow for appropriate adaptation in the interests of safety.
Action CH6c:	Consideration will be given to the recording of onshore transit marks so they can be designated appropriately, and where appropriate, become a material consideration in planning decisions and development design.

10.8 Wreck Sites

10.8.1 Background

The locations of known wreck sites are shown on *Fig. 10d.* They occur throughout the Bailiwick aligned with strong tidal flows, lying amongst jagged reefs and in the shallow water harbour approaches. Over the centuries large numbers of wooden vessels foundered and then quickly broke up or were rapidly buried in sediment. However, the iron and steel-clad steam driven ships of the 19th and 20th Centuries have lasted better as wrecks, and substantial remains can be visited by divers. Such wrecks include a unique paddle steamer tug which sank in 1850, First and Second World War ships, and combat and transport aircraft. Even structures deliberately sunk more recently (such as the barge used in the construction of the Waterfront development) are interesting and have heritage value. Sadly a small number of wrecks are war grave sites.

Those within recreational limits are regularly visited by divers, including *Schokland, Armed Trawler, La Cap,* and *La Mauve,* which was deliberately sunk off Bouley Bay as a diving attraction.



'Schokland' a Dutch steamer which had been requisitioned by the Germans as a supply ship to the Channel Islands. She hit a rock south of St Helier in 1943.

🔟 Illustration used with kind permission of Kevin McIlwee





The 'Hirondelle', a 43m long iron cargo ship, which sank in 1917, probably after being hit by a German U-boat. She lies on her starboard side and is broken up, but key features remain, including her engine, boiler and forward guns. Illustration used with kind permission of Kevin McIlwee



Named wreck
 Other wrecks

Note: Not all sites may contain physical remains

Map data supplied by Kevin McIlwee of Jersey Marine Conservation



As well as cultural and recreational value, and the designation of some as war graves, many of the wrecks are also important for nature conservation. Although reef establishment has been slow, vessels such as *Heron* and *Hirondelle* house pink seafan corals, sponges, and numerous varieties of anemones. Reefs provide shelter and protection from predators for fish and shellfish, with muddled spars forming habitat for conger eel and crawfish (European spiny lobsters).

10.8.2 Issues

At present, with a few exceptions (in the form of frequently-dived wrecks), little is known about the wrecks within Jersey's waters. Most are very poorly understood in terms of their location and their state of preservation. This is largely due to the lack of a recent comprehensive survey of the seabed using modern equipment *(see section 10.6.2).* Those which have been dived (for example by Jersey Marine Conservation) have been found to be functioning as artificial reefs, supporting rare and unique species, as well as forming 'marine time capsules' which provide a window on Jersey's maritime heritage and culture.

Wrecks in Jersey's waters currently have no protection. Although they are inherently vulnerable due to physical and chemical erosion on the sea floor, the lack of protection puts them at additional risk from looting and deliberate damage. Potting and mobile gear damages structures and divers have noted that souvenir hunters have removed frameworks in search of artefacts. Diving and recreational fishing boats may use spars to moor on whilst visiting the sites, and the subsequent retrieval of anchors may weaken or remove parts of the vessels. A further challenge is the inconsistency of ownership, with some wrecks privately owned.

10.8.3 Proposed Actions

The first stage in developing appropriate protection for wrecks is to fully understand what is there. Once the seabed has been surveyed, and wrecks' locations and states of preservation are known, their significance can be established, and the wreck sites and their contexts be protected appropriately. It should also be noted that protecting the significance of wreck sites and their contexts will require the development of bespoke designation criteria, as well as a monitoring framework. A further challenge will be maintaining access for responsible divers whilst preventing removal of artefacts, or activities which cause structural damage or accelerate decomposition. Such activities may include mobile fishing gear and pot lines. Buoying the wreck sites would make them less vulnerable to accidental damage, and would also enable diving and recreational fishing boats to moor without damaging the wrecks.

Priority CH7: Wreck sites

To protect the significance of wreck sites and their contexts.

Action CH7a:	Survey work should be undertaken to identify and record wreck sites.
Action CH7b:	Criteria will be established in order to introduce measures to protect significant wreck sites, for example by designation (listing) as SSIs.
Action CH7c:	The conservation of significant wreck sites should be promoted through a review of management and monitoring arrangements, introducing new regulations where appropriate to limit or prohibit damaging activities.

10.9 Intangible cultural heritage

10.9.1 Background

An understanding of the relationship between land and sea is essential for safe navigation through Jersey's shallow, rock-strewn waters. The names of rocks, and the navigational tricks to avoid them using landmarks and seamarks, were passed down between generations of local fishermen and sailors. They formed an extra layer of local placenames and vocabulary. Like all languages, rock names evolve over time.

Other elements of intangible cultural maritime heritage include folklore and legends related to the sea, rituals and customs, and traditional crafts such as boatbuilding.

10.9.2 Issues

Changing local culture, and a move away from traditional navigation practices towards GPS-based systems, means that many of the traditional rock names are passing out of use and therefore being forgotten. In the process, part of Jersey's intangible cultural maritime heritage — and rich vernacular vocabulary — is being lost. Sources of information about maritime folklore and legends are often not easily available. Most are historic documents (books or notebooks) such as those by Philip Ahier and ET Nicholle, which are held as hard copies in the Société Jersiaise archive.

10.9.3 Proposed Actions

There is an ongoing project using a combination of oral history and historic map analysis to record historic rock names while it is still possible to do so. It is proposed under the forthcoming Heritage Law that rock names are incorporated into the Historic Environment Record (HER), which would make them available digitally. A place-names commission to agree how coastal, intertidal and marine place names are recorded on charts would also help to safeguard this aspect of intangible cultural maritime heritage for the future.

Digitisation of historic documents relating to Jersey's maritime folklore and legends would enable it to be more widely known and to continue in the public consciousness. It would also open up a future project appraising published and unpublished literature relating to Jersey's maritime history and tradition.

Priority CH8: Intangible cultural heritage

To protect and promote intangible maritime cultural heritage.

Action CH8a:	Consideration will be given to establishment of a dedicated website and a place names commission relating to coastal, intertidal and marine place names, in accordance with the programme to realise the value of intangible heritage within the <i>Heritage Strategy for Jersey</i> (2022).
Action CH8b:	A research framework should be developed to increase knowledge and understanding of intangible maritime heritage.
Action CH8c:	A strategy should be developed to protect and promote intangible maritime heritage.



Recreation and Tourism

Aim: Recreation and tourism are flourishing, diverse and safe

Recreation and Tourism

Aim: Recreation and tourism are flourishing, diverse and safe

11.1 Introduction

11.1.1 Background

Jersey's coast and marine environment are used for a very wide (and ever-increasing) range of recreational uses, by tourists and local people. They support a large number of local businesses which are an important part of the local economy. In addition, coastal recreation is important to the health and wellbeing of many local people and visitors, as described in **Chapter 7**.

Coastal recreation includes informal and organised activities including walking, swimming, fishing and the use of powered and non-powered craft. It has a long history, with some of the coastal swimming sites dating back to the 19th Century.

Recreation tends to concentrate close to onshore facilities such as beach cafes, car parks and public toilets **(shown on Fig. 11a).** There is therefore some overlap here between the Bridging Island Plan (BIP) which controls onshore planning and the JMSP. There is a particular concentration of recreational use in the bays at St Ouen, St Brelade, St Aubin, St Catherine, Bouley and the Royal Bay of Grouville. There is also a concentration of boating activity at Les Écréhous.

Les Écréhous is also a popular recreation destination, with boats (including those from France), rigid inflatable boat (RIB) trips and kayakers visiting. Les Minquiers is less frequently visited as it is further away and more difficult to access.

🔟 Cover image, Eleanor Lister



Fig 11a. Coastal Recreation Facilities



A Historic Coastal Swimming Sites



11.1.2 Key Evidence Base documents

Key Evidence Base documents for this chapter:

- Contributions to consultation from coastal businesses, watersports providers and recreation organisations
- 'Enjoying our Coast Safely' Code of Practice for Safety in the Water on Jersey's Beaches Ports of Jersey
- Jersey Sport Strategic Plan 2023–2026 (2023)
- Marine Activities Assessment (Marine Resources, 2023)
- Marine Spatial Planning: an atlas and study of ecology and human activities in Jersey waters, unpublished MSc thesis, University of York, De Gruchy (2015)

11.1.3 Legislation and Policy Context

The Harbours (Inshore Safety) (Jersey) Regulations 2012 allow Ports of Jersey to control activities in territorial waters, control ships plying for hire, issue permits, and ensure boats are correctly registered and insured. Underpinning this legislation are Harbourmasters Directions which are more prescriptive in what can/cannot be done in relation to certain activities. These are made primarily with the safety of water users in mind. Jersey does not currently have a dedicated marine, coastal sport or leisure policy, although a Tourism Strategy has recently been published (which is not adopted Government policy). However, the *Economic* Framework for the Marine Environment (2022) [Evidence Base document EB/G/14] sets out several policy goals in this area. Policy MD2 will deliver a sector economic development plan for marine leisure and blue tourism. Policy MD4 also commits to look at leisure opportunities from an infrastructure perspective. The Jersey Sport Strategic Plan 2023-2026 [Evidence Base document EB/RT/3] does not directly reference coastal or marine recreation, but coastal and marine recreation have the potential to contribute to its four strategic purposes, particularly through activities which are free and require no specialist equipment (such as walking and swimming). The four strategic purposes are:

- To increase participation in sport and physical activity.
- To reduce inequalities namely for women and girls, lower socio-economic communities, and those with one or more disabilities.
- Focus on inactive islanders, increasing physical activity...
- Build a safe, sustainable and inclusive sporting community.

As explained in **Section 1.2**, the JMSP forms an overarching strategic framework setting the approach for a range of tools, including land use planning, marine resource management and fishing regulation. The JMSP is not a statutory document, but will give direction to other legislative and policy tools, which will be used to deliver the priorities and actions set out in the JMSP.


11.1.4 Pen Portraits



Toya Tomkins, Bouley Bay Dive Centre The joy I get working within the marine environment is so diverse, I get to teach people snorkelling or diving, and I watch them achieve their goals and dreams. Being at Bouley Bay I get to showcase Jersey in a way that isn't done anywhere else on the island, and this gives me and the team a real sense of pride. When people come out from the water amazed by what the underwater world of Jersey offers, we share in their joy and answer questions about the species and the conditions they have seen. It's amazing watching the seasons change underwater where different marine life comes and goes, and this is something many people have never even thought about.

At Bouley Bay I watch people simply enjoying the sea and getting a sense of joy, wellbeing, and peace. It's good to see people using it in such a range of ways, such as boating, paddle boarding, snorkelling and this brings friends and families together. With the way everything is so expensive, being in the sea is free, and this lets everybody come together. We have to find a way though for everyone to use the sea and marine areas in a way that reduces the negative impact, to really make it clear to the public of the effect negative actions have on the environment. I feel in Jersey this isn't always shown or known and we sometimes live in an 'ignorance is bliss' way.





Sally Minty-Gravett MBE — 'Dream, Achieve and Inspire', Local swimmer If there's no sea, there's no me. I swim in the sea year-long and love all our amazing bays and ocean. I'm often asked where my favourite place is and the answer is 'in it'!

As a swimming teacher I have passed on my passion to hundreds of people and this transmission is important. In Jersey we all have an intimate relationship with the sea and respect the variety of weather and sea states that greet us as we step outside. The information on where to swim when is passed on both from one generation to the next and from one group of friends to another. It is wonderful to share the sea with so many more people since Covid, as it brings such health benefits and improved well being.

I am very aware of the amazing cleanliness of local water and the healthy respect all of us sea swimmers, and users, have for our ocean. I want to do all I can to maintain and retain the bays as they are, and I would like to see more sustainable and responsible local fishing. I see the wonderful local seafood as further evidence of how special our marine environment is, and it deserves our ongoing respect.



11.2 Types of coastal and offshore recreation

11.2.1 Coastal recreation without craft

These activities take place close to shore and include walking, swimming, snorkelling and playing on the beach. They are enjoyed by locals and tourists of all ages and all walks of life, and require no (or minimal) specialist equipment.

Coastal **walking** is a very popular pastime in Jersey, by both local people and visitors. There is a network of coastal footpaths above the high tide line (often on cliff tops or along seawalls) which provide easy access to the coast and opportunities to enjoy the seascapes (*see Chapter 7*). The intertidal areas around Jersey's coast are also used for a wide range of recreational pursuits including walking, dog walking, nature watching and foraging. There are some guided walks (particularly on the south-east reefs), but most walking is informal. **Horse riding** also takes place on firm and flat sands such as St Aubin's Bay.

Swimming infrastructure includes the 19th Century Lido in the intertidal zone at Havre des Pas and Marine Lake in St Aubin's Bay. Informal summer swimming by casual swimmers is concentrated on the sandy beaches such as St Brelade, St Aubin's Bay, Havre de Pas, Royal Bay of Grouville, Plémont, Grève de Lecq, and St Ouen's Bay. It is often associated with paddling, and playing on the beach. Lifeguard patrols operate over the summer months at St Brelade's Bay, St Ouen's Bay, Plémont and Grève de Lecq. The areas of beach with lifeguard patrols are marked with red and yellow flags. The precise locations of the flags vary depending on tides and currents.

Local people have always swum in the sea, but open water swimming has increased in popularity in recent years (particularly during the Covid pandemic). As well as individual swimmers, there are several sea-swimming clubs and even holidays focussing on sea swimming. Open water swimming takes place around Jersey's coast throughout the year, with less well-known places particularly appreciated for their quieter surroundings, away from the crowds associated with the most popular beaches. It is enjoyed by a wide range of people of all ages. Some of the oldest locations known for sea swimming are the natural pools known as the 'Fairy Pools' at La Mathe à Madame (Octopus Pool), La Mathe à Dame, and Lavoir des Dames (Le Pits de la Tchutte), on the north coast. These are shown on Fig. 11a, and are still used for informal swimming. They have links with local folklore, with the name dame meaning a wraith or fairy.

The clear shallow waters around the coast, particularly above the reefs, offer exceptional **snorkelling** for beginners and more experienced divers. The Snorkel Portelet trail was launched within the Portelet No-Take-Zone in 2022, and is intended to be the first of a new network of snorkel trails around Jersey's waters. It exhibits several different marine habitats including rocky reefs, seagrass beds, gullies and caves which support different types of anemones and many other fish and crustaceans. The subsequent 'Snorkel Bouley' trail at Bouley Bay was launched in summer 2023.



Enjoying the beach at St Brelade's Bay in summer. Fiona Fyfe

Playing on the beach, building sandcastles, rockpooling and generally having fun is a hugely popular activity with families, particularly in the summer tourist season. It is concentrated on the sandy beaches with easy access, good facilities and (in some locations) emergency cover: St Brelade's Bay, Havre des Pas, St Ouen's, Plémont, Grève de Lecq, and the Royal Bay of Grouville.

Coasteering is another popular activity which enables people to physically engage with the coastline through swimming, rock climbing, scrambling and cliff jumping. Several Jersey-based activity companies offer coasteering expeditions, with particularly popular routes at Grève de Lecq, Gorey and St Brelade's Bay.

11.2.2 Coastal and offshore recreation with non-powered craft

These activities require varying amounts of specialist equipment, and can extend further out from the shore than activities without craft.

St Ouen's Bay is well-known for its outstanding **surfing,** and is home to one of the oldest surfing clubs in Europe, founded in the 1920s. The bay has a long fetch and shallow gradient, enabling the formation of peeling waves which create a beach break that is good for both beginners and advanced surfers. There are several places in St Ouen's Bay and St Brelade's Bay where surfing equipment can be hired. St Ouen's Bay is also the base for the Healing Waves charity, which enables people with disabilities to enjoy therapeutic ocean recreation, particularly surfing.



Paddleboards are inflatable rafts, which the user stands on and paddles with a single long oar. They are designed for use in calm water, and so are most used in the sheltered bays such as St Brelade's Bay, St Aubin's Bay and the Royal Bay of Grouville. However, they can be used all around the coast when conditions are right. Several local businesses hire out paddleboards and equipment.

Sea-kayaking is popular around Jersey, with individuals, clubs and adventure centres taking part. Experienced sea kayakers paddle out to the offshore reefs, with the Paternosters, Les Dirouilles and Les Écréhous particularly popular destinations on spring tides. Fewer kayakers visit Les Minquiers because it is much further and requires greater technical ability.

There are **rowing boats** held at moorings around the coast for informal inshore use. Competitive rowing also takes place, with local competitions and longdistance races to France and other Channel Islands. The Jersey Rowing Club is based in St Aubin's Bay, and does much of its training and shorter races within the bay.

St Ouen's Bay, the Royal Bay of Grouville and St Brelade's Bay are particularly popular locations for **windsurfing** and **kite surfing**, and various local business hire equipment. Competitions are held locally. There are generally few conflicts with other recreational users because the conditions required for kite-surfing are generally not suitable for other forms of recreation, and so there is a natural segregation of users.

Sailing boats are moored in many harbours around Jersey's coast, and used for informal inshore sailing, or — in the case of larger vessels — trips to the offshore reefs or France. There are two yacht clubs based in Jersey — the St Helier Yacht Club, based in St Helier Harbour, and the Royal Channel Islands Yacht Club, based in St Aubin. The St Catherine's Sailing Club is based in St Catherine's Bay. These organisations cater for the owners of a wide range of sailing craft, and provide training courses and events. Races may be within Jersey waters (particularly within St Aubin's Bay as two clubs are nearby) or further afield.

The wide sandy beaches such as St Ouen also offer opportunities for **land sailing** at low tide.



Kayak in St Catherine's Bay.Image: Samantha Blampied



Sailing race, St Aubin's Bay.

11.2.3 Coastal and offshore recreation with powered craft

Various types of powered recreational craft are used around Jersey's coast and further offshore. *Figs. 11b and 11c* (from the *Maritime Activity Report,* [*Evidence Base document EB/G/22*]) show the concentrations of recreational craft within Jersey's waters. Under Regulation 7 of the <u>Harbours (Inshore Safety) (Jersey) Regulations 2012</u>, all craft capable of going more than 12 knots must be registered.



Fig. 11b: Densities of leisure vessels within Jersey's waters.



Fig. 11c: Densities of tourism/charter vessels within Jersey's waters.

Jet skis are available to hire in St Aubin's Bay. Private jet skis can be launched and used anywhere, but must comply with the five knot speed limit where it applies. Different water conditions are required for different jet-ski activities (for example lessons, riding at speed, and stunts) and so — as long as the rider complies with the speed limit — there are no restrictions on where jet skis can be ridden.

Rigid Inflatable Boat (RIB) trips depart from St Brelade, St Helier and St Catherine's Bay.

They provide tours around Jersey's coasts, and also go out to offshore reefs. RIBs are often used to access other coastal recreation locations such as dive and coasteering sites. *Fig. 11c* shows the most popular routes — the darker the colour, the more popular it is.

Diving from boats can be close offshore, or further afield. Popular diving sites include reefs, wrecks and rich marine environments. The Paternosters reef is particularly popular for diving as it is relatively quiet, and is close to the main dive centre at Bouley Bay.



Popular diving wrecks include the WW1 *Hirondelle* on the Paternosters, and *La Mauve* which was deliberately sunk off Bouley Bay as a diving attraction. Offshore areas which are dived regularly include Les Sauvages and Rigdon Bank. Both these areas have exceptionally rich underwater seascapes and provide opportunities to see rare species such as sea fans and jewel anemones. **Motor boats** and other powered recreational craft operate around Jersey's coast. Some are privately owned and launched from slipways or moored in harbours/moorings. **Water skiing** is focused in St Aubin's Bay and the Royal Bay of Grouville where there are large expanses of sheltered water. Motor boats are used to tow inflatables such as 'banana boats' or 'inflatable sofas' in the popular sandy bays of St Aubin's Bay, St Brelade's Bay and the Royal Bay of Grouville. Companies also offer speed boat trips.



Rib trip at Les Écréhous. **(i)** Fiona Fyfe



Ormer under a rock, South-East reefs.

11.2.4 Recreational Fishing

Recreational low water fishing is a long-established pastime in Jersey, due to the size and abundance of the intertidal area. Many of the skills and sites are passed down through generations, enabling its safe practice by local people in this potentially dangerous environment. Recreational fishers are only allowed to take sufficient catch for their own consumption, which may include fish, shellfish and crustaceans. They may be taken by hand (often through turning over rocks), or through setting of lines, traps or pots.

Ormers (the local name for the abalone — a type of large edible sea snail) are found around the coast and are regarded as a delicacy. Ormering is an Island pastime, and ormers are part of Jersey's cultural and natural heritage. In order to protect stocks, ormering is only permitted on certain days between October and April, and is subject to minimum size rules and a bag limit. Regulations also cover the minimum sizes and quantities of shellfish which can be gathered, in order to protect stocks of juveniles. Recreational fishers are also expected to adhere to a code of conduct to protect the environment and future stocks, such as replacing turned rocks, not leaving litter, and returning any unwanted catch alive into the sea.

Recreational low water fishing is concentrated in the bays and around the intertidal reef areas, as shown in *Fig. 11d.*





Fig. 11d: Shore fishing density in Jersey's waters. from De Gruchy (2015, unpublished)

Recreational **angling, potting and netting** are popular pastimes all around Jersey's coasts, either from shore or by boat. Recreational fishing is a key part of Jersey's fishing heritage. It is subject to regulation regarding catch sizes, and some recreational activities (such as diving for scallops) require a permit.

Angling is an important component of Jersey's recreational fishing scene. A diverse range of fish are caught, including bass, pollack, bream, mackerel and other species, depending on the season. Total numbers of participants are unknown, and more information is needed on angling activity in Jersey as the last study on this sector was in 2015. As shown in *Fig. 11e,* the 2015 study identified the greatest density of rod fishing in St Catherine's Bay, with Bouley Bay, Noirmont, St Brelade's bay and Corbière also popular locations.

Jersey has formal angling clubs and associations, some with over 100 members. These clubs have annual competitions around the Island, targeting different species. There is also an annual 'open' competition which often attracts over 70 anglers, including some from overseas. Angling techniques are evolving, with catch and release fishing becoming more common in recent years; now most angling competitions use this method.

Recreational boat fishing includes netting, potting, scallop diving and line fishing. Again, up-to-date information on locations and numbers of participants is lacking. *Fig. 11f* uses data from 2015, and shows that recreational boat fishing takes place along the north, east and south coasts, and at Les Écréhous. There is a notable concentration of recreational boat fishing at Bouley Bay.



Fig. 11e: Rod fishing density in Jersey's waters. from De Gruchy (2015, unpublished)





Spear fishing involves free-diving to catch specific species of fish using a hand spear or rubber band/ compressed air-powered speargun. Spear fishers may also catch some species of crustaceans or molluscs by hand. It is a physically challenging sport which enables a strong interaction with the marine environment. Spear fishing takes place all around the coast and on the offshore reefs. It is mostly done in shallow inshore waters of less than 10m although some free divers are able to dive to 30m or more. *Fig. 11f: Recreational boat fishing density in Jersey's waters.* from De Gruchy(2015, unpublished) Boat fishing methods include netting, potting, scallop diving and line fishing.

Most dives take place from the shore, but occasionally boats, kayaks or paddleboards are used to access fishing sites. The locations of dives are chosen based on prevalent weather and sea conditions. Spear fishing generally takes place between April and October, but some spear fishers will dive all year round when conditions permit. There are three spear fishing clubs in Jersey, the largest of which has 33 members and which organises events and competitions. Spear fishers also operate individually or in small groups.



11.3 Safety of recreational water users

11.3.1 Background

As explained above, the Harbours (Inshore Safety) (Jersey) Regulations 2012 allow Ports of Jersey to control activities in territorial waters. These include recreational uses. Harbourmasters Directions set out what can/cannot be done in relation to certain activities, and are made primarily with the safety of water users in mind.

Ports of Jersey aim to take a pro-active and flexible approach, and try to keep spatial restrictions to a minimum. The last serious recreational accident in Jersey's waters was in 2017, and involved a collision between a jet ski and a speed boat. As a result, Ports of Jersey introduced a speed limit, segregated some users in the busiest part of St Aubin's Bay, and produced a code of good practice. The segregations reflect the locations and activities of the beach concessions and are updated as necessary to reflect any changes. For example, there may be a launch area for jet skis, or waterski lanes. In other areas, owners of beach concessions which involve (for example) launching RIBs, have agreed routes which they can use.

The five knot speed limit is intended to protect swimmers and other shallow water users and applies up to 200m from the water's edge. This means its precise line varies with the state of the tide. The speed limit is extended further in St Brelade's Bay, St Aubin's Bay and St Catherine's Bay.



Extract from Ports of Jersey chart showing speed limit area in St Brelade's Bay. © Crown Copyright



11.3.2 Issues

As shown in *Fig. 11g,* watersports are concentrated in a number of locations around Jersey's coast. There is an ongoing risk of accidents when a variety of users are within the same area of water. Swimmers are particularly vulnerable to collisions with powered craft. Although such accidents are rare, they can be very serious and therefore a precautionary approach should be taken. Recent years have seen an increased number of sea swimmers, who may well be venturing further away from the traditional swimming beaches. The public consultation for the JMSP revealed particularly high levels of concern regarding safety of swimmers in the vicinity of powered craft, although so far that concern has not been borne out in the accident statistics.



Fig. 11g: Heat map showing locations of water sports activities.

from De Gruchy (2015,unpublished). Water sports include swimming, scuba diving, spearfishing, kayaking/canoeing, jet skiing, surfing, wind surfing, kite surfing, stand-up-paddleboarding and leisure boating (not for fishing). Particular challenges occur when occasional events are taking place, for example competitive rowers or sailors having to avoid swimmers or jet skis within the course. Feedback from the JMSP consultation indicated that it can currently be difficult to organise one-off events on beaches due to the number of different users in the space and the lack of a simple mechanism which would enable one user group to have priority for a limited time.

There is also a risk to swimmers, paddleboarders, kayakers etc. from shipping lanes, as they are not easily seen from a large vessel. Again, the *Enjoying our Coast Safely* publication provides guidance to minimise dangers.

The JMSP consultation revealed a high level of concern from recreational swimmers and divers over the risk of becoming entangled in fishing nets, either because the nets were incorrectly marked (for example pot buoys had been used to mark fishing nets) or because the nets were lost/abandoned (known as ghost nets) and therefore not marked.

11.3.3 Proposed Actions

There are a number of measures which can be taken to reduce the risk of accidents resulting from concentrations of recreational users. These include retaining and reviewing the speed limit, and identifying multi-use recreation areas, where there are many different types of recreational activity occurring within a relatively small area, and where additional management measures may therefore be required. These areas are shown on *Fig. 11h.* Monitoring levels of recreation (for example through surveys on consistent days within the year) would provide baseline information on recreation patterns and whether they are changing. This information could be used to inform future policy.





Fig 11h. Multi-use recreation areas



Multi Use Recreation Area



Priority RT1: Inshore speed limits

To set and manage inshore speed limits in the interests of safety.

Action RT1a:The existing inshore five knot speed limit will be retained,
and extensions to the speed limit will be kept under review.



Priority RT2: Multi-use recreation areas

To manage conflict and improve safety within Multi-use Recreation Areas.

Action RT2a:	A pro-active and flexible approach to the management of Multi-use Recreation Areas should be maintained which will be responsive to local conditions and the types and locations of activities taking place in any particular season. Multi-use Recreation Areas are located in St Ouen's Bay, St Brelade's Bay, St Aubin's Bay, the Royal Bay of Grouville, St Catherine's Bay and Bouley Bay.
Action RT2b:	Consideration will be given to the segregation of swimmers and powered craft within popular bathing areas by prohibiting powered craft between the red and yellow flags marking the lifeguarded areas of beaches, for a distance of 200m out to sea, regardless of the speed at which the craft are travelling.
Action RT2c:	Consideration should be given to improvements to relevant regulatory processes in order to facilitate the organisation and management of one-off events without conflict with other beach/sea users.
Action RT2d:	Further studies will be undertaken to determine the quantities and types of recreational uses in specific coastal locations, including recreational fishing, swimming, and powered and non-powered craft.

Priorities regarding use of inshore fishing equipment are made in

Chapter 9: Commercial Fishing and Aquaculture, Priority FA2,

and these should apply equally to recreational fishers.



11.4 Enhancing access to the marine environment

11.4.1 Background

Jersey's coast and seas already play a hugely important role in people's health and wellbeing, and have the potential to do even more. Activities such as walking and swimming are cost-free and require no specialist equipment. They are ideal ways for people of all ages and from all walks of life to relax, exercise, and spend time in nature. Most beaches can be accessed by public transport, and provide a wonderful resource to be used by individuals, families, schools, health and social organisations.

There are also exciting opportunities to improve the accessibility of coastal and marine recreation and encourage people to try different watersports. This accessibility is not just physical; it also relates to improving the availability of equipment and making watersports more affordable and socially diverse.

There are also opportunities to make beaches safer and more pleasant by reducing the number of parked vehicles.

11.4.2 Issues

An issue raised through the initial JMSP consultation process is the lack of accessibility of watersports for young people, either due to difficulties in physically accessing the coast, or because of the cost of specialist equipment.

The increasing popularity of coastal recreation in recent years has led to an increase in parking on beaches, and also increased traffic and usage of coastal car parks by people transporting gear (for example surf boards and paddleboards). Increased provision of gear storage would reduce the need for car travel, as users would be able to access the coast using public transport. Whilst the carparks are above the high water mark (and, therefore, technically outside the scope of the JMSP), users' activities are within the marine environment and therefore there is an element of cross-over between the JMSP and the Island Plan.

A lack of gear storage at coastal locations means that users are required to travel to beaches/slipways by car, which is a less sustainable transport option than using public transport. It also makes it harder for people who do not own a car to take part in some forms of coastal recreation. Currently some beach concessions store gear under tarpaulins on the beach, which is not a secure or aestheticallypleasing solution.

Parking on beaches is currently controlled by permits (issued by Department for the Economy). The JMSP consultation raised concerns regarding anti-social behaviour in the form of vehicles parking on beaches illegally or unnecessarily, with consequent risks of pollution, danger to users of the beaches, and changing the character of the beaches. At present it can be cheaper to park on the beach (permits are free) rather than pay to use the car park. In some locations vehicles with roof racks (used for carrying watersports equipment) cannot access carparks due to height barriers, leading drivers to park on beaches instead.

The consultation also raised the issue of slipways being blocked so legitimate users could not access them safely, either through vehicles being incorrectly parked on the slipways, or items/equipment being left on the slipways. This is likely to be often due to ignorance rather than malicious behaviour, and could be addressed through a public education programme. Concerns were raised through the public consultation about the poor condition of some slipways, particularly at St Catherine's Bay. This is a problem as slipways are used by people participating in a variety of watersports.



11.4.3 Proposed Actions

All of Jersey's residents (regardless of age, ability and socio-economic status) should be able to access the coast and take part in a range of recreational pursuits. There are opportunities to build on the existing provision and to make it more accessible, more affordable, more diverse, and safer. This will benefit local people and visitors to the island, with positive consequences for the local economy as well as people's health and wellbeing. At the same time, it enhances people's connectedness to the coast and sea and reinforces Jersey's cultural identity.

Priority RT3: Access to the marine environment

To promote and manage access to the marine environment for the benefit of all.

Action RT3a:	All existing public access to the coast and foreshore should be maintained. Opportunities should be sought to improve access for those with diverse needs.
Action RT3b:	Community/health/sports/education organisations will be encouraged to use the coast for physical activity, education and for the enhancement of well-being.
Action RT3c:	The safe storage of recreational equipment at the coast should be promoted in order to minimise transportation needs and reduce the need to store equipment on beaches. Guidance should be produced on suitable locations and designs for such facilities.
Action RT3d:	In order to support recreational users and to reduce the need for car travel, coastal facilities such as showers and toilets will be retained and enhanced.
Action RT3e:	The condition of slipways should be assessed and repairs/improvements undertaken if required to maximise recreational access. The slipway at St Catherine's Bay should be prioritised.

Priority RT4: Parking on beaches and slipways

To review and control parking of vehicles on beaches and slipways.

Action RT4a: The current regulatory system regarding parking on beaches should be reviewed, with the objective of reducing the amount of parking on beaches except in exceptional circumstances such as due to disability or commercial requirements. This may also require a review of coastal carpark provision.

Action RT4b: Current rules for parking on slipways should be reviewed where necessary to enable all legitimate user groups to access slipways safely.

11.5 Respecting wildlife and habitats

11.5.1 Background

This section overlaps with some matters raised in *Chapter 8: The Natural Environment and Biodiversity.*

There are several areas around Jersey's coast where recreation takes place in close proximity to fragile habitats or to wildlife, and this can result in damage or disturbance of them. There are already some measures in place, including Areas of Special Protection (ASPs) *(see Section 8.5)* and some restrictions on exercising dogs.

The Winter Countryside Respect Campaign is a joint media campaign by the Government of Jersey and organisations with an interest in public land and access. It encourages islanders to enjoy the countryside during the winter months, but to avoid damaging the environment or disturbing wildlife by staying on marked paths, keeping distance from wildlife, and staying out of ponds and freshwater habitats.

11.5.2 Issues

Dogs can pose a nuisance to wading birds on beaches at certain times of year. This is a particular concern within the beaches of importance to wading and overwintering birds at St Aubin's Bay, St Catherine's Bay, Archirondel and Anne Port. Current regulations are aimed at separating dogs and beach users rather than dogs and wading birds. Between 1st October and 30th April, dogs can be exercised on beaches at any time. Between 1st May and 30th September, dogs must be kept on a lead between 10.30am and 6pm.

Anti-social behaviour which impacts wildlife is a concern in coastal areas, and includes littering, abandoning fishing or recreational gear, and disturbance of wildlife (physically, or through noise). Disturbance of wildlife in specific locations can be addressed through the designation of ASPs, as explained in *Section 8.5.*

Damage to intertidal habitats (probably through ignorance rather than malicious intent) includes not replacing turned stones and not adhering to fisheries regulations such as minimum shellfish sizes and bag limits. This is not a spatial issue as it applies everywhere, but it could be addressed through a public education programme to accompany the JMSP.

Some recreational activities (for example boat moorings, boat anchoring, horse riding and digging) can damage fragile seagrass habitats. This is dealt with more fully in *Section 8.7*.

11.5.3 Proposed Actions

In some circumstances, spatial planning can help to mitigate or avoid damage or disturbance of wildlife by limiting the area or time in which a particular recreational activity can take place. In other circumstances, where it is a more general problem, public education and/or measures such as a beach warden scheme may be more appropriate.

A review should be undertaken of the existing regulations relating to the exercising of dogs on beaches. The result of this review should be recommendations which reach a workable compromise between the interests of wildlife, beach users, dog walkers and other recreational users.

A Seaside Code should be produced to encourage understanding of and respect for the coastal and marine environments though behaviours and actions including:

- not touching protected species;
- not disturbing sensitive wildlife;
- replacing turned stones;
- not dropping litter;
- making sure fishing gear is correctly labelled to indicate the type of gear being used;
- not using potting or netting equipment in harbours;
- not leaving belongings on slipways.

Supplements to the Seaside Code are likely to be required for specific activities such as recreational and low water fishing.



Priority RT5: Regulations regarding dogs on beaches

To review current regulations regarding dogs on beaches.

Action RT5a: The current regulations to manage/control dogs on beaches should be reviewed. The review should aim to find an acceptable balance between the needs of beach users, dog walkers, wildlife and other recreational users.

Priority RT6: Increasing public education and awareness

To promote responsible use and enjoyment of the coastal and marine environment though increasing public education and awareness.

Action RT6a:	Understanding of and respect for the coastal and marine environments will be encouraged and developed through the introduction of a Seaside Code. Supplements to the Seaside Code will be produced for specific activities such as recreational and low water fishing. Consider support of measures within the Seaside Code through the introduction of a beach warden scheme.
Action RT6b:	The "Enjoying the Coast Safely" booklet should be revised and updated to include more references to good practice with regard to avoiding disturbance of wildlife, habitats and cultural heritage. A subsection on recreational fishing will be considered.

See also **Priorities NB4 Priority Areas** for designation as Areas of Special Protection and **NB6** Seagrass habitat management areas. Also **Priority FA2** regarding fishing regulation.

11.6 Recreation at the offshore reefs

11.6.1 Background

Many of the coastal issues mentioned above also apply to the offshore reefs when they are visited for recreational purposes. Often, problems are exacerbated because of the sensitivity of the reefs' habitats and wildlife, the number of protected species, the lack of facilities and the tiny amount of land which remains uncovered at high tide. Numbers of visitors to the reefs have increased in recent years as public awareness of the reefs grows and it becomes easier to visit on commercial tours.

11.6.2 Issues

Both Les Minquiers and Les Écréhous suffer from recreational pressures, but the location of Les Écréhous, accessible in a range of craft from both Jersey and France, means that its levels of recreational pressure are particularly high, especially in the summer months. Fragile habitats can be damaged by trampling, and by inappropriate activities such as barbeques, dropping litter and picking vegetation. In addition, the presence of large numbers of people and boats can affect the reefs' sense of remoteness and tranquillity. Drones can disturb wildlife as well as introducing fast-moving and audible objects into the skies above the reefs. The lack of infrastructure and toilet facilities, combined with the relatively large numbers of visitors, can also cause problems. However, it is important that the wild, elemental character of the reefs is retained, and they do not become more manicured or 'cluttered' by signs, artificial paths or facilities.

11.6.3 Proposed Actions

Seals and birds are vulnerable to disturbance by boats, drones and general levels of noise and activity. The existing designated Areas of Special Protection on Les Écréhous and Les Minquiers are intended to reduce bird disturbance during the breeding season, and are described in *Section 8.5.* It is recommended that an additional ASP is implemented at Les Écréhous to protect seals from disturbance by recreational visitors *(see Priority NB4).*

Priority RT7: Management Plans for offshore reefs

To produce Management Plans for the offshore reefs which integrate the management of recreation, Marine Protected Areas and Ramsar Sites.

Action RT7a: Holistic Management Plans for the reefs should be produced through collaboration with users and Residents' Associations. These will address local issues including recreation management, cultural heritage and the natural environment. Issues for consideration include the feasibility of limiting visitor numbers, introducing a permit system, employing reef wardens and identifying particularly sensitive wildlife areas where additional restrictions may be required.

See also Priority **NB2** Ramsar Sites.



12 Infrastructure, Energy and Transport

Aim: Infrastructure, energy and transport are resilient and efficient



12 Infrastructure, Energy and Transport

Aim: Infrastructure, energy and transport are resilient and efficient

12.1 Introduction

12.1.1 Background

The marine environment is vital to the functioning of many of Jersey's services, including the import and export of goods and the movement of people through the port, and the flow of electricity and data through submarine cables. All around the coast are smaller harbours, slipways and moorings used by local people and visitors. Streams and waste water from Jersey outfall into the sea, and the sea is also used as a water source (through desalinisation) when freshwater supplies are low. A designated area of the seabed (FEPA deposition area) is currently used for offshore deposition of material.

Looking ahead, work will be undertaken to improve sea defences around the vulnerable and developed parts of Jersey's coastline. In some places, this will be combined with coastal reclamation and development. The marine environment has the potential to contribute to Jersey's electricity needs through production of renewable energy. The BIP contains an area for an offshore windfarm, and as technology develops there may be more opportunities for harnessing tidal and/or wave power, and to use excess energy for the generation of hydrogen and desalinisation of seawater.

O Cover image, Jersey Electricity plc



12.1.2 Key Evidence Base Documents

Key Evidence Base documents for this chapter:

- *Bridging Liquid Waste Strategy 2023–2026* (States of Jersey Dept. of Infrastructure and Environment, 2023)
- Economic Framework for the Marine Environment (Government of Jersey, 2022)
- GIS Datasets: Boat passages, harbour limits, submarine cables, FEPA area
- Jersey Shoreline Management Plan (AECOM for Government of Jersey, 2020)
- Offshore Wind Pre-Feasibility Study (IPT Energised for States of Jersey, 2018)
- Report on Pollutants and their impact on coastal flora and fauna 2009–2023 (Save Our Seas Jersey, 2023)
- St Helier Harbour Master Plan https://www.ports.je/about-us/projects

12.1.3 Legislation and Policy Context

Jersey's harbours are operated by Ports of Jersey Limited (PoJ), which acts as the Harbour Authority and the Harbour Master. The Authority and separately the Harbour Master can exercise Government's legal powers, including provision of pollution response and control, provision of Coast Guard services, and monitoring of Jersey's territorial waters. It also maintains all aids to navigation within and outside port limits and enforces shipping legislation in territorial waters.

The Harbours (Protection of Cables in Territorial Waters) (Jersey) Regulations 2010 set out what is prohibited in the vicinity of submarine cables, and currently covers electricity cables between Jersey and France.

The Food and Environment Protection Act (FEPA) 1985 (Jersey) order 1987 (and Amendment Order) governs the requirements for licences to deposit any substance or article in the sea. The issuing of these licences is the responsibility of Marine Resources.

More detail on PoJ's remit, and the legislation and policy context of transport, energy and infrastructure within Jersey's waters is provided in the *Legislation and Policy Review* [Evidence Base document EB/G/21].

As explained in *Section 1.2*, the JMSP forms an overarching strategic framework setting the approach for a range of tools, including land use planning, marine resource management and fishing regulation. The JMSP is not a statutory document, but will give direction to other legislative and policy tools, which will be used to deliver the priorities and actions set out in the JMSP.



12.1.4 Pen Portaits



Captain Bill Sadler — Jersey Harbour Master, Chief Operating Officer Marine, Ports of Jersey The role of Jersey's harbour master is varied. It is the harbour master's responsibility to ensure the island's critical maritime infrastructure is open, safe and secure, so we can import the lifeline freight that's needed to sustain the island and its residents. The role also includes management of the coastguard, who ensure the safety of people in our territorial waters, and of Vessel Traffic Services (VTS), who manage marine traffic entering and leaving St Helier harbour.

The role incorporates management of the marinas, maintenance of Jersey's historic harbours and the care of associated maritime heritage. I also work with government and the maritime industry to develop strategies for the growth of the blue economy.

Our territorial waters are an extension of the island, and we need to make them work for our population while also looking after them constructively, in collaboration with all our maritime stakeholders.

At Ports of Jersey we are increasingly aware of the need to take care of the delicate balance of our marine environment: here are just a few of our initiatives:

- Jersey Marinas have been accredited as an international 'Clean Marina' by The Yacht Harbour Association
- We have initiated a trial of new sea grass-friendly moorings at St Catherine's Bay to protect Jersey's largest area of seagrass and
- We are working with local schools to design tiles to fix to smooth harbour walls to replicate the nooks and crannies that occur naturally on rocky seashores.

We understand our responsibility to the environment and to our community, and we are working to develop a sustainable future for the Island's maritime sector.





Ashley Marner, Jersey Electricity I am an engineer with Jersey Electricity plc and our team is fundamental to the running of the Island's electricity network. My job is to help ensure our electrical submarine connections to the French mainland are maintained and monitored. We are also preparing our network for future renewable solutions which may involve the use of the marine environment and our territorial waters. The use of the marine environment is essential to Jersey Electricity plc in providing a zero-carbon energy source to the island.

We would like the Jersey Marine Spatial Plan to set out a clear set of rules for all of Jersey's territorial sea users. This would ensure there is a good understanding of what equipment is allowed to be installed, and what activities undertaken in which areas, whilst maintaining a positive and caring approach to the environment.



12.2 Sea defences and associated development

The Jersey Shoreline Management Plan (AECOM for Government of Jersey, 2020) sets out an island-wide assessment of the risks associated with coastal flooding and erosion, and a policy framework to manage these risks over the next 100 years. As would be expected, the risk of coastal flooding (from both wave overtopping and tidal inundation) is greatest in low-lying coastal areas.

Although tidal inundation will affect beaches around the island, the greatest threats occur in areas which are currently settled, including St Aubin's Harbour, St Aubin's Bay, parts of St Helier, and the southeast. These areas also have fewest opportunities for natural flood management due to their developed state. Coastal defence schemes for the south coast would also seek to exploit secondary benefits to Jersey, such as improvements in coastal access, active transport and wellbeing corridors, in addition to the primary aim of coastal protection.

The risk of coastal erosion is greatest in areas of undefended soft cliffs, including Noirmont, Fliquet and Corbière. These areas are generally not associated with extensive development.

Fig. 12a is taken from the Jersey Shoreline Management Plan and shows the 36 Coastal Management Units (CMUs) around the coast, and the recommended policy options for each CMU. The line closest to the coast refers to the present day (0–20 years), the middle line refers to the medium term (20–50 years) and the outer line refers to the long term (50–100 years). There are four recommended policy options:

No active intervention (purple line) — a policy decision not to invest in coastal defences or maintenance work. The shoreline is left to naturally evolve without intervention. This policy will generally be applied to natural areas of the coastline which are currently undefended. It includes most of the north coast, and the headlands of Noirmont and Corbière. Maintain the defence line (pink line) — existing coastal defences are maintained. The level of flood protection may decrease in some locations due to climate change. This policy will generally be applied where the existing defences provide a reasonable standard of flood protection or prevent erosion of the shoreline. It includes St Ouen's Bay, the north coast harbours, the east coast between La Coupe and Gorey, La Colette, Belcroute and Ouaisné Bay.

Adaptive management (yellow line) — a policy to proactively manage and mitigate coastal flood or erosion risk. The policy will be delivered through various management schemes/initiatives depending on the level of risk and the circumstances. This could include improving the standard of flood protection for an existing sea defence, constructing new defences, raising awareness of local flood risk or recommending property-level flood protection.

It includes St Brelade's Bay, St Aubin's harbour, St Aubin's Bay, The south-east coast from Grève d'Azette to Gorey, and Archirondel.

Advance the line (green dash line) — new sea defences are built seaward of existing defences. This policy will only be implemented in areas where there is a significant risk of flooding and erosion, or where it will deliver additional benefits for the community, environment or economy, such as creating a new amenity space. It includes St Aubin's harbour, St Aubin's Bay, and Havre des Pas.

At the time of writing the JMSP, the engineering feasibility, baseline environmental and concept design studies for the adaptive management and advance the line policies for the first epoch are underway. These projects are located in the areas considered to be the three highest priority areas based on current coastal flood risk:



- Havre des Pas Scheme La Collette to Charrier Corner Slipway
- St Aubin's Harbour Harbour plus coast east to La Haule Promenade
- St Aubin's Bay First Tower to West Park

In addition to these projects an additional six SMP delivery projects will be initiated through the epoch, with completion of these by 2040.

The Havre des Pas Coastal Flood Alleviation scheme will be constructed within the SE Coast Ramsar Site. The design and development of any scheme in this site will pay cognisance to the status of the Ramsar site to manage any impacts that may result, with mitigations developed to compensate or enhance the areas impacted.

Fig. 12a: Policy Summary Map from Shoreline Management Plan (2020)



Priority IT1: Coastal defences

To support the principle of new or replacement coastal defences as set out in the Shoreline Management Plan (2020), in order to protect coastal communities from flooding, whilst minimising environmental harm from their construction.

Action IT1a:	Subject to environmental safeguards, provision will be made for 'advance the line' defences as set out in the Shoreline Management Plan (2020).
Action IT1b:	Where coastal defence schemes potentially impact on designated areas, the implications on cultural and natural heritage will be thoroughly investigated and considered through the Environmental Impact Assessment process. Appropriate research, mitigation and compensatory habitats (offsite and/or onsite through Nature Inclusive Design) should be integrated into the preliminary, design and construction processes.
Action IT1c:	Following construction, designation boundaries should be reviewed and if necessary amended to reflect changes to the shoreline.



12.3 Submarine cables

12.3.1 Background

There are currently several active submarine cables connecting Jersey with France, Guernsey and the UK mainland, as shown on *Fig 12b.* This submarine cable network is considered critical national infrastructure by Jersey, as it provides power and communications services for Jersey and other Channel Islands.

These include high-voltage power cables, and fibre optic telecommunications cables, as follows:

- Normandie 1 and 2 power cables link Jersey France and come ashore at Archirondel.
- Normandie 2 Fibre Optic Outrigger telecommunications cable links Jersey — France and comes ashore at Archirondel.
- Normandie 3 power cable links Jersey France and comes ashore at Gorey.
- Guernsey Jersey 1 overlay power cable links Jersey — Guernsey, and comes ashore at Grève de Lecq.
- Ingrid Fibre Optic Outrigger telecommunications cable links Jersey — Guernsey and comes ashore at Grève de Lecq.
- UK-CI 8 Fibre Optic telecommunications cable links Jersey UK and comes ashore at Le Braye.
- Guernsey—Jersey No4 Fibre Optic telecommunications cable links Jersey and Guernsey, and comes ashore at Grève de Lecq.

The fibre optic cables are smaller and lighter than the power cables. Multiple cables are required in order to provide resilience and diversity of supply, and whilst most cables are laid individually, occasionally the fibre optic cables and power cables share a route, with the fibre optic cables being referred to as outriggers.



Cross-section through a submarine power cable. **(19)** Jersey Electricity plc



Cable-laying ship — *Grève de Lecq.* Jersey Electricity plc







 Existing mandatory power cable exclusion corridor
Existing advisory telecommunications cable exclusion corridor Area of search for mandatory protection zones to protect vulnerable sections of power cable



12.3.2 **Issues**

Because the submarine cables lie on the seabed, they can be vulnerable to damage by external aggression, such as mobile fishing gear and anchors, particularly in areas where sea-floor sediment deposits are relatively shallow and therefore provide less protection to the cables through burial. Damage and breakages can occur for a variety of reasons, which result in loss of service and these cables are also extremely expensive and can take some time to repair.

Internationally, submarine power cables usually gain their external protection from burial within the sea-floor sediments, but in some areas, particularly where shallow or no sediments exists, they are protected by an exclusion zone which prevents third parties anchoring or using mobile fishing gear in their vicinity. Within Jersey waters an exclusion zone of 1000m width was established for the original EDF1 route between Archirondel and Surville, France. This exclusion zone was set up to protect both marine traffic, fishers and the cable, providing clear indication of safe areas to fish and anchor, and fishing vessels time and notice to lift their gear in order to pass safely over the cable.

Jersey Electricity and Guernsey Electricity closely monitor all marine traffic in Jersey, Guernsey and French waters, and have the ability to contact vessels deemed to be a threat to any of the submarine cables using an automated monitoring and warning system. This advanced warning system also gives the monitoring services time to anticipate any potential threats and contact relevant vessels to warn them if they are not aware of the exclusion zone or cables being protected. This alerting system relies on vessels having an automatic identification system installed and operational. In a typical month, around 250 high severity alerts are received in the vicinity of these cable assets. These include scallop dredgers, demersal trawlers, slow moving vessels and anchor risks¹.

At present, The Normandie 1 and 2 power cables are laid on the seabed and are protected by a mandatory exclusion corridor which covers +/-500m either side of the cable. The Normandie 2 fibre-optic outrigger cable is also included in this exclusion corridor.

The Normandie 3 power cable does not have an exclusion corridor as it was well buried at installation by up to 2m of sediment providing a good level of protection for both marine traffic and the cable.

The Guernsey — Jersey 1 Overlay power cable does not currently have a mandatory exclusion corridor and is only partially buried by sediment due to the nature of the seabed along the route. It is shown on charts, but currently without an exclusion zone, introducing some risk to marine traffic and the power cable in some areas.

Submarine telecommunications cables are generally not protected by mandatory exclusion corridors, as other legal mechanisms such as the Submarine Telegraph Act and UNCLOS protocols provide the authorities with protection powers. Within Jersey waters, some telecommunication cables are laid within exclusion corridors set up to protect a nearby power cable. Where telecommunications cables lie outside the mandatory exclusion corridors associated with nearby power cables, an advisory approach is taken. The telecommunications cables are marked on charts, and Jersey Telecom works with Jersey and French fishing organisations to ensure that the fishermen are aware of the cables and know to avoid them by 500m when using mobile gear. If incidents do occur, they are covered by legal protocols and Industry Recommendations and Guidelines. The current system is considered by Jersey Telecom to be adequate and proportionate within Jersey's waters. Nevertheless, it would be preferable for any future cables to be laid where they are least vulnerable to damage.

¹ Figures provided by Jersey Electricity plc



All the cables come ashore through the intertidal area, where they are generally buried beneath sandy beaches. Occasionally they can become exposed due to sediment movement during storms, and it is important that they are not damaged by machinery or touched by members of the public.

It is likely that additional submarine power and telecommunications cables will be required in Jersey's waters in the future, potentially including power cables serving renewable offshore energy generation facilities, and as the existing cables require enhancement, repair or replacement.

12.3.3 Proposed Actions

Due to its status as critical power infrastructure to Jersey and Guernsey, it is recommended that mandatory protection zones should be created around vulnerable (i.e. unburied) sections of the Guernsey — Jersey 1 overlay power cable, prohibiting the use of mobile fishing gear or anchors within 500m either side of the cable. These zones would also provide protection to vulnerable sections of the adjacent Ingrid Fibre Optic Outrigger telecommunications cable, and parts of the Guernsey-Jersey No4 telecommunications cable. It will be necessary to undertake seabed surveys to identify the vulnerable sections of the Guernsey — Jersey 1 overlay power cable. The area of search for survey is shown on **Fig. 12b.**

Optimum routes for future cables should be considered at an early stage.

6	Priority IT2: Protection of submarine cables To protect submarine cables which form critical national infrastructure from damage by anchors and mobile fishing gear.
Action IT2a:	The existing mandatory protection corridors covering the Normandie 1 and 2 cables will be retained.
Action IT2b:	New mandatory protection zones covering vulnerable sections of the Guernsey — Jersey 1 overlay power cable, and the adjacent Ingrid Fibre Optic Outrigger telecommunications cable, should be created. The necessary surveys should be undertaken and the relevant legislation should be updated accordingly.
Action IT2c:	Advisory protection corridors along other telecommunications cables will be retained.
Action IT2d:	Access to cable landfalls through intertidal areas for maintenance, repair and overlay will be retained.
Action IT2e:	Provision will be made for cable maintenance, repair and overlay along all existing cable routes, in accordance with best environmental practice to mitigate ecological damage.
Action IT2f:	Subject to environmental safeguards, provision will be made for new cable routes connecting offshore renewable energy installations to the mainland or to interconnector sites.



12.4 Seawater quality monitoring sites

12.4.1 Background

Issues related to water pollution (particularly the prevalence of sea lettuce in St Aubin's Bay) were frequently raised during the public consultation for the JMSP. These concerns are of great importance to the Jersey residents who participated in the consultation process and should be recognised within the JMSP.

The quality of sea water has consequences for human health and the effective functioning of coastal and marine ecosystems. However, the quality of water entering Jersey's seas from streams and outfalls is a result of processes taking place on land (particularly agricultural management and sewage treatment) and is therefore beyond the scope of the JMSP. The spatial framework for monitoring seawater quality is within the scope of the JMSP, as it takes place within the marine environment.

Land-based activities that have the potential to cause pollution (including of Jersey's coastal and territorial waters) are regulated and governed by international directives/conventions, local legislation, local strategies (specifically the *Bridging Liquid Waste Strategy 2023–2026*) and best environmental practice. The Jersey Water 'Action for Cleaner Water Group' is a collaboration between Jersey Water, Government, and representatives from arable farming and dairy sectors, and aims to improve water quality. Monitoring is undertaken to provide robust scientific evidence of the impacts of human activities. It aims to provide evidence to protect and enhance the marine environment and to safeguard the population of Jersey.

Under OSPAR water pollution laws, monitoring should take place in areas of greatest human impact. Responsibility for monitoring and protecting the marine environment lies between various government departments and external organisations. The Government uses a risk-based approach to its regulatory and environmental monitoring, focussing on human activities and processes that have the potential to cause environmental/human harm and measuring them against internationallyrecognised standards. Areas of monitoring include (but are not limited to) monitoring of treated effluent discharges; designated bathing waters; environmental monitoring for nutrients in St Aubin's Bay and heavy metal monitoring of marine species. All of these were areas of concern highlighted during the consultation process.

Table 12a shows the types of routine monitoring currently taking place, their legislative bases and the Government department or organisation responsible. The general locations of monitoring points are shown in *Fig. 12c.* Further details of the monitoring regimes in place around Jersey's coast are provided in *Appendix E.*

Monitoring	International directives/ agreements/ Conventions/ local legislation	GoJ department/ organisation responsible
Environmental status assessment of St Aubin's Bay	EU Water Framework Directive (WFD)	Land Resource Management — Natural Environment Department
Additional nutrient monitoring of St Aubin's Bay surf zone (Sewage Treatment Works compliance)	n/a	Land Resource Management — Natural Environment Department
St Aubin's Bay outfall monitoring	n/a	Land Resource Management — Natural Environment Department
lsotope analysis of macroalgae — Jersey's south coast	n/a	Land Resource Management — Natural Environment Department
Bathing water monitoring (sea water monitoring)	EU Bathing water Directive	Environmental Health — Regulation and Land Resource Management — Natural Environment Department
Environmental monitoring of Jersey Harbours and marinas	Measured against Cefas — environmental standards	Land Resource Management — Natural Environment Department and Ports of Jersey
Heavy metal accumulation in shellfish and seaweeds	n/a	Marine Resources — Natural Environment Department
Mariculture monitoring	EU Legislation (Wild Aquatic Animals-Food and Feed) (Jersey) Regulations 2019 and EU Legislation (Monitoring of Residues in Animals) (Jersey) Regulations 2019 — as described in retained European Union (EU) Regulations 2017/625 and 2074/2005	States Vet — Natural Environment Department
Shellfish water monitoring	EU Shellfish Directive (now forming part of the WFD)	Land Resource Management — Natural Environment Department
Harmful algal bloom	n/a	Natural Environment Department
Radioactive substance	UK RIFE Programme	Land Resource Management — Natural Environment Department
Regulatory compliance monitoring of the discharge from the sewage treatment works	Water Pollution (Jersey) Law, 2000 and OSPAR	Pollution Control — Regulation
Regulatory compliance monitoring of the La Collette waste disposal facility	Waste Management (Jersey) Law 2005, Water Pollution (Jersey) Law, 2000 and the Basal Convention	Pollution Control — Regulation



Fig. 12c: Indicative seawater quality monitoring sites.



12.4.2 Issues

Water quality is generally consistent, with nutrient enrichment in St Aubin's Bay the main current concern. The nutrient enrichment, combined with the horseshoe-shape of the bay (which traps sediment within it), is associated with growth of sea lettuce on the beach. More generally, organic nutrient enrichment is recognised as a threat to marine habitats (see *section 8.6.8*).

Jersey's bathing water is generally of good or excellent quality. More details of the results of the various monitoring programmes are provided in *Appendix E.*



Sea lettuce in St Aubin's Bay (photographed in 2019).

12.4.3 Proposed Actions

Monitoring of sea water and marine biota (plants and animals) should be continued, within a spatial framework covering the areas of greatest potential human impact (St Aubin's Bay); locations popular for swimming; locations with the greatest potential for pollution; locations used for growing food for human consumption, locations that are regulated under Jersey legislation, and locations of particular importance for nature conservation.

Priority IT3:	Seawater quality monitoring sites
To continue t actions if wal	to monitor seawater quality, triggering appropriate ter quality falls.
Action IT3a:	Monitoring of water quality using suitable indicators should continue within a spatial framework covering areas of greatest potential human impact (St Aubin's Bay); locations popular for swimming; locations with the greatest potential for pollution; locations used for growing food for human consumption; locations that are regulated under Jersey legislation, and locations of particular importance for nature conservation.



12.5 Renewable energy: wind power

In April 2024, there was a States Debate on whether there was support for the principle of developing a wind farm in the south-west of Jersey's waters.

The proposition submitted to the States Assembly was accepted in April 2024. By accepting this proposal the States have agreed:

- (a) To pursue the opportunities arising from the development of an offshore wind farm in the south west of its territorial waters;
- (b) that development of up to around 1000MW in provision should be encouraged in order to meet the needs of Islanders, to power the Island's future economy and to create energy for export; and
- (c) to request the Council of Ministers to bring forward appropriate policy and legislation before the end of 2024 to set in place a process to lease, provide consent for, regulate and safely decommission a wind farm.

Fig. 12d shows the general location of the proposed windfarm area in the south-west of the Bailiwick. It should be noted that this area has the fewest environmental and cultural heritage constraints, but it is an area of hard, rocky seabed dominated by strong currents and tidal movement. This will limit foundation options for turbines, and will require suitably strong foundations and fixtures to withstand these challenging conditions. It is likely that fixed foundation turbines will be required, rather than floating turbines.





Potential areas for utility scale offshore wind *

St Brieuc Windfarm

* Source: Bridging Island Plan



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The St Brieuc windfarm under construction in French waters (as seen from Jersey waters, south-west of Les Minquiers). Fiona Fyfe

International research is ongoing to understand the additional environmental and economic benefits of wind turbines, and how they can be designed to maximise habitat creation and support fish stocks in surrounding waters, to minimise bird strikes, and/or to integrate other commercial uses such as seaweed farming. It is important that the findings of such research are fed into the design development of Jersey's offshore windfarm, along with other considerations such environmental and socioeconomic impacts, safe movement of vessels, and any implications on search and rescue.

Any windfarm application will be accompanied by a detailed Environmental Impact Assessment (EIA). The JMSP should be taken into account when designing the scope and detail of the EIA, which will be set out as part of the planned development of a new legal consenting route for offshore renewables, consistent with Island Plan policy. The following requirements should be considered in the consenting framework, covering the windfarm itself, associated submarine cables and onshore facilities:

- Best practice in marine conservation (including Nature Inclusive Design (NID), respecting wildlife and habitats, and underwater noise minimisation and monitoring);
- additional economic benefits, for example commercial seaweed production;
- implications for search and rescue operations; and
- minimisation of adverse impacts on views and cultural heritage.

Submarine cables connecting the windfarm are likely to be subject to the same restrictions on mobile fishing gear and anchoring as the existing high voltage cables. The impacts on ecology, archaeology and seascapes from cable landfalls will also need to be considered.

Priority IT4: Utility scale offshore wind generation

To support the principle of utility scale offshore wind generation in the south-western part of the Bailiwick.

Action IT4a:

An appropriate and rigorous assessment and consenting process for offshore renewable energy developments should be introduced.

12.6 Renewable energy: tidal power

12.6.1 Background

Jersey has one of the largest tidal ranges in the world, and the potential to use this resource for the creation of renewable energy has been discussed for a number of years. The BIP references the potential for tidal lagoon and tidal stream technology but does not map any potential sites.

12.6.2 Issues

In recent years feasibility work has been undertaken for a tidal barrage in St Aubin's Bay but at present there is no interested developer and so it is not currently being promoted. However, the work which has been done to date suggests that the project has potential to both supply electricity and to act as a sea defence, and it may therefore be desirable to investigate it further to better understand the potential benefits, implications and costs. It will also be necessary to investigate any potential adverse ecological impacts.

Surplus electricity generated could be stored, exported, and/or used for high energy processes such as hydrogen generation and desalinisation, both of which are likely to be increasingly in-demand due to climate change and the pressing need to move away from fossil fuels.

12.6.3 Proposed Actions

Tidal power should continue to be researched as a potential source of renewable energy.

Priority IT5:	Tidal Power
To investigal electricity w	te the potential of using tidal power to generate ithin Jersey's waters
Action IT5a:	Work should continue into investigating the potential for renewable energy generation using tidal power, especially where this can be combined with sea defence, subject to appropriate Environmental Impact Assessments.



12.7 FEPA offshore deposition site

12.7.1 Background

The current FEPA deposition area is located to the south of St Aubin's Bay, approx. two nautical miles offshore. It is shown on *Fig. 12e.* FEPA stands for the Food and Environmental Protection Act (1985) which applies in Jersey's waters, and sets out the requirement for a licence to deposit any substance or article in the sea. The deposits include inert construction materials, dredged materials (including sea lettuce removed from St Aubin's Bay), fish waste, and burials at sea. Licenses granted are reported annually to OSPAR. The area is labelled 'foul ground' on Admiralty Charts for the historic deposit of dredged material from harbours.

12.7.2 Issues

The JMSP enables the FEPA offshore deposition area to be formalised as a spatial use within the marine environment so it can be included in future iterations of the Island Plan. It also provides an opportunity to review the FEPA offshore deposition area, to make sure it is of a suitable size and location to meet future needs. There are currently no restrictions on fishing in the area, but as the seabed is rocky here it is generally not used for trawling as fishing gear is likely to be damaged.

The FEPA regulations are outdated and in need of review to ensure that they are capable of handling large-scale projects such as coastal redevelopment, reclamation and windfarms.

12.7.3 Proposed Actions

The existing FEPA offshore deposition area should be retained, and its size and location reviewed to make sure it meets future needs.

Priority IT6:FEPA offshore deposition areaTo retain the existing FEPA offshore deposition site.Action IT6a:The size and location of the existing FEPA offshore deposition
area will be reviewed in relation to potential future needs

to formalise its use.

ction IT6b:	A review of current legislation should be undertaken to ensure
	it is fit for purpose for large-scale projects.

and environmental requirements, and steps will be taken



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12.8 Harbours and moorings

12.8.1 Background

Harbours are located around Jersey's coast and at the offshore reefs. Harbour limits are *shown on Fig. 12e.*

St Helier Harbour is Jersey's main commercial port, and a lifeline in the supply of goods and services to and from Jersey. A redevelopment programme for St Helier Harbour is currently at the consultation stage, and will see substantial upgrading of commercial and leisure facilities. The first phase will be the redevelopment of Elizabeth harbour for commercial and passenger traffic, with roll on roll off (RoRo) and lift on lift off (LoLo) facilities all in one place, and new passenger infrastructure.

Fig. 12f from the St Helier Harbour Master Plan shows the different areas within the harbour, and the proposed redevelopments. The overall footprint of the port is not expected to change. Note that this is part of an active planning application, and is therefore subject to change.



Fig. 12f: Proposed new layout of Elizabeth Harbour, from Ports of Jersey website St Helier Harbour Limit extends over a large area, from the western side of St Brelade's Bay to Samarès. It includes all of St Aubin's Bay, and extends approx. two nautical miles out to sea from the most southerly points on land (Noirmont and Samarès).

There are several smaller harbours around Jersey's coast, including two (St Brelade and St Aubin) which are within St Helier Harbour Limits. Other harbours are Bonne Nuit, Bouley Bay, Gorey, Grève de Lecq, La Rocque, Rozel and St Catherine. Two harbours (Les Écréhous and Les Minquiers) are on the offshore reefs. All these harbours are the responsibility of PoJ as the Harbour Authority. Their limits are not expected to change within the next ten years.

Informal boat moorings also occur outside of harbour limits.



St Helier Harbour. Fiona Fyfe



Small harbour with 19th Century quay at Rozel.



12.8.2 Issues

There is a risk of harbour infrastructure being lost through redevelopment or abandonment, particularly if it is not well-used.

Rising sea levels may impact on harbour infrastructure such as piers and pontoons, which would need modification as appropriate.

Moorings outside harbour limits are a current concern in Jersey as they fall between the remits of PoJ and Marine Resources. Existing moorings outside harbours are not currently regulated. Therefore, vessels could be on inadequate moorings, increasing the risk of damage or pollution. There are also questions and concerns over insurance, FEPA licences and planning permission.

12.8.3 Proposed Actions

Existing harbour limits should be retained. Harbour infrastructure should be safeguarded through the planning system to ensure it is retained unless there is certainty that it is no longer needed. Where necessary it should be adapted to take account of rising sea levels. There is a possibility that large scale projects such as the potential wind farm may require an expansion of industrial areas associated with harbour facilities.

The issue of moorings outside harbours should be resolved through discussions between PoJ and Marine Resources.

Priority IT7: Harbours, moorings and associated infrastructure

To retain existing harbour limits and infrastructure.

Action IT7a:	Existing harbour limits will be retained.
Action IT7b:	Harbour infrastructure such as piers should be safeguarded
Action IT7c:	Where necessary, the appropriate and sensitive adaptation of harbour infrastructure to allow for rising sea levels should be supported.
Action IT7d:	Issues relating to moorings outside current harbour limits should be investigated, and collaborative action taken.

12.9 Boat passages

12.9.1 Background

Jersey's waters are criss-crossed by boat passages. The boat passages for large vessels are shown on *Fig. 12e.* The main passages for commercial vessels are the north-west, western, southern and eastern passages.

Smaller vessels are less restricted in their movements, and can access smaller harbours, moorings and slipways around the coast.

Precautionary Areas are defined by the International Maritime Organisation (IMO) *as an area within defined limits where ships must navigate with particular caution and within which the direction of flow of traffic may be recommended.* There is a Precautionary Area outside St Helier Harbour (shown in *Fig. 12e*) due to the density of marine traffic in this area and the importance of retaining safe movement of vessels into and out of the harbour. The waters directly south of Noirmont Point are also spatially constrained due to shallow bathymetry which requires deeper draught vessels to pass between Noirmont Point and Les Fours Buoy. This 'gateway' for vessels into St Helier is critical for the efficient passage of vessels.

12.9.2 Issues

Boat passages should remain open to enable safe passage of vessels, as well as safe access into St Helier Harbour.

12.9.3 Proposed Actions

Boat passages should remain open so boats can travel within and through Jersey's waters, with alternative routes available if required. It is particularly important that access to St Helier harbour is unimpeded. Vessels should continue to exercise particular caution to the south of Noirmont, and in the Precautionary Area outside St Helier Harbour.



Jersey — Guernsey — Portsmouth ferry berthed in St Helier Harbour. io Fiona Fyfe

Priority IT8: Boat Passages

To retain safe boat passages, including those to and from neighbouring jurisdictions.

Action IT8a: Boat passages and the Precautionary Area should be safeguarded and appropriate alternative routes identified where possible. It will be necessary to consider boat passages when identifying sites and developing designs for offshore renewables.



12.10 Anchorages

12.10.1 Background

The largest commercial vessels (including cruise ships) cannot enter the relatively shallow waters which surround Jersey, so they anchor offshore where there is enough depth of sediment for anchors to hold fast on the seabed. Designated commercial anchorages are shown on *Fig. 12e* and include St Aubin's North; St Aubin's South; West of Ruaudière; Demie de Pas and the Pilotage Waiting Anchorage. It is prohibited to lay static fishing gear in commercial anchorages.

12.10.2 Issues

It is important that anchorages remain open and free of other development or hazards, so vessels can anchor safely.

12.10.3 Proposed Actions

Existing anchorages should be retained.



Priority IT9: Anchorages

To retain existing anchorages.

Action IT9a:	Existing anchorages will be safeguarded and will be
	kept free of development or hazards.



12.11 Research and logistics

12.11.1 Background

Its geographical location, the diversity of its marine environment, and its existing infrastructure, mean that Jersey is uniquely positioned to become a hub for marine research and development (R&D), logistics and education. There are opportunities to promote Jersey as a maritime hub which could (for example): Provide a construction and operations base for maritime engineering (potentially initially linked to the construction of the offshore windfarm); provide infrastructure used by a range of industries, such as a decompression chamber; include a R&D campus servicing Government, universities, private sector firms and start-ups; utilise emerging technologies (for example in transport, data storage or energy). Such a hub would bring socio-economic benefits to Jersey. It would not necessarily need to be located at a single site.

12.11.2 Issues

The current lack of R&D facilities in Jersey means existing collaborations (for example with universities) cannot always reach their full potential. There is also a concern about 'brain drain' from the island, with Islanders leaving to pursue jobs in sectors which do not present opportunities locally.

The logistics of constructing the offshore wind farm may be a catalyst for this hub. Due to changes in the way fuel is imported into Jersey, the tanker berths at St Helier harbour are now used less frequently than previously, and they now have the capacity to act as a maritime hub during construction. They are currently accommodating support vessels for the St Brieuc windfarm.

12.11.3 Proposed Actions

The potential for a maritime hub in Jersey, covering R&D and logistics, should be explored.

Priority IT10: Maritime hub

To explore the potential for a Jersey-based maritime hub supporting research and development and logistics.

Action IT10a:	Initial conversations with potential partners should be undertaken.
Action IT10b:	Integrating development of the hub with the design and logistics of the offshore wind farm should be considered.
Action IT10c:	Potential sites (within St Helier and potentially elsewhere) should be explored.



Appendices



Appendix A: Implementation Table

Seascapes

	Action	Responsibility	Status
		(lead in bold)	
SC1 Seascape			
Character	To maintain the diversity and specia	l character of coastal and	l marine areas.
SC1a	The special qualities of coastal and	GoJ Marine Resources	In progress
	marine character types should be	GoJ Place and Spatial	
	maintained through application of	Planning	
	the strategy and relevant	GoJ Land Resource	
	management guidelines for each	Management	
	character type as set out in the	Ports of Jersey	
	Jersey Integrated Landscape and	Jersey Heritage	
	Seascape Character Assessment.	JE plc and GEL	
		Telecoms	
SC2 Marine			
Landmarks	To protect marine landmarks in view	vs from land and sea.	
SC2a	Key marine landmarks that form	GoJ Marine Resources	Resources required
	focal points or features in views	GoJ Place and Spatial	
	from the coastline or within the	Planning	
	marine area should be identified,	Ports of Jersey	
	designated and safeguarded and	Jersey Heritage	
	potential impacts on these should		
	be taken into account when		
	proposals for new developments or		
	activities are considered. Key		
	landmarks should be safeguarded		
	through the application of BIP		
	policies and supplementary		
	planning guidance.		



Natural Environment and Biodiversity

	Action	Responsibility	Status
NR1 No Tako	To support current and future No Ta	(leau ill bolu)	portant and valuable
	marine resources	ike zones for the most in	iportant and valuable
NB1a	The existing No Take Zone at Portelet Bay will be retained and will continue to be monitored. Monitoring will include assessment of damage to the seabed from current anchoring practices, and recommendations to minimise damage will be made accordingly.	GoJ Marine Resources Société Jersiaise	In progress
NB1b	A new No Take Zone will be designated at Les Sauvages, with the boundary determined following a review of the evidence against agreed criteria.	GoJ Marine Resources GoJ Legal Team	Resources secured
NB1c	Subject to the impacts and effects of the Portelet and Les Sauvages No Take Zones being found to be positive, further No Take Zones will be considered within Jersey's waters. These should be targeted to achieve social and biodiversity goals	GoJ Marine Resources Société Jersiaise	Resources required
NB2 Ramsar			
Sites	To retain Ramsar Sites and promote	their effective managem	ient.
NB2a	Existing Ramsar Site designations will be retained and will be managed in accordance with international obligations. Their management will be integrated with that of the surrounding Marine Protected Areas. Comprehensive management plans will cover habitat management, access and recreation, and shoreline management. Management Plans will be prepared in association with residents' associations where appropriate.	GoJ Marine Resources GoJ Land Resource Management Ports of Jersey Société Jersiaise Reefs Residents' Assocs. Jersey Ramsar Management Authority	In progress



	Action	Responsibility	Status
NB3 Intertidal Sites of Special Interest	To promote sound and sustainable r Interest (SSIs), and to consider the e	management of intertida	l Sites of Special
NB3a	Existing SSI designations will be retained and protected through the appropriate management and regulation of potentially damaging activities.	GoJ Land Resource Management	In progress
NB3b	The SSI network should be reviewed by Government against agreed criteria, and expanded to include further suitable sites and/or extensions of existing sites.	GoJ Land Resource Management	Resources required
NB3c	Condition monitoring should be put in place for all SSIs not currently monitored, including those in private ownership.	GoJ Land Resource Management GoJ Legal Team	Resources required
NB4 Priority areas for designation as Areas of Special Protection	To identify priority areas for the furt designation of additional Areas of S	ther protection of wildlife pecial Protection.	e through the
NB4a	Sites at Petit Port, Les Écréhous and at the proposed Seabird Protection Zone, should be considered for designation as Areas of Special Protection in order to counter the threats to wildlife. Relevant user groups (for example reefs residents' associations and boat trip operators) should be consulted when ASPs are being considered.	GoJ Land Resource Management Écréhous Residents Association	In progress
NB4b	The effectiveness of Area of Special Protection designation should be monitored and reviewed	GoJ Land Resource Management	In progress



	Action	Responsibility (lead in bold)	Status
NB5 Marine Protected Areas (MPAs)	To protect the most ecologically-value of the network of Marine Protected	uable marine habitats the Areas, and to support the f lersey's territorial area	rough the expansion e international by 2030
NB5a	The existing Marine Protected Areas (MPAs) will be extended and linked to cover the inshore area; the offshore reefs (Les Écréhous, Les Minquiers, the Paternosters and Les Anquettes); and parts of the sedimentary basins which contain a high coverage of OSPAR listed habitats. No mobile fishing gear will be permitted to be used within the MPAs.	GoJ Marine Resources GoJ Land Resource Management Ports of Jersey	Resources secured
NB5b	Legislation will be revised to give the MPAs a statutory basis.	GoJ Marine Resources GoJ Legal Team	Resources secured
NB5c	Further research will be undertaken in order to inform the future expansion of the Marine Protected Area network. This will include gaining greater understanding of the distribution of migratory fish species and sensitive habitats and species, as well as the potential consequences of the changed MPA boundaries on habitats and species.	GoJ Marine Resources GoJ Land Resource Management Société Jersiaise	Resources secured
NB5d	Compensatory measures and/or alternatives will be considered for fishers within the mobile fishing sector affected by the MPAs, where considered appropriate, having regard to economic impact assessments.	GoJ Marine Resources GoJ Economic Development	Resources required
NB5e	The potential will be explored for using biodiversity aids such as artificial reefs in order to enhance biodiversity within the MPA.	GoJ Marine Resources	Resources required
NB5f	Ongoing monitoring of the effectiveness of the MPA will be undertaken, including collaborative working between relevant organisations.	GoJ Marine Resources Société Jersiaise Jersey Fishermen's Association, Other conservation organisations	Resources required



	Action	Responsibility	Status
		(lead in bold)	
NB6 Seagrass			
Habitat	To designate Coogrand Liebitet Mana		
Ivianagement	To designate Seagrass Habitat Management Areas in order to promote the		
Areas	protection and regeneration of seag	rass.	Deseuress required
мвба	Seagrass Habitat Management	Goj Warine Resources	Resources required
	Areas should be established in St	Goj Land Resource	
	Catherine's Bay, Archirondel and	Nanagement	
	Anne Port, the Royal Bay of	Ports of Jersey	
	Grouville, South-East Reefs and St	Societe Jersiaise	
	Aubin's Bay, where damaging	Parisnes	
	activities will be restricted. It will		
	be necessary to explore options to		
	achieve this objective through		
	change or enhancement of the		
NDC	existing legal framework.		
NB6D	Subject to the findings of research	Ports of Jersey	In progress
	Into seagrass-friendly moorings		
	proving to be positive, such		
	moorings should be promoted		
	within Seagrass Habitat		
	Management Areas.		
NB/ Marine		•••••••••	· · · · · · · · · · · · · · · · · · ·
Environment	To promote a marine environment v	lisitor centre to act as a fo	ocus for education
Visitor Centre	for residents and visitors.		December 201
NB7a	A partnership of interested	There is potential for a	Resources required
	organisations should be	combination of	
	established and funding identified	government	
		departments and	
		external organisations	
		to be involved.	
		Precise details are yet	
107		to be agreed	.
INR \D	A suitable site should be sought for	GoJ Place and Spatial	Resources required
	a marine environment visitor	Planning	
	centre	GoJ Marine Resources	
		Ports of Jersey	
		National Trust for	
		Jersey	
		(Uthers as	
		appropriate)	



Commercial fishing and aquaculture

	Action	Responsibility	Status
		(lead in bold)	ishing Zong A
FA1 Fishing zones	(Regulated Fishing Zone); Fishing Zo (No Take Zones)	ne B (Seabed Protection)	Zone); Fishing Zone C
FA1a	Fisheries regulations will be updated to reflect the new zonal system, in line with government procedures and in consultation with local and neighbouring fishing fleets.	GoJ Marine Resources GoJ Legal Team	Resources secured
FA1b	A programme of public engagement will be undertaken with the Jersey and French fishing fleets, and the recreational fishing sector to make sure that all are aware of the new system following its introduction.	GoJ Marine Resources	Resources secured
FA2 Potting and netting equipment	To promote safe and responsible use to avoid entrapment or injury to peo	e of potting and netting e ople, or to marine fauna a	equipment, in order and birds.
FA2a	Netting regulations within the proposed MPA areas will be reviewed in order to minimise entrapment or injury to people or to marine fauna and birds. This review will include consultation with fishers. Commercial and recreational fishers will be made aware of any resultant changes.	GoJ Marine Resources GoJ Land Resource Management	Resources secured
FA2b	The visible marking of all commercial fishing equipment to indicate the type of gear being used will be trialled.	GoJ Marine Resources GoJ Legal Team	Resources required
FA2c	Workable solutions to minimise ghost fishing will be promoted. Onshore fishing gear disposal facilities (as established in 2023) should be enhanced.	GoJ Marine Resources	In progress
FA2d	Initiatives to minimise marine littering and to promote beach cleans will be encouraged.	GoJ Marine Resources GoJ Land Resource Management Ports of Jersey Société Jersiaise Parishes	In progress
FA2e	A review of commercial potting and netting in proximity of angling spots will be undertaken.	GoJ Marine Resources	Resources secured



	Action	Responsibility (lead in bold)	Status
FA2 Potting and netting	To promote safe and responsible use	e of potting and netting e	equipment, in order
FA2f	Signage in harbours will be improved to show harbour extents where potting and netting are prohibited.	Ports of Jersey	Resources required
FA3			
Aquaculture FA3a	Sustainable methods of aquaculture will be promoted and the industry will be encouraged to reach for recognised professional standards in environmental sustainability, and to monitor and mitigate local impacts of farming practices.	aquaculture. GoJ Marine Resources GoJ Economic Development	In progress
FA4	To ensure that any future seaweed f	farming (phytoculture) is	undertaken in a
Phytoculture	responsible and sustainable manner	Col Marine Baser	December were incl
FA4a	into the potential for phytoculture in Jersey including its suitability and effect on the marine environment.	Goj Marine Resources	Resources required
FA4b	Based on the outcome of FA4a, a licencing and regulatory framework will be established for phytoculture activity in Jersey's waters.	GoJ Marine Resources GoJ Place and Spatial Planning GoJ Economic Development GoJ Legal Team	Resources required
FA5		Ŭ	
Sustainable			
fishing	To support and promote facilities ar	nd actions which support	sustainable fishing.
FA5a	The marketing of sustainably- caught fish should be promoted by the creation of a sustainability mark or similar mechanism to indicate high quality and sustainability in Jersey's fisheries.	GoJ Marine Resources GoJ Economic Development	In progress
FA5b	The provision of appropriate marine and onshore facilities for sustainable fishing will be encouraged.	GoJ Marine Resources GoJ Place and Spatial Planning GoJ Economic Development Ports of Jersey	Resources required



Cultural heritage

	Action	Responsibility (lead in bold)	Status
CH1 Coastal	To protect working coastal infrastru	cture and landscapes of h	nistoric or cultural
Structures	interest, and their settings.		
CH1a	Working coastal infrastructure,	GoJ Place and Spatial	In progress
	including harbour and berthing	Planning	
	facilities, slipways, recreational	Ports of Jersey	
	structures and offshore huts	Jersey Heritage	
	should continue to be surveyed	Société Jersiaise	
	and assessed in terms of their		
	contribution to coastal cultural		
	landscapes.		
CH1b	Consideration will be given to	GoJ Place and Spatial	Resources required
	extending or introducing measures	Planning	
	to protect coastal cultural	Jersey Heritage	
	landscapes, their infrastructure,		
	specific features and settings, using		
	existing or by introducing new		
	protective measures.		
CH2 Military	To protect military heritage sites in t	the coastal and marine e	nvironment, and
heritage sites	their settings.		Γ
CH2a	Assessment of heritage value of	GoJ Place and Spatial	In progress
	military sites should be kept under	Planning	
	review and new sites added as	Jersey Heritage	
	appropriate.	Société Jersiaise	
CH2b	Sympathetic alternative uses for	GoJ Place and Spatial	In progress
	military sites and redundant	Planning	
	buildings should be explored,	Jersey Heritage	
	including use by the community to		
	optimise conservation and public		
	value.		



	Action	Responsibility (lead in hold)	Status
CH3 Coastline adjacent to prehistoric coastal sites	To protect prehistoric coastal sites, a and their settings, and affording the	acknowledging the herita m appropriate protection	ge value of the sites 1.
CH3a	The condition of the coastal margins of important prehistoric sites (La Cotte de St. Brelade, La Cotte à la Chèvre, Green Island, Le Pinacle, and Belle Hougue caves) should be surveyed and any current or potential activities which may be harmful identified; and any harm mitigated through the appropriate regulation of proposals for development or other activities which might harm their special interest and settings.	GoJ Place and Spatial Planning GoJ Land Resource Management Jersey Heritage Société Jersiaise	Resources required
archaeology	To protect the cultural heritage of in	itertidal areas and offsho	re reefs.
CH4a	The intertidal areas of the west, south and east of Jersey, along with the offshore reefs, should be considered for designation as Areas of Archaeological Potential.	GoJ Place and Spatial Planning Jersey Heritage	Resources required
CH4b	Arrangements for the management of the cultural heritage of intertidal areas and offshore reefs should be reviewed and strengthened where necessary.	GoJ Place and Spatial Planning Jersey Heritage	Resources required
CH4c	Further studies and survey work should be undertaken to investigate the potential for parts of the intertidal areas and offshore reefs to be given additional statutory designations, such as Listing.	GoJ Place and Spatial Planning Jersey Heritage Société Jersiaise	Resources required



	Action	Responsibility (lead in hold)	Status
CH5 Submerged landscapes survey	To undertake a seabed survey of the	e subtidal area.	
CH5a	In accordance with Jersey Heritage's existing research framework, further studies and Multi Beam Echo Sounder survey work of the subtidal seabed should be undertaken in order to inform priorities for further detailed investigation and facilitate the protection of important and sensitive features from inappropriate or harmful activities.	GoJ Marine Resources GoJ Place and Spatial Planning Ports of Jersey Jersey Heritage	Resources required
CH6 Culturally- significant navigation markers	To identify and concerve culturally o	ignificant pavigational m	arkors
CH6a	A survey should be carried out to identify the locations and condition of navigational markers of cultural or historic importance.	GoJ Marine Resources GoJ Place and Spatial Planning Ports of Jersey Jersey Heritage	Resources required
CH6b	Subject to the outcomes of survey work, conservation plans should set out measures for the most important markers recommending retention in situ, relocation or recording. They should allow for appropriate adaptation in the interests of safety.	Ports of Jersey Jersey Heritage	Resources required
CH6c	Consideration will be given to the recording of onshore transit marks so they can be designated appropriately, and where appropriate, become a material consideration in planning decisions and development design.	GoJ Place and Spatial Planning Jersey Heritage Société Jersiaise	Resources required

	Action	Responsibility	Status
		(lead in bold)	
CH7 Wreck			
sites	To protect the significance of wreck	sites and their contexts.	
CH7a	Survey work should be undertaken	GoJ Place and Spatial	Resources required
	to identify and record wreck sites.	Planning	
		Ports of Jersey	
		Jersey Heritage	
		Société Jersiaise	
CH7b	Criteria will be established in order	GoJ Marine Resources	Resources required
	to introduce measures to protect	GoJ Place and Spatial	
	significant wreck sites, for example	Planning	
	by designation (listing) as SSIs or by	Jersey Heritage	
	being afforded Listed status.		
CH7c	The conservation of significant	GoJ Place and Spatial	Resources required
	wreck sites should be promoted	Planning	
	through a review of management	GoJ Legal Team	
	and monitoring arrangements,	Jersey Heritage	
	introducing new regulations where		
	appropriate to limit or prohibit		
	damaging activities.		
CH8			
Intangible			
cultural			
heritage	To protect and promote intangible n	naritime cultural heritage	2.
CH8a	Consideration will be given to	Jersey Heritage	Resources required
	establishment of a dedicated	Société Jersiaise	
	website and a place names		
	commission relating to coastal,		
	intertidal and marine place names,		
	in accordance with the programme		
	to realise the value of intangible		
	heritage within the Heritage		
	Strategy for Jersey (2022).		
CH8b	A research framework should be	Jersey Heritage	Resources required
	developed to increase knowledge	Societe Jersiaise	
	and understanding of intangible		
CU0-	maritime neritage.		December 1991
CHAC	A strategy should be developed to	Jersey Heritage	Resources required
	protect and promote intangible	Societe Jersialse	
	maritime heritage.		



Recreation and tourism

	Action	Responsibility (lead in bold)	Status
RT1 Inshore speed limits	To set and manage inshore speed lir	nits in the interests of sa	fety.
RT1a	The existing inshore five knot speed limit will be retained, and extensions to the speed limit will be kept under review.	Ports of Jersey	In progress
RT2 Multi-use recreation			
Areas	To manage conflict and improve safe	ety within Multi-use Reci	reation Areas.
RT2a	A pro-active and flexible approach to the management of Multi-use Recreation Areas will be maintained which will be responsive to local conditions and the types and locations of activities taking place in any particular season. Multi-use Recreation Areas are located in St Ouen's Bay, St Brelade's Bay, St Aubin's Bay, the Royal Bay of Grouville, St Catherine's Bay and Bouley Bay.	Ports of Jersey	In progress
RT2b	Consideration will be given to the segregation of swimmers and powered craft within popular bathing areas by prohibiting powered craft between the red and yellow flags marking the lifeguarded areas of beaches, for a distance of 200m out to sea, regardless of the speed at which the craft are travelling.	Ports of Jersey	Resources required
RT2c	Consideration should be given to improvements to relevant regulatory processes in order to facilitate the organisation and management of one-off events without conflict with other beach/sea users.	GoJ Legal Team Ports of Jersey	Resources required
RT2d	Further studies will be undertaken to determine the quantities and types of recreational uses in specific coastal locations, including recreational fishing, swimming, and powered and non-powered craft.	Ports of Jersey Marine resources (for recreational fishing)	Resources required

	Action	Responsibility	Status
RT3 Access to the marine environment	To promote and manage access to the	e marine environment fo	or the benefit of all
RT3a	All existing public access to the coast and foreshore should be maintained. Opportunities should be sought to improve access for those with diverse needs.	GoJ Place and Spatial Planning	In progress
RT3b	Community/health/sports/education organisations will be encouraged to use the coast for physical activity, education and for the enhancement of well-being.	GoJ Economic Development GoJ Education GoJ Health and Community Société Jersiaise	Resources required
RT3c	The safe storage of recreational equipment at the coast should be promoted in order to minimise transportation needs and reduce the need to store equipment on beaches. Guidance should be produced on suitable locations and designs for such facilities.	GoJ Place and Spatial Planning GoJ Economic Development	Resources required
RT3d	In order to support recreational users and to reduce the need for car travel, coastal facilities such as showers and toilets will be retained and enhanced.	GoJ Place and Spatial Planning GoJ Economic Development Parishes	Resources required
RT3e	The condition of slipways should be assessed and repairs/improvements undertaken if required to maximise recreational access. The slipway at St Catherine's Bay should be prioritised.	Ports of Jersey	Resources required



	Action	Responsibility (lead in bold)	Status
RT4 Parking on beaches	To review and control parking of vehi	clos on beaches and clin	wovs
RT4a	The current regulatory system regarding parking on beaches should be reviewed, with the objective of reducing the amount of parking on beaches except in exceptional circumstances such as due to disability or commercial requirements. This may also require a review of coastal car park provision	GoJ Legal Team GoJ Department for Infrastructure Parishes Jersey Property Holdings	Resources required
RT4b	Current rules for parking on slipways should be reviewed where necessary to enable all legitimate user groups to access slipways safely.	Ports of Jersey Parishes	Resources required
RT5 Regulations regarding dogs on beaches	To review current regulations regardi	ng dogs on beaches.	
RT5a	The current regulations to manage/control dogs on beaches should be reviewed. The review should aim to find an acceptable balance between the needs of beach users, dog walkers, wildlife and other recreational users.	GoJ Land Resource Management GoJ Legal Team	Resources required



	Action	Responsibility (lead in bold)	Status
RT6 Increasing public education and	To promote responsible use and enj	oyment of the coastal an	d marine
awareness	environment though increasing pub	lic education and awaren	ess.
КТБа	the coastal and marine environments will be encouraged and developed through the introduction of a Seaside Code. Supplements to the Seaside Code will be produced for specific activities such as recreational and low water fishing. Consider support of measures within the Seaside Code through the introduction of a beach warden scheme	GoJ Land Resource Management	Resources required
RT6b	The "Enjoying the Coast Safely" booklet should be revised and updated to include more references to good practice with regard to avoiding disturbance of wildlife, habitats and cultural heritage. A subsection on recreational fishing will be considered.	GoJ Marine Resources GoJ Land Resource Management Ports of Jersey	Resources required
RT7			
Management			
Plans for	To produce Management Plans for t	he offshore reefs which i	ntegrate the
offshore reefs	management of recreation, Marine	Protected Areas and Ram	isar Sites.
RT7a	Holistic Management Plans for the reefs should be produced through collaboration with users and Residents' Associations. These will address local issues including recreation management, cultural heritage and the natural environment. Issues for consideration include the feasibility of limiting visitor numbers, introducing a permit system, employing reef wardens, and identifying particularly sensitive wildlife areas where additional restrictions may be required	GoJ Marine Resources GoJ Land Resource Management GoJ Legal Team Jersey Heritage Reefs Residents' Associations Parishes Jersey Ramsar Management Authority	Resources required



Infrastructure, Energy and Transport

	Action	Responsibility	Status
		(lead in bold)	
IT1 Coastal	To support the principle of new or replacement coastal defences as set out in the		
defences	Shoreline Management Plan (2020), in order to protect coastal communities from		
	flooding, whilst minimising environr	mental harm from their c	onstruction.
IT1a	Subject to environmental	GoJ Operations and	In progress
	safeguards, provision will be made	Transport	
	for 'advance the line' defences as	GoJ Land Resources	
	set out in the Shoreline	Management	
	Management Plan (2020).	GoJ Marine Resources	
		GoJ Place and Spatial	
		Planning	
IT1b	Where coastal defence schemes	GoJ Operations and	In progress
	potentially impact on designated	Transport	
	areas, the implications on cultural	GoJ Land Resources	
	and natural heritage will be	Management	
	thoroughly investigated and	GoJ Marine Resources	
	considered through the	GoJ Place and Spatial	
	Environmental Impact Assessment	Planning	
	process. Appropriate research,		
	mitigation and compensatory		
	habitats (offsite and/or onsite		
	through Nature Inclusive Design)		
	should be integrated into the		
	preliminary, design and		
174	construction processes.		Deres and the second
1110	Following construction, designation	Goj Marine Resources	Resources secured
	and if pacessary amonded to	Goj Land Resources	
	reflect changes to the shoreline	Wanagement	
IT2 Protection	Teneer enanges to the shoreline.		
of submarine	To protect submarine cables which f	form critical national infr	astructure from
cables	damage by anchors and mobile fishi	ng gear.	
IT2a	The existing mandatory protection	Ports of Jersey	In progress
	corridors covering the Normandie	JE plc and GEL	
	1 and 2 cables will be retained.	Telecoms	
IT2b	New mandatory protection zones	GoJ Legal Team	Resources required
	covering vulnerable sections of the	Ports of Jersey	
	Guernsey – Jersey 1 overlay power	JE plc and GEL	
	cable, and the adjacent Ingrid Fibre	Telecoms	
	Optic Outrigger		
	telecommunications cable, should		
	be created. The necessary surveys		
	should be undertaken and the		
	relevant legislation should be		
	updated accordingly.		
IT2c	Advisory protection corridors along	Ports of Jersey	In progress
	other telecommunication cables	JE plc and GEL	
	will be retained.	Telecoms	



	Action	Responsibility (lead in bold)	Status
IT2 Protection of submarine cables	To protect submarine cables which form critical national infrastructure from damage by anchors and mobile fishing gear.		
IT2d	Access to cable landfalls through intertidal areas will be retained.	GoJ Marine Resources GoJ Place and Spatial Planning Ports of Jersey Jersey Heritage JE plc and GELTelecoms	In progress
IT2e	Provision will be made for existing cable maintenance, repair and overlay along existing cable routes in accordance with best environmental practice to mitigate ecological damage.	Ports of Jersey JE plc and GEL Telecoms	In progress
IT2f	Subject to environmental safeguards, provision will be made for new cable routes connecting offshore renewable energy installations to the mainland or to interconnector sites.	JE plc and GEL Wind energy developer GoJ Place and Spatial Planning GoJ Marine Resources Ports of Jersey Jersey Heritage	Resources required



	Action	Responsibility (lead in bold)	Status
IT3 Seawater quality monitoring	To continue to monitor seawater qu	ality, triggering appropria	ate actions if water
sites	quality falls.		
IT3a	Monitoring of water quality using suitable indicators should continue within a spatial framework covering areas of greatest potential human impact (St Aubin's Bay); locations popular for swimming; locations with the greatest potential for pollution; locations used for growing food for human consumption; locations that are regulated under Jersey legislation, and locations of particular importance for nature conservation.	GoJ Marine Resources GoJ Land Resource Management Ports of Jersey	In progress
IT4 Utility			
scale offshore	To support the principle of utility and	le offenere wind concret	ion in the couth
generation	western part of the Bailiwick.	ne onshore wind general	ion in the south-
IT4a	An appropriate and rigorous assessment and consenting process for offshore renewable energy developments should be introduced.	GoJ Marine Resources GoJ Place and Spatial Planning GoJ Economic Development Ports of Jersey JE plc and GEL Telecoms	Resources required
IT5 Tidal	To investigate the potential of using	tidal power to generate o	electricity within
power	Jersey's waters		
IT5a	Work should continue into investigating the potential for renewable energy generation using tidal power, especially where this can be combined with sea defence, subject to appropriate Environmental Impact Assessments.	GoJ Place and Spatial Planning GoJ Economic Development Ports of Jersey	In progress

	Action	Responsibility	Status
		(lead in bold)	
IT6 FEPA			
offshore			
area	To retain the existing FEPA offshore	denosition site	
IT6a	The size and location of the existing	Gol Marine	Resources required
	FEPA offshore deposition area will	Resources	nessurees required
	be reviewed in relation to potential	GoJ Place and Spatial	
	future needs and environmental	Planning	
	requirements, and steps will be	Ports of Jersey	
	taken to formalise its use.		
IT6b	A review of current legislation	GoJ Marine Resources	Resources required
	should be undertaken to ensure it is	GoJ Legal Team	
	fit for purpose for large-scale	Ports of Jersey	
	projects.		
IT7 Harbours,			
moorings and			
infrastructure	To retain existing harbour limits and	infrastructure	
IT7a	Existing harbour limits will be	Ports of Jersey	In progress
-	retained.	· · · · · · · · · · · · · · · · · · ·	
IT7b	Harbour infrastructure such as	GoJ Place and Spatial	Resources required
	piers should be safeguarded.	Planning	
		Ports of Jersey	
IT7c	Where necessary, the appropriate	GoJ Place and Spatial	In progress
	and sensitive adaptation of	Planning	
	harbour infrastructure to allow for	Ports of Jersey	
	rising sea levels should be	Jersey Heritage	
IT7d	Issues relating to moorings outside	Gol Marine Resources	Resources required
ii /u	current harbour limits should be	Ports of Jersey	nesources required
	investigated, and collaborative	Reefs Residents'	
	action taken.	Associations	
IT8 Boat	To retain safe boat passages, includ	ing those to and from n	eighbouring
passages	jurisdictions.		
IT8a	Boat passages and the	Ports of Jersey	In progress
	Precautionary Area should be		
	safeguarded and appropriate		
	alternative routes identified where		
	possible. It will be necessary to		
	consider boat passages when		
	identifying sites and developing		
IT9			
Anchorages	To retain existing anchorages.		
IT9a	Existing anchorages will be	Ports of Jersey	In progress
	safeguarded and will be kept free	-	
	of development or hazards.		



	Action	Responsibility (lead in bold)	Status					
IT10 Maritime hub	To explore the potential for a Jersey-based maritime hub supporting research and development and logistics.							
IT10a	Initial conversations with potential partners should be undertaken.	GoJ Place and Spatial Planning GoJ Economic Development Ports of Jersey	Resources required					
IT10b	Integrating development of the hub with the design and logistics of the offshore wind farm should be considered.	GoJ Place and Spatial Planning GoJ Economic Development Ports of Jersey	Resources required					
IT10c	Potential sites (within St Helier and potentially elsewhere) should be explored.	GoJ Place and Spatial Planning GoJ Economic Development Ports of Jersey	Resources required					



APPENDIX B: Evidence Base

Items which are commercially confidential or have been provided in confidence are marked*.

General

Ref.	Title	Pub.	Source		JMSP		
		date	Doc	GIS	Consult	Atlas	
				layer	ation	layer?	
EB/G/1	United Nations Convention on the Law of	1982	\checkmark				
	the Sea (UNCLOS)	1502	-				
EB/G/2	Channel Islands Pilot	??	✓				
EB/G/3	Integrated Coastal Zone Management Strategy	2008	~				
EB/G/4	OSPAR List of Threatened and/or Declining	2008	1				
	Species and Habitats 2008	2008					
EB/G/5	UK Marine Policy Statement HM						
	Government, Northern Ireland Executive,	2011	2011	\checkmark			
	Scottish Government, Welsh Assembly						
	Government						
EB/G/6	Les Minquiers – A Natural History Paul	2010					
	Champers, Francis Binney and Gareth	2016	v				
	Jeffreys						
EB/G/7	Jersey Shoreline Management Plan	2020	\checkmark				
	ASD Clobal International Cuida on Marina						
EB/G/8	MSP Global International Guide on Marine	2021	\checkmark				
	Identification at hiérarchisation des anieux						
CD/0/9	ácologiques des facades maritimes						
	métropolitaines (Office Français de la	2021	2021	\checkmark			
	Biodiversité)						
FB/G/10	Advancing social equity in and through						
, -,	marine conservation Frontiers in Marine	2021	\checkmark				
	Science, July 2021 Vol. 8 Article 711538						
EB/G/11	Compendium of existing and emerging						
	cross-border and transboundary MSP	2021	\checkmark				
	practices. (UNESCO)						
EB/G/12	Country-level factors in a failing						
	relationship with nature: Connectedness	2022					
	as a key metric for a sustainable future	2022	v				
	Ambio 2022, 51: 2201-2213						
EB/G/13	Jersey Bridging Island Plan	2022	\checkmark	✓			



Ref.	Title	Pub.	Source		JMSP	
		date	Doc	GIS	Consutl	Atlas
				Layer	ation	layer?
EB/G/14	Economic Framework for the Marine					
	Environment Marine Economy Advisory	2022	✓			
	Group (MEAG)					
EB/G/15	Jersey Carbon Neutral Roadmap	2022	\checkmark			
EB/G/16	Declaration environnementale du plan					
	d'action du document stratégique de	2022	\checkmark			
	façade. Façade Manche Est – Mer du Nord					
EB/G/17	Document stratégique de la façade					
	Manche Est – Mer du Nord, Plan d'Action	2022	\checkmark			
	Ministère de la Mer					
EB/G/18	Nord Atlantique – Manche Ouest Tome 1	2022	\checkmark			
	Annex 1					
EB/G/19	Nord Atlantique – Manche Ouest Tome 1	2022	~			
/_ /	Annex 1					
EB/G/20	Nord Atlantique – Manche Ouest Tome 1	2022	\checkmark			
	Plan d'action					
EB/G/21	Legislation and Policy Review for JMSP	2023	~			
EB/G/22	Maritime Activities Assessment Marine	2023	\checkmark			
== / = / = =	Resources					
EB/G/23	Minister for Energy and the Environment	2023	\checkmark			
	Delivery Plan 2023					
EB/G/24	Proposed Common Strategic Policy 2024-	2024	\checkmark			
	2020					
ED/0/25	Consultation Posponso Summary	2024	✓			
	Consultation Response Summary			 ✓ 		_
						· ·
	Substrate intertidal					-
	Substrate subtidal					
	Geology intertidal			· •		✓
	Geology subtidal			· •		
	Seafloor sediment thickness			· •		
	Sediment stability			· •		
	Depth contours			\checkmark		✓
	Tidal energy			· •		· ✓
	Wave height			\checkmark		✓
	Wave nower			✓		
	Coastal Exposure index			✓ →		✓ →
	Wind speed			✓ ×		
	Wind power density			✓		
	Land			✓		✓
	lersev chart datum			✓		
	lersev intertidal area			✓		✓
	JEISEY IIILEI LIUdi di Ed			•		•

Seascapes

Ref.	Title	Pub.	Source			JMSP
		date	Doc	GIS	Consult	Atlas
				layer	ation	layer?
EB/SC/1	Jersey Integrated Landscape and Seascape	2020				
	Character Assessment (ILSCA)		•			
	Seascape Character Areas from ILSCA			\checkmark		\checkmark

The Natural Environment and Biodiversity

Ref.	Title	Pub.	Source			JMSP
		date	Doc	GIS	Consult	Atlas
				layer	ation	layer?
EB/NB/1	Ramsar Site Management Plans	2011	\checkmark	\checkmark		
EB/NB/2	MPAs and Ecosystem Services	2014	\checkmark			
EB/NB/3	Non-native Marine Species in the	2017	1			
	Channel Islands: Review & Assessment		·			
EB/NB/4	Biodiversity A Strategy for Jersey	2020	\checkmark			
EB/NB/5	Jersey Geodiversity Audit British	2020	1			
	Geological Survey		v			
EB/NB/6	Invasive Non-Native Species: Challenges	2021				
	for the water environment Environment		\checkmark			
	Agency, 2021					
EB/NB/7	Blue Carbon Report: An Assessment of	2022				
	Jersey's Territorial Seas Marine		\checkmark	\checkmark		\checkmark
	Resources					
EB/NB/8	Ecosystem service assessment of Jersey's	2023	 ✓ 	 ✓ 		1
	marine habitats Marine Resources		•			•
EB/NB/9	A valuation of Jersey's marine habitats in	2023				
	providing ecosystem services Blue		 ✓ 			
	Marine Foundation and New Economics					
	Foundation					
EB/NB/10	An outline of the ecology and sensitivity	2023				
	of marine habitats in Jersey, Channel		\checkmark			
	Islands Marine Resouces					
EB/NB/11	A baseline description of the benthic	2023				
	assemblages of Les Sauvages reef, Jersey		\checkmark			
	Blue Marine Foundation					
EB/NB/12	Jersey MPA Assessment Methodology	2023	 ✓ 	√		1
	Marine Resources					-
EB/NB/13	Seasearch Marine Surveys in Jersey					
	(National Biodiversity Network website)					
	https://doi.org/10.15468/0ppp4p					



EB/NB/14	National Biodiversity Network Atlas				
	species records (website)				
	https://records.nbnatlas.org/occurrences				
	/search?q=data_resource_uid%3Adr659				
	<u>&nbn_loading=true&fq=-</u>				
	<pre>occurrence_status%3A%22absent%22</pre>				
	SSI boundaries		\checkmark		\checkmark
	Areas of Special Protection		✓		✓
	Ramsar Site boundaries		✓		✓
	MARESA information		✓		✓
	EUNIS Marine Biotopes (intertidal and				
	subtidal)		v		v
	Cetacean sightings		✓		✓
	Dolphin activity		✓		✓
	Porpoise activity		✓		✓
	Seal haul sites		✓		✓
	Bird resting and roosting sites		✓		✓
	Wading birds		✓		✓
	OSPAR Priority habitats		✓		✓
	Final proposed MPA boundaries		✓		✓
	Findings of specialist stakeholder				
	workshop (combined with cultural			\checkmark	
	heritage, 28 th Feb 2023)				
	Submission from Marion relating to:				
	ethics of care, shifting baseline,				
	intergenerational equality, ecocide,			\checkmark	
	parity for marine animal communities,				
	consultation				
	Submission from Blue Marine relating to				
	MPAs			*	
	Submission from Société Jersiaise			./	
	relating to East Coast No Take Zone			*	



Fishing and aquaculture

Ref.	Title	Pub.	Source			JMSP
		date	Doc	GIS	Consult	Atlas
				layer	ation	layer?
EB/FA/1	A history of fishing in Jersey Government of Jersey	1967	~			
EB/FA/2	A People of the Sea: The maritime history of the Channel Islands Alan G. Jamieson	1986	~			
EB/FA/3	The Ecosystem Services of Marine Aquaculture: Valuing benefits to people and nature Bioscience 2019 Vol.69, 59- 68	2019	~			
EB/FA/4	Marine Resources Annual Report 2020	2020	\checkmark			
EB/FA/5	Value of Coastal Habitats to Commercial Fisheries in Jersey and the Role of MPAs Blampied <i>et. al.</i> Fisheries Management and Ecology 00:1-11)	2021	~			
EB/FA/6	Optimal fishing effort benefits fisheries and conservation Rees, A., Sheehan, E.V., Attrill, M. J. Optimal fishing effort benefits fisheries and conservation. (Sci. Rep. 11, 1-15 2021).	2022	~			
EB/FA/7	<i>The socio-economic impact of MPAs in</i> <i>Jersey – a Fishers' perspective</i> Blampied (Fisheries Research, 259)	2023	~			
EB/FA/8	Business Impact Assessment of the proposed Marine Protected Area network on the mobile gear fishing fleet Government of Jersey Marine Resources and Economic Teams, with input from Tautenay Ltd. and Terra Mare Ltd.	2024	~			
	Existing MPA boundaries			\checkmark		\checkmark
	No Take Zone boundaries			\checkmark		\checkmark
	Regulated Areas (NMGZ, box, parlour)			\checkmark		\checkmark
	Commercial fisheries*			\checkmark		
	Recreational species inspections*			\checkmark		
	Recreational activities inspections			\checkmark		\checkmark
	Shore angling locations			\checkmark		\checkmark
	Active aquaculture			\checkmark		
	Aquaculture monitoring			\checkmark		
	Jersey exclusive area			\checkmark		\checkmark
	Proposed fishing zones			\checkmark		\checkmark
	Findings of specialist stakeholder workshop 2 nd March 2023				~	


Cultural heritage

Ref.	Title	Pub.	Source			JMSP	
		date	Doc	GIS	Consult	Atlas	
				layer	ation	layer?	
EB/CH/1	Wrecked on the Channel Islands David	1982	1				
	Couling						
EB/CH/2	Underwater cultural heritage and	2013					
	battlefields in Jersey Scoping Study		\checkmark				
	Orbasil and Chowne						
EB/CH/3	The palaeo-environmental history of a	2019					
	peat bed near to Le Tas de Pois, Les		~				
	Écréhous Paul Chambers, Nicolas Jouault						
	and John Whittaker in <i>SJ Bulletin</i>						
EB/CH/4	The presence of historic wall-like features	2019					
	on Jersey's seashore Tompkins, Tompkins		✓				
	and Chambers in SJ Bulletin						
EB/CH/5	A Heritage Strategy for Jersey	2022	\checkmark				
EB/CH/6	Palaeolithic Jersey Resource Assessment	2023	\checkmark				
	(Chapter 2, Draft) Matt Pope						
EB/CH/7	Archaeological Seabed Mapping around	2022	\checkmark				
	Jersey – Desk Appraisal Fjordr						
EB/CH/8	Conservation Management Plan for	2024	~				
	German Military Sites on Jersey						
	Proposed Areas of Archaeological			✓		✓	
	Potential			,			
	Historic Buildings			 ✓ 		✓	
	Shipwrecks			✓		✓	
	Archaeology Points			 ✓ 		✓	
	Archaeology Density			✓		✓	
	Jersey Historic Environment Record			 ✓ 			
	Jersey Lidar Survey 2020			✓			
	Findings of specialist stakeholder						
	workshop (combined with biodiversity,				✓		
	28 th Feb 2023)						

Recreation and tourism

Ref.	Title	Pub.	Source			JMSP
		date	Doc	GIS	Consult	Atlas
				layer	ation	layer?
EB/RT/1	Marine Spatial Planning: an atlas and	2015				
	study of ecology and human activities in		1			
	Jersey waters, unpublished MSc thesis,		•			
	University of York, 64pp. De Gruchy					
EB/RT/2	Enjoying our Coast Safely – Code of	2017				
	practice for safety in the water on		\checkmark			
	Jersey's beaches Ports of Jersey					
EB/RT/3	Jersey Sport Strategic Plan 2023-2026	2023	\checkmark			
	Coastal National Park boundary			\checkmark		\checkmark
	Carparks			\checkmark		\checkmark
	Footpaths			\checkmark		\checkmark
	Panoramas (viewpoints)			✓		✓
	Toilets			\checkmark		\checkmark
	Coastal food outlets			\checkmark		
	Coastal accommodation			\checkmark		
	Watersports (onshore sites)			\checkmark		\checkmark
	Watersports (offshore areas used)				\checkmark	~
	Beach tourist index			✓		
	Lifeguard Beaches			✓		✓
	Historic Coastal Swimming Sites			✓		✓
	Findings of specialist stakeholder				1	
	workshop 3 rd March 2023				v	
	Submission from Spearfishers*				\checkmark	



Infrastructure, energy and transport

Ref.	Title	Pub.	Source			JMSP	
		date	Doc	GIS	Consutl	Atlas	
				layer	ation	layer?	
EB/IT/1	Tidal Lagoon St Aubin's Bay, Jersey – a	2017	✓				
	report on Feasibility	2017	-				
EB/IT/2	Jersey Offshore Wind Pre-feasibility Draft	2018	✓				
	v.1.1 (IPT Energised for States of Jersey)*	2010					
EB/IT/3	Bridging Liquid Waste Strategy 2023-	2023	~				
	2026	2025					
EB/IT/4	General Direction no. 8: Port and	2018	~				
	Harbour Limits	-010					
EB/IT/5	Ministerial Plan for Offshore Wind	2023	✓				
	Harbour Limits			✓		✓	
	Anchorages			\checkmark		✓	
	Deposition Site under Food and			 ✓ 		1	
	Environment Protection Act			•			
	Coastal defences			✓		\checkmark	
	Outfalls			✓		\checkmark	
	Freshwater inflow			✓		\checkmark	
	Coastal Buildings			\checkmark			
	Building Density			\checkmark			
	Cables (active and disused)			\checkmark		\checkmark	
	Moorings outside harbours			\checkmark		\checkmark	
	Boat passages (commercial, large and			1		1	
	small vessels)			·		•	
	Reclaimed areas			\checkmark			
	Slipways			\checkmark		\checkmark	
	Windfarm parameters			\checkmark			
	St Brieuc windfarm boundaries			✓			
	Findings of specialist stakeholder						
	workshop 1 st March 2024				v		
	Report on Pollutants and their impact on						
	coastal flora and fauna 2009-2023 (Save				✓		
	our Seas Jersey)						



APPENDIX C: Legislative and policy background

International treaties and conventions

Title	Date	Date came	Objective
	ratified	into force	
	(UK)	(Jersey)	
United Nations Convention on the Law of the Sea (UNCLOS)	25/07/1997	24/08/1997	The Convention defines the rights and responsibilities of nations in their use of the world's oceans, establishing guidelines for businesses, the environment, and the management of marine natural resources, including the protection and preservation of the marine environment in each territorial zone of the sea; whilst Article 194 requires them to take the necessary measures, using the best practicable means, to 'prevent, reduce and control pollution of the marine environment from any source'.
Kunming-Montreal Global Biodiversity Framework (COP 15)	December 2022	December 2022	 The framework supports the achievement of the Sustainable Development Goals to reach the global vision of a world living in harmony with nature by 2050 and to 'bend the curve' on global biodiversity loss. The framework includes: effective conservation and management of at least 30% of the world's lands, inland waters, coastal areas and the ocean; have restoration completed or underway on at least 30% of degraded terrestrial, inland waters, coastal and marine ecosystems; reduce to near zero the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity; reduce by half both excess nutrients and the overall risk posed by pesticides and highly hazardous chemicals; prevent the introduction of priority invasive alien species and reduce by at least half the introduction and establishment of other known or potential invasive alien species and eradicate or control invasive alien species and eradicate or control invasive alien species and eradicate or control invasive alien and establishment of other known or potential invasive alien species and eradicate or control invasive alien and establishment of other known or potential invasive alien species and eradicate or control invasive alien and establishment of other known or potential invasive alien species and eradicate or control invasive alien and establishment of other known or potential invasive alien species and eradicate or control invasive alien and establishment of other known or potential invasive alien species and eradicate or control invasive alien and establishment of other known or potential invasive alien species and eradicate or control invasive alien species on islands and other priority sites; and cut global food waste in half and significantly reduce over consumption and waste generation.



Title	Date ratified (UK)	Date came into force (Jersey)	Objective
Paris Agreement on Climate Change	18/11/2016	29/04/2022	The Paris Agreement sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C. It also aims to strengthen the abilities of countries to deal with the impacts of climate change and support them in their efforts.
Convention on Wetlands of International Importance (Ramsar)	05/05/1976	05/05/1976 (Amended 1982 and 1987)	To achieve sustainable development throughout the world by the conservation and wise use of wetlands. There are currently 159 contracting parties with a total of 1,888 wetland sites. Jersey has four designated Ramsar sites: • South east coast of Jersey • Les Écréhous and Les Dirouilles • Les Minquiers • Les Pierres de Lecq (the Paternosters) Jersey has established the Ramsar Management Authority to implement the Ramsar Management plans produced for each of the four sites. Once a management plan is published the Authority must work to fulfil the objectives and implement what has been agreed.
Agreement on the Conservation of Africa-Eurasian Migratory Waterbirds	22/02/1999	01/11/1999	The objective is for parties to take co-ordinated measures to maintain migratory waterbird species in a favourable conservation status or to restore them to such a status.
Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS)	13/07/1993	26/09/2002	The Parties undertake to cooperate closely in order to achieve and maintain a favourable conservation status for small cetaceans in the Baltic and North Seas.
Bern Convention on the Conservation of European Wildlife and Natural Habitats	28/05/1982	25/10/2002	The aims of this Convention are to conserve wild flora and fauna and their natural habitats, especially those species and habitats whose conservation requires the co-operation of several states, and to promote such co- operation, with particular emphasis to endangered and vulnerable species, including endangered and vulnerable migratory species.



Title	Date	Date came	Objective
	ratified	into force	
	(UK)	(Jersey)	
International	03/06/1994	01/09/1994	The Convention sets out the main goals required
Convention on			for conservation of biological diversity (or
Biological Diversity			biodiversity). Each contracting party is required
			to establish a system of protected areas where
			conserve biological diversity
Convention on the	23/07/1985	01/10/1985	The Convention (also known as CMS or the Bonn
Conservation of			Convention) aims to conserve terrestrial, marine
Migratory Species			and avian migratory species throughout their
of Wild Animals			range.
Convention for the	10/09/1974	11/03/1978	This convention aims to recognise the
Conservation of			vulnerability of Antarctic seals and protect them
Antarctic Seals			from commercial exploitation and ensure
			effective conservation.
Convention for the	15/07/1997	29/01/2002	The OSPAR Convention merges the 1972 Oslo
Protection of the			and 1974 Paris Conventions. It aims to
Marine			sources of pollution of the marine environment
Environment of			and the adverse effects of human activities upon
the North-East			it.
Atlantic (OSPAR			The main convention was extended to Jersey in
Convention)			2002 and Jersey is listed on the FCDO website.
			Annex V was also extended in 2019.
Convention on the	13/11/1987	01/03/1988	The main purpose of the Convention, commonly
Protection of the			known as the Granada Convention, is to
Archaeological			reinforce and promote policies for the
Heritage of Europe			conservation and enhancement of Europe's
			solidarity with regard to heritage conservation
			and is designed to foster practical co-operation
			among the Parties. It establishes the principles of
			"European co-ordination of conservation
			policies" including consultations regarding the
			thrust of the policies to be implemented.
European	19/09/2000	20/03/2001	The revised text makes the conservation and
Convention on the			enhancement of the archaeological heritage one
Protection of the			of the goals of urban and regional planning
Archaeological			arrangements to be made for co-operation
Heritage (The			among archaeologists and town and regional
'Valletta			planners in order to ensure optimum
Convention')			conservation of archaeological heritage. The
(Revised)			Convention sets guidelines for the funding of
			excavation and research work and the
			publication of research findings. It also deals
			with public access, in particular to archaeological
			sites, and educational actions to be undertaken
			to develop public awareness of the value of the



			archaeological heritage. Finally, the Convention constitutes an institutional framework for pan- European co-operation on the archaeological heritage, entailing a systematic exchange of experience and experts among the various States. The Convention is commonly known as the Valetta Convention.
EU-UK Trade and Cooperation Agreement	30/12/2020	01/05/2021	The EU-UK Trade and Cooperation Agreement concluded between the EU and the UK sets out preferential arrangements in areas such as trade in goods and in services, digital trade, intellectual property, public procurement, aviation and road transport, energy, fisheries, social security coordination, law enforcement and judicial cooperation in criminal matters, thematic cooperation and participation in Union programmes. It is underpinned by provisions ensuring a level playing field and respect for fundamental rights.

Jersey legislative and policy context

Торіс	Existing Legislation	Existing Policy
Administration	Planning and Building (Jersey) Law 2002 Territorial Sea Act 1987 (Jersey) Order 1997	Bridging Island Plan 2022-2025 Common Strategic Policy 2023- 2026 Proposed Common Strategic Policy 2024-2026 Economic Framework for the Marine Environment 2022 Government Plan 2023-2026 Integrated Coastal Zone Management Strategy 2008 Ministerial Plans 2023
Infrastructure	Drainage (Jersey) Law 2005 Planning and Building (Environmental Impact) (Jersey) Order 2006 Planning and Building (General Development) (Jersey) Order 2011 Planning and Building (Jersey) Law 2002 Sea Beaches (Removal of Sand and Stone) (Jersey) Law 1963	Bridging Island Plan 2022-2025 Infrastructure Capacity Report 2020 Jersey Integrated Landscape and Seascape Character Assessment (ILSCA) 2020 Minerals, Waste and Water Study 2020 Shoreline Management Plan 2020 Carbon Neutral Roadmap 2022



Торіс	Existing Legislation	Existing Policy
Harbours and Transport	Air and Sea Ports (Incorporation) (Jersey) Law 2015 Harbours (Administration) (Jersey) Law 1961 Harbours (Inshore Safety) (Jersey) Regulations 2012 Harbours (Jersey) Regulations 1962 Harbours (Protection of Cables in Territorial Waters) (Jersey) Regulations 2010 Maritime Security (Jersey) Order 2014 Planning and Building (Jersey) Law 2002 Shipping (Jersey) Law 2002 Shipping (MARPOL) (Jersey) Regulations 2012	Bridging Island Plan 2022-2025 St Helier Harbour Masterplan 2023
Climate Change	Planning and Building (Jersey) Law 2002	Blue Carbon Resources: An assessment of Jersey's Territorial Seas 2022 Bridging Island Plan 2022-2025 Carbon Neutral Roadmap 2022 Pathway 2050: An Energy Plan for Jersey 2014 The Carbon Neutral Strategy 2019 Shoreline Management Plan 2020
Biodiversity and Natural Environment	Endangered Species (CITES) (Jersey) Law 2012 Planning and Building (Jersey) Law 2002 Wildlife (Areas of Special Protection) (Jersey) Order 2022 Wildlife (Jersey) Law 2021	Bridging Island Plan 2022-2025 States of Jersey Biodiversity Strategy 2000
Environmental Management	Food and Environment Protection Act 1985 (Jersey) Order 1987 Food and Environmental Protection Act 1985 (Deposits in Sea Exemptions) (Jersey) Order 2007 Planning and Building (Jersey) Law 2002 Waste Management (Jersey) Law 2005 Water Pollution (Jersey) Law 2000 Water Pollution (Water Management)	Bridging Island Plan 2022-2025 Challenges for the Water Environment of Jersey 2014 Liquid Waste Bridging Strategy 2023-2026 Waste Water Strategy 2013 Water Management Plan 2017- 2021



	(Jersev) Order 2020	
	Water Pollution (Water Quality)	
	(Jersey) Order 2020	
	Water Resources (Jersev) Law 2007	
History and	Heritage (Jersey) Law (in progress)	A Heritage Strategy for Jersey
Culture	Planning and Building (Jersev) Law	2022
	2002	Historic Environment Review
	Shipping (Jersey) Law 2002	2020
	······································	Bridging Island Plan 2022-2025
Tourism and	Harbours (Inshore Safety) (Jersey)	Bridging Island Plan 2022-2025
Leisure	Regulations 2012	
	Planning and Building (Jersey) Law	
	2002	
	Policing of Beaches (Jersey)	
	Regulations 1959	
	Recreational Diving Projects (ACoP 7)	
Fisheries	Aquatic Resources (Jersey) Law 2014	Economic Framework for the
	Aquatic Resources (Seaweed Licences)	Marine Environment 2022
	(Jersev) Regulations 2019	
	Illegal, Unreported and Unregulated	
	Fishing (Jersev) Regulations 2021	
	Sea Fisheries (Bag Limits) (Jersev)	
	Order 2020	
	Sea Fisheries (Bag Limits) (Jersey)	
	Regulations 2016	
	Sea Fisheries (Inshore Trawling,	
	Netting and Dredging) (Jersey)	
	Regulations 2001	
	Sea Fisheries (Inshore Waters)	
	(Jersey) Regulations 1998	
	Sea Fisheries (Jersey) Law 1994	
	Sea Fisheries (Les Écréhous) (Jersey)	
	Regulations 2018	
	Sea Fisheries (Les Minquiers) (Jersey)	
	Regulations 2007	
	Sea Fisheries (Licensing of Fishing	
	Boats) (Jersey) Regulations 2003	
	Sea Fisheries (Log Books,	
	Transhipment and Landing	
	Declarations (Jersey) Regulations	
	2014	
	Sea Fisheries (Minimum Size Limits)	
	(Jersey) regulations 2001	
	Sea Fisheries (Miscellaneous	
	Provisions) (Jersey) Regulations 1998	
	Sea Fisheries (Trawling, Netting and	
	Dredging) (Jersey) Regulations 2001	

Торіс	Existing Legislation	Existing Policy
Fishing (Contd.)	Sea Fisheries (Underwater Fishing) (Jersey) Regulations 2003 Sea Fisheries (Vessel Monitoring Systems) (Jersey) Regulations 2014 Sea Fisheries and Aquatic Resources (Portelet Bay) (Jersey) Regulations 2022 Sea Fishers (Spider Crabs – Restrictions on Fishing) (Jersey) Order 2019	
Aquaculture	Aquatic Resources (Jersey) Law 2014 EU Legislation (Aquatic Animal Health) (Jersey) Regulations 2016 Planning and Building (Jersey) Law 2002 Sea Fisheries (Fisheries) (Jersey) Regulations 2010 Sea Fisheries (Jersey) Law 1994	Economic Framework for the Marine Environment 2022 Bridging Island Plan 2022-2025



Appendix D: Changes to Marine Protected Area boundaries following public consultation





Appendix E: Further information on seawater quality monitoring

Summary of seawater quality monitoring activities

Environmental status assessment of St Aubin's Bay

The Government of Jersey recognises that nutrient enrichment has the potential to threaten marine habitats, with signs of eutrophication occurring annually in St Aubin's Bay through the prolific growth of sea lettuce. As a result, Natural Environment began monitoring St Aubin's Bay in 2012 using the monitoring criteria set out in the EU Water framework Directive. In 2015, an environmental assessment of the bay resulted in an overall status of 'moderate' due to elevated physio-chemical parameters (dissolved inorganic nitrogen) and excess *Ulva* (sea lettuce) growth. As part of this assessment, the bay was found to be of good chemical status.

In 2015, a principal of 'no deterioration' of the effluent quality and of the water quality in the bay was adopted. The 'no deterioration' approach under the Water Framework Directive contains an aspiration to achieve 'good' status for all water bodies, including St Aubin's Bay.

The monitoring of St Aubin's Bay enabled an evidence-based approach to support the need for a replacement sewage treatment works. As part of the Water Management Plan 2017-2021 (<u>Water management plan for Jersey 2017 to 2021 (gov.je</u>)) an integrated catchment management approach was adopted. This addresses nutrient (nitrate and phosphate) as well as pesticide pressures by reducing them at source. Nitrates are a key pressure to the marine environment of St Aubin's Bay. Joint working by the farming industry, Government and Jersey Water through the Action for Cleaner Water Group has reduced nitrate levels in streams flowing into the Bay Average by just over one-third during the past 20 years.

It is anticipated that the upgrade of the sewage treatment works, along with other measures in the Bridging Liquid Waste Strategy 2023-2026, will further reduce the problem over the coming years.

It is worth noting that sea lettuce will not go away completely even if nitrogen inputs are reduced to a minimum. This is because sea lettuce growth in St Aubin's Bay is a result of a combination of both environmental factors and anthropogenic influences. Including the beach topography (shallow and enclosed), available sunlight, warm temperatures, tidal flow/ direction; along with land reclamation and nutrient loading from land-based sources. St Aubin's Bay is also the receiving waters for the majority of the Island's catchment run-off, draining from urban, countryside and road run-off; along with the treated effluent from Bellozanne sewage treatment works.



Additional nutrient monitoring of St Aubin's Bay

To support the Water Framework Directive (WFD) nutrient monitoring of St Aubin's Bay, sampling of the surf zone (mixing zone) began in 2014, with the assistance of CREH $^{1}(UK)$ environmental consultancy). The aim of the monitoring is to acquire baseline data to:

- understand the source and distribution of nutrient loading into St Aubin's Bay;
- enable policy decisions to be targeted appropriately; and to
- further knowledge and understanding of the conditions which cause the prolific growth of sea lettuce.

Over time the data collected will be used to assess the increase or decrease in nutrient loadings resulting from the replacement sewage treatment works (commissioned in 2023). Data will also be used as part of the assessment into the effectiveness of catchment control measures designed to reduce nutrient loading from agricultural runoff which discharge to St Aubin's Bay. It is important to make clear that the surf zone is a mixing zone and is not compared to standards set under the EU Urban Wastewater Treatment Directive for compliance purposes. This would only be applicable to the sampling locations utilised for the WFD monitoring. Results from the monitoring show elevated nutrient levels close to the sewage treatment works (First Tower outfall) discharge point. As would be expected, nutrient levels tend to be highest nearer this outfall, and become more diluted towards the middle of the bay and beyond.

Isotope analysis of macroalgae – Jersey's south coast

In 2019, Durham University undertook nitrogen isotope analysis on the seaweeds Fucus. vesiculosus and Ulva spp. independently of the Government of Jersey. The results showed that the seaweed in St Aubin's Bay were absorbing nutrients from human effluent source. This research was of interest to the Government of Jersey, who in 2021 decided to continue the research in association with Durham University as another indicator of nutrient enrichment, which can hopefully be used to assess any environmental change as a result of improvement measure that have/ will be implemented (e.g. upgrade of the sewage treatment works and alterations to catchment management).

St Aubin's Bay outfall monitoring

Outfall monitoring began Island wide in 2009 to obtain a baseline data set of discharges into the sea. In 2013, the outfall monitoring programme was revised to focus on discharges into St Aubin's Bay because it is at higher risk of contamination (as mentioned before the majority of the Island land run off discharges into the bay, along with the STW discharge).

¹ Centre for Research Environment and Health - CREH



The monitoring programme tests for nutrients, microbiology and heavy metals and provides important baseline data for these parameters.

Bathing water monitoring (sea water monitoring)

Jersey's coastal waters are monitored as part of the Bathing Water Directive, with the following beaches tested weekly (During May to September): Beauport; Bonne Nuit; Grève de Lecq; Le Braye; Plémont; Portelet; St Brelade's Bay; Watersplash; Archirondel; Bouley Bay; Green Island; Grouville Bay; Havre des Pas; Rozel Bay; La Haule and Victoria Pool (St Aubin's Bay). Monitoring is important for a number of reasons:

- The health of the public swimming in these bays and for those involved in water sports.
- Detection of pollution within the environment.
- Providing information to the aquaculture industry, for example shellfish farming

Jersey has proven to have some of the cleanest beaches in Europe. The results of the weekly sampling are available on the Government of Jersey website.

Environmental monitoring of Jersey's marinas and harbours

The Ports of Jersey (PoJ) and the Government of Jersey undertake environmental monitoring of Jersey's marina and harbour areas in a joint venture to gather baseline data on the quality of the sediment and water. The parameters being tested for are heavy metals, organotins and hydrocarbons. Monitoring of Jersey's harbour and coastal environment is important:

- To enable the collection of baseline data to assess the current environmental status of these areas.
- To track environmental changes and identify trends in water/sediment quality.
- Where necessary, develop and implement measures to improve the quality of the marine environment.

Results show elevated levels of some heavy metals within the marina/ harbour areas (which would be expected), but very low detection in the sediments tested outside of the port area (St Aubin's Bay).

As a result of this work a joint working group which includes Officers from the Pollution Control, Marine Resources and Water & Air Monitoring Team meet quarterly with the PoJ Environment Officer to enable joint working and collaboration on marine monitoring.



Heavy metal accumulation in shellfish

In 1993, heavy metal monitoring of limpet species and Fucus seaweed commenced to assess whether any contamination of the marine biota was occurring from the waterfront reclamation site (east of St Aubin's Bay). The bio-monitors used were:

- Common limpet (Patella vulgata)
- Slipper limpet (*Crepidula fornicata*),
- Brown seaweed serrated wrack (Fucus serratus).

All three species are common around Jersey's coast. Common limpet and serrated wrack samples are taken from five locations around the coast and slipper limpets are sampled from the same coastal locations with additional sampling at two offshore sites.

In 2010, the data was reviewed to assess the possible contamination of the adjacent marine biota from the storage of incinerator ash at the Waterfront reclamation site. The results suggest that no localised pollution from the La Collette reclamation site has occurred.

Mariculture monitoring

Natural Environment monitor Jersey's farmed shellfish harvesting industry annually in accordance with the EU legislation to assess the health of the growing beds, resulting in a production classification areas grading. All shellfish beds in 2023 received a B grading and require purification before being sold direct for human consumption to protect human health.

Shellfish water quality monitoring

The aquaculture area in Royal Bay of Grouville is monitored quarterly by the Natural Environment – Land Resource Management. The sampling is carried out under the criteria set by the Shellfish Water Directive, (which now form part of the EU Water Framework Directive), measuring levels of faecal coliforms, suspended solids and heavy metals (biannual only). This information provides baseline data on the water quality surrounding the shellfish beds and provides an indication of background levels of contaminants. All heavy metal results are within WFD environmental quality standards, with low level detection of faecal coliforms have also been detected.



Harmful algal blooms

Shellfish and seawater samples are collected and analysed monthly from November to April and bimonthly from May to October. Samples are analysed for three algal biotoxins. Since 2019 all results for bivalve molluscs have been reported at less than the limit of detection. The seawater sampling usually picks up 3-4 elevated results of the *Alexandrium* species per annum, which results in further investigation and resampling and any necessary action that may be required to protect public health.

Radioactive substances

Radioactivity in the marine environment is monitored by an annual sampling programme and analysis as part of a UK wide programme. The programme monitors the effects of radioactive discharges from the French reprocessing plant at Cap de la Hague and the power station at Flamanville. It also serves to monitor any effects of the historical disposals of radioactive waste in Hurd Deep. Analyses show that the concentration of artificial radionuclides in the marine environment continue to be of negligible radiological significance. No evidence for significant releases of activity from Hurd Deep was found².

Regulatory compliance monitoring of the discharge from the sewage treatment works

The replacement sewage treatment works was operational in 2023 and required a new discharge permit issued under the Water Pollution (Jersey) Law 2000.

The discharge permit authorises the discharge of treated sewage effluent into controlled waters. The permit contains specific conditions and limits to ensure the quality of the effluent being discharged into the sea via the St Aubin's outfall does not cause pollution of controlled waters.

There has been historic non-compliance with the total nitrogen limit exceeding the 10 mg/l limit set in the discharge permit, which has been the subject of ongoing compliance assessment and investigations between 2009 and 2023, the outcome of which will be overseen by the Attorney General.

The new discharge permit is currently being drafted by the regulator. The total nitrogen limit will be greater than the current 10mg/l annual average, based on the operational design specification and the 'no deterioration' approach stipulated under the Water Framework Directive will be applied.

A regular monitoring programme is undertaken by the Operator to measure the effluent quality discharging from the sewage treatment works to ensure compliance with the limits set in the permit. This includes the sampling and analysis of the final sewage effluent for a variety of parameters every other (working) day, prior to discharging into St Aubin's Bay via



the outfall. The Regulator also carries out regular audit samples of the new sewage treatment works effluent quality, currently on a quarterly basis.

Regulatory compliance monitoring of the La Collette waste disposal facilities

Waste activities and waste management businesses, including Government Departments responsible for the management and disposal of waste are regulated by the Waste Management (Jersey) Law 2005. The law aims to protect people and the environment from the potentially polluting impacts of dealing with waste.

Jersey is a signatory to the Basel Convention. The convention is an international agreement committed to improving the management of all types of waste within Jersey and when wastes are exported from the Island.

The waste management licence for the La Collette waste disposal site requires extensive heavy metal sampling of the La Collette area. Results of this monitoring show that apart from Chromium², all other sampling shows that averages (the key measure) are well within the required Marine EQS limits.

The potential impact on water quality moving through the La Collette waste and recycling facilities is also monitored on a bi-annual basis by I&E and the results are reported back to the Regulator. This monitoring forms part of the waste management licence under the Waste Management (Jersey) Law 2005 and discharge permit conditions under the Water Pollution (Jersey) Law 2000.



² The results for chromium are problematic due to the lab having an issue during duplicate analysis which is currently being addressed.

Appendix F: List of Acronyms

AAP	Area of Archaeological Potential
ASCOBANS	Agreement on the Conservation of Small Cetaceans of the Baltic, North East
	Atlantic, Irish and North Seas
ASP	Area of Special Protection
BIP	Bridging Island Plan
CMU	Coastal Management Unit
FEPA	Food and Environmental Protection Act (1985)
GBA	Bay of Granville Agreement
GoJ	Government of Jersey
HER	Historic Environment Record
ILSCA	Integrated Landscape and Seascape Character Assessment
IMO	International Maritime Organisation
JMSP	Jersey Marine Spatial Plan
Lidar	Light Detection and Ranging
LPUE	Landings per Unit Effort
MarESA	Marine Evidence-based Sensitivity Assessment
MARPOL	International Convention for the Prevention of Pollution from Ships
MBES	Multi Beam Echo Sounder
MPA	Marine Protected Area
NID	Nature Inclusive Design
OSPAR	Oslo and Paris Conventions
RIB	Rigid Inflatable Boat
SPG	Supplementary Planning Guidance
SSI	Site of Special Interest
TCA	Trade and Cooperation Agreement
UNCLOS	United Nations Convention on the Laws of the Sea
VTS	Vessel Traffic Services
WFD	Water Framework Directive









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