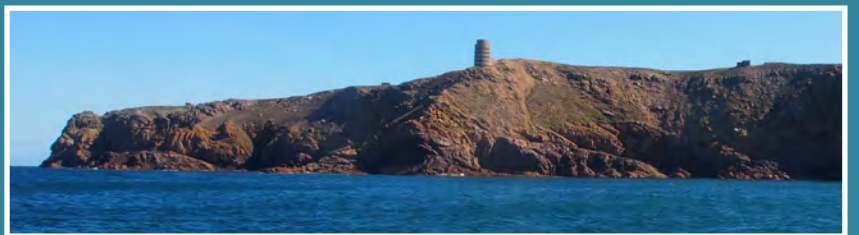


Jersey Integrated Landscape and Seascape Character Assessment

Prepared for
Government of Jersey

by
Fiona Fyfe Associates

May 2020



Acknowledgements

The lead consultant would like to thank all members of the client team for their contributions to the project. Particular thanks are due to the Government of Jersey staff who accompanied field work and generously shared their time and local knowledge. This includes the skipper and crew of FPV *Norman Le Brocq* who provided transport to the reefs and marine areas.

Thanks are also due to the many local stakeholders who contributed helpfully and willingly to the consultation workshop.

The original landscape characterisation for terrestrial and intertidal areas was done by LUC for the 1999 *Jersey Countryside Character Appraisal*. This ILSCA expands and updates that earlier work.

Innovative and in-depth projects such as this require the combined skills of many professionals. This project had an exceptional consultant team and the lead consultant would like to thank them all for their superb contributions. She would particularly like to acknowledge the contribution of Tom Butlin (1982- 2020) for his outstanding and innovative work on the visibility mapping.

- Jonathan Porter and Tom Butlin (Countryside)
- Carol Anderson (Carol Anderson Landscape Associates)
- Nigel Buchan (Buchan Landscape Architecture)
- Douglas Harman (Douglas Harman Landscape Planning)

All photographs have been taken by Fiona Fyfe unless otherwise stated.



Carol Anderson
Landscape Associates

buchan landscape architecture



Ministerial Foreword



It gives me tremendous pleasure to introduce the Jersey Integrated Landscape and Seascape Character Assessment which has been commissioned for the review of the 2011 Island Plan.

Jersey's coast and countryside is a unique and precious asset, which is treasured by islanders and is one of the key reasons why people visit the island. Understanding what makes the island's environment so special is crucial to ensuring that it is appropriately protected, and that change is properly managed, so that we can continue to enjoy it now and into the future.

Land Use Consultants produced the Jersey Countryside Character Appraisal in 1999, which provided an integrated and holistic understanding of the island's rural character, and which has been fundamental in the development and maintenance of our planning policies for over two decades. This was a visionary and seminal piece of work for Jersey that has served the island remarkably well.

I am delighted, therefore, that this work is now being updated by Fiona Fyfe Associates: to reflect current best practice in landscape character assessment methodologies; but also expanded to include an assessment of the character of Jersey's marine environment, out to our territorial limits.

As an island, there are inevitably strong physical, cultural and perceptual links between Jersey's landscapes and seascapes, and we have seen much change and development over the last 20 years, particularly along parts of our coastline. It is essential, therefore, that the new Island Plan can continue to protect the island from current threats and manage the forces for change which may adversely affect our island environment. The Integrated Landscape and Seascape Character Assessment provides us with a rich analysis of both our marine and terrestrial environments and the relationship between the two. I feel confident the study will prove to be a critical tool for future decision-makers.

Deputy John Young

Minister for the Environment

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Executive Summary

Jersey contains a rich diversity of landscapes and seascapes. Its location in the English Channel, close to the French coast, means that it has environments and cultural influences which are unique within the UK. This *Integrated Landscape and Seascape Character Assessment* (ILSCA) is both an analysis and a celebration of Jersey's landscapes and seascapes. It is intended for use by a wide range of people, including planners, land and marine managers, developers, local people and community organisations.

The ILSCA is an update of the 1999 *Jersey Countryside Character Appraisal*. Its scope has been expanded to include the entire Bailiwick, and it reflects the changes which have taken place in the landscape and seascape since 1999, as well as the forces for change which are currently affecting Jersey, and which are likely to occur over the next decade. It also incorporates up-to-date research and understanding, particularly with regard to the marine environment.

Jersey's complex geological and environmental history, combined with both terrestrial and maritime influences, creates an extra-ordinary diversity of landscapes and seascapes. These have been further enriched by millennia of human occupation, farming, fishing and travel, all of which have left their marks in the landscape and seascape. Jersey's rich geological, ecological and cultural heritage is reflected in the number of designated sites, which sit within a wider landscape and seascape habitat framework.

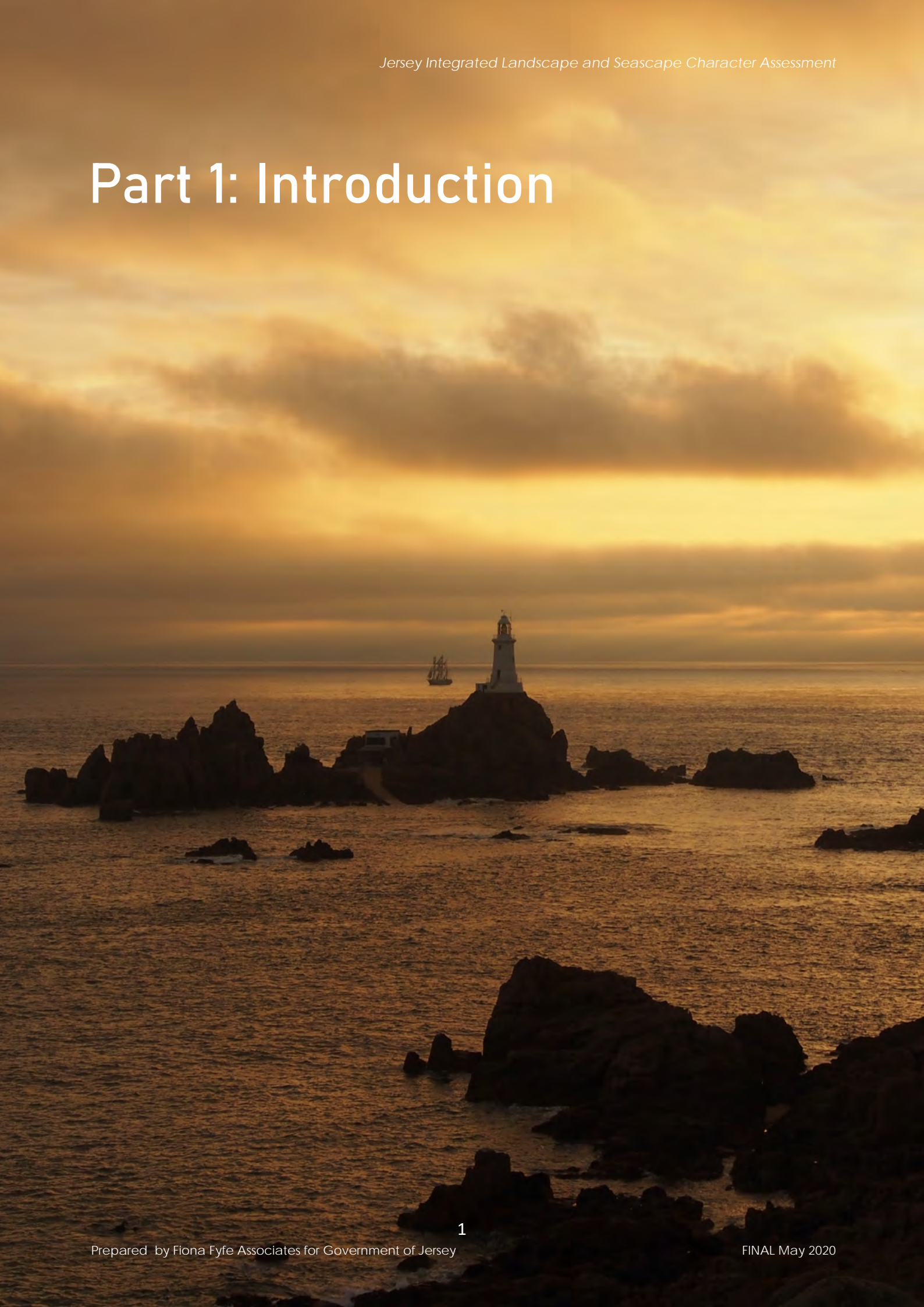
Many issues are currently affecting Jersey's landscapes and seascapes, and will continue to do so for the foreseeable future. These forces for change may be natural (such as coastal erosion) or man-made (such as new development). They include land-based and marine development, agricultural and land management changes, infrastructure, recreational pressure and climate change. These forces for change are described in the ILSCA, along with recommendations to 'protect, manage and plan' to protect and enhance Jersey's landscapes and seascapes for the future.

The ILSCA identifies 10 distinctive Character Types, covering terrestrial, intertidal and marine environments. These Character Types are divided into 34 smaller Character Areas, each of which has a distinctive sense of place. A series of profiles describe these Character Types in more detail, including a summary description, key characteristics, natural influences and sites, cultural influences and sites, perceptual qualities, natural capital and ecosystem services, Character Areas, sensitivities, condition and forces for change, strategy and guidelines.

The ILSCA also identifies 14 Coastal Units. These are an additional layer of assessment focussing on the most complex area (the coast) where many different Character Types and Areas meet and/or are inter-visible. The Coastal Units are primarily defined using visibility, so typically relate to bays, with headlands dividing them. The Coastal Units describe how the terrestrial, intertidal and marine Character Types and Areas fit together to create bigger compositions at the coast, and help to cement the project as an *integrated* landscape and seascape character assessment. Each Coastal Unit is described in terms of its location, constituent character areas, description, coastal sensitivities and guidance.

The final part of the ILSCA contains landscape design guidance to help address issues which are currently affecting Jersey's landscapes. This guidance covers: Accommodating rural development; enhancing rural character, and views and visibility. The aim of the landscape design guidance is to ensure that new development or change is located where it fits best into the landscape/ seascape, and makes a positive contribution to Jersey's character.

Part 1: Introduction



1.1 The Jersey Integrated Landscape and Seascape Character Assessment

The *Jersey Integrated Landscape and Seascape Character Assessment* (ILSCA) was commissioned by the Government of Jersey in June 2019, and was undertaken by Fiona Fyfe Associates between July 2019 and May 2020.

It is a review and update of the 1999 *Jersey Countryside Character Appraisal*, reflecting changes which have occurred in the past 20 years, as well as the forces for change which are affecting Jersey's landscapes and seascapes now, and are likely to affect them over the next 10 years. The ILSCA extends the scope of its coverage to include seascapes as well as landscapes, and therefore covers all terrestrial, intertidal and marine areas within the Bailiwick of Jersey. It also reflects the most up-to-date understanding of Jersey's landscapes and seascapes, and includes the findings of research undertaken over the past 20 years. In addition, the ILSCA is in accordance with current best practice for landscape and seascape character assessment, which has evolved since the 1999 *Countryside Character Appraisal* was undertaken. For all these reasons it will form a robust part of the evidence base for the new Island Plan.

The ILSCA is both an analysis and a celebration of Jersey's landscapes and seascapes. The overall aim of the ILSCA, as stated in the project brief, is *to understand how the island's landscape and seascape framework contributes to its unique sense of place, including the role it plays as a setting to development (past, present and future)*.

The ILSCA draws on a wide variety of information from many different sources. A list of references is provided in Appendix A. The ILSCA is not trying to replicate or replace any of these specialist documents, and should not be used in place of them.

1.2 How to use the Jersey ILSCA

The Jersey ILSCA is intended for a wide range of users, including Government of Jersey staff; land owners and managers; conservation organisations, developers and those submitting planning applications, community groups, and people who are interested in Jersey's landscapes and seascapes and would like to know more about them. It is presented in 5 parts:

Part One introduces the document, and provides background information on the principles, definitions and methodology for landscape and seascape character assessment. It introduces the relatively new concepts of ecosystem services and natural capital, and summarises the special qualities of Jersey's landscapes and seascapes.

Part Two sets the scene, telling the story of the development of Jersey's landscapes and seascapes, and describing the current issues and forces for change, including the impacts of climate change.

Part Three contains maps and a series of profiles which describe the ten Character Types found within Jersey. They include terrestrial, intertidal and offshore areas.

Part Four describes Jersey's 14 Coastal Units identified through this project.

Part Five provides basic landscape design guidance on accommodating new development, enhancing rural character, and consideration of views and visibility.

The Appendices include references and sources of further information; changes to boundaries between the 1999 and 2020 Assessments; attendees at stakeholder workshops, and glossary.

It is hoped that the ILSCA will act as a catalyst to raise public awareness of landscapes / seascapes and associated change, in a similar way to the French *Atlas de paysages* (*Landscape Atlases*).

1.3 Landscape and Seascape Character Assessment

Landscape character assessment is the process of identifying and describing variation in the character of the landscape. It seeks to identify and explain the unique combination of elements and features (characteristics) that make landscapes distinctive. This process results in the production of a Landscape Character Assessment¹.

The European Landscape Convention provides a holistic definition for 'Landscape' as **an area of land, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors**.²

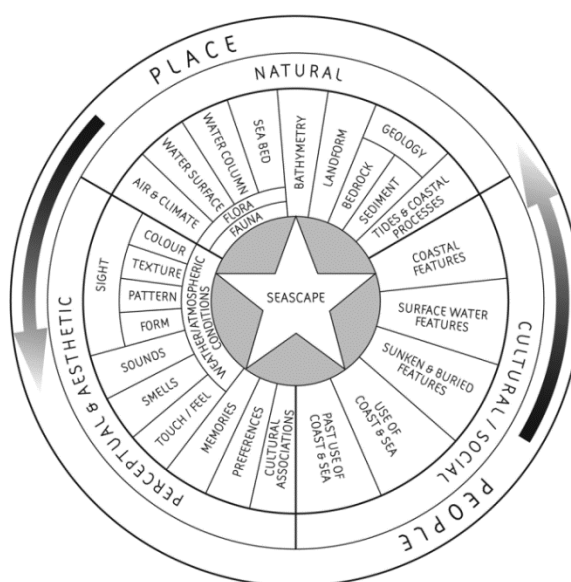
Seascape character assessment has emerged from the process of landscape character assessment. It is an appropriate way to assess, characterise, map and describe seascape character. The process of seascape character assessment follows the well-established and widely used principles and stages set out in Landscape Character Assessment Guidance, with emphasis given to particular issues that need to be considered when assessing coastal and marine environments.³

The landscape definition has been expanded for seascapes, which are defined as **an area of sea, coastline and land, as perceived by people, whose character results from the actions and interactions of land with sea, by natural and/or human factors**.⁴

Both of the definitions above refer to natural, human (cultural) and perceptual factors. The constituents of these three factors are shown in the following diagrams.



The 'Landscape Wheel' summarising what constitutes landscape⁵



The 'Seascape Wheel', summarising what constitutes seascape⁶

¹ An Approach to Landscape Character Assessment (Natural England 2014, p.8)

² European Landscape Convention, 2000 p.5

³ An approach to Seascape Character Assessment (Natural England 2012 p.10)

⁴ An approach to Seascape Character Assessment (Natural England 2012 p.8)

⁵ An Approach to Landscape Character Assessment (Natural England 2014) p. 9

⁶ An Approach to Seascape Character Assessment (Natural England 2012) p. 9

The process of landscape/ seascape character assessment seeks to identify the distinct and recognisable patterns of physical, cultural and perceptual elements in the landscape, which make one landscape different from another, rather than better or worse. To do this, it defines distinctive Landscape/ Seascape Character Types and Landscape/ Seascape Character Areas.

Landscape Character Types are distinct types of landscape which are relatively homogenous in character. They are generic in nature in that they may occur in different areas...but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation, historical land use and settlement pattern.⁷

Seascape Character Types are distinct types of seascape which are relatively homogenous in character. They are generic in nature in that they may occur in different locations, but wherever they occur they share broadly similar combinations of geology, bathymetry, ecology, human influences and perceptual and aesthetic attributes.⁸

The Landscape/ Seascape Character Types are subdivided into locally-distinctive Landscape/ Character Areas.

Landscape/Seascape Character Areas are single unique areas which are the discrete geographical areas of a particular landscape/seascape type. Each area has its own individual character and identity, even though it shares the same genetic characteristics with other areas of the same type^{9,10}

For simplicity, the 'Landscape/Seascape' prefix has been dropped for this project, as it is an integrated landscape and seascape character assessment. It therefore refers to 'Character Areas' and 'Character Types' regardless of whether they are terrestrial, intertidal or marine.

As far as possible, the layout and content of the descriptions are consistent across terrestrial, intertidal and marine areas. The aim is to provide consistent and seamless coverage of character across the entire Bailiwick.

A note on boundaries:

It is important to note that the boundaries on the ground between Character Types or between Character Areas are rarely abrupt. It is more usual to have a 'zone of transition' between them where the landscape/ seascape character gradually changes. During the mapping process, the boundary lines are drawn at an appropriate point within this zone of transition.

In addition, a site within one Character Type may be strongly influenced by another nearby Character Type. Therefore, if a site is close to a boundary, it is important to understand the characteristics and guidelines for each of the nearby Character Types, and to take them into account.

The project brief did not include a requirement for a full on-the-ground review of all Character Type/ Area boundaries, as these are already provided by the Countryside Character Appraisal undertaken in 1999. However, where improvements to boundaries were noticed as a result of fieldwork, desk studies or consultation, these changes were made, and are recorded in Appendix B. There were also some instances where boundaries were rationalised to make the ILSCA easier to use (for example the number of Character Areas within the Interior Agricultural Plateau Character Type was reduced from eight to four). Some Character Type / Area names were also changed.

⁷ An Approach to Landscape Character Assessment (Natural England 2014) p.54

⁸ An Approach to Seascape Character Assessment (Natural England 2012) p. 20

⁹ An Approach to Landscape Character Assessment (Natural England 2014) p.54

¹⁰ An Approach to Seascape Character Assessment (Natural England 2012) p. 20

1.4 Natural Capital and Ecosystem Services

Considerations of Natural Capital and ecosystem services are becoming increasingly important tools in the management of landscapes and seascapes.

Natural Capital can be defined as the *'world's stock of natural assets' which include the elements of nature that directly and indirectly produce value or benefits to people, including ecosystems, species, fresh water, land, minerals, the air and oceans, as well as natural processes and functions.*¹¹

Jersey contains a wealth of Natural Capital within its land and seas, including the inherent scenic beauty of its landscapes and seascapes which provide an important resource for people's wellbeing.

*From this Natural Capital we derive a wide range of services, often called ecosystem services, which make human life possible. The most obvious ecosystem services include the food we eat, the water we drink and the plant materials we use for fuel, building materials and medicines. There are also many less visible ecosystem services such as the climate regulation and natural flood defences provided by forests, the tons of carbon stored by peatlands and the pollination of crops by insects. Even less visible are the cultural ecosystem services, such as the inspiration we take from wildlife and the natural environment*¹².

The Natural Capital and ecosystem services associated with each of Jersey's Character Types are described in the profiles in Part 3. Management decisions affecting ecosystems and Natural Capital will impact on the future provision of ecosystem services, so they need to be considered in decision-making.

Ecosystem services are divided into four categories:

Cultural Services

The non-material benefits people obtain through ecosystems

e.g. recreation, aesthetic experiences, tourism, sense of history, learning

Provisioning Services

Products obtained through ecosystems

e.g. food, fuel, timber, water

Regulating Services

Benefits obtained from the regulation of ecosystem processes

e.g. climate regulation, water purification, flood prevention, pollination, air quality regulation, noise masking

Supporting services

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

e.g. soil formation, photosynthesis, water cycle

¹¹ Natural Capital Committee, 2017

¹² World Forum on Natural Capital Conference, Edinburgh 2015.

1.5 Methodology

The methodology for the *Jersey ILSCA* is in line with current best-practice guidance, namely *An Approach to Landscape Character Assessment* (Natural England, 2014), and *An Approach to Seascape Character Assessment* Natural England (2012). There are four key stages of work:



1.6 Special Qualities of Jersey's Landscape and Seascape

Variety, uniqueness and drama

Within Jersey's 45 square miles, there is an extraordinary diversity of landscapes, from patchwork fields to deep wooded valleys; from rugged coastal cliffs to sweeping flat sandy bays, and from uninhabitable reefs to tranquil villages. Its unique position in the English Channel, close to the French coast, means that it is influenced by both marine and continental weather and water systems, and by a fusion of English and French culture.

Diverse and unusual geology

Jersey's skeleton is formed of many different types and ages of igneous and sedimentary rocks, reflecting its tumultuous formation over millions of years. This combination of rocks (on land, in the intertidal zone and under the sea) leads to great diversity of landform, as well as marine features and habitats. The coasts offer opportunities to see very rare rock formations, whilst the largely-inaccessible offshore reefs are unique in Europe.

Abundance of habitats

Jersey's waters are teeming with life, supported by an array of underwater and intertidal habitats including seagrass beds, kelp forests, maerl beds, underwater rock and reefs. Onshore, extensive dune systems provide habitats for species unique to Jersey, and wildlife thrives in the coastal heaths, woodlands, meadows and marshes. A network of hedgerows and banks provides opportunities for wildlife corridors across the island.

Spectacular coastline

Much of Jersey's dramatic and distinctive coastline is entirely natural, from the high, rugged, granite cliffs and headlands of the north coast, to the vast sandy sweep of St Aubin's Bay in the south. Low tide reveals a dramatic and vast world of reefs around the coast, and out to sea. The coastline also has a human legacy of fishing, vraicing (collecting seaweed to use as fertilizer), tourism and defence. Lighthouses, beacons and defensive towers form landmarks and seamarks, and add to the sense of place.



The historic parish centre of St Clement nestles at the foot of the escarpment, surrounded by farmland. Beyond can be seen the intertidal reefs, extending far out to sea.

Hidden rural interior

Away from the coast, Jersey feels strongly rural, with a secretive, intimate character. Deep, dark wooded valleys cut through a plateau of patchwork fields. The rural landscape reflects generations of farming practices - from sheep, to apples, to potatoes and cattle – practices which have evolved to take advantage of Jersey's weather, climate and soils. An intricate web of lanes, often tunnel-like between banks and trees, cover the island, linking the scattered farms and villages.

Unique prehistoric archaeology

Caves in the cliffs contain archaeological remains from the Palaeolithic period onwards, including evidence for early human life. Back then, the caves would not have been looking out over the sea, but instead over a vast plain, crossed by river channels, and it would have been possible to walk to what is now France. Later prehistoric archaeology includes La Hougue Bie, one of the most complete Neolithic burial chambers in Europe, and around the coast are visible monuments (dolmens and standing stones) and archaeological landscapes buried under sand deposits.

A rich built heritage

Traditional buildings of local warm-coloured granite occur throughout Jersey, with a distinct local vernacular style influenced by both English and French cultures. Villages vary in form, with some nestled at the foot of the coastal escarpment, and others in sheltered valley-head locations. Most villages are centred around a medieval parish church with a stone spire, which form landmarks in views across the island. Other typical Jersey buildings include manors, dovecotes, mills and structures relating to historic water uses, such as abreuvoirs and lavoirs. Farms are distinctive, often forming a cluster of buildings at the heads of valleys, and accessed through a round-headed 'Jersey arch'. Traditional farm buildings are often two storeys, with windows allowing multiple uses.

A legacy of defensive sites

Jersey's vulnerable location has resulted in a legacy of defensive sites spanning roughly 2000 years, from Iron Age coastal forts to structures relating to German occupation in World War II. Most of the defensive sites are coastal, and include distinctive landmarks such as Mont Orgueil castle, Elizabeth Castle, the distinctive round coastal 'Conway Towers' and the WW II range-finding towers at Les Landes, Corbière and Noirmont, which formed part of the German 'Atlantic Wall'.

Spectacular views

The longest and most spectacular views in Jersey are generally at the coast, where panoramas encompass land, sea and sky. This is where the different landscapes and seascapes meet, creating attractive compositions, and natural and built landmarks create focal points. Along the north coast, the offshore reefs draw the eye out to sea. The other Channel Islands and the French coast appear on the horizon. The sunsets are spectacular, particularly over the intertidal reefs. At night, dark skies over much of the island allow the stars to be appreciated, punctuated by the flashes from the lighthouses and beacons.

Part 2: The Story of Jersey's Landscape and Seascape

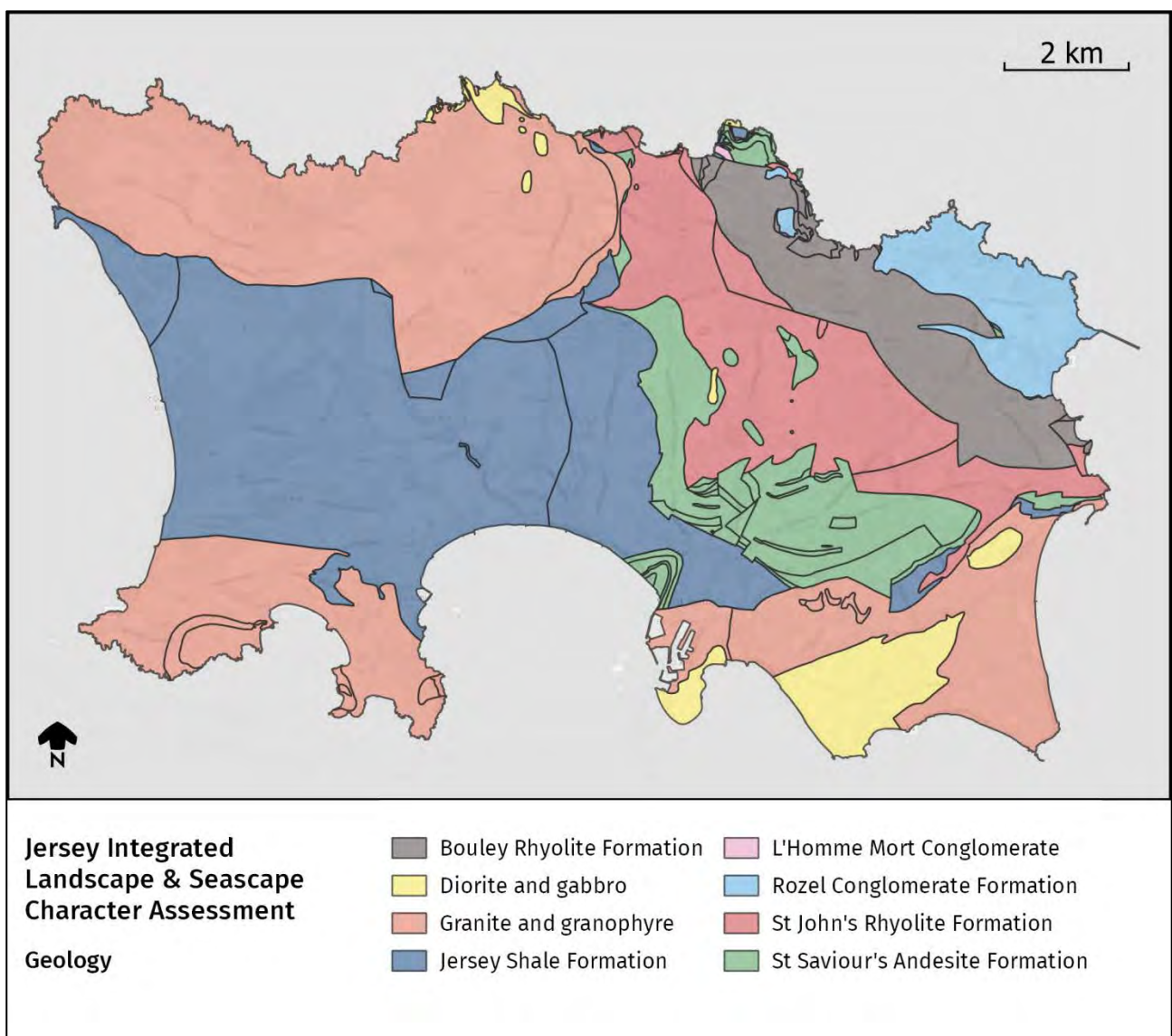


2.1 Geology and the Evolution of Jersey's Natural Environment

Jersey's geology is outstandingly varied, and complex. This is why there are so many geological SSI sites. It is possible to see some of the oldest rocks visible in the British Isles – dating from the Neoproterozoic period, approx. 640 million years ago – through to deposits laid down since the end of the last ice age, approx. 10,000 years ago. Jersey's rocks include examples of all of the three

principle 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 existing rocks within the earth's crust due to heat and/or pressure). The following short summary provides background information on this complex topic.

Bedrock Geology



Jersey's Bedrock Geology

The oldest rocks within the Bailiwick are found on the offshore reefs, formed of foliated granodiorite from the Neoproterozoic period. At Les Maisons on Les Minquiers, these can be seen alternating with pegmatite, in layers which have been bent and twisted by extreme pressure. Outcrops of other igneous rocks of similar age with different mineral compositions which can also be seen on the reefs include quartz diorites and orthoquartzite. The rocks of the offshore reefs form excellent building stone, and Les Minquiers was quarried to construct Fort Regent.

The oldest rocks exposed in Jersey itself are the sedimentary rocks of the Jersey Shale Formation, which comprise silts, sandstones and conglomerates. They were deposited in sea floor conditions in the Neoproterozoic period, over 540 million years ago. They cover the central part of Jersey, but are relatively soft, and so have eroded to create the broad bays of St Ouen's Bay and St Aubin's Bay. They have also been eroded by streams to create the deep interior valleys.

The Cambrian period (approx. 541-485 million years ago) saw intensive volcanic activity, when the Jersey Volcanic Group rocks were formed. These occur in a wide diagonal band in the east of the island, and are most easily seen in the coastal cliffs. Three successive phases of volcanic activity are represented in the St Saviour Andesite formation, the St John Rhyolite formation and the Bouley Bay Rhyolite formation. Lava flows can also be seen at Anne Port.

This volcanic phase was followed by earth movements which caused deformation and melting of the existing sedimentary and igneous rocks. In addition new volcanic material was intruded, including the various diorites, gabbros and granites which now form the north-west, south-east and south-west corners of Jersey. Their different mineral compositions result in different colours, including red, pink, orange and grey. The granites are hard and resistant to erosion, but

can become strongly fissured by actions of sea and rain exploiting weaknesses in the rock.



Fissured granite at Grosnez

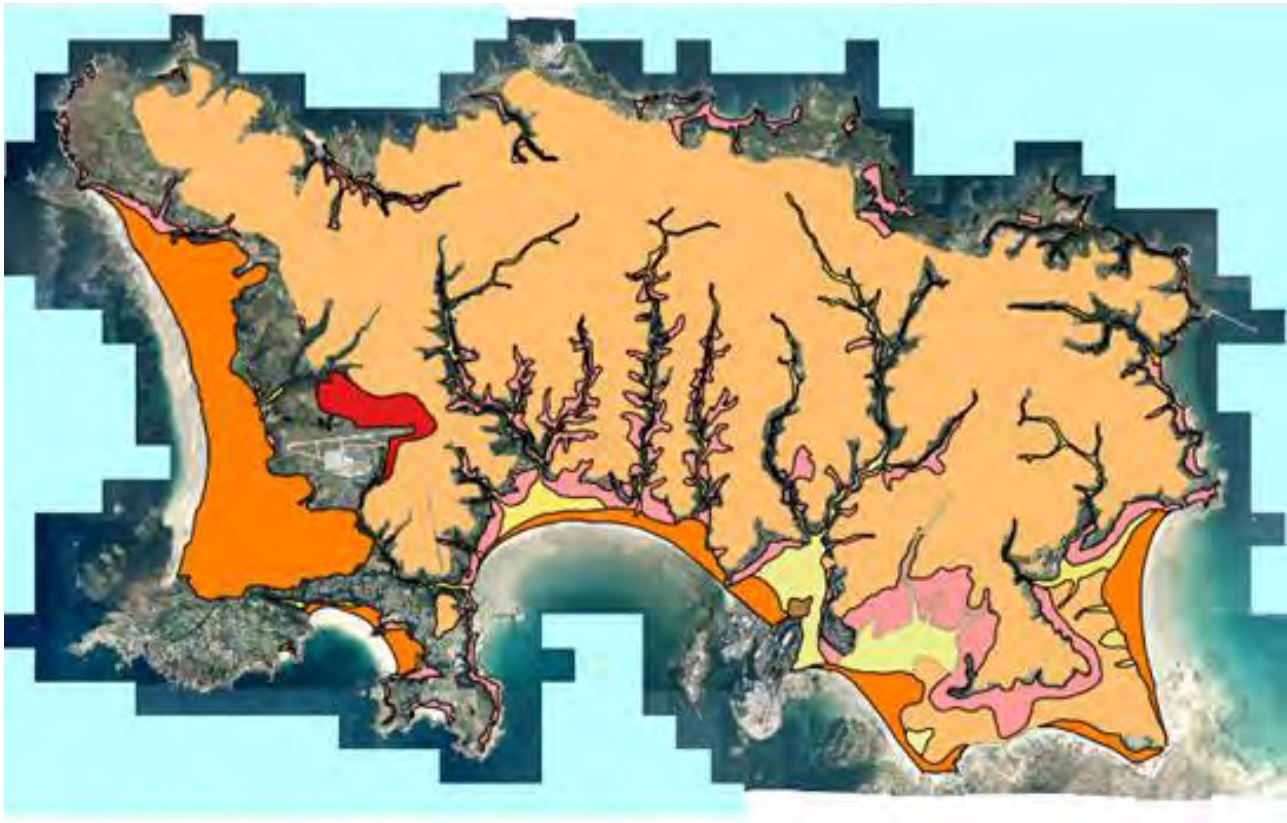
The range of granites is reflected in the buildings, walls and monuments in Jersey. There is a long history of quarrying, and numerous small and large quarries are dotted around the island. Ronez Quarry on the north coast was opened in the 19th Century for kerbstones, but is now used as a source of aggregate for crushing.

The most recent visible bedrock is the Rozel conglomerate, which can be seen in the north-east of Jersey. It was formed in the Silurian period (approx. 444-419 million years ago) and comprises small rounded pebbles cemented together. It is likely to have been laid down in a flash flood event. These rocks are brown in colour, with a distinctive rough texture and are known locally as 'puddingstone.'

This was followed by further earth movements, which strained the land surface and created a number of fault lines across the island. These fault lines would have influenced the alignments of the later river valleys, which followed the weaker rocks.

The seas surrounding Jersey contain extensions of some of the rocks seen on land, as well as extensive areas of limestone, which would have been formed in the Eocene period (approx. 55-34 million years ago) when the area was a warm, shallow, tropical sea.

Drift Geology and Soils



Drift Geology of Jersey (La Manche Prehistoric research group)

Beige: Loess - Middle to Late Pleistocene

Yellow: Alluvium – Holocene

Red: Blown Sand - Late Pleistocene

Brown: Peat - Holocene

Pink: Head - Late Pleistocene

Orange: Blown Sand - Holocene

Not shown: Raised Beach Deposits and Foreshore Sediments.

The Pleistocene period (approx. 2 million – 10,000 years ago) saw many climatic fluctuations which affected sea levels. Various changes in sea level are reflected by the escarpment (an old cliff line), raised beaches (such as the coastal plain at St Ouen), wave cut platforms and notches in cliffs. During times of low sea level, the Channel Islands would have been elevated land within a broad open plain which connected them with France. The Ruau channel (between Jersey and Les Écréhous) would have been a river channel.

Low sea levels occurred during ice ages, as water was locked in glaciers. Although glaciers did not extend as far south as Jersey,

the area experienced extreme cold, and was also influenced by glacial deposits. The loess deposits which cover much of central and eastern Jersey comprise fine-grained material which was washed out by the glaciers of northern Europe, then blown across the open plains and deposited in deep blankets. There is 5m of loess on the coastal plain near St Clement, and on the central plateau near La Hougue Bie, although the thickness of the deposit decreases towards the west. Loess is associated with rich fertile soils. There are also deposits of blown sand dating from the Pleistocene period to the north of Jersey Airport.

The extreme cold experienced during the cold periods of the Pleistocene led to frost-shattering of the rocks in Jersey. Rock fragments weathered and moved downslope, where they accumulated in deposits known as 'head'. Today, head deposits can be found in valleys, and at the base of the escarpment in the east and south of the island. Like loess, head deposits support fertile soils.

Pleistocene sediments also occur on the seashore, where they take the form of clays and gravels buried below more recent beach sediments. The middle-shore intertidal deposits seem to have been deposited in what would have been hollows in the landscape, and which are now rock pools.



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

The 10,000 years since the end of the last ice age (known as the Holocene period) has seen a warming of the climate, and sea levels have become established at their present levels. During this time there have been extensive accumulations of sand in the form of beaches and sand dunes. The most extensive sand dune system is at Les Quennevais on the west coast, where the sand has been blown up against the escarpment and is up to 15m deep. This dune system extends up to 3km inland, and

buries an intact Neolithic land surface. It is also an important ecological habitat. There is a history of sand extraction at Grouville and St Ouen's Bay, with a remaining active sand quarry at St Ouen's Bay.



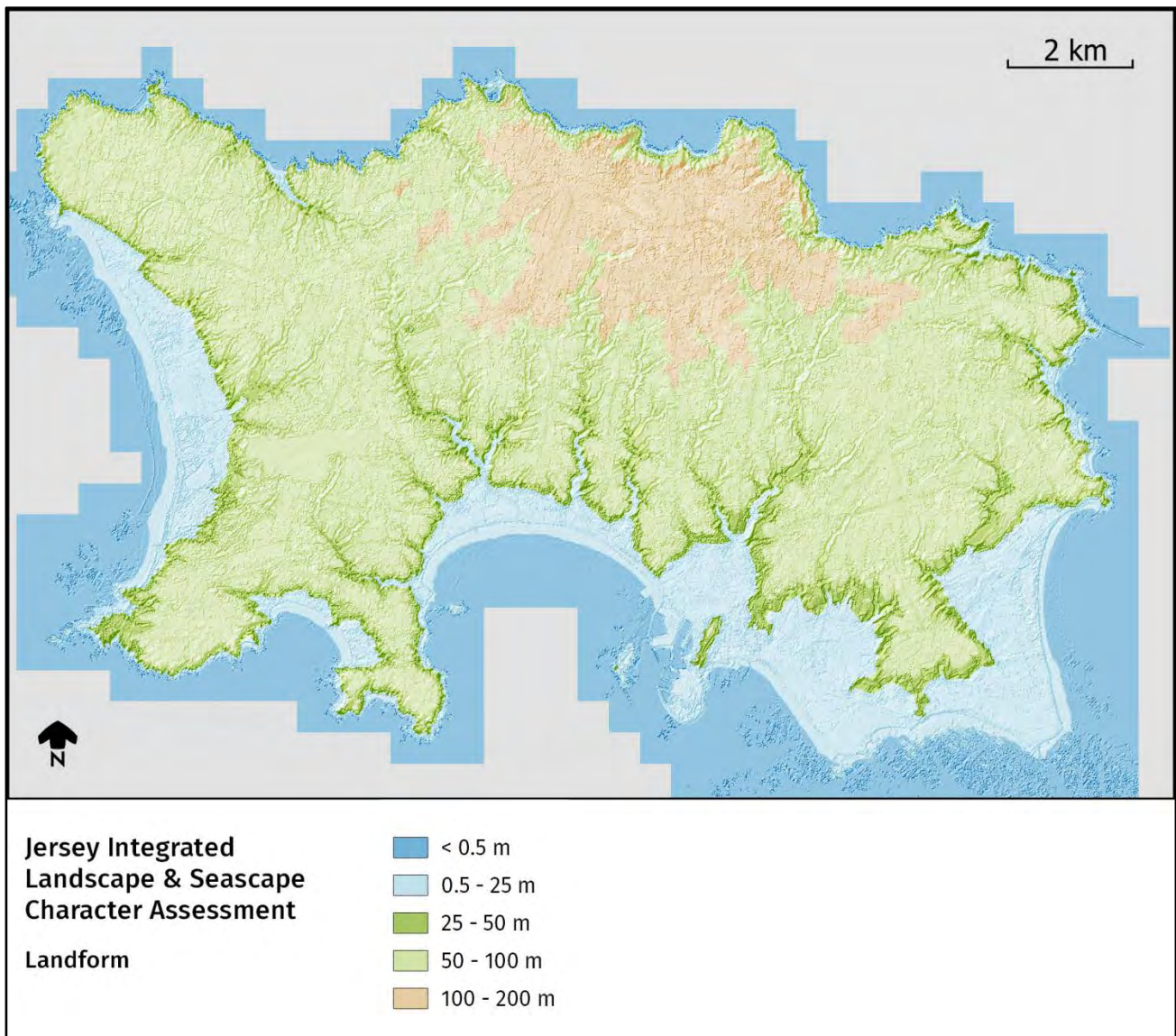
Extensive Holocene blown sand deposits at Les Quennevais

Other relatively recent drift deposits include alluvium and peats within valleys, and on the coast where the valley streams wash out into the sea. There are also buried peat beds in St Ouen's Bay which are an important paleo-environmental resource: pollen preserved within the peat beds can reveal information on vegetation and land uses over time.

The Holocene period has seen a gradual rise in sea levels, following the melting of glaciers at the end of the last ice age. Until approximately 7000 years ago land still connected Jersey and France, and the areas covered by the offshore reefs and islands, and today's intertidal areas, would have been dry land. Since then, sea levels have risen and the islands have taken the form we recognise today.

Areas of loess, head and alluvium have supported development of deep, fertile and well-drained soils which support agricultural use. However they are vulnerable to erosion by wind and water, hence the need for hedgerows and shelter-belts. In other areas (steep slopes, coasts and in the west of Jersey) soils are thinner and derived from weathering of the bedrock itself. Although these soils are less fertile, they are very light and easy to work, and (depending on their aspect) warm more quickly in spring. They are therefore ideal for growing early potatoes.

Landform



Landform of Jersey

The majority of Jersey's landform comprises a raised plateau of land which is tilted from north to south. The highest point is at Les Platons on the north coast, and is over 130m above sea level. The north coast is bounded by a high wall of cliffs which rise steeply from the sea. Inland, the plateau dips southwards, and is dissected by deep-sided branching valleys which have been carved out by streams. These create complexity and variety in the landform and scenery within relatively small areas.

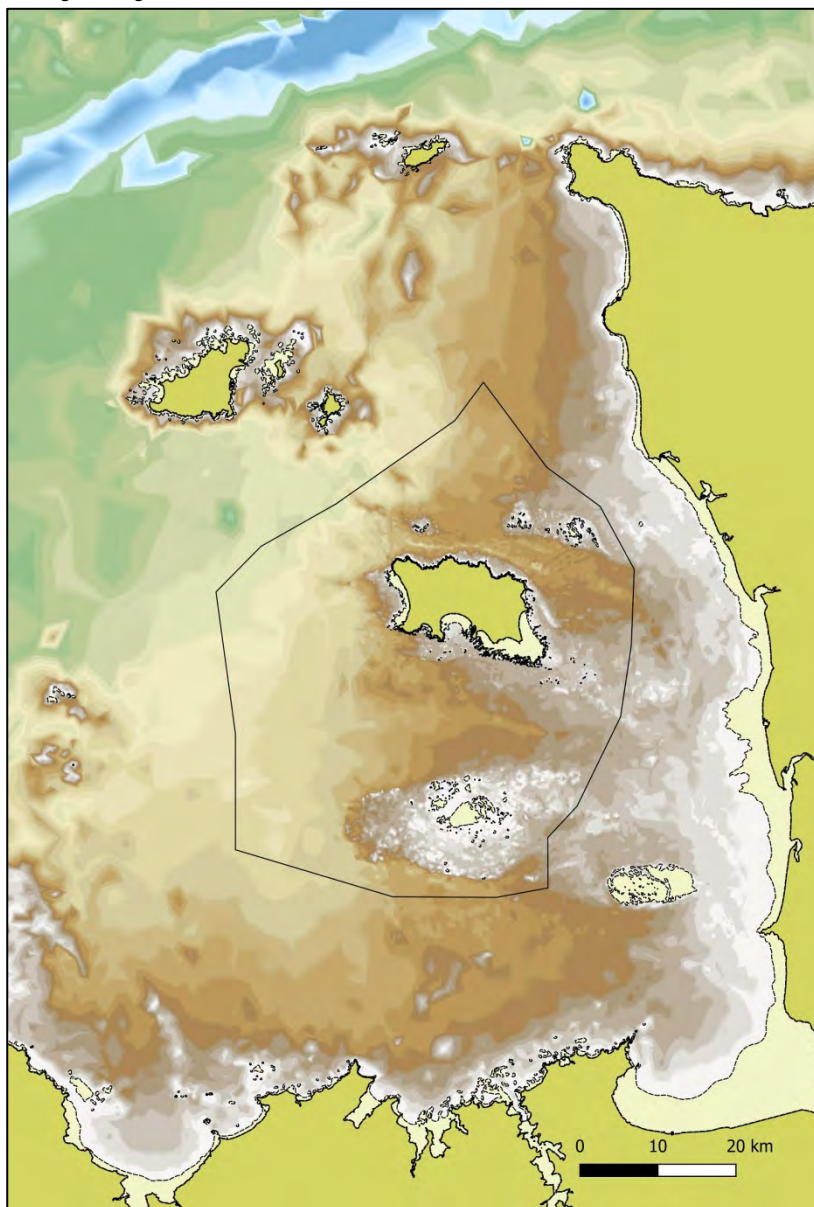
To the south, east and west, the plateau terminates at an escarpment which is an ancient cliff-line, set back from the current

shore. Between the escarpment and the current shoreline are areas of relatively flat land which form the coastal plain.

The coastline of the west, south and south-east comprises a series of broad sandy bays set between rocky promontories.

At low tide the land area of Jersey increases dramatically, as extensive areas of sandy beach and intertidal reefs emerge. This emergence of intertidal environments is even more dramatic offshore, around Les Minquiers reef (approx. 12 nautical miles south of Jersey) and Les Écréhous reef (approx. 7 nautical miles north-east).

Bathymetry



Bathymetry of Jersey

The Bathymetry map above shows the relative depths of the seabed. The lightest areas represent the shallow seas around the reefs, and between Jersey and the French coast. The beige and green areas represent the deeper channels between the Channel Islands, with the deepest water to the north-west of Guernsey. It shows that the seas around Jersey are relatively shallow, but also that they are quite variable in depth.

Marine influences

Jersey's position as an island in the English Channel has a significant effect on its

environmental conditions, and therefore its landscape and character. It is influenced by both the warming influence of the Gulf Stream and colder northern waters. This means that species from both north and south are found at the limit of their ranges in Jersey. The meeting of waterbodies and the funnelling effect of the English Channel means that Jersey has one of the highest tidal ranges in the world (up to 12m on Spring tides) which has a profound effect on the character and habitats of the coast and the offshore reefs and islands. In addition, the complexity of the water circulation pattern within the Bay of Mont-Saint-Michel and

around the various Channel Islands results in a number of circular gyre currents around the islands. These currents, and the energy associated with them, influence the character of the seabed and the water column, and the habitats which they provide.

Climate

Jersey's climate is also the product of several influences and the reactions between them. There is a strong maritime influence (including the Gulf Stream), which tends to modify both summer heat and winter cold. As it is so close to France there is also an influence from continental Europe. Jersey therefore has a unique climate, distinctive from the other Channel Islands, the UK and France.

Jersey is the sunniest of the Channel Islands, with a mean daily air temperature of 11°C. However, occasional ground frosts between November - March mean that the growing season does not necessarily continue all year round. Nevertheless, the relatively warm conditions in early spring mean that it has an advantage for crop growing (particularly potatoes) compared to the UK.

Although it has relatively warm temperatures, Jersey also experiences strong, salt-laden winds for much of the year. The prevailing winds are from the west or south-west, switching to the north in winter. As a result the more exposed coasts are windswept, with few trees, and plants limited to hardy, salt-tolerant species.

Ecology and habitats

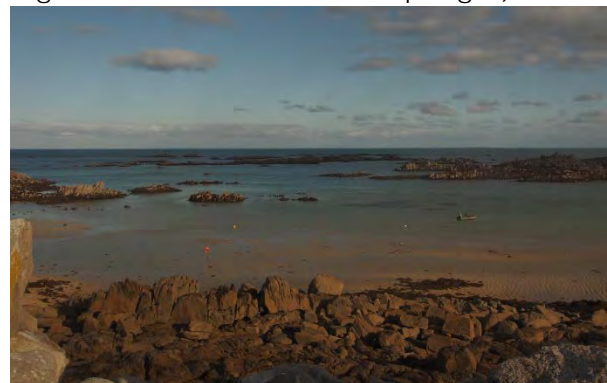
The diversity of geology, marine and climatic influences mean that Jersey and its territorial waters have an outstanding range of habitats and species (see Maps 1a and 1b on the following pages). On land, these habitats include coastal heath, sand dunes and woodland, as well as semi-natural habitats such as wet meadows, marsh and fresh water, and coastal grassland. Many of these areas are designated ecological Site of Special Interest (SSI). Other habitats include

hedgerows and gardens which can link to provide valuable networks.



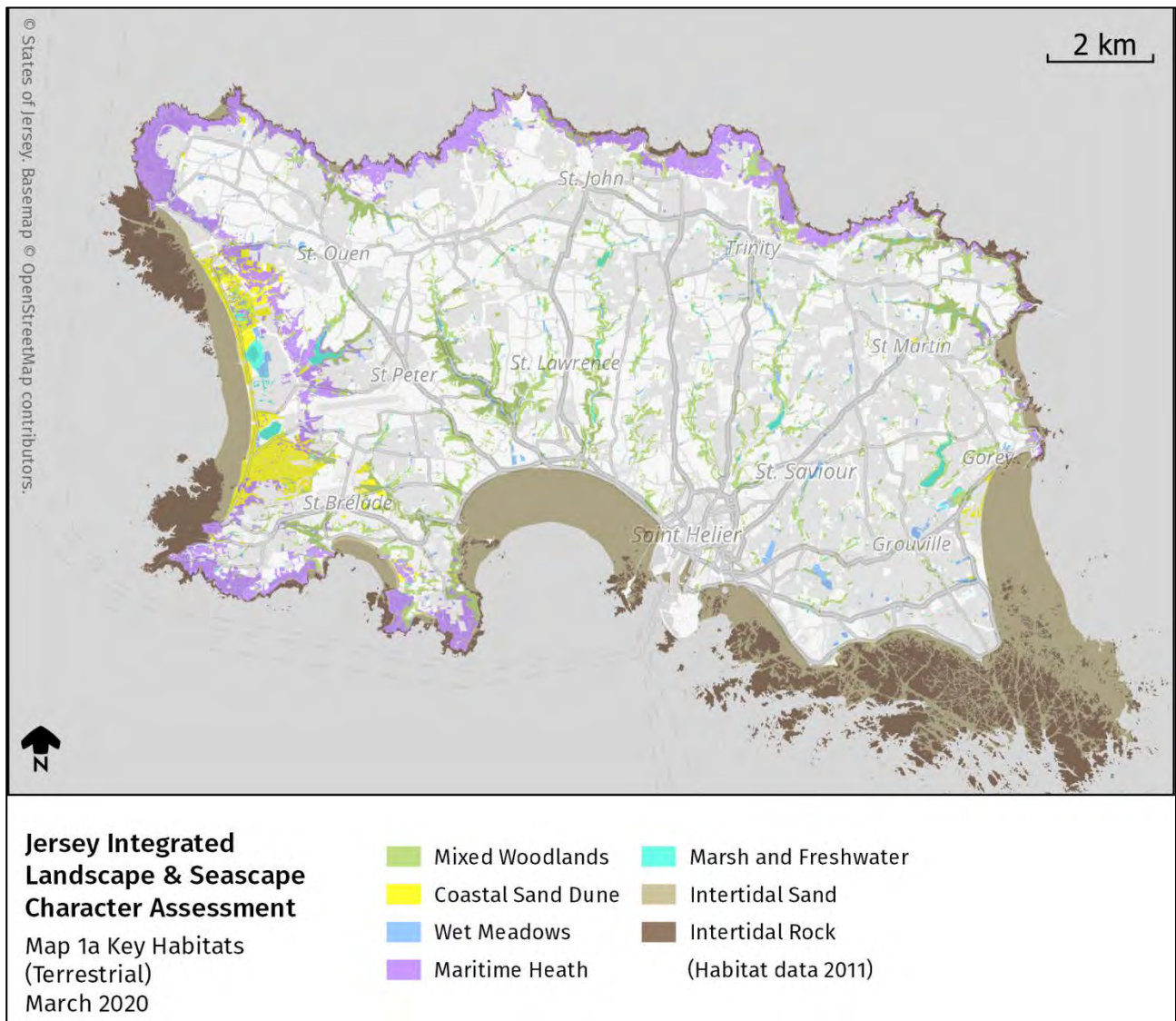
Coastal Heath and grassland at Les Landes

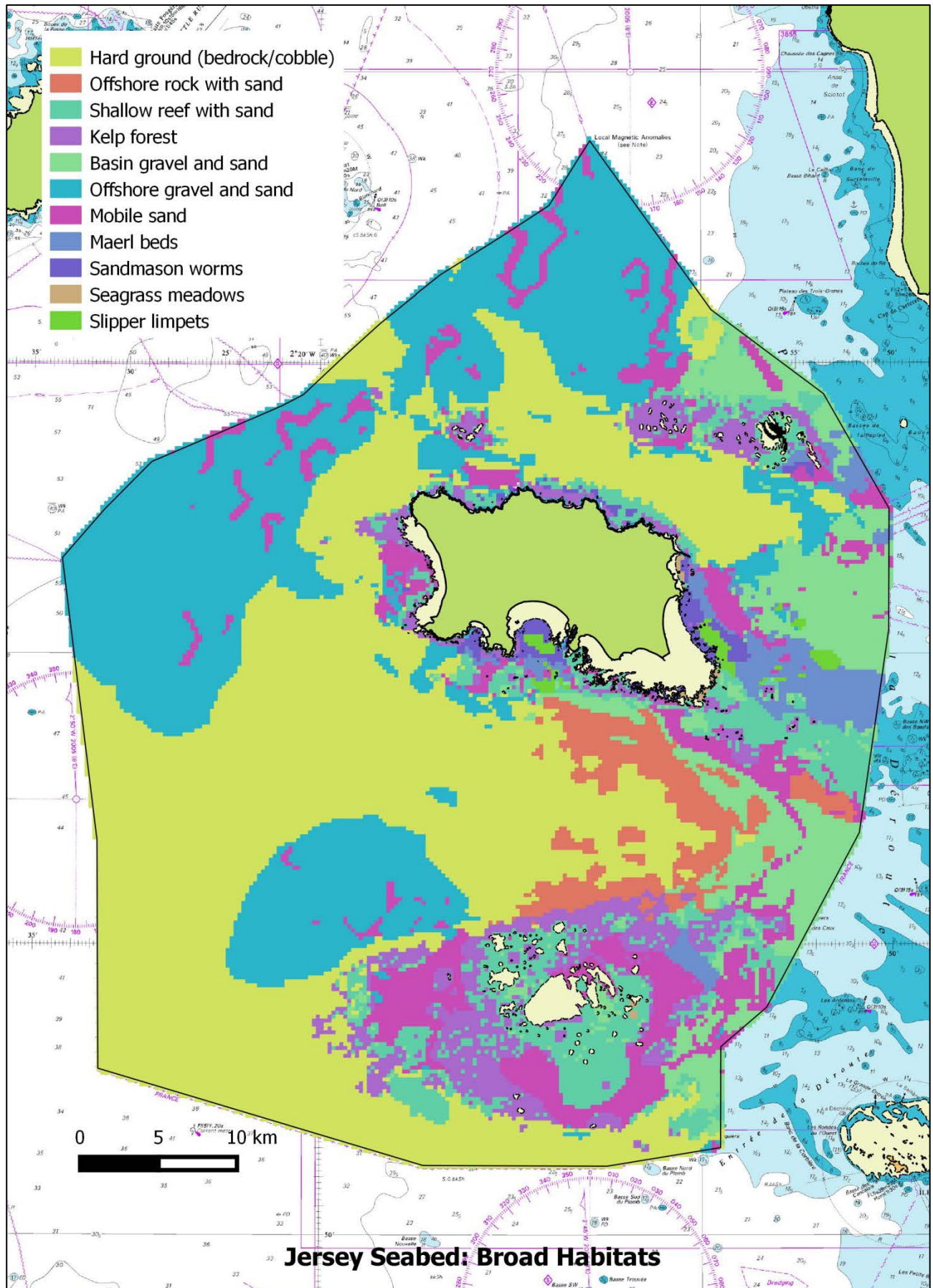
Offshore, intertidal, reef and marine areas provide a unique and internationally-significant habitat resource which support many different species of birds, fish and marine plants and animals. They also act as a nursery for fish and crustaceans. Examples of offshore habitats include seagrass beds, maerl beds, kelp forest, sandy sediments supporting burrowing fauna, flooded gully complexes (rock platforms with significant bodies of sea water remaining at low tide) and subtidal rock platforms (15m below sea level providing habitats for encrusting organisms such as corals and sponges).



Intertidal reef and sand at Les Minquiers

Jersey's large tidal range means that extensive areas of intertidal reefs are exposed at low tide, both adjacent to Jersey, and in the offshore reefs and islands. These parts of Jersey's seascape are highly distinctive and make a key contribution to both its character and its biodiversity.





Map 1b Key Habitats (marine)

2.2 Early inhabitants

Palaeolithic

There is archaeological evidence for early human life in Jersey in the caves at La Cotte à La Chèvre on the north-west coast, and La Cotte de St Brélade on the south-west coast. Both contain sequences of deposits showing occupation over approximately 250,000 years in the Palaeolithic period, and represent two of the most important Palaeolithic archaeological sites in Europe. Archaeological finds include flint tools, flint flakes, bones of rhinoceros and woolly mammoth, and human teeth and a skull fragment, possibly Neanderthal. Because the deposits span such a long period of time, they provide valuable evidence of the relationship between early man and the environment. They also record changing sea levels, and climatic and environmental conditions. At the start of 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. One of these rivers flowed between what are now Jersey and Les Écréhous.

Mesolithic

The Mesolithic period (which began approximately 10,000BC) saw further adaptation by hunter-gatherers to rising sea levels, for example by the exploitation of marine resources such as seaweed and fish. A fine Mesolithic axe was found at L'Ouziere, and pollen analysis shows that hazel and oak were also present. Microliths (flint flakes) were placed in shafts to create harpoons and arrows, and were used in hunting. The diet consisted of wild food, such as seeds, nuts, fruits, roots, shellfish, meat (caught by hunting and trapping) and fish.

Neolithic

The Neolithic period saw a gradual transition to a more settled farming lifestyle, and also

coincided in Jersey with the loss of land connections with the continent as sea levels rose. However, the island was still larger in area than today, as today's intertidal areas were still dry land. Early Neolithic material has been found on Les Écréhous and Les Minquiers reefs, as well as several mainland sites including Mont Orgueil and Le Pinnacle. Archaeological evidence for Neolithic occupation in Jersey includes pottery, flint tools and megalithic monuments (standing stones and burial chambers). Pollen analysis from buried peat deposits suggests that the island was densely wooded at this time.

Le Pinnacle at Les Landes has evidence of occupation from the Early Neolithic to the Bronze Age, as well as a later Roman temple (the only significant Roman site in Jersey). Animal remains found here provide evidence for the domestication of animals, and it has been suggested that stone axes were produced here and exported to other Channel Islands.



Le Pinnacle

There are several Neolithic menhirs (standing stones), including a group in the St Ouen's Bay area. It is likely that a complex Neolithic landscape is preserved under the sand dune system at Les Quennevais. Jersey also contains an outstanding collection of megalithic monuments in the form of Neolithic and Bronze Age burial mounds and dolmens. Of these, La Hougue Bie is the best preserved, and is one of the most spectacular Neolithic monuments in Europe. It comprises

a burial chamber, covered by a mound 12m high and 54m in diameter. Two medieval chapels have been constructed on the top of the mound. The passage into the chamber is orientated so the equinoctial sunrise shines into the chamber. Here there a series of spaces constructed using rocks from different parts of the island, and with carved cup marks and cists made up of small standing stones. Other examples of megalithic monuments include dolmens at Mont Ubé and Mont Grantez, gallery graves at Le Couperon and Ville-ès-Nouaux, and a closed chamber grave at La Hougue Boëte.



Inside La Hougue Bie

Bronze Age

Bronze Age pottery and flint flakes have been found in Jersey and on Les Minquiers, the latter along with seabird, fish and seal bones. It's possible that hunters were resident on Les Minquiers for days or weeks whilst they 'processed' seals. Above these Bronze Age deposits is a deep layer of blown sand with no archaeological finds.

Iron Age

There are several surviving archaeological sites dating from the Iron Age, particularly along the north coast of Jersey. These include a series of promontory forts, which are defended by earthworks (banks and/ or ditches) on the landward side, and by the cliffs on the seaward side. Although they are called 'forts', the purpose of these structures is not well understood. The largest is Le Câtel

de Rozel, which has a massive rampart 10m wide and 6m high. It would have required considerable labour and organisation to construct. There is also evidence for Iron Age occupation at other locations, including L'Île Agois, and on Les Minquiers, where hearths, animal bones, tools and ashes suggest hunters were burning seaweed in order to process seals for their fat and meat.

2.3 Living Off the Land and Sea

Jersey's landscape and seascape have been shaped by centuries of exploitation and modification to enable efficient farming, fishing and trade.

Farming

A large proportion of Jersey's soils are naturally fertile, and agriculture has always been an important part of the island's economy. However, the soil is also vulnerable to erosion by wind and water, and therefore requires protection by hedgerows, banques (banks), walls and shelterbelts. The earliest of the patchwork of small fields are thought to date back to the initial clearance of the land in prehistoric times. Others represent later phases of enclosure, as the agricultural economy has focussed on different crops at different times. However, throughout these changes, wheat, rye and barley were grown for local consumption, and farmers would also have kept a few cattle, pigs, sheep, poultry and bees. Milk, eggs, honey etc. would have been consumed by the family or sold at market. In Tudor times (and earlier), Jersey's economy was focussed on knitting (particularly stockings). Sheep provided wool and were therefore the main source of income, while a small amount of land was in arable production for local consumption. Sheep were grazed over much of the island, but particularly on open commons, which were often situated on headlands (such as Portelet and Les Landes). Several of these medieval commons retain their open character today.

Jersey's sunny climate was ideal for apple growing, and the 17th and 18th Centuries saw a rapid growth in orchards, producing cider for export to England and France. The Richmond Map (1795) shows approximately one third of Jersey's agricultural land planted as orchards. It is likely that some of the high banks and shelter belts date from this time, and the agricultural landscape contains other evidence of this industry, including apple crushers, cider barns and apple lofts.



Apple crusher at Hamptonne

The 19th Century saw apple growing replaced by potatoes and dairy farming, both of which remain key to Jersey's agricultural economy. The 'Jersey Royal' potato started as a fluke in a garden, and has grown and developed into a major industry. The light, warm soils enable very early potatoes which are popular products. The aspects of some of the steepest slopes make them ideal for potato growing, which sometimes requires ploughing using a winch rather than a conventional tractor. The development of the potato industry coincided with increased trade, after wars with the French ceased, and steamships were developed which enabled faster transport of perishable products. Warehouses were built along the waterfront in St Helier to store goods prior to export.

The distinctive Jersey dairy cattle have been a recognised breed for several centuries, and thrive on the rich pastures, producing creamy milk.



Jersey cattle

Development of faster and more reliable transport enabled export of potatoes and milk, and also perishable fruit and vegetables. A horticultural industry developed in Jersey, with tomatoes a particular speciality. Some were grown outdoors in sheltered, sunny fields, whilst others were grown in glasshouses. Some glasshouses remain today, although not all are still in productive use.

For centuries, the main source of fertilizer for arable crops was *vraic* (seaweed), which was collected at low tide and loaded onto carts for transport inland. The intertidal areas are still criss-crossed with *vraicing* tracks used by the carts, which enabled quick access to the slipways. From the slipways, lanes led inland and connected with the road network. The coastal roads were not constructed until relatively recently.

Management of the limited water supplies was an essential part of Jersey's agricultural system. A parish-based system of access to water developed, including *abreuvoirs* (for watering animals) and *lavoires* (for doing laundry) as well as various well-heads and water pumps.

Fishing

Fishing has long been important to Jersey's population both as a source of food and of income. It may involve conventional fishing from boats, or 'low tide fishing' which involves visiting intertidal areas on foot and setting lines, traps or pots to catch fish. Low tide

fishing is distinctive to Jersey, and is possible due to the scale of the intertidal area. The techniques and safe practice are passed down through generations of Jersey families. Boat-based fishing has resulted in the construction of several harbours and quays around the coast, including La Rocque and St Aubin. Boat building yards were set up along the south and east coasts. The boat-building structures were temporary and ephemeral features which have left little trace within the landscape. However, their techniques are still visible in Jersey's traditional buildings, where ship's carpenters contributed to woodwork in the houses. For example, some older properties have caulked floorboards. The international voyages of the Jersey fishermen have also left indirect impacts on built environment. Following the discovery of the New World, a circular trade developed, with Jersey ships sailing to Newfoundland to fish for cod, which was then preserved. The ships then sailed to Central America, where they traded the cod for hardwood, then sailed home. Fine hardwood remains a feature of many historic Jersey houses.

Quays (such as at Bouley Bay and Gorey) were constructed in the 19th Century as part of the oyster boom, when oyster cutters from around the UK came to Jersey. Following over-fishing, the oysters declined, although they are now successfully grown commercially in the Royal Bay of Grouville.



Gorey pier, originally constructed to shelter oyster cutters in the 19th Century

2.4 Settlement and Buildings

Place names and Parish structure

Jersey's long history of settlement is recorded in its place names. Some of the oldest are Viking in origin, including L'Etacq, a derivation for the Norse *stakkr*, meaning 'high rock'. Later names record French and English occupation, as well as the development of the local Jèrriais language, which has strong elements of Norman French.

Jersey's parish structure appears to have been in place by 1066, and may have evolved from earlier estates. The island is divided into 12 parishes, each of which has access to the sea, to common land, and to a stream used to power a watermill. This enabled all parishes to have a fair share of the island's resources. The parish system remains a distinctive part of Jersey's administration and built environment pattern, with each parish having a church, primary school and parish hall. Each of the settlements has a distinctive character and form: some are dispersed in pattern, whilst others are more nucleated. They also vary in size and population, with St Helier and St Brelade containing the largest developed areas.

Farmsteads

In addition to the parish centres, farms are scattered throughout the island. Many of the earliest farmsteads are sited at the heads of valleys, with access to clean water supplies and fertile ground. They often comprise small clusters of buildings which form 'family hamlets' as a result of the traditional 'partage' system of distributing land between sons. Farms were generally located away from the coast, where they were less vulnerable to attack by raiders.

Jersey farmsteads have a number of distinctive features, the most obvious of which is the round-headed Jersey arch, seen in gateways and doorways. The farmsteads can be divided into a number of distinctive

sub-types, but one of the most common features are the multi-use farm buildings (reflecting the long history of mixed farming, and the varied cash crops grown over the centuries). For example, it is not uncommon for Jersey farm buildings to have a horse-drawn apple press on the ground floor, and a room with shuttered windows above it, which could be used for chitting potatoes, storing apples, or as accommodation for farm workers.



Jersey arch, Hamptonne

Up until about 1700, most buildings were non-symmetrical in appearance, with small shuttered windows, and granite walls (sometimes rendered). Brick was only used from the 19th Century onwards. As fashions changed, and symmetrical frontages with sash windows became popular, older houses were re-fronted in the new style. Asymmetrical houses are now therefore relatively rare. There are also surviving examples of early forms of single storey cottages on Les Minquiers and Les Écréhous.



Le Rât farmhouse, with original frontage. Now owned by the National Trust for Jersey

Manorial buildings and churches

Jersey contains around 30 manors, with associated seigneurial features, such as dovecotes. All the manors are different in style. Some, such as Hamptonne, are simply substantial farmhouses, whilst others, such as Samarès, are more ornate. The manors (and their grounds) make an important contribution to Jersey's heritage. Several manorial mill buildings survive, including Le Moulin de Quetivel in St Peter's Valley which still functions and is run by the National Trust for Jersey.

The churches make a highly visible contribution to Jersey's built heritage. Several of the churches are located on high land, and have tall steeples, which help them to function as daymarks for coastal navigation.



St Peter's Church

St Brelade's church is much lower, and located near the beach. Historically, St Helier church was also located on the shoreline, but subsequent land reclamation means that it is no longer near the coast. Monastic sites in Jersey include the site of St Helier's Abbey, which was founded in the Mid-12th Century on the islet now occupied by Elizabeth Castle but destroyed during the Civil War, and a small monastic site on Les Écréhous. Intact

medieval chapels are found on the top of La Hougue Bie. There are many later churches which contribute to Jersey's ecclesiastical heritage, including the 'Glass Church' with glass sculptures designed by Lalique in 1934; Gouray Church which was constructed for English-speaking oyster fishermen, and numerous Victorian non-conformist chapels.

Roads and transport

The road network in Jersey also reflects centuries of development. Initially, a network of tracks used by people and carts linked farms, villages and coasts.



Historic lane running down to slipway at the coast, Le Hocq

A hierarchy of roads developed from the narrowest quatre-pieds to the widest King's Highway. In the early 19th Century, General Don ordered the construction of military roads which linked the existing lanes, and enabled quick movement of troops around the island. These broader roads made travel much easier, and remain in use today. Later, the coast road (St Helier to Grouville) and the coastal section of the railway (St Aubin to St Helier) encouraged development and tourism. Early 20th Century development followed the coast road, often only a single property deep. Although the railway only lasted for just over 30 years, closing in the 1930s, evidence for it can still be seen in footpaths, St Aubin's Bay esplanade, and old stations, halts and bridges.



Former station, Grouville

2.5 Defence and Occupation

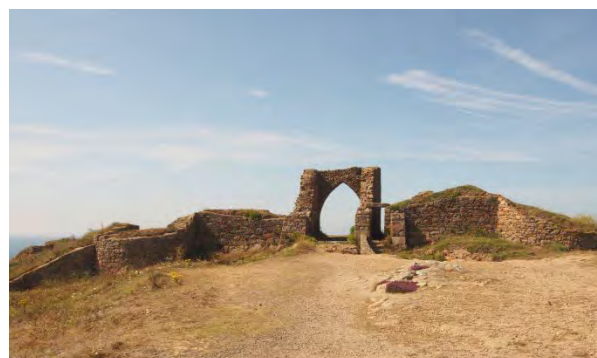
Jersey's political and military history has resulted in a highly distinctive legacy of fortifications dating from the Iron Age until WW2.

Early defences

The earliest known defensive structures in Jersey are the Iron Age Coastal Promontory forts described above. The surviving prehistoric defensive earthworks are mostly along the north coast, although there are Iron Age sites inland. A few centuries later, some existing fortified sites may have been used as protection against (or at least to look out for) Viking raiders.

Castles

When King John lost the Normandy possessions of the English Crown in 1204, Jersey chose to stay with the English Crown, despite being only a few miles away from the 'enemy' of France. French raids were frequent for the following centuries, and it was necessary for islanders to have refuges where they and their animals could shelter in times of danger. Grosnez Castle is a good surviving example of a Medieval refuge, which also acted as a lookout.



Grosnez Castle

The castle later known as Mont Orgueil was started by De Suligny (the first Warden of Jersey), on a site which was easily defended, and the closest point to France. It was gradually extended and embellished over the following three hundred years or so, until it took on its present form and was named

Mont Orgueil (Mount Pride). It was described by Sir Walter Raleigh as *A stately fort of great capacity*. However, as weapons evolved and cannon became more effective, it was not possible to adapt Mont Orgueil in response. So Elizabeth Castle (named after Queen Elizabeth I) was constructed as a state-of-the-art fortress to protect St Helier, and to complement 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.



Elizabeth Castle

Towers and forts

Tensions with France rose again in the 1770s, resulting in the construction of Seymour Tower, over a mile offshore. Other structures followed, including Fort William and Fort Henry in Royal Bay of Grouville, and the offshore tower of La Rocco (St Ouen's Bay). In the late 18th Century, General Conway commanded the construction of a series of 'Conway Towers' around the coast, in every bay vulnerable to attack. Many of these distinctive round towers with overhanging machicolations survive. Today, some are painted on their seaward side so they can be seen from the sea and act as daymarks. Fort Regent, overlooking St Helier, was constructed between 1806-1814 as a barracks and fortress. It contained a parade ground, accommodation, gun emplacements, magazines etc. and was built of granite quarried from the south-west of the island, plus some stone from Les Minquiers. It was roofed in the 1960s and now functions as a sports and entertainment venue.



Archirondel Tower – a 'Conway Tower' in St Catherine's Bay

Napoleon's defeat at Waterloo reduced the French threat, but it re-emerged in the 1830s. This led to the construction of Martello Towers on undefended coasts and areas vulnerable to larger guns, the Icho Tower in St Clement's Bay, as well as other coastal fortresses and barracks. 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.

World War 2

Jersey was under German occupation during WW2, and this period has left a landscape legacy of concrete structures throughout the island. These include various inland tunnels (such as the Underground Hospital in St Peter's Valley), sentry posts, command and communication bunkers. Coastal features dating from the German occupation include gun batteries, bunker networks and anti-tank structures (which were often modifications of existing sea walls). The most prominent German structures are the coastal range-finding towers, with their slit windows looking out to sea. Unlike earlier defences against French invasion, the German structures are principally located on the west and south coasts, where they formed part of Hitler's 'Atlantic Wall'.



German bunker (above) and gun emplacement (below) at Noirmont

2.6 Tourism and Finance

In the later 19th Century, cessation of hostilities with France, and the development of faster ships, enabled tourists to come and enjoy Jersey's beautiful scenery, beaches and balmy climate. Hotels began to develop, particularly behind the sandy bays of St Brelade, St Aubin and Grouville. They were often associated with new parks and ornamental planting.



Early tourism development of esplanade, hotels and park at St Brelade's Bay

The hotels were serviced by new roads, and the railway line mentioned above. Flights to Jersey commenced in the 1930s, initially landing on the sand of St Aubin's Bay before the airport opened in 1937.

The 1960s and 1970s were the heyday of package tourism in Jersey, with numerous hotels and holiday camp style accommodation. Jersey's family holiday market has declined in recent decades, and many hotels have closed. Some have been converted to apartments, or demolished. However tourism still makes an important contribution to the Island's economy. Additional tourism infrastructure such as restaurants, beach-side facilities and marinas continue to influence Jersey's landscape, particularly around the coast.



Seaside holiday at Royal Bay of Grouville

In recent decades, financial industries have become the main economic driver in Jersey. Whilst this has not had a direct impact on Jersey's landscape character, economic growth and associated in-migration has resulted in a demand for associated infrastructure, commercial development in St Helier, and a continued demand for housing.

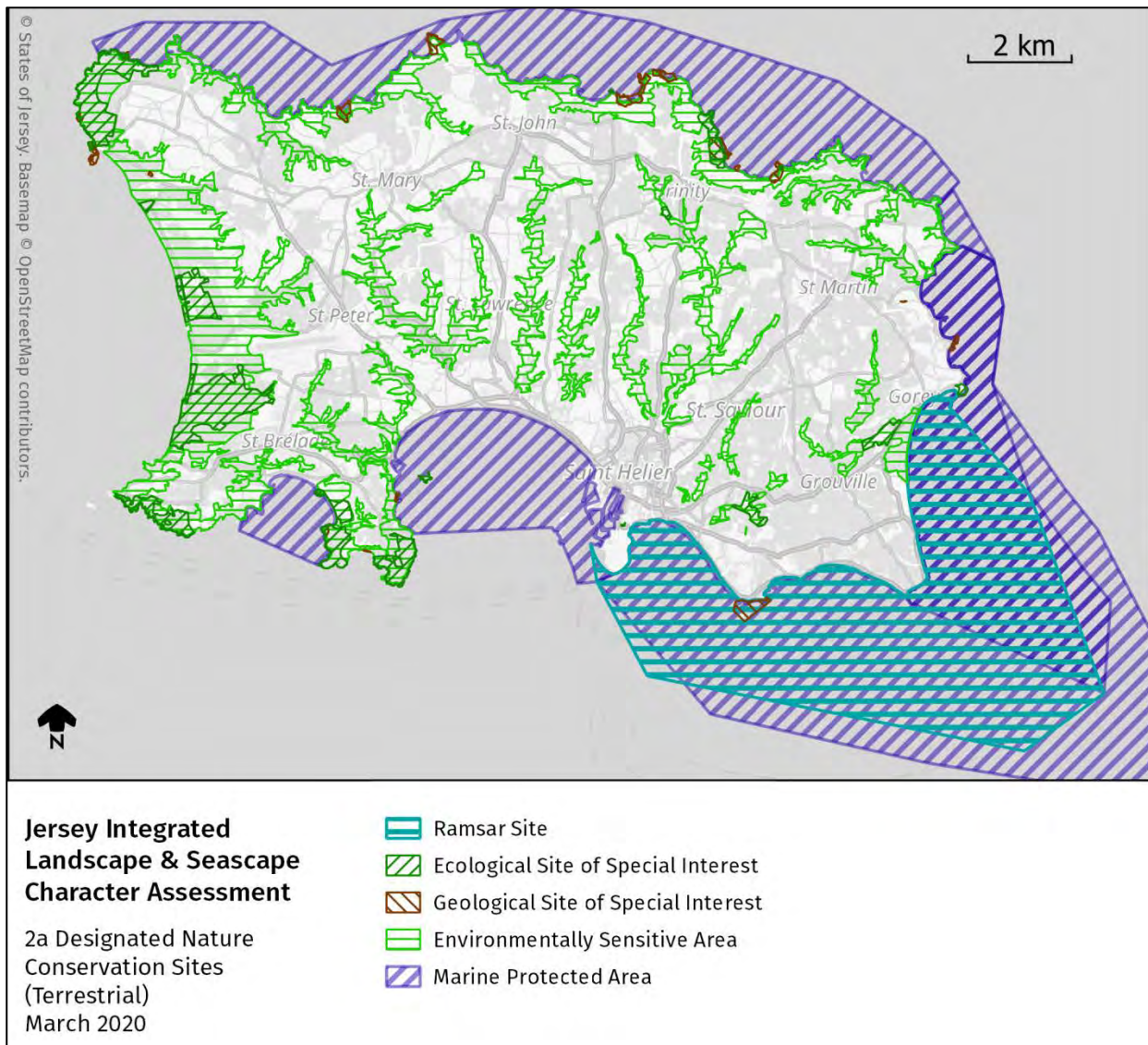
2.7 Designated Sites

Jersey's wealth of geology and ecology, and its rich cultural heritage, is recognised through a range of designations which aim to identify and protect key sites. The following maps show the designated Nature Conservation and Cultural Heritage sites within Jersey.

Maps 1a and 1b above show the key habitats (terrestrial and marine) within Jersey. These key habitats, together with the wider ecological network of hedgerows, trees,

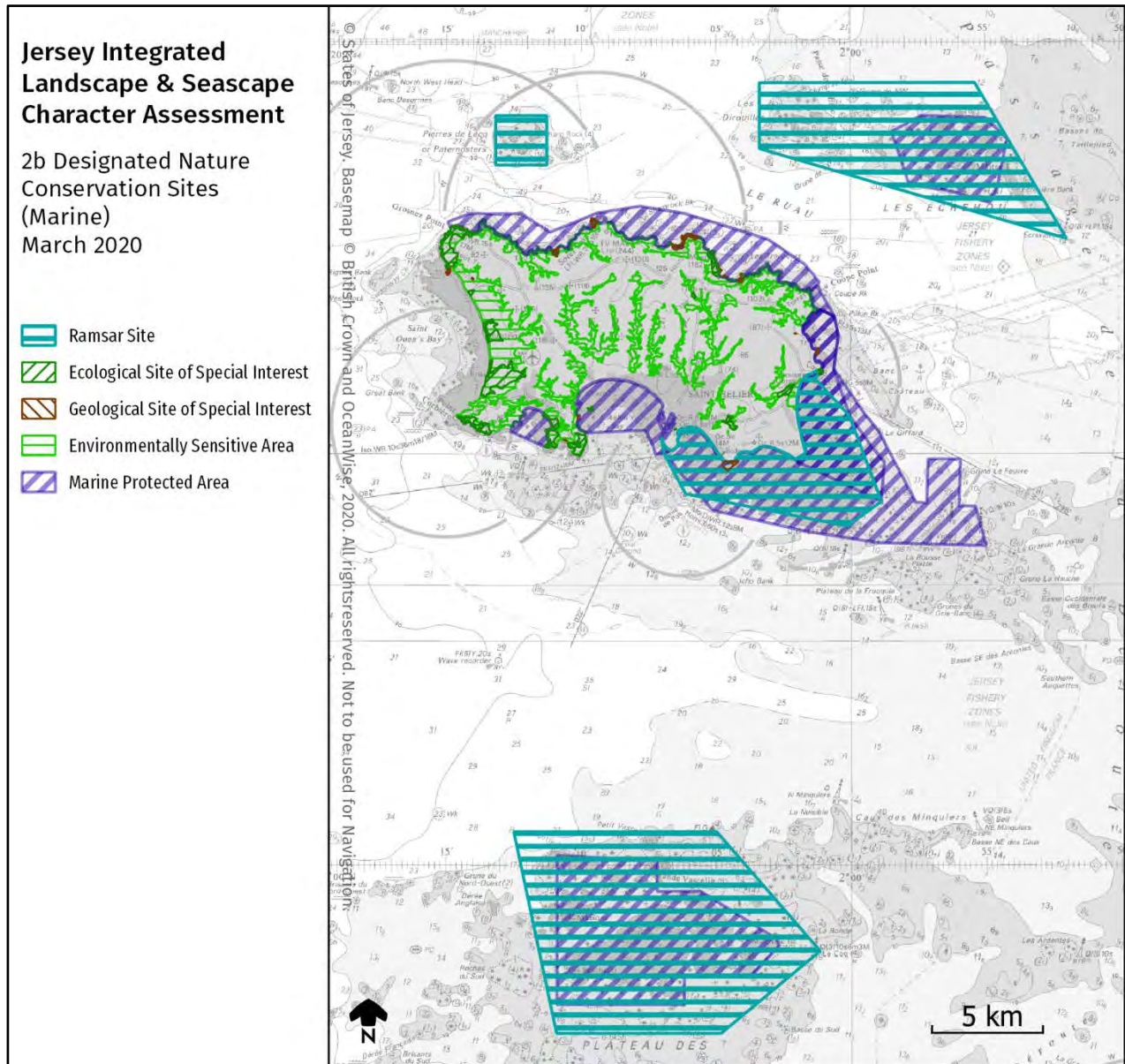
banks and grasslands, form a framework within which the designated sites are located.

These designated sites (terrestrial and marine) are shown in maps 2a and 2b below.

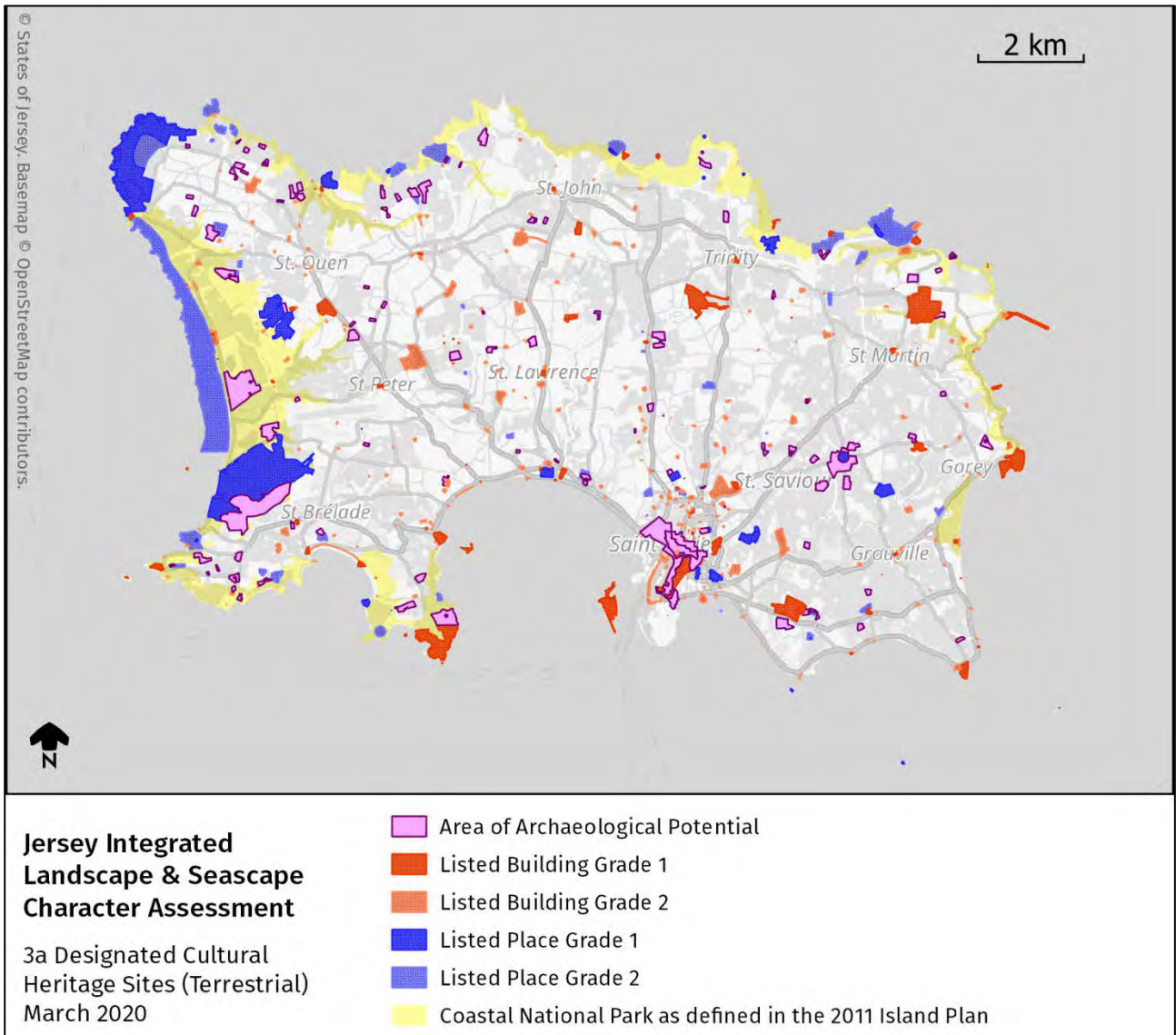


Note: Ramsar Sites are wetlands of international importance that have been designated under the criteria of the Ramsar Convention on wetlands for containing representative, rare or unique wetland types, or for their importance in conserving biological diversity.

Environmentally Sensitive Areas are not statutory designations.

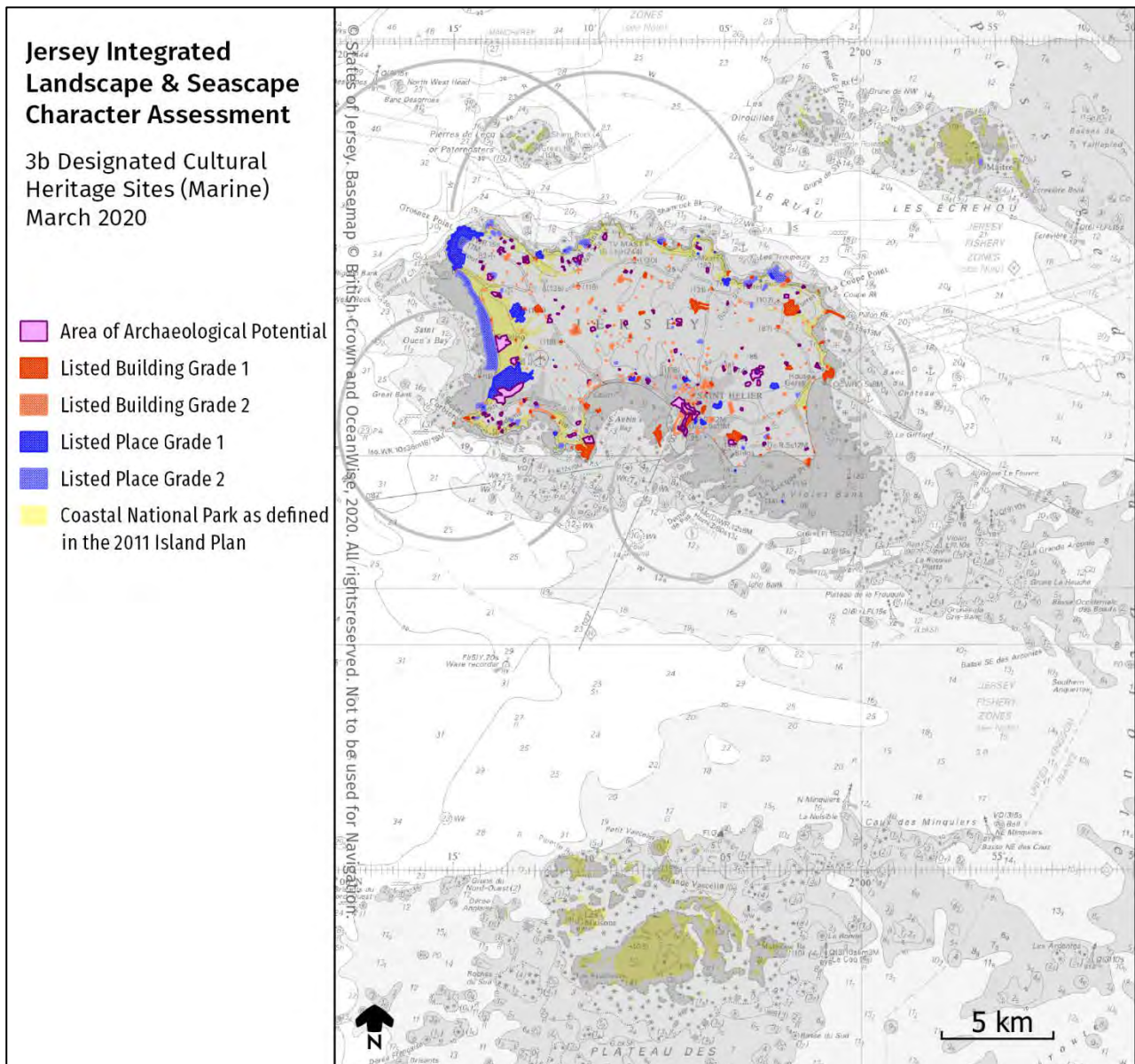


Maps 3a and 3b below show the designated cultural heritage sites within Jersey.



Note: Listed Buildings Grades 3 and 4, and Listed Places Grade 3 are not shown at this scale.

Areas of Archaeological Potential are not statutory designations.



2.8 Forces for Change

The preceding sections have described how Jersey's landscapes and seascapes have evolved as a result of many different factors. This process continues, as landscapes and seascapes are dynamic, and under constant pressure from natural forces and human influence. The challenge is to identify how changes can be accommodated in a way which enhances, rather than damages, Jersey's sense of place.

Some of the changes are small scale and incremental, and possibly not readily perceived until a comparison with earlier pictures shows the extent of change. Other changes may be sudden and dramatic. It is important to consider the cumulative impacts of small-scale changes. Whilst most changes are visual, others may impact on the experience of the landscape or seascape through the senses of sound or smell.

This section summarises the key changes which are happening currently, and/ or are likely to occur in the future. Climate change is now becoming a reality, and responses will be required to both ameliorate and mitigate its effects.

Land-based development

There is considerable pressure for new housing in Jersey. Poorly-sited and/or designed housing can be very visually intrusive, and can impact on the character and special qualities of a place. Recent years have seen building on the slope and crest of the escarpment in some locations. Escarpment slopes and skylines are particularly sensitive because they form the backdrop in views from the sea and lower land, and development here can therefore often be seen from a wide area.

Creeping suburbanisation of coastal settlements and the rural interior of the island is also a concern. This may be due to the design of buildings themselves, overly-formal grounds, or suburban property boundaries

(such as elaborate walls and gates). Other issues include the gentrification of former farmhouses, replacing smaller properties with larger structures (which are often much more visible), the introduction of urban features such as concrete kerbs, and light pollution from streetlights, floodlighting and spotlights.

Marine Development

Marine forces for change include renewable energy schemes such as offshore tidal and wind energy projects, such as the proposed Saint-Breivik wind farm, which is being built just outside Jersey's territorial waters. Some shellfish farming already takes place in intertidal areas off the Jersey coast, and there may be future pressure to increase this. The Shoreline Management Plan sets out the future treatment of the interface between land and sea. In some locations, where enhanced sea defences are required, they may alter the character of the coast (although they also offer opportunities for positive enhancement).

Infrastructure

Historic and continued growth in the island's population generates a requirement for the provision of the necessary infrastructure to satisfy its needs and meet expectations. Land-based renewable energy generation may also increase in the island, particularly solar photovoltaic panels. Light pollution is becoming an issue, resulting in loss of contrast between day and night. It impacts on dark skies and visibility of stars, animal behaviour, and night views of Jersey from France and other Channel Islands.

Land Management

Farming has seen considerable changes in recent years, and these are likely to continue. Recent years have seen farmers sell to potato merchants rather than directly to retailers, resulting in large storage sheds and a more centralised industry. Jersey cattle are still a key part of the island's agricultural economy, but tend to be concentrated in a smaller

number of larger herds, whereas in the past, it would have been common for most farms to own a few cattle.

Horticulture has declined in recent years, and empty glasshouses are therefore not uncommon. Commercial livery and horse grazing is increasing, resulting in a higher proportion of land in equine use, and subdivision of fields into smaller paddocks. After a long period of decline, some orchards have been planted in recent years.



Abandoned glasshouse, St Clement

In future years, climate change is likely to lead to accelerated changes in crops and land use. Examples of new crops being grown in Jersey include grapevines (for wine production), tea and medicinal cannabis. The introduction of new crops, and the potential for associated infrastructure, may impact on the character of the landscape.



Vineyard at La Mare

Many areas of coastal heath, grassland and dune systems are in positive active management (such as the removal of bracken and scrub). Such schemes are likely

to continue and expand in the future, for example the promotion of good practice in woodland and hedgerow management, and the expansion and linking of habitats to enhance the island's biodiversity.

Recreational Pressure

Changing tourism patterns, and the replacement of family package holidays with high-end short breaks, has led to the closure of many large hotels and other tourism accommodation. Some have been converted to apartments to address housing shortfall. Others have been replaced with private properties or, in the case of the former Holiday Village at Plémont, demolished and the land reclaimed as coastal habitat. Tourism pressures are generally greatest around the coast and include infrastructure and facilities for marine leisure, café/restaurant and accommodation proposals. Proposals for activity-based tourism are also a pressure in the island. The offshore reefs and islands also experience issues with recreational pressure, which is a particular concern given the sensitivity of their habitats.

Climate Change

Climate change will have a range of impacts in Jersey, some of which are already being felt. Changing weather patterns will include hotter, drier summers, and milder wetter winters. Storms will be more frequent and more intense, increasing the risk of coastal and riverine flooding. It is also likely to increase the rate of coastal erosion. Some plant, tree and animal species which are currently at the limit of their ranges, or which are very sensitive to changing conditions, may not survive. Climate change will impact on crop choice, potentially affecting the appearance and character of rural areas. It will also provide suitable conditions for a range of tree pests and diseases, with oak and ash trees particularly vulnerable. Marine areas will experience a change in sea temperatures, water acidity and water circulation patterns which are likely to impact on the marine environment and its habitats.

Part 3: Character Descriptions



Jersey's Character Types and Areas

The *Jersey Integrated Landscape and Seascape Character Assessment* identifies ten Landscape Types, which cover the Bailiwick and are subdivided into 34 distinctive Character Areas. These are set out in the tables below, and in maps 4a and 4b on the following pages.

Terrestrial Character Types and Areas

<i>Character Type</i>	<i>Character Areas</i>
A: Cliffs and Headlands	A1: North Coast Heathland
	A2: South West Heathland
	A3: North East Low Wooded Edge
B: Coastal Plain	B1: Grouville Coastal Plain
	B2: St Clements- St Saviour Coastal Plain
	B3: St Aubin's Bay Coastal Plain
	B4: Ouaisné Coastal Plain
	B5: Les Quennevais Dunes Coastal Plain
	B6: St Ouen's Bay Coastal Plain
C: Escarpment	C1: Grouville- St Saviour Escarpment
	C2: St Aubin's Bay Escarpment
	C3: St Brelade's Bay Escarpment
	C4: St Ouen's Bay Escarpment and Valleys
D: Enclosed Valleys	D1: Southern Valleys
	D2: St Brelade's Valleys
	D3: North Coast Valleys
	D4: St Martin's Valleys
E: Interior Agricultural Plateau	E1: Western Coast and Headlands Farmland
	E2: North Coast Farmland
	E3: North East Farmland
	E4: Southern Plateau and Ridges Farmland

Intertidal Character Types and Areas

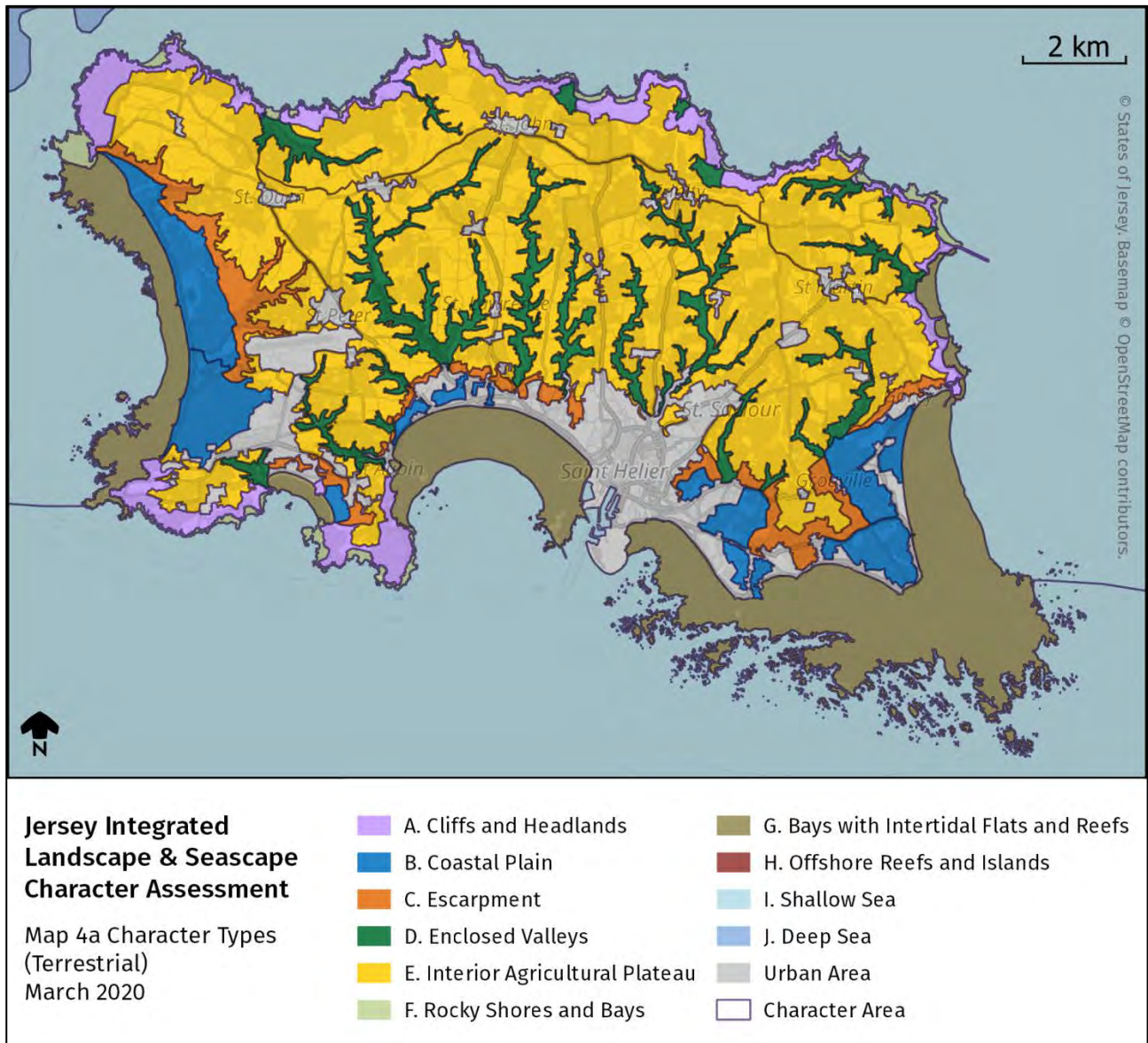
<i>Character Type</i>	<i>Character Areas</i>
F: Rocky Shores and Bays	F1: North and South West Coast
G: Bays with Intertidal Flats and Reefs	G1: St Ouen's Bay Intertidal Zone
	G2: St Brelade's Bay Intertidal Zone
	G3: St Aubin's Bay Intertidal Zone
	G4: South East Coast Intertidal Zone
	G5: St Catherine's and Anne Port Intertidal Zone

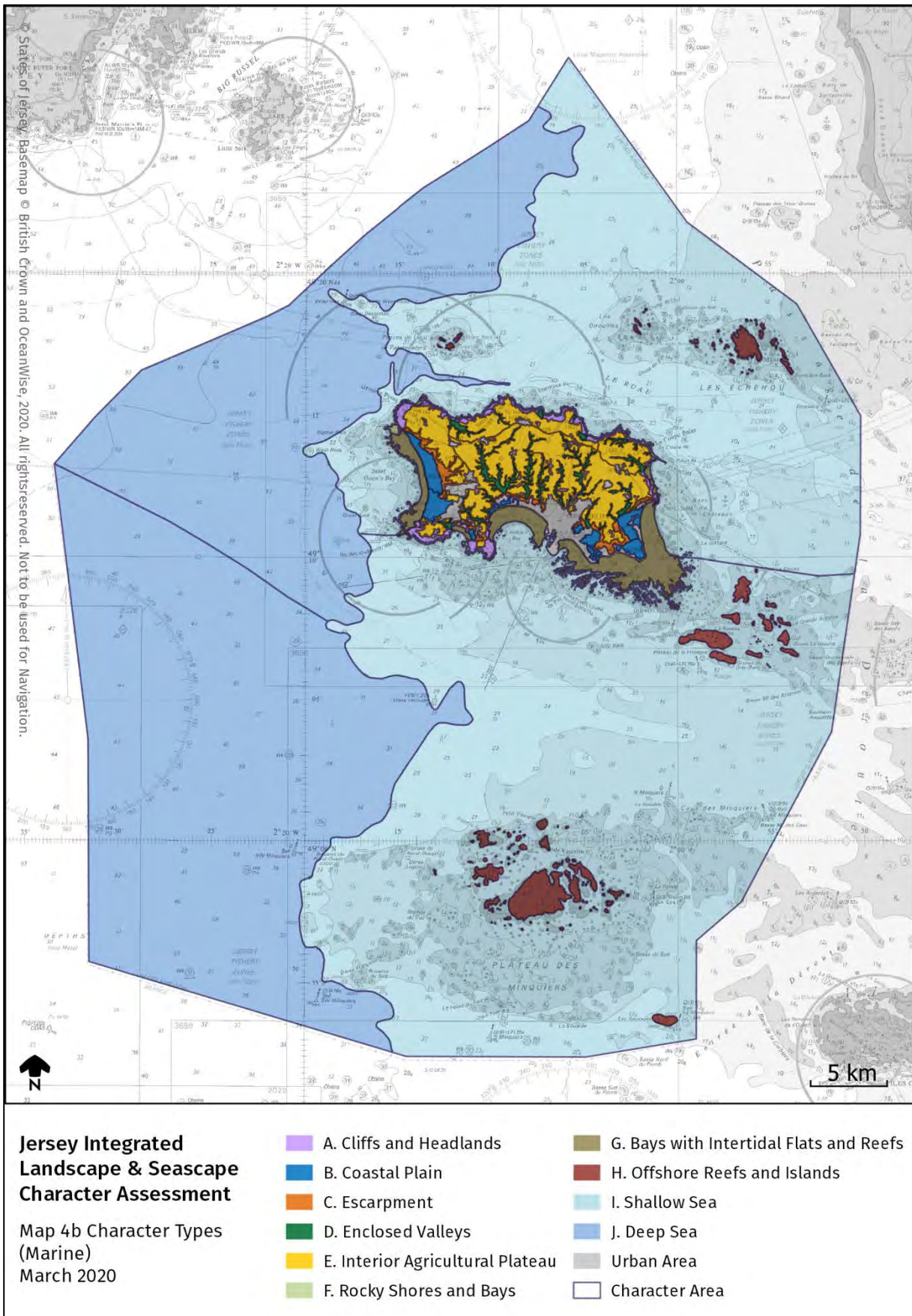
Marine Character Types and Areas

<i>Character Type</i>	<i>Character Areas</i>
H: Offshore Reefs and Islands	H1: Les Écréhous (inc. Paternosters and Les Dirouilles)
	H2: Les Minquiers
	H3: Les Anquettes
I: Shallow Sea	I1: North East Shallow Sea
	I2: South East Shallow Sea
J: Deep Sea	J1: North West Deep Sea
	J2: South West Deep Sea

The remainder of Part 3 contains a series of profiles, one for each Character Type, which include descriptions of the Character Areas. Each of the ten profiles contains the following sections:

- Summary description
- Location map
- Key Characteristics
- Natural influences and sites
- Cultural influences and sites
- Perceptual qualities
- Natural Capital and Ecosystem Services
- Character Area descriptions
- Sensitivities, Condition and Forces for Change
- Strategy and Guidelines





Character Type A: Cliffs and Headlands



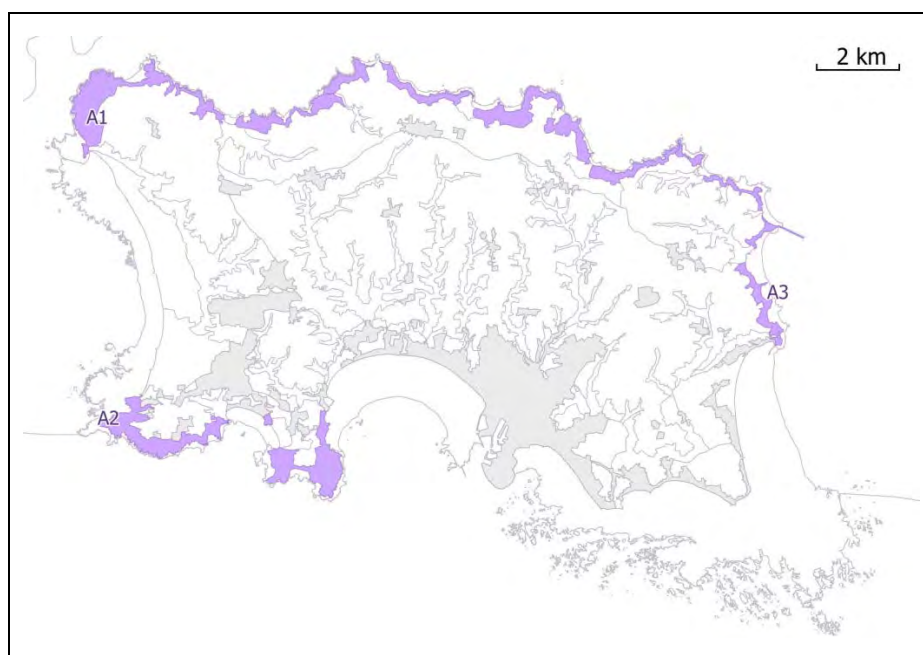
Cliff and Headland Scenery at Portelet Common and cliffs

Summary Description

This Character Type comprises the rugged coastal areas of Jersey, including some of the island's best-known scenery. It is often elevated, and includes cliffs (down to the high water mark), rock faces, heath, coastal grassland and occasional patches of coastal woodland and scrub. It occurs along the northern and north-eastern coasts of Jersey between L' Etacq and Mont Orgueil, and also in the south-west of Jersey, around Noirmont, Portelet, St Brelade's Bay and Corbière. It is closely associated with the *Rocky Shores and Bays* Character Type.

There is very little settlement within the *Cliffs and Headlands* Character Type, which contains some of Jersey's wildest and most remote areas. It is highly valued for its spectacular coastal views, its rich biodiversity and geodiversity, and its sense of isolation and tranquillity. There is a rich cultural legacy of defensive and ritual sites ranging from Iron Age coastal forts through to WW2 structures, as well as caves with evidence of prehistoric occupation. Many of the defensive sites, along with navigation features such as lighthouses and beacons, form key features in views from both land and sea.

There are three distinctive Character Areas within the *Cliffs and Headlands* Character Type, each with a unique 'sense of place'.



A1: North Coast Heathland

A2: South West Heathland

A3: North East Low
Wooded Edge

Key Characteristics of the *Cliffs and Headlands* Character Type

- Complex underlying geology. Primarily granites, with conglomerate in the north-east. Its geodiversity is reflected in the number of geological SSIs.
- Landform comprises steep rugged cliffs of varying heights, with associated headlands, bays and promontories.
- Many natural coastal features, including cliffs, caves and stacks.
- Land cover is primarily heath, rock, grassland and woodland. Land use is mainly recreational, with many areas managed for nature conservation. Localised quarrying also occurs.
- Extensive areas of natural and semi-natural habitats, including cliffs, coastal heath, trees and wet flushes. These support a wide range of seabirds, ground-nesting birds, insects, amphibians, birds, plants and mammals.
- Pockets of woodland in the north-east and treed areas on Noirmont Common
- Few enclosed fields (just occasional surviving stone walls) as area was traditionally open common.
- Very little settlement. Occasional small coastal settlements or isolated dwellings, but most of the Type is un-inhabited.
- Long sequence of archaeological sites dating from Palaeolithic through to WW2. Many sites are ritual or defensive.
- Numerous viewpoints, with spectacular views in all directions, including to France and other Channel Islands. Prominent defensive features and navigation aids form landmarks and seamarks.
- Strong and distinctive colours and textures from exposed granite, heather and gorse. Dominant colours, sounds and smells change with the seasons.
- Contains many of the least accessible or developed parts of Jersey, with a resulting strong sense of exposure, tranquillity, wildness and remoteness.
- A sense of being close to nature.

Natural Influences and Sites

The *Cliffs and Headlands* provide many opportunities to see and appreciate Jersey's complex geology. Granite underlies much of the Type, particularly in the south and north-west, and is associated with the highest cliffs. However, there is variation within the granite, for example it is particularly red around Beauport, orange at Grosnez, and pink around Corbière. Along the north coast cliffs there are coastal exposures of rhyolite, andesite and diorite (all igneous in origin), as well as later sedimentary conglomerate in the north-east. The geological importance of the *Cliffs and Headlands* is reflected in the number of geological SSI sites. The cliff tops contain a succession of preserved Pleistocene drift deposits, but generally the soils are thin and infertile.

The *Cliffs and Headlands* contain a range of coastal features and formations, including cliffs (up to 100m high in the north-west), headlands, bays, caves, raised beaches, islands and stacks. These form a key habitat for seabirds, including choughs, fulmars, occasional auks and gulls as well as other birds such as Peregrine falcons and ravens. Exposed rocks also support lichens, salt-tolerant plants and reptiles such as lizards.



Granite cliffs at Grosnez, looking towards Sorel Point

The headlands are vegetated with carpets of dwarf shrub heath, comprising a mosaic of heather, gorse, bracken, coastal grassland

and scrub. The salt, exposure and wind keep vegetation low and it therefore requires relatively little management. The coastal heath provides valuable key habitats for a range of bird, insect and reptile species. It is also very popular with visitors and can be accessed from the coast path, as well as coastal carparks. Wet flush habitats such as at Les Landes, add to the richness of the *Cliffs and Headlands'* biodiversity. The most extensive areas of coastal heath are designated ecological SSIs.



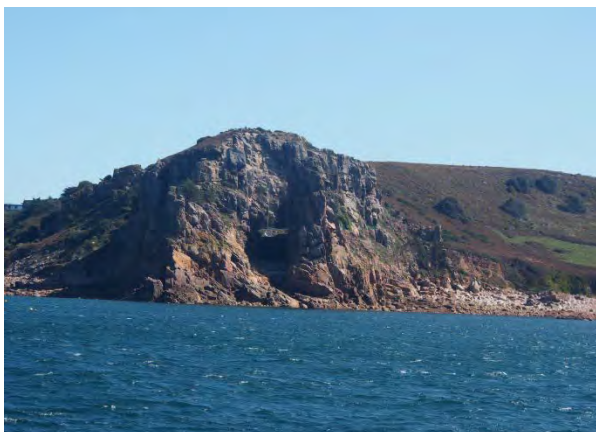
Dwarf heath at Les Landes.

Designated Nature Conservation Sites:

ESSI (Geological)	Le Petit Etaquerel; Le Grand Etaquerel; Le Pulec; Le Pinacle; La Cotte à la Chèvre; Île Agois; Sorel Point; Giffard Bay; Belle Hougue Caves; Les Rouaux; Bouley Bay and Les Hurets; L'Islet; La Tête des Hougues; Anne Port Bay; Belcroute; Portelet Bay; La Cotte de St. Brelade
ESSI (Ecological)	Les Landes de l'Est; Le Crête Fort; Bouley Bay and Les Hurets; Fort Leicester; Etaquerel Fort; Mont Orgueil; Noirmont Field; Portelet; Ouaisné (part); Les Lands Du Ouest
Seabird Protection Zone	Plémont to Grève de Lecq
Environmentally Sensitive Areas (ESAs)	Les Landes; North Coast; Rozel (part); South-west Coast (part); Noirmont-Portelet

Cultural Influences and Sites

The *Cliffs and Headlands* Character Type contains some of the earliest and most important Palaeolithic occupation sites in Europe. Deposits within the caves at La Cotte de St Brèlade and La Cotte à la Chèvre have provided evidence of early humans and contemporary animals (such as woolly mammoth and rhinoceros) starting in the Lower Palaeolithic period, approx. 250,000 years ago. The deposits chart the changes in sea levels, temperature, environmental conditions and cultural artefacts such as tools over hundreds of thousands of years. This includes the gradual loss of land contact with what is now France, as sea levels rose.



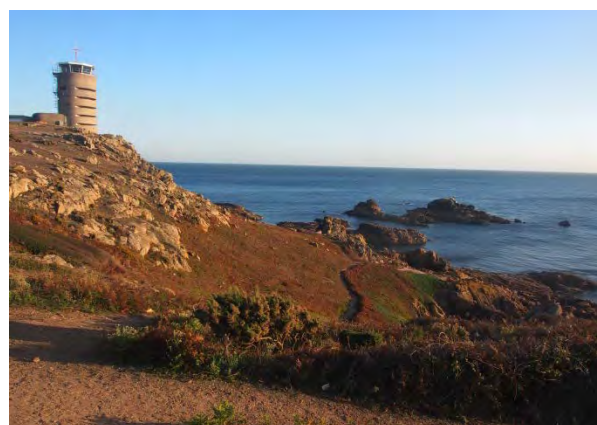
La Cotte de St. Brèlade, as seen from the sea

Neolithic and Bronze Age Megalithic ritual monuments include standing stones and various types of chambered cairns. Evidence of prehistoric occupation has also been found at coastal sites such as Le Pinacle.



Reconstructed late Neolithic gallery grave at Le Couperon

This rich archaeological landscape also contains a wealth of defensive sites from the Iron Age through to WW2. These include Le Câtél Iron-Age Promontory Fort, the Medieval refuge at Grosnez, Mont Orgueil Castle, Napoleonic barracks, forts and breakwaters, and numerous examples of WW2 German structures forming part of the 'Atlantic Wall'. As well as the prominent range-finding towers, there are also extensive underground complexes, such as those at Les Landes and Noirmont.



German range-finding tower (now holiday accommodation), Corbière

The headlands were traditionally used as open common land, and therefore there are few field walls. Commoners could graze sheep, and gather gorse for fuel and bracken for animal bedding. Quarrying of granite also took place on accessible rock faces, and continues today.

The exposed conditions mean that there is very little settlement within this Character Type. The 20th Century saw construction of isolated hotels and bungalows (located for their sea views), but these are not widespread. In recent years some hotel sites have been redeveloped for residential use. The *Cliffs and Headlands* remain popular for recreation, as demonstrated by its inclusion in the Coastal National Park, and by features facilitating access, such as carparks and the coastal footpath. Parts of the *Cliffs and Headlands* are also open access land. Other recreational uses include a rifle range, model aeroplane club, motorcycle scrambling and racecourse.

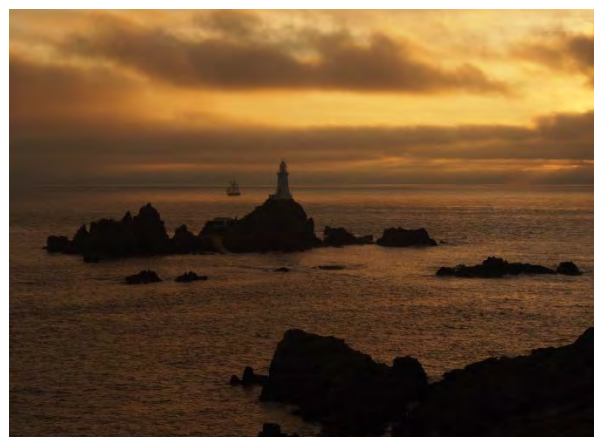
Other structures within the Character Type are associated with navigation and communication, including beacons, lighthouses and masts. These structures are prominent in views from land and sea, and add to views and sense of place (see below).

Designated Cultural Heritage Sites:

Listed Buildings (Grade 1/2)	Numerous, including castles, forts, towers, slipways, harbours, German Occupation sites.
Listed Places (Grade 1/2)	Le C��tel de Lecq; La T��te de Fremont Promontory Fort; Le C��tel de Rozel; Le C��tel du Lecq, Belle Hougue Caves; La Pierre de la Fetelle; St Ouen's Peat Beds; Beauport dolmen; La Cotte de St Brelade; Les Landes prehistoric landscape; Belcroute Bay Iron Age Habitation Site; various flint scatter sites
Area of Archaeological Potential	Le Couperon Headland; Corbi��re Unnamed Field; Mound and Bronze Age Hoard at La Lande du Ouest; Field B574; Noirmont Headland; La Hougue;
Coastal National Park (2011 Island Plan)	All of the <i>Cliffs and Headlands</i> Character Type is within the Coastal National Park

Perceptual Qualities

The Cliffs and Headlands Character Type contains some of the most well-known and spectacular views in Jersey. All but one of the official viewpoints on the Ordnance Survey map are located here. There are splendid and often panoramic views in all directions. Many are over the sea, and many include natural features (such as dramatic cliffs) and/or prominent landmarks and seamarks (for example Mont Orgueil Castle and Corbi  re Lighthouse). In addition, the Cliffs and Headlands often feature in views from other marine and land-based Character Types. For example, the south-west headlands are seen from the ferry approaching St Helier, and the trees on the eastern side of Noirmont Point form the backdrop to views across St Aubin's Bay.



Sunset over Corbi  re Lighthouse, from the headland



Mont Orgueil with Gorey Harbour below

The grandeur and drama of the scenery; the sense of exposure; the stunning views; the sense of history, and the lack of development within the Cliffs and Headlands impact on people's perceptions of this area. They combine to create a strong sense of remoteness, wildness and tranquillity which is rarely experienced elsewhere in mainland Jersey. It gives a strong sense of connection with nature and allows personal 'breathing space'. This Character Type is therefore very highly valued, and is visited by many people.

The strong colours and textures, particularly of granite, heather, gorse and trees, are key to the character of the *Cliffs and Headlands*. However, its perceptual qualities extend beyond the visual. They encompass the sense of height and exposure, the sounds of birds and crashing waves, and the scent of salt spray and gorse.

Natural Capital and Ecosystem Services

Type of Ecosystem Service	Existing contributions	Opportunities
Cultural Services	The Character Type is an attractive landscape which is rich in archaeology, history and biodiversity. It is popular with visitors, who enjoy its spectacular coastal scenery. It is particularly well appreciated from the Coastal Path. The Character Type therefore enables people to obtain non-material benefits such as recreation, reflection, aesthetic experiences and spiritual enrichment.	This Character Type has the potential to continue to contribute to people's mental and physical health and wellbeing. There are also further opportunities to enhance the cultural services it provides through improved access and sensitive interpretation at historic sites.
Provisioning Services	Traditionally, the <i>Cliffs and Headlands</i> have been an important source of provisioning services, including food and fibre from sheep, and gorse and wood for fuel. Today these uses have declined, although there is limited sheep grazing.	There is potential to increase sheep grazing within the <i>Cliffs and Headlands</i> in order to reduce bracken and scrub encroachment,
Regulating Services	Peaty soils absorb and store rainwater. Plants and trees can also improve air quality.	Water regulation is an important part of adaptation to climate change, particularly if storms become more intense.
Supporting Services	Peaty soils contribute to the sequestration (holding) of carbon, helping to reduce the amount of carbon dioxide released into the atmosphere (a key factor in global warming). Plants photosynthesize (removing carbon dioxide from the air and replacing it with oxygen). Cliffs and coastal heath provide habitats for a range of plants, insects, animals and birds.	Increasing soil depth and improving soil structure will help carbon sequestration, as well as its ability to retain water. Encouraging a range of plants will also improve air quality. Improving habitat connectivity by linking heathland and grassland habitats. Managing bracken will help wildlife and also increase its resilience to climate change.

Character Areas

Within the *Cliffs and Headlands* Character Type there are three distinctive Character Areas. Each one has a unique 'sense of place' as a result of its combination of landscape elements. It also contains subtly different habitats, which all contribute to the biodiversity and character of Jersey.

Character Area A1: North Coast Heathland

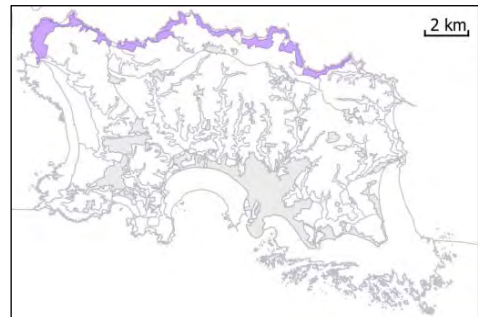


View looking west from Sorel Point along the North Coast Heathland towards La Tête de Plémont

This Character Area comprises the narrow strip of coastal heathland and cliffs between L'Etacq and White Rock, and also includes headlands such as La Tête de Plémont and Sorel Point. This is an intricate, convoluted stretch of coastline, containing numerous small bays, outcrops and islands. Much of it is inaccessible, with only limited access from the Coastal Path. There are also a number of well-known and popular bays within the Character Area, including Plémont, Grève de Lecq, Bonne Nuit and Bouley Bay. These bays have small settlements or low-key seaside infrastructure associated with them, but otherwise the area is unsettled.

The northerly aspect of the coastline means that it is exceptionally exposed, and also receives limited sunlight. Its relative shade and dampness affects the flora and fauna found here, and also its character. The remote nature of much of the coastline makes it ideal for nesting seabirds, including fulmar, and very occasionally puffins and razorbills.

Views north out to sea include the Paternosters; Les Dirouilles reefs just out to sea, the French Coast (including Cap de la Hague) and the island of Sark beyond. On very clear days, Alderney is visible on the northern horizon. From Les Landes and Grosnez there are also clear views of Guernsey.



Character Area A2: South West Heathland

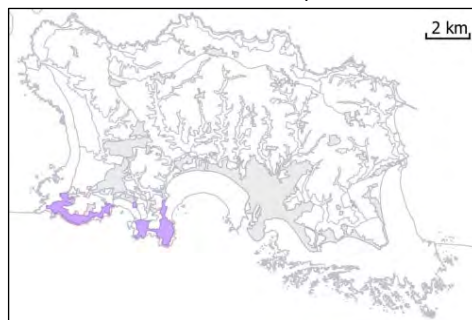


View looking east from Noirmont Point towards Portelet

This Character Area comprises the headlands and of Noirmont, Portelet, St Brelade and Corbière. Their southerly aspect means that they are warmer and drier than the north coast, and their soils attract different plant, insect and bird species such as Dartford warbler, stonechat and linnet. Where the South West Heathland is relatively sheltered from westerly and northerly winds, dense patches of trees – particularly pine, cypress and holm oak – have become established. At a distance these appear as woodland (for example the western side of Noirmont as seen across St Aubin's Bay).

The outstanding views from these headlands make them popular visitor sites, and in some places this has an impact on their character. The view from Corbière headland towards the lighthouse is one of Jersey's iconic views. The panoramic views from the South West Heathlands have also made them important for defence, and there are well-preserved German Occupation lookouts and bunkers at both Corbière and Noirmont, as well as smaller structures at Le Grouin.

Guernsey can be seen in views looking north-west from Corbière, but otherwise the seaward horizon is open. The South West Heathland contributes to the approach to Jersey when arriving by ferry, so it is appreciated by visitors and local people looking from the sea, as well as from land.



Character Area A3: North East Low Wooded Edge

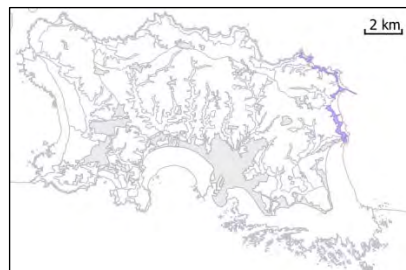


View looking north west from La Coupe toward Rozel Point

This Character Area is located on the north-east coast of Jersey, and stretches from White Rock to Mont Orgueil. It has a number of characteristics which makes it distinctive from the rest of the north coast.

Its underlying geology is conglomerate, rather than granite. This gives the rocks a different colour and texture, and has also led to the formation of much lower cliffs. Its relatively sheltered aspect has enabled coastal woodland to thrive, so there is less heathland vegetation and more trees. The lower cliffs and presence of woodland mean that this Character Area is less dramatic, but it is still very attractive and has a softer, more settled feel, which is less exposed and wild.

Its location closest to France means that views out to sea include Les Écréhous in the middle distance, and France on the horizon. In addition it has been at the forefront of defence against French attack, and includes a number of sites representing different periods of unrest. The castle of Mont Orgueil was founded in the 12th Century, but today is primarily a 15th Century structure. Mont Orgueil is one of Jersey's most well-known views and visitor attractions, and dominates much of the east coast of the island. St Catherine's Breakwater and Archirondel Tower were constructed in response to the Napoleonic threat. Both are now distinctive features within the landscape and seascape, which contribute to the sense of place.



Sensitivities, Condition and Forces for Change within the *Cliffs and Headlands* Character Type

Sensitive Special Qualities

- Rugged landform of rocky cliffs and headlands, enclosing secluded bays, some quite large.
- Extensive areas of coastal heathland on slopes and flatter tops and some mixed woodland.
- Strong coastal character, with a sense of exposure, openness and movement.
- A lack of development (largely limited to a scatter of military defences and lighthouses) and a strong sense of remoteness and naturalness, with dark night skies.
- Extensive views out to sea, to France and other Channel Islands, and along the coast.

Landscape Condition

1. Some extensive and largely intact areas of semi-natural habitat cover the cliff faces and headlands, although uncontrolled access has, in places, resulted in severe erosion.
2. Rabbit burrows are widely evident; some have collapsed, resulting in further erosion and loss of heathland vegetation.
3. Invasive species such as Hottentot fig and bracken are a problem in some locations, as they out-compete in key habitats including heath, grassland and bare rock.
4. Wildfires are a concern, particularly in heathland areas.
5. A diverse selection of visitor infrastructure, such as seating, signage, boundary and car park treatment results in a confusing experience for visitors. Poorly maintained infrastructure, car park and footpath surfaces, also detract from the coastal character.
6. On some of the more open headlands, built development interrupts the integrity of the largely undeveloped skyline. This includes structures associated with the racecourse.
7. A recent positive landscape change has been the restoration of coastal grassland at the former Plémont holiday camp.

Forces for change

Landscapes and seascapes are dynamic and are constantly affected by a variety of forces for change, which may be natural (e.g. coastal erosion) or man-made (e.g. development pressure, and/or changes in farming practices). The following table illustrates the main forces for change acting on this Character Type, and how they will potentially affect the landscape/ seascape. Recommendations for addressing these issues are provided in the following section.

Issue	Potential impacts on sensitive special qualities	Character Areas affected
Marine development	<ul style="list-style-type: none"> • Offshore developments (e.g. tidal barriers, wind turbines), and associated shore-based infrastructure could affect the natural and remote character of the coastline, and the wide seaward views. 	All
Infrastructure	<ul style="list-style-type: none"> • Harbour-based expansion or land reclamation could affect the physical form of the rocky coastline, its natural and remote character and the extensive seaward views. • Communications masts threaten the natural appearance of this landscape, particularly where they break the skyline. • A noticeable increase in marine traffic could also affect the sense of remoteness and naturalness. • Expansion of recreation facilities such as the racecourse may have landscape and visual impacts. 	All
Housing	<ul style="list-style-type: none"> • Extension of small coastal dwellings into larger properties, and the 	

	<p>redevelopment of former hotel sites to residential accommodation, could affect the character of the coast, particularly in prominent locations. They may be visible from land and/ or sea.</p> <ul style="list-style-type: none"> • Further housing development could affect the rugged landform and semi-natural vegetation. • It could also diminish the coastal experience, particularly the sense of naturalness and remoteness and impact on the coastal views. Light pollution from dwellings may also impact on dark night skies. • Housing on adjacent areas of the Interior Agricultural Plateau Character Type can also impact on views from the <i>Cliffs and Headlands</i>, especially where it is apparent on the skyline. 	All
Land management	<ul style="list-style-type: none"> • Pollution from chemicals used on nearby agricultural land could affect the biodiversity and sense of naturalness. • Invasive species will continue to spread unless contained, potentially out-competing native vegetation. 	All
Recreational pressure	<ul style="list-style-type: none"> • An increase in the number of visitors could have a direct effect on the sense of naturalness and remoteness of the headlands. • Further car parking, signage, fences and other recreational infrastructure (including potential increase in demand for mobile food kiosks in coastal car parks) could also affect the coastal character and seaward views. • Overuse of paths by walkers and cyclists can lead to physical damage of coastal habitats. 	All
Climate change	<ul style="list-style-type: none"> • Variations in seasonal weather patterns could result in changes to the extent, composition and survival of semi-natural habitats, affecting the sense of naturalness of the landscape. • Stormier seas could enhance the strong coastal experience and drama, but also increase coastal erosion rates. • Wildfires become a greater threat in hotter, drier summers. • Further sea defences could detract from the physical form of the rocky coastline and its remote and natural character. 	All

Strategy and Guidelines

Strategy

The overall strategy for the *Cliffs and Headlands* Character Type should be to protect and enhance the coastal character, particularly the sense of naturalness and remoteness which contribute so much to its special quality.

Further built development should be resisted, particularly on steeper slopes, where extensive earthworks would be required, or where it may be visible on the skyline. The extension and/or redevelopment of existing buildings should be appropriate in scale and design.

Managing recreational pressure is another key priority, improving the condition of eroded heathland, managing visitors' experience through well designed facilities and creating a more unified range of seating, signage, car park and path treatment.

A co-ordinated plan for biodiversity enhancement and visitor management could be prepared with input from all relevant organisations.

Coastal habitats such as heath, grassland and woodland should be linked where possible. In some places this may require management of vegetation (such as bracken control) or the planting of trees to link coastal woodlands.

Character Type-Specific Management Guidelines

Protect

- Protect the predominantly undeveloped character of the Character Type.

- Protect the rugged landform of rocky cliffs and headlands.
- Protect the open character and long range coastal views.
- Protect the strong coastal character, including the sense of naturalness and remoteness.

Manage

- Manage visitor pressure away from sensitive habitats.
- Manage visitor infrastructure such as car parks, benches, signage and surface treatment. Make sure that any future mobile food outlets are not detrimental to landscape character.
- Manage coastal vegetation, controlling invasive species such as bracken and Hottentot fig where necessary. Limited grazing may help in bracken control, but associated fencing would need to be as unobtrusive as possible.
- Investigate opportunities to expand and link coastal woodlands where this can be achieved without loss of other key habitats.

Plan

- Plan for a strategic approach to the management of visitors and recreational routes.
- Resist new built development. Any modifications to existing buildings must be of a similar scale, and respect landscape character through materials and design.
- Encourage relevant organisations (e.g. National Trust for Jersey, Government of Jersey, Coastal National Park, volunteer groups) to work together with a co-ordinated approach to biodiversity enhancement and visitor management.
- Enhance the provision of interpretation of cultural and natural features.
- Enhance the management of heathland and existing areas of scrub and woodland, including the linking of key habitats to improve their function as biodiversity corridors, and their resilience against climate change.
- Consider enforced 'no go' areas to protect rare nesting seabirds.
- Consider expanding coastal heath/ grassland onto adjacent former development or agricultural sites (such as the coastal grassland now being established on the site of the former holiday camp at Plémont).
- Explore the potential to link existing paths to form a long distance coastal walking route with small scale accommodation facilities such as camping barns within existing buildings.
- Plan for some limited areas of tree and scrub planting to help integrate existing buildings whilst retaining the predominantly open character of the landscape.
- Carefully consider the location of future communications masts, avoiding prominent open clifftop positions. Minimise the number of masts needed by encouraging mast sharing.
- Develop a long-term restoration plan for coastal recreation sites such as the racecourse.
- Provide additional protection for key viewpoints and their settings, specifically Mont Orgueil and Corbière. These should take into account views from both land and sea.

Further Information

Please refer to the **Landscape Design Guidance (Part 5)** for more information on relevant topics:

- Accommodating new development
- Enhancing rural character
- Views and visibility

Relevant **Coastal Units (Part 4)**: 1,2,3,4,5,6,7,12,13,14

Character Type B: Coastal Plain



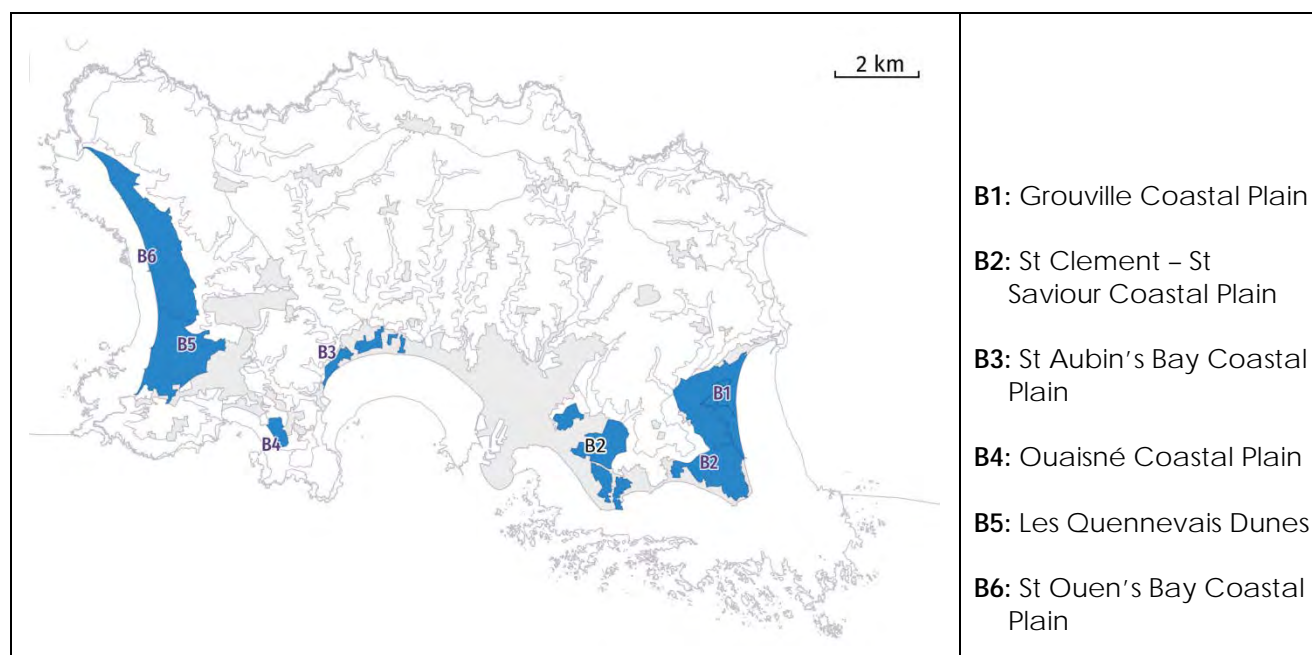
Coastal Plain scene in St Ouen's Bay, looking north with Les Quennevais dunes in the foreground

Summary Description

This Character Type comprises the low-lying, flat land between the escarpment and the sea on the east, south and west coasts of Jersey. It is covered with drift deposits, including blown sand and alluvial outwash, which do not occur elsewhere in Jersey. These have led to creation of habitats which are unique within the island, including wetlands, marsh and sand dune systems. These support a wide range of plants, birds, insects and reptiles, including rare and endangered species.

Historically, much of the area was wetland or dunes, but gradual construction of seawalls and drainage of land enabled farming of the fertile soils, and a new landscape of regular fields was created, often used for horticulture. The former wetland and dune habitats shrank and became fragmented, but important wildlife sites still exist on the Coastal Plain, such as dune systems at Les Quennevais and Ouaisné, and wetlands at St Ouen's Pond (La Mare au Seigneur), Grouville Marsh and Rue des Prés.

The coastal location of this Character Type meant that it was very important for defence, and it contains many fine examples of Jersey Round Towers as well as WW2 German defences which formed part of the 'Atlantic Wall'. The construction of the seawalls, coastal roads and railway prompted much 19th and 20th Century development in the Coastal Plain, including the expansion of St Helier, and linear coastal development around the La Rocque peninsula toward Gorey. However, even in these areas undeveloped parts of the Coastal Plain remain strongly rural, and function as a gap between settlements. Elsewhere (for example St Ouen's Bay) it remains open and exposed, with the regular pattern of coastal fields contrasting with the rough texture and form of the dunes.



Key Characteristics of the *Coastal Plain* Character Type

- Underlying geology may be igneous or sedimentary, but all is overlain by drift deposits, including loess, alluvium and blown sand.
- Exceptionally flat and low-lying landform which forms an ‘apron’ between the *Escarpment* and the coast.
- Coastal features include dune systems and outwash plains, but most have been modified to some degree by seawalls or development.
- Land cover is varied. It is dominated by agriculture, but also includes development, golf courses and semi-natural habitats.
- A wide range of important semi-natural habitats supporting many rare species. Habitats include sand dune system, fresh and salt marsh, wetlands and open water.
- Relatively little woodland, but parts are well-treed with hedgerows, shelterbelts and water-tolerant vegetation
- Field patterns are generally regular, with small fields. Boundaries include walls or low banks in the west, and hedgerows or shelterbelts in the east.
- Settlement includes St Helier suburbs, coastal strip development, and expanded historic coastal or scarp-foot settlements.
- Rich prehistoric archaeology, and numerous structures associated with different periods of coastal defence.
- Forms the foreground in views from the *Escarpment*, and also contributes to views from the sea. Within the Coastal Plain there are long sea views, and views inland to the escarpment.
- Wide variety of colours, patterns and textures due to the range of land uses, and the contrast between agricultural and semi-natural areas. Sense of exposure on the coast.
- Parts feel strongly rural and/or coastal, with pockets of tranquillity.

Natural Influences and Sites

The Coastal Plain occurs in several locations around Jersey. In all these places it is characterised by its low-lying and flat landform.



View towards La Rocque from Le Hocq, showing the low and flat landform of the Coastal Plain

The character of the *Coastal Plain* is dominated by drift deposits rather than solid geology. Drift deposits include blown sand, loess (wind-blown sediment), alluvial outwash from streams, and peat. Generally sand deposits occur inland of sandy beaches, and form dune systems. Alluvial and peat deposits are associated with stream courses. The quaternary deposits associated with the *Coastal Plain* drift deposits are valuable resources for archaeology, and for aiding understanding of past environments.

These drift deposits have also enabled the development of a rich diversity of habitats including sand dunes, dune slacks, freshwater marsh, wet meadow, open water and coastal heathland. The *Coastal Plain* habitats are therefore highly prized in terms of their size and their species diversity. This is reflected in the number and extent of ecological SSIs.

There are extensive areas of sand dune habitat at Les Quennevais, Ouaisné and Grouville, although the latter is now golf links and therefore modified. The Les Quennevais dune system extends inland and is by far the largest. It contains a number of ecological niches including fixed dry dune grassland, damp dune slacks, marram grassland, open sand, gorse scrub and lichen-rich woodland. Similarly the dune system at Ouaisné represents a habitat transition from dry dunes, through to freshwater dune slacks, scrub, heath and willow carr (wet woodland). These

sites support a vast range of species, including approx. 460 plant species (many of which are rare in Jersey and at the extremes of their ranges), along with birds, insects, reptiles and mammals. Ouaisné is one of the last wild breeding-place of the Agile frog.



Marram grass and scrub habitats at Ouaisné

The construction of sea walls/ anti-invasion defences limited the supply of new sand into the dune systems, so they are now less mobile than previously. They are also affected by changes in the water table, and encroaching development or land use change.

Freshwater marsh and wet grassland occurs at a number of sites within the *Coastal Plain*. Several of these (for example Grouville Marsh, Rue des Prés and St Ouen's Pond) are designated SSI. They are particularly important for the varied plant, insect and bird species which they support, including orchids, summer warblers, marsh harriers and egrets.



View of wetland from the new hide at St Ouen's Pond

A bird hide and interpretation centre has recently been opened in a former German bunker at St Ouen's Pond, which enables

people to better appreciate the rich diversity of wildlife found here.

The Richmond Map of 1795 shows the dunes and marshes to be far more extensive than today. This is because the subsequent construction of sea walls made it relatively easy to drain or level coastal land for agriculture or development. Its fertile soils and convenience for building have meant a loss of the natural habitats. Nevertheless, although the habitats of the *Coastal Plain* are more fragmented than in the past, they are still extremely valuable, and make a very significant contribution to Jersey's biodiversity and character.

Designated Nature Conservation Sites:

ESSI (Ecological)	St Ouen's Bay Coastal Strip; La Mare au Seigneur; La Partie du Nord & du Sud de Mielles; Les Blanches Banques; Rue des Prés; Grouville Marsh; Ouaisné
Environmentally Sensitive Areas (ESAs)	St Ouen's Bay; Noirmont-Portelet; Beaumont (part); South-East Grasslands; Grouville; South-West Coast

Cultural Influences and Sites

The *Coastal Plain* contains some of the oldest archaeological evidence on Jersey, buried in the peat beds below the sand deposits in St Ouen's Bay. Finds include a Mesolithic axe head, and also evidence for the environmental conditions in the area at the time, which included hazel and oak trees. At this time the sea levels were much lower than today, and Jersey was still joined to France. There are also significant Neolithic sites, including several prominent menhirs.

Historically there was little settlement on the *Coastal Plain* because of the ever-present risk of coastal flooding, although some farms and settlements were located on the landward edge. Lanes ran down to slipways at the coast to enable the transport of *vraic* (seaweed), used as fertilizer on the fields. Land uses within the *Coastal Plain* worked with the naturally-occurring conditions, and

included seasonal grazing of animals on marshland, and a rabbit warren on Grouville Dunes. There are many placenames within the *Coastal Plain* which signify common land or marsh. By 1795 inland and sheltered parts of the area were drained and being used for farming, particularly apple orchards. The resulting pattern of regular fields largely obliterated the previous organic patterns. The fertile, south-facing soils of the eastern side of Jersey were used for market gardening and horticulture, whilst the more exposed west coast was used for sheep grazing, and only ploughed much later.

Marshland at Samarès was drained using a canal to create farmland and a manorial estate, now the Jersey Botanical Garden.



Samarès Manor & Jersey Botanical Garden. The dovecote (circular structure in the centre of the photo) was a seigneurial privilege.

The Coastal Plain was critical to defence, and numerous defensive structures survive, telling the story of different threats over the centuries. The oldest structure is La Caumine à Marie Best in St Ouen's Bay. The first record of a guardhouse here is in 1665, but the current building dates from 1765. The square structures of Fort Henry and Fort William in the Royal Bay of Grouville were constructed in the mid-18th Century. In response to increased threat of invasion from France, they were supplemented by a chain of Jersey Round Towers, which lined the coasts. Many of these towers survive and form landmarks. Two in St Ouen's Bay were lost to coastal erosion, and replaced with more typical Martello Towers in the Mid-19th Century.



Le Hocq Round Tower

The latest phase of defensive structures date from German occupation of Jersey in WW2. These are concentrated on the west and south-facing coasts, which formed part of Hitler's 'Atlantic Wall'. Existing granite seawalls were supplemented with concrete to form anti-tank defences, as well as bunkers, look-outs, gun platforms and trenches.

Over the last 200 years, construction of seawalls, coastal roads and railway lines, and land drainage schemes made much of the *Coastal Plain* suitable for development. As a result, extensive areas were built on, particularly around St Helier. Linear coastal development has also taken place, particularly in the south and south-east. Elsewhere the *Coastal Plain* has been used for sand extraction and waste disposal. Recreation and tourism developments on the *Coastal Plain* have left their mark, particularly in the west. They remain popular destinations.

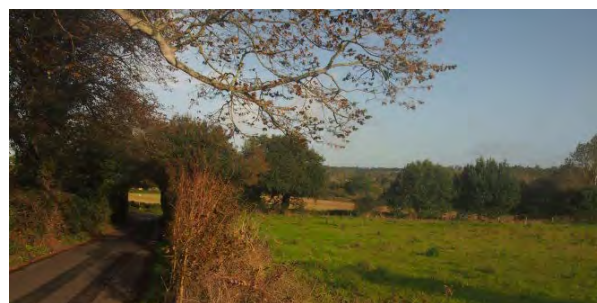
Designated Cultural Heritage Sites:

Listed Buildings (Grade 1/2)	Numerous, including farms; houses; manors; slipways; Fort Henry; towers; WW2 structures
Listed Places (Grade 1/2)	Numerous, including, Lager Wick forced labour camp; La Dame Blanche; megalithic sites
Areas of Archaeological Potential	Les Mielles and La Moye Prehistoric Landscapes; Gallo Roman Artefact Scatter; La Rogodaine; Samares Nursery
Coastal National Park (2011 Island Plan)	Grouville Common; Ouaisné; Les Quennevais and St Ouen's Bay

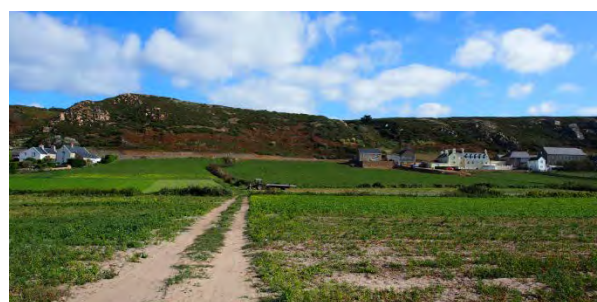
Perceptual Qualities

The *Coastal Plain* has strong visual connections with the sea, and also with the *Escarpment* inland, which forms the horizon. The *Coastal Plain* forms the foreground in views from the *Escarpment*, but is less obvious from the sea because of its flat landform.

There are many different colours, patterns and textures within the landscapes of the *Coastal Plain*. The regular shapes of the agricultural fields contrast with the more organic forms of the dunes and wetlands. Seasonal colour is also important, particularly in spring and summer when wildflowers are at their most striking. Sounds are important too, such as the whistling and rustling of marram grass, the sound of the sea (at different stages of the tide), the calls of birds and the sounds of insects. Scents such as wild thyme can be very evocative, and also the feel of sand or salt spray on exposed coasts.



Gentle pastoral scene near Rue des Pres



Strong linear patterns at St Ouen's Bay

Historic towers are prominent landmarks and form focal points in views. Seafront carparks and buildings are also visible in views from above, but provide access to the coast and are well used. Despite its proximity to urban development, much of the *Coastal Plain* feels peaceful and rural, and western parts also feel open and exposed. Historic lanes and slipways provide a connection with the past.

Natural Capital and Ecosystem Services

Type of Ecosystem Service	Existing contributions	Opportunities
Cultural Services	<p>The Coastal Plain has a rich archaeological resource of prehistoric sites and buried prehistoric land surfaces which provide opportunities for paleo-environmental study.</p> <p>The accessible parts of the Coastal Plain (particularly the dunes) are popular to visit, and are well-used and valued, particularly by local people. They therefore offer a number of cultural Ecosystem Services, including recreation, aesthetic experiences, reflection and spiritual enrichment, all important for health and wellbeing.</p>	A balance needs to be achieved where people can enjoy and benefit from access to coastal landscapes, but without damage to them. There may be opportunities to encourage people to visit less fragile parts of the Coastal Plain.
Provisioning Services	The Coastal Plain contains some of Jersey's most fertile soils, which are important Natural Capital Assets. Much of the area is used as farmland for food production, although some former horticultural sites are currently unused or vacant.	Changing climate and markets provide opportunities to grown different crops, and to re-purpose or re-develop former horticultural sites.
Regulating Services	<p>Coastal marshland and wetland function as water-storage areas, helping to regulate water flows and reduce flooding elsewhere.</p> <p>Sand dune systems act as buffers to coastal storms and rough seas, protecting areas inland.</p> <p>Trees and plants within the Coastal Plain improve air quality through absorption of pollutants, and provide shade which regulates heat.</p>	These roles are likely to become increasingly important as a result of climate change.
Supporting Services	<p>The Coastal Plain contains many different semi-natural habitats (sand dune systems, wet meadows, marsh, open water etc.) which play a vital role as feeding grounds and habitats for a very wide range of plants, insects, birds, reptiles and mammals, including several endangered species.</p> <p>The wetland habitats within the coastal plain contribute to the water cycle, and trees and plants absorb carbon dioxide and produce oxygen through photosynthesis.</p>	There are opportunities to expand and link habitats, increasing their effectiveness as wildlife sinks and corridors, and increasing their resilience to climate change.

Character Areas

Within the *Coastal Plain* Character Type there are six distinctive Character Areas. Each one has a unique 'sense of place' as a result of its combination of landscape elements.

Character Area B1: Grouville Coastal Plain

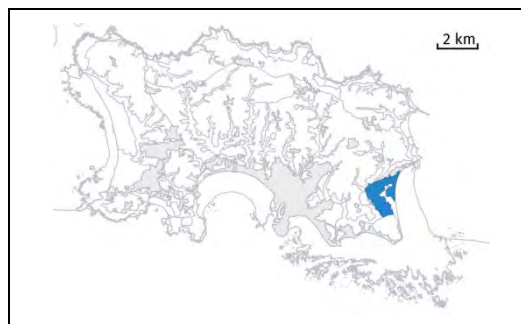


View over the Grouville Coastal Plain from above Les Prés Manor

This Character Area is located on the eastern side of Jersey, and forms the coastal area between the northern end of the Royal Bay of Grouville, and the arc of the *Escarpment*, which runs relatively far inland at this point. The Grouville Coastal Plain contains deep deposits of drift and peat, and its fertile soils have a long history of agricultural use. The marshes were grazed in Medieval times, and there are some historic farmsteads here, including Les Prés Manor, at the edges of the Coastal Plain, above the flood level. Richmond's 1795 map shows the area largely drained, with a large proportion planted with orchards. Today the area is used for mixed agriculture, with regularly-shaped fields bounded by hawthorn/ hazel hedgerows on low banks. The coastal village of Gorey developed below Mont Orgueil, and its harbour was constructed in the early 19th Century. Some village expansion has taken place, particularly around Gorey and Grouville Marsh, but much of the Character Area remains undeveloped and retains its rural character.

The Character Area is of importance for wildlife, and includes Grouville Marsh (SSI), a freshwater marsh providing habitat for a range of species including orchids. The Royal Jersey dunes golf links provides bird habitat (including for curlew buntings), and is included within the Coastal National Park.

The orientation of the coast towards France has influenced the development of defensive sites. There are several Napoleonic defences, including Fort Henry, but relatively few German WW2 defences. From the coast there are views towards France, but inland views are dominated by the *Escarpment*, or limited by hedgerows.



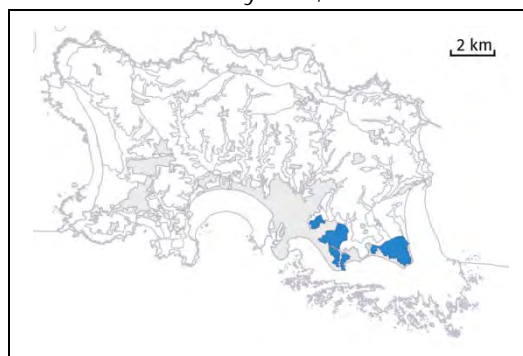
Character Area B2: St Clement–St Saviour Coastal Plain



View within the St Clement – St Saviour Coastal Plain, near Les Nouettes

This Character Area is located in the south-east of Jersey between St Helier and Fauvic, and includes the peninsulas of land which extend out to La Rocque and Samarès. It also includes a flat area of marshy land at Bagot/Longueville. It is exceptionally low-lying, and the landform is almost flat. Historically it comprised sand dunes and marshes, but today, following drainage, it contains deep, fertile and well-drained soils derived from alluvium, loess and blown sand. The fertile soils and southerly aspect of this area meant that it had a high proportion of land used for market gardening and horticulture, including outdoor tomatoes. These industries have declined in recent decades and there are now several abandoned glasshouse sites. However, the hedges and shelter belts remain, framing fields and creating a strong landscape structure. The regular fields contrast with the surviving pockets of marshland and wet meadow, which provide important wildlife habitats.

Flooding meant that there was little settlement here historically. Lanes crossed the Coastal Plain to Samarès and La Rocque, where there is a small harbour. These lanes were used for the transport of goods to the coast and vrac inland. The coast road was constructed relatively late, but the 20th Century saw ribbon development along much of its length. This has created a developed character along the coast, but it is often only two houses deep. The suburbs of St Helier have also expanded onto the Coastal Plain. The location of this Character Area meant that it was vulnerable to French attack, so there are a series of Jersey Round Towers to defend the coast. From the coast there are outstanding views across the vast intertidal area.



Character Area B3: St Aubin's Bay Coastal Plain

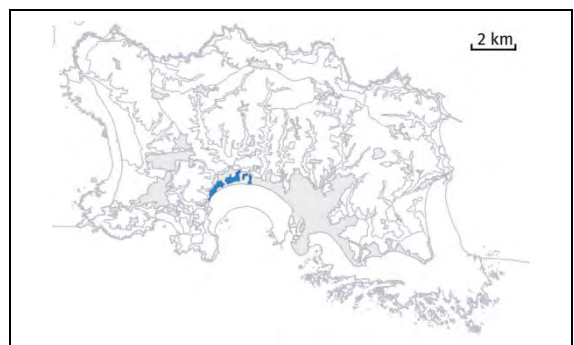


View over a gap between developments in the St Aubin's Bay Coastal Plain, to the west of St Helier

This Character Area is located in the south of Jersey, and forms the flat/ gently sloping land between St Aubin's Bay and the base of the *Escarpment*. The underlying geology is Jersey shale, overlain by deep drifts of blown sand against the base of the Escarpment, and by alluvial outwash at the base of St Peter's Valley.

The 1795 Richmond Map shows this area to be dunes and salt marsh along the coast, and orchards further inland. Construction of the coastal road and railway line dramatically changed the area, and its convenient location in relation to St Helier meant that urban growth spread rapidly, often outwards from railway halts. Surviving areas of Coastal Plain now function as gaps between settlements, preventing the impression of continuous development from St Aubin to St Helier. Some of these gaps remain in agricultural use (e.g. around Mon Plaisir) whilst others (particularly within the Urban Area) are now parks.

This is the most developed of all the Coastal Plain Character Areas. The esplanade which follows St Aubin's Bay is popular for recreation, and there are long views over St Aubin's Bay towards Elizabeth Castle at St Aubin's Fort. Inland, the views are limited by the *Escarpment*.



Character Area B4: Ouaisné Coastal Plain



View of Ouaisné Common sand dune system from Portelet Common.

This Character Area is located in the south-west of Jersey, at the eastern end of St Brelade's Bay, and contains the important sand dune complex at Ouaisné Common. The *Escarpment* Character Type rises up behind it, and at either end are promontories of the *Cliffs and Headlands* Character Type which enclose views. The peace and naturalness of Ouaisné contrasts with the busier tourist development at St Brelade's Bay.

Ouaisné is an exceptionally important habitat area, designated SSI and within the Coastal National Park. It contains a transition of habitats (including some rare habitats) from dry sand dunes through freshwater dune slacks, ponds, heathland, scrub and wet woodland. These habitats support a wide range of species of flowers, insects, birds and reptiles, and the area is the last breeding site of the Agile Frog within Jersey. Ouaisné's rich and unusual flora includes Marsh St John's Wort and Yellow-horned poppy.

The seawall which separates Ouaisné dunes from the adjacent sandy beach was constructed during German occupation as an anti-tank defence. Today it is a popular foot path, and provides easy access to Ouaisné from the busier St Brelade's bay.

The Jersey Round Tower at Ouaisné is painted with distinctive red and white stripes as a daymark.



Character Area B5: Les Quennevais Dunes

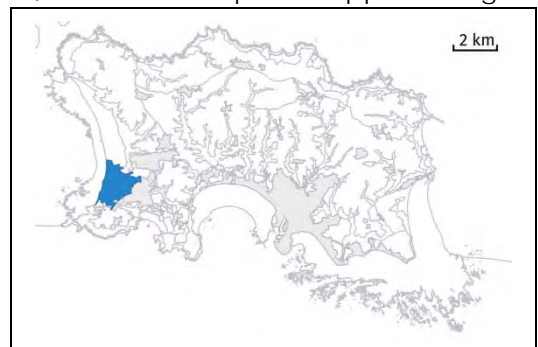


View looking up towards Les Quennevais dunes from near the Five Mile Road

This Character Area is located in the west of Jersey, at the southern end of St Ouen's Bay. It comprises deep Holocene deposits of wind-blown sand which form an extensive dune system. The sand has been blown against the *Escarpment*, and extends up to 1.5km inland. The oldest dunes are thought to be at least 3,000 years old. The Character Area includes the open dunes, a golf links and a sand quarry (Simon Sand). The dunes are gradually becoming less mobile due to development (and therefore fixing) at the inland end, and because of reduced quantities of blown sand, which is trapped by the seawall/ anti-tank defence which lines the beach.

The dune system at Les Quennevais is by far the largest in Jersey, and consequently has a much greater sense of scale. It is of exceptional importance, and has multiple designations reflecting its value for prehistoric archaeology, and also the range and extent of habitats which are found here. Les Quennevais Dunes are also within the Coastal National Park.

The dunes can be seen over a wide area: from land, from sea, and also from planes approaching/ taking off from the airport runway, which fly low over the dunes. Although they form a Character Area in their own right (because they are so extensive and unique) they are also very much a part of the broader character of St Ouen's Bay. The presence of the airport reduces the tranquillity of the area, but is nevertheless a very distinctive place. From the tops of the dunes there are excellent views of St Ouen's Bay.



Character Area B6: St Ouen's Bay Coastal Plain

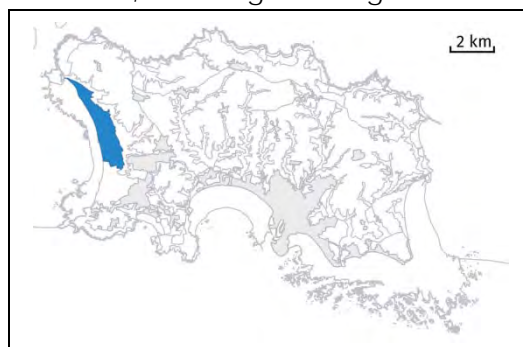


View within the St Ouen's Bay Coastal Plain, looking north. Note the prominent recreational buildings along the coast road, and the possible re-use of a standing stone as a gatepost.

This Character Area forms the northern part of St Ouen's Bay, in the west of Jersey. It comprises the flat/ gently sloping land between the sweep of St Ouen's Bay, and the old cliff line of the *Escarpment*. It contains many different land uses: agricultural fields, wetlands, recreation, coastal and restored sand dunes. However, it is united by its sense of exposure and very strong sense of place. This windswept landscape was not enclosed for farming, but was used for grazing sheep. Although land was subsequently divided into fields, they are generally divided by ditches or banks rather than hedgerows, and this adds to the open and exposed feel of the landscape. This is the only Coastal Plain Character Area to feel remote and tranquil.

The salt-spray provides habitats for salt-loving plants, and the freshwater wetlands also add to the rich diversity of flowers, butterflies and birds which are found here. The area is within the Coastal National Park. Below the sandy soil are ancient deposits of peat, which hold a valuable archaeological record. There are also several surface prehistoric sites, including standing stones.

This Character Area also retains its traditional settlement pattern of buildings along the base of the scarp. There are some much later recreational buildings along the coast which are very prominent, and a series of coastal defensive structures including Martello Towers, La Caumine à Marie Best 17th Century guardhouse, and extensive German defences (bunkers, anti-tank wall, trenches, etc.) along the 'Atlantic Wall'.



Sensitivities, Condition and Forces for Change within the *Coastal Plain* Character Type

Sensitive Special Qualities

- Outstanding wetland and dune habitats which are rare in Jersey and provide a strong sense of naturalness.
- A diverse range of land uses. The Character Type is strongly rural in parts, but elsewhere is influenced by nearby development.
- Strong sense of naturalness, exposure and openness near to the coastal edge.
- Robust framework of trees and hedges further inland that creates landscape structure and provides some screening of development.
- Extensive views of the sea, coast and landmarks, such as defensive structures, as well as views inland to the Escarpment Character Type.
- Some areas have a distinctive field pattern, emphasised by stone walls or low banks.
- Many surviving defensive structures, particularly from the early 19th Century and WW2 which form coastal landmarks.
- A landscape which is often viewed from the Escarpment above.

Landscape Condition

1. Some badly sited development within the more open parts of the Character Type has a widespread impact on the coastal/rural character, and affects views of the sea and escarpment. Some coastal car parks are also highly visible in the flat open landscape.
2. There are examples of redevelopment of rural sites (such as former glasshouses) which are either too large and appear out of scale with their surroundings, or are lacking in screening so they appear very prominent within the landscape.
3. The grounds and boundaries of new properties can be very out-of-keeping with their rural setting and character, with elaborate structures, ornamental planting and extensive areas of tarmac or suburban-style hard paving. Light pollution from floodlights and entrance lighting is also becoming an increasing issue in some locations.
4. Many hedgerows and boundary trees are missing and some field boundaries have been lost due to field amalgamation. Some tree belts appear to be poorly managed with few young trees to ensure continuity of tree cover.
5. Some derelict glasshouses, polytunnels and security fencing introduce industrial elements and visual clutter.
6. Erosion of dune systems is evident as a result of recreational pressure, rabbit activity, golf courses, quarrying, and sea walls limiting sand supplies. In recent years, dune systems and their immediate environs have also been impacted by recreational use (particularly golf courses) and housing development.
7. A diverse selection of seating, signage, boundary and surface treatments results in a poor experience for esplanade users in some coastal locations.
8. Encroachment from development, and changes in land management, have resulted in shrinkage and fragmentation of wetland and sand dune habitats. Wetland habitats are also vulnerable to pollution of streams and groundwater from agricultural chemicals.
9. The SSIs are generally well managed, with an increasing proportion of the sites in favourable condition.

Forces for change

Landscapes and seascapes are dynamic and are constantly affected by a variety of forces for change, which may be natural (e.g. coastal erosion) or man-made (e.g. development pressure, and changes in farming practices). The following table illustrates the main forces for change acting on this Character Type, and how they will potentially affect the landscape/ seascape. Recommendations for addressing these issues are provided in the following section.

Issue	Potential impacts on sensitive special qualities	Character Areas affected
Marine development	<ul style="list-style-type: none"> Offshore energy generation schemes, such as tidal barrages and as offshore wind farms (and their associated onshore infrastructure), would impact on the open coastal/sea views and potentially on the settings of historic coastal landmarks. 	All
Infrastructure	<ul style="list-style-type: none"> Additional and upgraded sea defences and land reclamation could impact on the open character of this Character Type and affect the extensive seaward views. Communications masts on the adjacent Escarpment Character Type could adversely affect views from this landscape, particularly where structures break the skyline. 	All
Housing	<ul style="list-style-type: none"> New housing could impact on the coastal/rural character, introducing suburban elements and lighting. It could also affect the pattern of enclosed fields and the open views. Housing within adjacent areas of the <i>Escarpment</i> or <i>Interior Agricultural Plateau</i> Character Type may also affect views from this Character Type, especially where it is apparent on the skyline or near the top of the escarpment. Development within the Coastal Plain or nearby can affect the water table and associated wetland sites. 	All
Land management	<ul style="list-style-type: none"> Land management practices, such as the use of agricultural chemicals, can impact on the environmental quality of wetlands, open water, and beaches, affecting wildlife and recreational use. Lack of management could threaten the survival of the tree and hedgerow framework, resulting in a loss of landscape structure. Increasing numbers of polytunnels and security fencing around hemp production units would introduce further clutter, lighting and industrial elements into the rural landscape. 	All
Recreational pressure	<ul style="list-style-type: none"> Further loss or erosion of dune systems could result from additional recreational pressure and associated development. An increase in the amount of traffic and visitor parking could have a direct effect on the sense of naturalness of the less developed parts of the Character Type. 	All

Issue	Potential impacts on sensitive special qualities	Character Areas affected
Climate change	<ul style="list-style-type: none"> Variations in seasonal weather patterns could result in changes to the extent, composition and survival of the wooded landscape framework. Sea level rise (exacerbated by extreme weather conditions) brings an increased risk of coastal flooding, and a need for additional coastal protection, affecting the character of the coast and views from the Character Type. Seasonal drought could result in further water abstraction, bringing about changes to dune and wetland vegetation. Variations in seasonal weather patterns could result in changes to land management practices and land use, potentially compromising the rural character and the strong field pattern and enclosure. Warmer conditions will increase populations of pests and diseases, potentially resulting in loss of trees and other species. 	All

Strategy and Guidelines

Strategy

The overall strategy for this LCT should be to protect the remaining undeveloped areas in order to retain their coastal/rural character, the sense of openness and naturalness.

Any new buildings should be located immediately adjacent to existing settlements, where the existing landscape framework can provide screening and allow their integration. They should be of an appropriate scale to fit within their rural setting. Gaps between settlements should be retained.

A co-ordinated plan for biodiversity enhancement and visitor management could be prepared with input from all relevant organisations. Habitats should be expanded and linked where possible in order to increase resilience to climate change. This should include long-term plans for restoration following large-scale land uses, such as sand quarries and golf courses.

Managing recreational pressure is another key priority, improving the condition of eroded dunes, managing visitors' experience through well designed facilities and creating a more unified range of seating, signage, car park and path treatment.

Character Type-Specific Management Guidelines

Protect

- Protect the open views of the sea, coast and escarpment from this landscape.
- Protect the remaining undeveloped areas of St Ouen's Bay and Ouaisné, in order to retain their coastal/rural character and sense of naturalness.
- Protect the dune systems from further loss and erosion, and recreational pressure.
- Protect wetland habitats from damage by pollution and abstraction.
- Protect historic defensive structures and their settings.
- Protect areas within St Aubin's Bay which are acting as a gap separating settlements.

Manage

- Encourage visitors away from sensitive habitats and raise awareness why this is necessary.
- Restore and manage existing field boundaries.
- Identify and promote opportunities to link dune, grassland and wetland habitats. This could be undertaken as compensation for development elsewhere.
- Continue to manage dune systems and wetlands to enhance their habitat value.

Plan

- If additional housing land is required, identify areas within St Aubin's Bay, St Clement-St Saviour and Grouville where it can be located immediately adjacent to existing settlements; where the landscape structure would provide screening; where there would be no loss of gaps between settlements, and where there would be no loss of wetland, grassland or dune habitats.
- Consider the impacts of any future development in the *Coastal Plain* on views from the Escarpment above.
- Ensure that new development is of an appropriate scale, and that property boundaries and gateways are low-key and rural in design. Take opportunities to soften the edges of built development with native planting.
- Plan to restore lost tree belts, hedgerows and boundary trees within some open areas to help integrate existing and proposed development.
- Encourage relevant organisations to work together with a co-ordinated approach to biodiversity enhancement and visitor management. Explore opportunities to expand and link wildlife habitats, with screen planting related to new development part of this strategy.
- Prepare long-term plans for restoration of sand quarry sites, golf-courses etc. once they are no longer active. Restoration plans should enhance biodiversity and landscape character.
- Upgrade visitor infrastructure such as car parks, benches, signage and surface treatment.
- Explore opportunities for zoning to protect scientifically/ archaeologically-valuable quaternary deposits.

Further Information

Please refer to the **Landscape Design Guidance (Part 5)** for more information on relevant topics, specifically:

- Accommodating new development
- Enhancing rural character
- Views and visibility

Relevant **Coastal Units (Part 4)**: 1, 8, 9,10,11,13



A lack of screen planting means that this recent development on a former glasshouse site in the Coastal Plain is unnecessarily prominent.

Character Type C: Escarpment



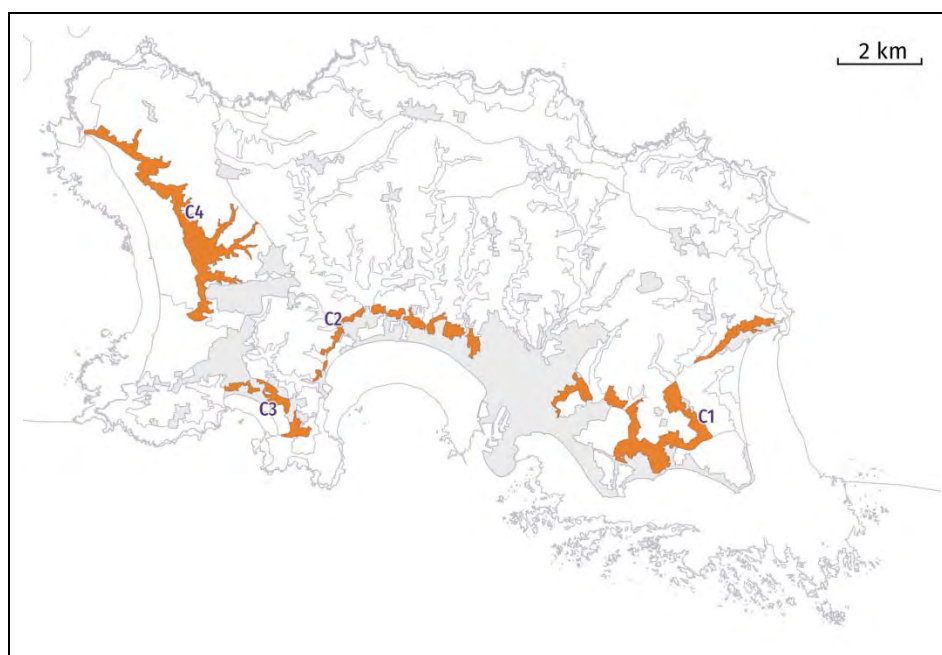
Escarpment scenery near St Clement. The village, with its prominent church spire is located at the base of the escarpment. Here the escarpment contains arable fields and wooded slopes, and there are long views out to sea. Mont Ubé lighthouse is towards the right of the image.

Summary Description

This Character Type comprises a ribbon of steeply sloping ground between the coastal plain and the interior plateau. It is one of the smallest Character Types in terms of area, but one of the most important in terms of visual prominence, particularly in views from the coast and sea. It therefore contributes to people's perceptions of Jersey when they arrive by sea. Its slopes form the backdrop to many coastal views of Jersey, and it forms the setting to many coastal sites, such as Mont Orgueil.

Its land uses (and the traces they have left in today's landscape) reflect the changing agricultural history of Jersey. Over the last 500 years it has been used for sheep grazing, orchards, arable agriculture and potato growing. Parts of the escarpment have also been influenced by suburban growth, and by 19th and 20th Century tourism and the associated growth in hotels and ornamental tree and garden planting. Elsewhere, the escarpment remains relatively natural, with exposed rock and heathland vegetation.

The top of the escarpment forms an important horizon, and is the location of several Neolithic sites (some technically within the adjacent Character Type), as well as later skyline features such as towers and lighthouses. Several historic settlements are nestled in sheltered locations at the base of the scarp with easy access to fertile soils, water supplies, and commanding views of the sea.



C1: Grouville – St Saviour

C2: St Aubin's Bay
Escarpment

C3: St Brelade's Bay
Escarpment

C4: St Ouen's Bay
Escarpment and Valleys

Key Characteristics of the *Escarpment* Character Type

- Varied underlying geology of granite or Jersey Shale. Glacial Pleistocene loess and head deposits create fertile soils at the base.
- Landform created as a prehistoric cliff line, comprising a relatively steep face, up to 60-75m in height. In places the escarpment is quite convoluted.
- Much of the escarpment is in agricultural use (arable fields or potato côtils) but some parts are uncultivated.
- A range of semi-natural habitats, including woodland, scrub, trees, heath, hedgerows, bare rock and open water (reservoirs).
- Trees and woodland have become established on abandoned agricultural land. There is also some ornamental planting, particularly in the south.
- Fields generally small, and separated by low walls or hedgerows. They include numerous traditional steep potato côtils, located on south/ east facing slopes.
- Settlements and farms nestled in sheltered locations at the base of the escarpment. Some 20th/ 21st Century residential and tourism development located further up the escarpment, and highly visible.
- Neolithic burial sites on skyline at top of escarpment. Church towers and lighthouse also prominent historic features.
- Outstanding coastal views from the top of the escarpment over the coastal plain and out to sea.
- The escarpment is a key visual feature, forming the backdrop in views of Jersey from the coast and sea.
- Varied textures and colours, from smooth arable fields to rough, rocky and heathy cliffs. Often strong seasonal changes.
- Away from urban areas, the escarpment feels relatively peaceful and detached from the coastal plain below. In places it is possible to feel very close to nature.

Natural Influences and Sites

The escarpment is a prehistoric cliff line, formed when sea levels were higher than they are now. Its steep topography creates a distinctive and prominent feature around the east, south and west of Jersey.

Where the underlying geology is hard granite, the escarpment is relatively steep (i.e. at the northern end of St Ouen's Bay, St Brelade's Bay and in the south-east of Jersey). At St Aubin's Bay and St Ouen's Bay, the underlying geology is softer Jersey shale, and the slope of the escarpment is slightly shallower.

At the base of the escarpment are deposits of wind-blown material (blown sand, loess and head) which create fertile soils. Soils become thinner higher up the slopes, which may be bare rock at the top.



Steep rocky scarp above the coastal plain at the northern end of St Ouen's Bay.

The semi-natural habitats present on the escarpment vary around Jersey. In the west, there are some steep cōtils, as well as bare rock, grassland and heathland habitats. Val de la Mare Reservoir includes open water, wetland and woodland habitats. In the south, fields are interspersed with woodland, and (particularly around St Brelade's Bay) ornamental evergreen planting. In the south-east there are a mixture of agricultural habitats, including woodland, scrub, hedgerows and some abandoned land. These varied semi-natural habitats create

excellent opportunities to enhance habitat links.



Woodland and hedgerow semi-natural habitats on the escarpment east of St Helier.

Designated Nature Conservation Sites:

SSI (Geological)	Mont Huelin Quarry;
Environmentally Sensitive Areas (ESAs)	St Ouen's Bay (part); South-West Coast (part); Noirmont-Portelet (part); St Aubin's Valley (part); Beaumont (part); Waterworks Valley (part); St Peter's Valley complex (part); Valley de Bellozanne (part); South-East Grasslands (part)

Cultural Influences and Sites

The visual prominence of this Character Type has long been appreciated. The crest of the escarpment contains a number of Neolithic burial sites (some in adjacent Character Types) which are visible on the skyline. The Dolmen de Mont Ubé (on the escarpment above Samarès Manor) is within the Escarpment Character Type. It was found by quarrymen in 1848, and was described at the time by Guernsey antiquarian F C Lukis as follows:

At the present moment there are nineteen stone pillars uncovered, about seven feet in height, and from four to six feet square, forming an oval, about fifteen feet square at the greatest width, and the supposed The

entrance is about four feet wide. It is presumed that it is the remains of some druidical chapel, as stone pillars of smaller dimensions are found inside upright, about the width of a seat, the floor to which is composed of large flat stones. An earthen vase was also found in the interior...



'Mont St Ubé Cromlech' in 1870

Picture from www.theislandwiki.org

The crest of the scarp is also associated with later prehistoric finds, including a Bronze Age hoard (found at Le Blanche Pierre, above the southern end of St Peter's Valley) and an Iron Age/ Gallo-Roman site above St Clement Parish Church. As well as being visually prominent, the scarp crest would also have been strategically important as a look-out over the sea and coast.

The base of the escarpment has long been a focus for settlements, with several villages and many farms nestled in sheltered locations at the scarp foot, set back from the coast but with easy access to fertile soils. Such settlements include Grouville, St Clement, and the farm groups at L'Etacq. Often their churches also sit just below the escarpment, with spires seen against it.

The settlements are linked by roads at the base of the escarpment, and occasional steep lanes up/ down it. Many of these lanes are deeply sunken through centuries of use, with steep stony banks. The branches of the hedgerow trees sometimes meet overhead, creating a tunnel.



Grouville is a typical historic scarp-foot settlement. Here the wooded escarpment forms a backdrop to the village and church.

There is a long history of human exploitation of the escarpment, including quarrying for building stone. Historic maps and photographs chart the changes of land use on the scarp. It was traditionally used for grazing in the west, and by 1775 orchards covered many of the southern slopes. From the 1880s, the land was mainly used for arable crops or potatoes. The steep south and east facing slopes warm early in the spring, and are therefore ideal for growing early potatoes. The potato cõtils are a distinctive feature of Jersey. Some are so steep that they are ploughed using a tractor-mounted winch. Changing markets mean that some cõtils are no longer in production. They are reverting to scrub, or being used for alternative crops, or as horse paddocks.



Potato cõtils near L'Etacq, St Ouen's Bay

Tourism has also impacted on the escarpment, particularly around St Brelade's Bay, where ornamental tree planting has transformed it from bare fields to a wooded backdrop.



Postcard showing St Brelade's Bay in c.1900. The escarpment is mostly open fields. (Picture from a display in St Brelade's Church)

Designated Cultural Heritage Sites:

Listed Buildings (Grade 1/2)	Numerous, including St Ouen's Manor (part); Nicolle Tower; Mont Ubé lighthouse; churches; farmhouses; houses
Listed Places (Grade 1/2)	St Ouen's strip fields (part); Les Varines; Le Dolmen du Mont Ubé; Le Blanche Pierre; Iron Age/ Gallo-Roman site above St Clement Village; Mont Felard Megaliths; Les Blanchés (part)
Areas of Archaeological Potential	Hougette Field; Mound (St Peter); Le Dolmen du Mont Ubé; Le Marquanderie Hoard; Field L819; Site of Menhir.
Coastal National Park (2011 Island Plan)	Parts of the Escarpment (around St Ouen's Bay and St Brelade's Bay) are within the Coastal National Park

Perceptual Qualities

The escarpment is one of Jersey's most distinctive features, and is particularly prominent in views from the coast and sea. It forms a rural and/ or vegetated backdrop with colours and textures which contrast with the more developed coastal plain below.

The skyline of the escarpment is particularly

important, and any development which breaks the skyline becomes very prominent. Features which appear on the crest of the escarpment such as dolmens or towers can be seen over a long distance.

The escarpment forms the setting for a number of coastal historic sites, including Mont Orgueil and prehistoric ritual sites. It also contributes to the views from these sites, which are often popular visitor attractions as well as being of historical significance.



Potato còtils and scarp-top woodland form the setting to Mont Orgueil when viewed from the sea. Ridge-top houses on the skyline are very prominent



Panoramic view of the escarpment as seen from the top of Mont Orgueil

The escarpment has an important function as an open gap between urban areas, and also provides the setting for coastal sites. Away from urban areas it has a peaceful, secluded character, and there are spectacular views from the top of the escarpment over the coastal plain, intertidal area and sea. Steep, deep and often dark lanes cut through the escarpment and add to the sense of place.



Steep, tunnel-like lane above St Clement

Natural Capital and Ecosystem Services

Type of Ecosystem Service	Existing contributions	Opportunities
Cultural Services	The Escarpment's key role in Jersey's coastal and sea views means that it is important to aesthetic experiences and to tourism. It provides a setting to several historic sites, and also functions as an open gap between settlements. Prehistoric sites on the crest of the scarp have outstanding views and a strong sense of history.	Improved screening of development, particularly near the top of the escarpment or on skylines, will enhance views from the sea.
Provisioning Services	Much of the escarpment is in agricultural use, primarily for potatoes. Arable crops are also grown on gentler slopes. The reservoir at Val de la Mare is an important drinking water resource.	As agricultural markets change, the escarpment may be used for alternative agricultural crops.
Regulating Services	Vegetation (particularly trees and hedgerows) on the escarpment contributes to a range of regulating services, including control of climate (by providing shade and cooling temperatures), air quality (by trapping and absorbing pollutants) and flooding, by slowing water runoff.	These functions will become increasingly important as climate change becomes more apparent.
Supporting Services	As well as the trees and hedgerows mentioned above, the escarpment contains other habitats which play a very important supporting role for a wide range of plants, insects, birds and mammals. Such habitats include grassland, heath, scrub and open water. The linear shape of the escarpment means that it can connect habitats. Photosynthesis from plants on the escarpment produces oxygen and absorbs carbon dioxide.	There is considerable potential to enhance habitat links along the scarp, connecting habitats such as grassland and woodland. These links help to make habitats more resilient to climate change.

Character Areas

Within the *Escarpment* Character Type there are four distinctive Character Areas. Each one has a unique 'sense of place' as a result of its combination of landscape elements.

Character Area C1: Grouville to St Saviour

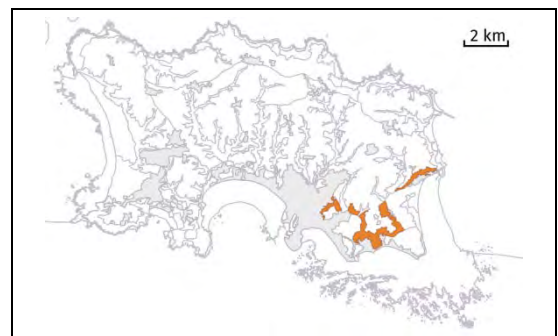


The Escarpment behind St Clement, as seen from the sea

This Character Area is located on the eastern side of Jersey, between Mont Orgueil and St Helier. It forms a narrow band between the settled coastal plain and the interior agricultural plateau. The underlying geology comprises hard igneous rocks of granite, diorite and gabbro, and the escarpment becomes more convoluted in shape towards the west, where it contains some spurs.

This Character Area has a rural feel, which contrasts with the adjacent developed coastal areas. In places it feels very secluded, and there are spectacular long views over the intertidal area. Dramatic and steep sunken lanes cut through the escarpment, often with hedgerows forming 'tunnels' across them. Settlements are generally located at the base of the escarpment, although there are some locations where development is creeping up the escarpment, and occasionally appears on the ridgeline, such as at Gorey. Skyline features, including Nicolle Tower, Le Moulin de Beauvoir and Mont Ubé lighthouse provide orientation.

Deep fertile soils, particularly at the base of the escarpment, and a southerly/ westerly aspect have seen this area used for orchards, and then arable and potato growing. Some of the steepest and earliest potato còtils on Jersey occur at Gorey, where they contribute to the setting of Mont Orgueil.



Character Area C2: St Aubin's Bay Escarpment

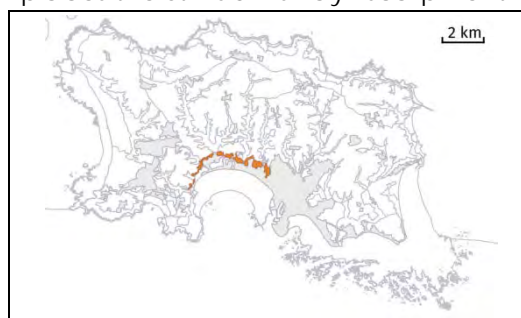


View of St Aubin's Bay Escarpment, as seen from near St Aubin's Fort

This Character Area is located in the south of Jersey, between St Helier and St Aubin. Its underlying Jersey shale geology means that it is lower and gentler than some other parts of the escarpment, and in some sections it merges imperceptibly with the lower ends of the wooded valleys which flow into St Aubin's Bay. These valleys cut through the escarpment, meaning that it does not always appear as a single uniform feature.

Extensive head deposits on the lower slopes of the escarpment create deep, fertile soils. Historically these were used for orchards. Some are still in agricultural production (for potatoes or arable crops). Others are wooded with native or ornamental planting. These undeveloped areas provide an important rural hinterland and backdrop for the coastal suburbs of St Helier, and also create physical and visual gaps between settlements.

This Character Area has seen particular development pressure, as the shallow, south-facing slopes near St Helier are highly desirable places to live. Therefore in places the St Aubin's Bay Escarpment has merged with urban areas. Nevertheless it retains a distinct sense of place.



Character Area C3: St Brelade's Bay Escarpment

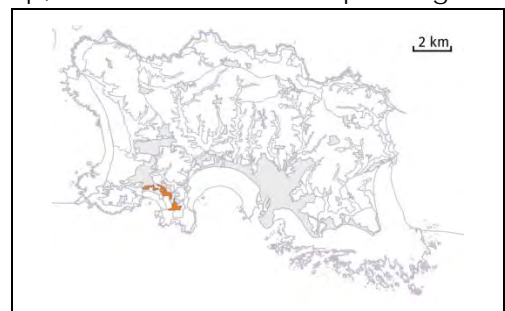


View of St Brelade's Bay Escarpment, as seen from Les Creux

This Character Area is located in the south-west of Jersey, and comprises the steep granite escarpment which rises behind St Brelade's Bay. The coastal plain is relatively narrow (particularly at the western end of the Bay, where it is largely developed) so the escarpment appears to rise almost from the sea.

This evolution of this Character Area has been particularly affected by tourism and landscape design. In 1900 the escarpment above St Brelade's Bay was largely open and used for cōtils. However, the construction of hotels and large houses in the area led to the planting of the escarpment with exotic garden species and ornamental trees. These are often evergreens, including Monterey pines, cypress and holm oak. These ornamental plantings, which have now matured, create a distinctive character and backdrop to the Bay, and also provide a home for red squirrels.

Recent years have seen considerable built development within this Character Area, including construction or expansion of properties on the crest of the scarp, and some removal of planting to enable sea views from properties.



Character Area C4: St Ouen's Bay Escarpment and Valleys



Framed view of the St Ouen's Bay Escarpment and Valleys, as seen from the bird hide at St Ouen's Pond Wetland Centre

This Character Area is located on the western side of Jersey, and forms the long escarpment which rises behind St Ouen's coastal plain between Etacq and Mont Crapaud, where the scarp merges with the Les Quennevais dune system. Several valleys cut through the escarpment, and these are included within this Character Area. The St Ouen's Bay Escarpment is formed of granite at the north end, and Jersey shale for the remainder. It includes the geological SSI at the contact point between the two formations (at Mont Huelin Quarry). It also includes a small part of St Ouen's Manor (Listed Building Grade 1).

This is the most exposed of the escarpments, receiving the full force of Atlantic westerlies. It therefore has the least tree cover, although there are some patches of woodland, and also some stone-walled potato cõtils which are still in use. The escarpment contains coastal habitats including heathland and grassland and supports a range of bird species including Dartford warbler, stonechat, whitethroat and linnet. Val de la Mare Reservoir is located within this Character Area, and contains open water, reed bed and woodland habitats.

Generally this escarpment has retained its clean, smooth profile, but there are sections where this has been lost to small-scale but intrusive development on skylines or near the top of the escarpment. Features on the crest of the scarp (but sited in adjacent Character Areas) include St Ouen's Church and windmill, St Peter's Church, Dolmen de Monts Grantez and the airport control tower.



Sensitivities, Condition and Forces for Change within the Escarpment Character Type

Sensitive Special Qualities

- Distinctive steeply sloping landform which is widely visible and provides physical containment and a visual backdrop to the *Coastal Plain* and *Bays with Intertidal Flats and Reefs* Character Types.
- Much of the Character Type comprises a largely undeveloped, tranquil, and often relatively well-treed rural landscape that contrasts sharply with the relatively developed and cultivated coastal plain below.
- Historic settlements at the scarp foot, often with prominent church towers, and a series of prehistoric sites on the crest of the scarp.
- Landform, trees and field patterns create a strong sense of enclosure and intimate scale.
- Distinctive sunken lanes, fringed by lines of mature broadleaved trees.
- Extensive coastal and seaward views.

Landscape Condition

1. In some localities (particularly around St Aubin's Bay and St Brelade's Bay) urban development has encroached onto the escarpment, impacting on its rural character and on coastal views.
2. Some prominent buildings and structures have breached the skyline, interrupting the integrity of the horizon. They are particularly apparent when viewed from coast or sea.
3. Recent developments on the escarpment include large properties constructed of materials which do not blend into their surroundings and which are therefore highly visible. This problem is compounded when screening vegetation is removed to enable sea views from properties.
4. Engineered building platforms affect the landform in places and, together with some discordant boundary treatments, increase the impact of the built development on the rural character. Poor boundary treatments can also occur where former cõtils are being used for horse pasture.
5. Woodland and trees on the escarpment often appear to be unmanaged, with few young trees to ensure continuity of tree cover, and occasional mature trees overrun by ivy.
6. Tree lines along lanes and field boundaries have many gaps, and some hedgerows and banks have also been lost. Many scarp-top trees were lost during the 1987 storm and have not been replaced.
7. Bracken invasion is evident where former fields are reverting to scrub and woodland.

Forces for change

Landscapes and seascapes are dynamic and are constantly affected by a variety of forces for change, which may be natural (e.g. coastal erosion) or man-made (e.g. development pressure, and changes in farming practices). The following table illustrates the main forces for change acting on this Character Type, and how they will potentially affect the landscape/ seascape. Recommendations for addressing these issues are provided in the following section.

Issue	Potential impacts on sensitive special qualities	Character Areas affected
Marine development	<ul style="list-style-type: none"> Offshore developments, such as tidal barriers and wind turbines, could affect the extensive seaward views from the escarpment. 	All
Infrastructure	<ul style="list-style-type: none"> Harbour-based expansion or land reclamation could affect the extensive seaward views from the escarpment. Additional communications masts could adversely affect the rural character and compromise the containment provided by the landform, particularly where they break the skyline. 	C1, C2
Housing	<ul style="list-style-type: none"> Housing development can adversely affect the undeveloped horizons, the steeply sloping landform (through cut and fill) and woodland vegetation (through tree loss). It could also affect coastal views and diminish the surviving undeveloped, rural character, introducing suburban elements and lighting that impact on the sense of tranquillity. Housing on adjacent areas of the <i>Interior Agricultural Plateau</i> Character Type can also impact on this LCT, especially where it is apparent on the skyline. 	All
Land management	<ul style="list-style-type: none"> Fields no longer cultivated or grazed may revert to scrub or woodland. This may result in the loss of small-scale field patterns, grassland habitats and associated links. Hedgerows and banks may fall into disrepair if they are no longer needed to retain stock or demarcate fields. Changes in agricultural markets and/ or in climate are likely to lead to changes in land use, for example use of c��tils for horse pasture, or for new crops such as tea. These will affect the traditional appearance of the Character Type, particularly if boundary treatments are changed. 	All
Recreational pressure	<ul style="list-style-type: none"> Visitor parking provision could have a direct effect on the sense of tranquillity, rural character and landform of the escarpment, extending urban influences into a largely undeveloped landscape. Increasing interest in active recreation may require some additional infrastructure, potentially increasing the amount of traffic on rural lanes. 	All
Climate change	<ul style="list-style-type: none"> Variations in seasonal weather patterns could result in changes to the extent, composition and survival of the tree cover. Prominent trees along scarp slopes and tops are especially vulnerable to storms and high winds. Warmer weather will provide conditions for new pests and diseases, leading to loss of/ damage to trees. Ash Dieback, Phytophthora, and Oak Processionary Moth are of particular current concern. Further sea defences may have some limited effect on views from the escarpment. Variations in seasonal weather patterns could result in changes to land management practices and land use, compromising rural character and the strong field pattern and sense of enclosure. 	All

Strategy and Guidelines

Strategy

The overall strategy for this Character Area should be to protect its undeveloped areas from further degradation, and to assimilate development into the landscape where it has already occurred.

Further built development on the escarpment should be resisted, particularly on steeper slopes, where extensive earthworks would be required, or where it may be visible on the skyline.

The extension and/or replacement of existing buildings should be appropriate in scale, design and material; well landscaped, and not be visually-prominent in the landscape.

Opportunities should be sought to improve connectivity between woodland, heathland and grassland habitats, and to increase the extent of tree cover where this can be achieved without loss of other habitats.

The settings of historic monuments located on or near the escarpment should be protected and kept free of development. These settings include views from the sea as well as from land. Opportunities should be sought to make the most of the excellent views from the top of the escarpment by promoting recreational paths, and keeping viewpoints clear of vegetation.

Character Type-Specific Management Guidelines

Protect

- Protect the open, predominantly undeveloped, sweep of the escarpment which provides physical containment for the coastal plain below.
- Protect the settings of archaeological sites along the crest of the escarpment.
- Protect the open setting of Mont Orgueil in views from land and sea.
- Protect the steepest parts of the landform from new development, especially where buildings could breach the skyline.
- Protect the rural character through sensitive treatment of property and field boundaries. For example avoid close-boarded fences and ornamental railings (see Part 5).
- Protect the wide coastal views by avoiding siting prominent buildings on the skylines or steep upper sections of the scarp slopes.
- Protect the rural character of narrow lanes, discouraging further development that would generate additional traffic or extend urban influences.
- Protect the remaining open areas of escarpment around St Aubin's Bay and St Brelade's Bay which act as visual gaps between settlements.

Manage

- Enhance the management of existing areas of woodland, aiming for age and species diversity, and using traditional techniques such as coppicing where appropriate. Keep sea views from viewpoints open where possible.
- Manage agricultural land, and encourage restoration and management of hedgerows and treelines, even if land uses change. This will retain the landscape structure, and also allow them to function as wildlife corridors.
- Where former còtills are being used as horse paddocks, follow best practice guidance for fencing and structures (see Part 5).

Plan

- Restrict development which will be visible on the scarp top, or on the steepest or most prominent slopes. This includes extension and redevelopment of existing sites and buildings.
- Any new development (including extensions and redevelopment of existing sites and buildings) should relate to existing development, and not be in visually-prominent locations.
- Traditionally, settlement has occurred at the base of the scarp. In order to fit with this pattern ensure that any new development is very carefully integrated into the landscape at the base of the scarp, is at an appropriate scale (so that the scarp landform remains dominant, rather than the building), and does not extend up the scarp slope (See part 5).
- Ensure that lighting is designed to minimise light pollution, and avoid floodlighting.
- Integrate screening with native broadleaved species into new development design.
- Plan to link areas of habitat such as heathland, grassland and woodland, in order to increase biodiversity and resilience to climate change. Where land is no longer required for agricultural use, it may be possible to use it for habitat expansion.
- Plan for further broadleaved tree planting within some open areas to help integrate existing buildings, particularly where they breach skylines.
- Consider additional protection for trees and woodlands to prevent felling by property owners who wish to have sea views.
- Explore the potential to link existing paths to form longer walking routes along and through the escarpment, so people can experience the undeveloped, rural character and coastal views. Include some small scale accommodation facilities such as camping barns (utilising existing buildings). This route could be connected with the Coastal Path.
- Consider expanding the Coastal National Park to include of parts of this Character Type which fulfil the necessary criteria (for example the Escarpment which provides the setting to Mont Orgueil).

Further Information

Please refer to the **Landscape Design Guidance (Part 5)** for more information on relevant topics, specifically:

- Accommodating new development
- Enhancing rural character
- Views and Visibility

Relevant **Coastal Units (Part 4)**: 1, 8, 9, 11, 13

Character Type D: Enclosed Valleys



Enclosed Valleys scene near Le Moulin de Quétivel, St Peter's Valley

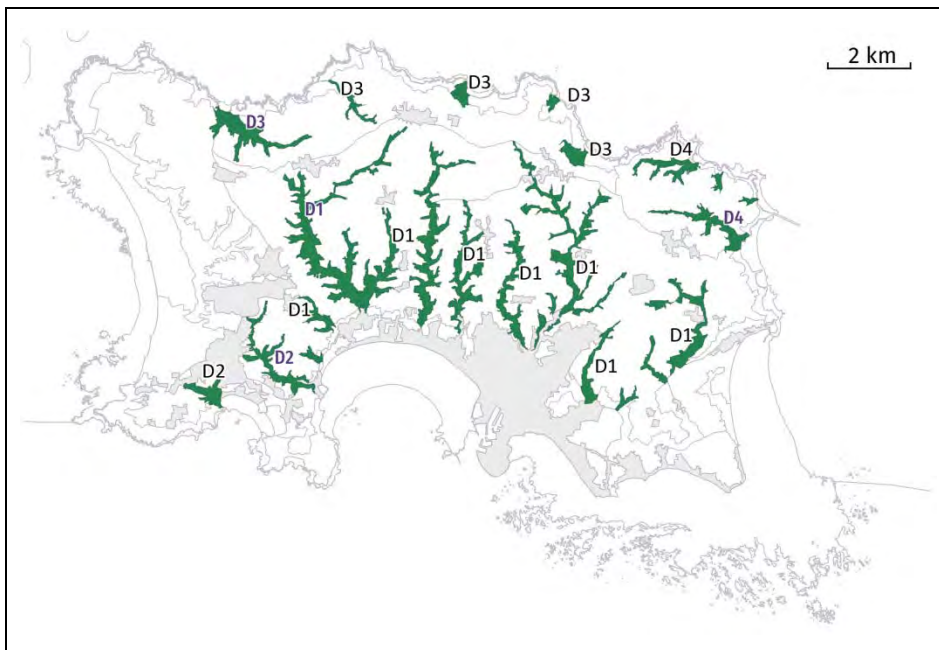
Summary Description

This Character Type comprises the numerous enclosed valleys which occur throughout Jersey. These valleys occur where streams have eroded through rock, often creating dramatic ravines and rock faces. The *Enclosed Valleys* introduce great diversity and variety into the landscape character of Jersey's interior. The valleys vary in size and complexity, but all contain a patchwork of woodland and valley-floor meadows. They contrast with the surrounding agricultural land, and the lack of views to outside the valleys creates a sense of enclosure.

The woodlands of the *Enclosed Valleys* are important for biodiversity, particularly as they contain the most extensive areas of woodland in Jersey. Other habitats also occur within the *Enclosed Valleys*, including open water, streams, wet meadow and rock. This allows for a range of flowers, insects, birds, amphibians, mammals, mosses, ferns and liverworts to thrive.

The *Enclosed Valleys* have a long history of use and exploitation. Some of the oldest farmsteads in Jersey are located at the valley heads, with easy access to water supplies and fertile soil. The streams have been used to provide power for mills, as well as drinking water, and there are numerous reservoirs on the valley floors. Trees from the valley-side woodlands have been used for shipbuilding, house building and for fuel, and several of the valley floors provide convenient routes for roads.

Nevertheless, within the valleys it is possible to experience a sense of tranquillity, particularly away from roads. There is relatively little settlement, and the enclosure provided by the trees and landform creates a secretive and often timeless feel.



D1: Southern Valleys

D2: St Brelade's Valleys

D3: North Coast Valleys

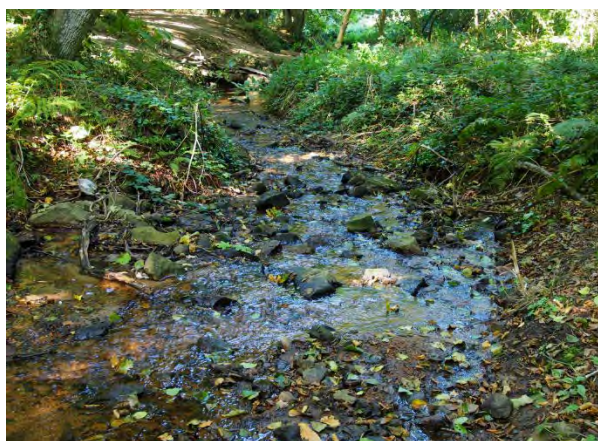
D4: St Martin's Valleys

Key Characteristics of the *Enclosed Valleys* Character Type

- Varying underlying geology, as this Character Type occurs across Jersey. Some exposed rock faces on valley sides
- Valley landforms start as shallow V-shape valleys and get progressively steeper and with wider floors. Landforms are most dramatic where the valleys break through the southern escarpment.
- Numerous streams and tributaries, as well as areas of open water where reservoirs have been created.
- Land cover is predominantly a mixture of woodland and pastoral meadows, with small areas of arable cōtils at the tops of valley sides.
- Semi-natural habitats include woodland on valley sides, with wet meadow, marsh, streams, marsh and open water on valley floors. Bare rock also occurs on valley sides and in walls
- Extensive woodland (mostly deciduous, and some ancient).
- Field pattern comprises linear fields on valley floors bounded with fences or hedgerows. Valley side fields are more irregular in shape, and often hedged or banked.
- Settlement includes farms at valley heads, mills on valley floors, and some coastal settlement near valley mouths.
- Historic features generally relate to water, including mills, leats, dams, waterworks, lavoirs and abreuvoirs.
- Very limited views into or out of the valleys, creating a strong sense of enclosure and secrecy.
- Contrasting colours and textures between woodland, meadows and open water.
- Sense of tranquillity away from roads, and a strong contrast with surrounding agricultural land and development.

Natural Influences and Sites

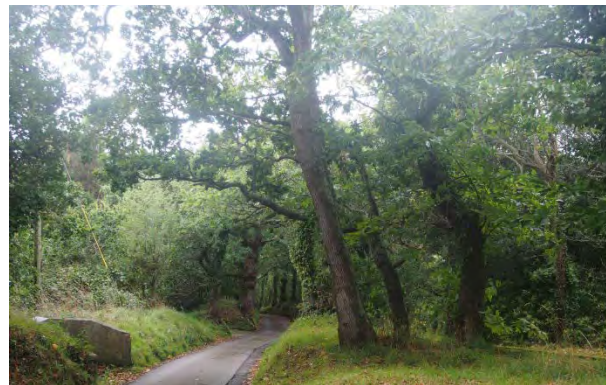
The *Enclosed Valleys* are not associated with a particular rock type, as they occur throughout Jersey. However, the orientations of the valleys are influenced by ancient fault lines in the rock which were then followed by streams and subsequently eroded. The valleys are particularly deep where they cut through the relatively soft Jersey shales, creating dramatic breaks in the escarpment at their southern ends. The largest valleys were cut by streams in tundra conditions at the end of the last Ice Age, which also deposited periglacial head (sediment). The valleys have branching patterns, and are deeply incised, with rock outcrops exposed on the steepest valley sides. The upper ends of the valleys are less dramatic, comprising relatively shallow V-shaped valleys containing narrow streams.



Open stream in woodland, Vaux de Lecq

Soils are dominated by clayey glacial head on valley sides, and alluvial deposits on valley floors. Both are fertile, but the steepness of the valley sides has made them difficult to plough. As a result, woodland has developed on the steepest valley sides, and fields occur on the narrow bands of flat land on the valley floor. Woodland was felled for fuel during German occupation in WW2, so much of the woodland is single age (post 1945) and is dominated by sycamore, although there is some local variation. Many of the woodlands in the *Enclosed Valleys* were also affected by the 1987 hurricane, and were replanted with quick-growing species such as sycamore and

birch, rather than slower-growing native species such as oak, ash and sweet chestnut.



Twisted oaks in woodland in Queen's Valley

Waterbodies include streams and open water. The open water bodies are not natural and comprise millponds and reservoirs. Some contain shallow water and wetland habitats.

Other semi-natural habitats include wet meadow (including unimproved pasture), pockets of marsh, walls and rock faces. The bare rock and walls provides an excellent environment for lichens, ferns, liverworts and mosses, which thrive in the humid conditions.



Ferns grow on a wall in St Catherine's Valley

Designated Nature Conservation Sites:

ESSI (Ecological)	Le Petit Pré Bouley Bay and Les Hurets (part)
Environmentally Sensitive Areas (ESAs)	South-West Coast (part); St Aubin's Valley ; Beaumont; St Peter's Valley Complex; Waterworks Valley; Waterworks Valley Link; Bellozanne Valley; Le Vallée de Vaux; Les Grands Vaux; Queen's Valley; Rozel; North Coast (part)

Cultural Influences and Sites

The exploitation and modification of water supplies dominate the cultural heritage of the *Enclosed Valleys*. The valley heads were ideal locations for early farmsteads as they had access to fresh water supplies, good soil and land which is not too steep to plough. As a result, many individual and clustered historic farmsteads are found at the valley heads. These include land at Hamptonne (Listed Grade 1), although the buildings are within the adjacent Character Type E.



Valley head land at Hamptonne

Farming has traditionally taken place in cōtils on the upper valley sides (although some are now unmanaged and reverting to woodland) and in meadows on the valley floor. The valley floor meadows were used for grazing tethered animals, and their soils were enriched by the silt from seasonal flooding (See example at the start of this section).

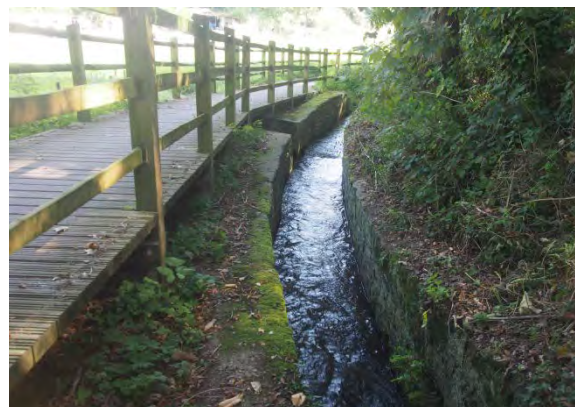
Management of water supplies is essential for successful farming, and Jersey contains a number of surviving abreuvoirs, where animals were watered. Communal use of water was part of Jersey's culture, and there are also examples of lavoirs, where laundry was done. These were stream-fed enclosed stone structures, with places to wash, scrub and rinse clothes.

Valley-side woodlands and trees were carefully managed, as timber was in great demand. In 1789 a 280-ton vessel was built using oak from the parish of St Lawrence.



Lavoir near Le Croix de Bois

From Medieval times until the 19th Century, streams were used to power watermills. Most were used for grinding corn, but there are also later examples of mills used for grinding malt and sugar, and making paper. Initially mills were seigneurial, and tenants were obliged to pay their Seigneur to use the mill. By the 18th Century, when milling was at its heyday, there were 45 water-powered mills in Jersey, including eight in St Peter's Valley.



Leat at Le Moulin de Quétivel channelling water from the millpond to the mill.

Watermills require damming streams to create millponds, and constructing leats to divert the water away from the main stream, and to channel the water from the pond to the mill. The *Enclosed Valleys* contain many examples of millponds and stone-lined leats, but there is only one remaining working watermill, at Le Moulin de Quétivel.

An expanding population of local people and tourists in the 19th Century required infrastructure to provide drinking water. A number of reservoirs were built, initially in St Lawrence Valley, which became known as

'Waterworks Valley'. There are many reservoirs throughout the island, some of which are underground. The large surface reservoir in Queen's Valley was constructed in the 1990s. Sewage treatment works have also been constructed in the *Enclosed Valleys*.

Several of the *Enclosed Valleys* with wide floors contain roads. These are generally very windy, as they follow the meanders of the streams. Many are lined by fern-covered walls or rock faces. Valley side roads are steep and often sunken. The road through St Peter's Valley is one of General Don's 'Military Roads' to enable quick transfer of troops between the barracks at Grève de Lecq and Fort Regent. The entrance to the German Underground Hospital (now the 'Jersey War Tunnels') is also in St Peter's Valley. Mont Les Vaux Valley was used for the Corbiere- St Aubin railway line, now a recreational path.

In addition to the farmsteads at the valley heads, settlement has also traditionally occurred at the ends of the valleys, where they meet the sea. Examples of such settlements are Grève de Lecq, Rozel, St Helier, St Aubin and St Brelade's Bay.

In more recent years there has been linear expansion of settlements up the lower ends of valleys, particularly around St Helier.

Designated Cultural Heritage Sites:

Listed Buildings (Grades 1 / 2)	Numerous, including Hamptonne historic farmstead; several manors; many farms; St Brelade's Church; mills; bridges; waterpumps; abreuvoirs; lavoirs; Grève de Lecq Barracks, Tower and slipway; Bonne Nuit Harbour; German occupation sites
Listed Places (Grades 1 / 2)	Le Catillon; Les Côtis Farm Menhir; Rockmount de Moustiers gardens;
Areas of Archaeological Potential	Fields 'Hougettes'; La Houge Les Lucas
Coastal National Park (2011 Island Plan)	Valleys along the North Coast (D3) and St Martin's Valleys (D4) are within the Coastal National Park.

Perceptual Qualities

One of the most striking features of the *Enclosed Valleys* is the patterns of light and shade. Emerging from woodland or a tree-tunnel road into a sunny glade is a marked change. The patchwork of woodland and meadows created striking contrasts in texture and colour, particularly in spring and autumn. These features combine with the topography to create an intimate, secretive and complex character. The winding nature of the roads, the complex branching of the valleys, and the lack of views out, can combine to create a sense of disorientation. Away from roads the valleys feel tranquil and secluded.



Light and shade in Fern Valley

There are few long views within the *Enclosed Valleys*. The valleys are often hidden in views from the adjacent *Interior Agricultural Plateau* as views tend to be across them rather than into them. However, the valleys are more visible from the coast and sea, from where they form the backdrop to historic settlements.



Mont Les Vaux Valley forms a wooded backdrop to St Aubin, seen from St Aubin's Bay

Natural Capital and Ecosystem Services

Type of Ecosystem Service	Existing contributions	Opportunities
Cultural Services	<p>The <i>Enclosed Valleys</i> contain paths and green lanes which offer opportunities for exercise, recreation, and to enjoy the landscape and its associated aesthetic experiences. This contributes to health and wellbeing.</p> <p>Mills, dams, lavoirs and other water-related structures provide a sense of history and opportunities for education.</p>	There are excellent opportunities to expand access into the valleys, and to create linked paths and routes to enable people living in nearby urban areas to access and enjoy the valleys.
Provisioning Services	<p>Trees provide timber for fuel and building materials.</p> <p>Agriculture (on valley floors and upper slopes) provides food. The streams were also managed for many centuries to provide power for milling, a key element of food production.</p> <p>The enclosed valleys are a critical source for the supply and storage of fresh water.</p>	Identify opportunities for sustainable use of timber (for example for fencing) and enable economically-viable schemes to promote positive woodland management.
Regulating Services	<p>The <i>Enclosed Valleys</i> and the trees within them contribute to a number of regulating services. Trees improve air quality through trapping and absorbing pollutants. Their shade helps to cool temperatures. Trees also store carbon, helping to reduce the rate of global warming.</p> <p>Trees absorb and filter water, regulating flows into streams (helping to reduce downstream flooding) and improving water quality.</p> <p>They also provide natural noise-masking, and can enhance tranquillity.</p>	These roles will become increasingly important in mitigation and adaptation to climate change.
Supporting Services	<p>Woodlands are a key Natural Capital Asset, providing habitats for numerous species of plants, birds, insects, mammals and amphibians. Wet meadows support wildflower species, and bare rock and damp walls support mosses, ferns and liverworts.</p> <p>Photosynthesis from trees and plants absorbs carbon dioxide and produce oxygen, supporting life.</p> <p>Decaying woodland leaf litter contributes to the formation of nutrient-rich soils.</p>	Opportunities exist to extend and link woodland, wetland and grassland habitats, increasing their effectiveness as wildlife sinks and corridors, and increasing their resilience to climate change.

Character Areas

Within the *Enclosed Valleys* Character Type there are four distinctive Character Areas. Each one has a unique 'sense of place' as a result of its combination of landscape elements.

Character Area D1: Southern Valleys



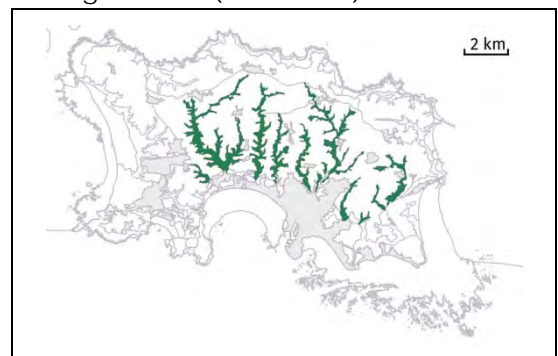
Millbrook Reservoir, waterworks and woodlands, Waterworks Valley

This is the largest Character Area, and comprises the valleys which run from north to south in the centre and east of Jersey. These include Beaumont Valley, St Peter's Valley, Waterworks Valley, Vallée des Vaux, Grands Vaux, Bellozanne Valley/Fern Valley, Swiss Valley and Queen's Valley.

The larger valleys have wide floors and a branching structure. Several have steep ravines where they cut through the Jersey shale, resulting in dramatic entrances at their southern ends where the streams break through the escarpment to flow into St Aubin's Bay. The shorter valleys are simpler in form. The appearance of the shorter valleys is very similar to that of the heads of the larger valleys, with a simple shallow V-shape, and wet meadows along the valley floor with trees above.

Many of the Southern Valleys have been modified to provide water for drinking, and to power mills. There are numerous reservoirs, millponds, and associated buildings. Some (but not all) of the Southern Valleys contain roads. The Jersey War Tunnels (formerly known as the German Underground Hospital) are accessed from the side of St Peter's Valley.

The Southern Valleys contain extensive woodlands, which are important for biodiversity, as well as open water and wet meadow habitats.



Character Area D2: St Brelade's Valleys

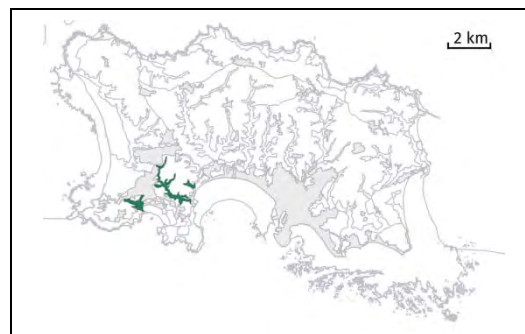


View along former railway line (now recreational path) from St Aubin to Corbière, Mont Les Vaux valley

This Character Area is located in south-west Jersey, and comprises the relatively small valleys which run eastwards into St Aubin's Bay and St Brelade's Bay, including Mont Les Vaux, Le Val and the small valley behind Les Creux. These wooded valleys provide the settings for historic coastal settlement sites including St Aubin's Harbour and St Brelade's Church.

St Brelade's Valleys are relatively short, and were of limited use for water power. The valley floors were therefore not used for mills, but were instead available for development. As a consequence the valley floors tend to be occupied by houses and gardens, rather than by meadows. Garden planting spread up the valley sides, with ornamental and non-native species planted within the woodland. Many of these trees are evergreen, such as Monterey pine, Monterey cypress and Holm oak, and this changes the character of the woodland, particularly in winter. It also provides cover and shelter for red squirrels, which have their largest population around this part of Jersey.

The main road from St Aubin to Red Houses/ Les Quennevais (Mont les Vaux/ Grande Route de St Brelade) crosses Mont Les Vaux valley on a high bridge. However, the former railway line between Corbière and St Aubin follows the valley side, and the route is now a popular walking and cycle path. A significant proportion of the St Brelade's Valleys remain private, with little public access.



Character Area D3: North Coast Valleys

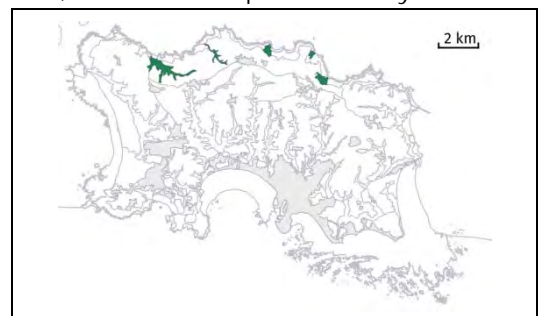


The wooded Vaux de Lecq valley, as seen from the road east of Grève de Lecq

This Character Area consists of a series of steep, narrow valleys which run northwards through hard igneous rocks to meet the north coast of Jersey. They include Les Vaux de Lecq, Mourier Valley, Egypte, and the short valley which runs into Bouley Bay. The valleys are generally very steep, with ravines in places. Several of the streams are stone-lined, suggesting management for powering mills. There are meadows on the valley floors, surrounded by steep woodland dominated by sycamore and holly, with some oak, Holm oak and sweet chestnut. These provide habitat for breeding birds, insects and small mammals.

Several of the valleys end in small coastal settlements (e.g. Grève de Lecq and Bouley Bay), for which the valleys provide the approach (via dramatic hairpin bends) and the setting. The role of the valleys in providing the setting is particularly apparent in views from the sea.

Les Vaux de Lecq is a breach in the high cliffs of the north coast, which would provide easy access to the centre of Jersey. Consequently the coast at Grève de Lecq has been heavily defended, with surviving defences from the Iron Age, the Napoleonic threat of the early 19th Century, and WW2.



Character Area D4: St Martin's Valleys

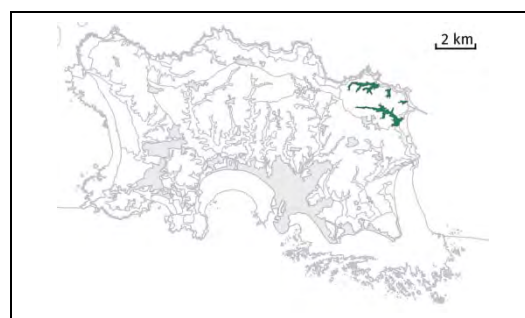


View within St Catherine's Valley, with wooded valley floor and ancient trees.

This Character Area is located in north-east Jersey, and includes the Rozel and St Catherine's valleys. The valleys run north-east towards the coast, through sedimentary Conglomerate rocks. There is less drift deposit here, and so the soils are poorer. This has resulted in less intensive clearance for agriculture, and some of the valley floors remain wooded. St Catherine's Valley also has a strong association with Rozel Manor, and there is some estate influence in the form of walls, gateways and paved carriage paths. There is also a small reservoir (La Maseline) which was built during the German occupation.

The North-West Valleys also have the largest surviving areas of ancient woodland in Jersey, as not as many trees from here were felled for fuel during German occupation in WW2. Trees include oak, hazel, ash, beech, medlar and wild cherry, with alder and willow on the damper valley floor. This is also an exceptionally sheltered environment, allowing a luxurious undergrowth of ferns, mosses and liverworts to thrive alongside streams.

The Rozel valley is private, and provides a backdrop (including some ornamental tree species) for the picturesque settlement of Rozel. However, St Catherine's Valley is managed as a public nature reserve, and is popular with visitors and dog walkers.



Sensitivities, Condition and Forces for Change within the *Enclosed Valleys* Character Type

Sensitive Special Qualities

- A complex pattern of land uses, with distinctive rock outcrops, areas of wet grassland, open meadows and broadleaved woodland, all of which contribute to habitat networks.
- Largely undeveloped rural upper valleys contrast with lower sections that are more developed with several reservoirs.
- Sense of tranquillity and detachment from large urban areas, strongest in upper parts of valleys, which have a secluded quality.
- The landform provides a strong sense of enclosure and intimate scale, emphasised by the broadleaved woodland. A network of roads, paths and green lanes makes many of the valleys within this landscape accessible.
- Distinctive sunken lanes along the upper valleys sides, fringed by mature broadleaved trees.

Landscape Condition

1. Some development within the valleys detracts from the rural character, particularly where it crosses the valley floor or where its scale or density overwhelms the small scale of the landform.
2. The steep valley landform is largely intact, although some engineered landforms and municipal landscape treatment increase the impact that reservoirs and other infrastructure has on the rural character.
3. Chestnut paling fencing around reservoirs, and stone walls, are distinctive but elsewhere some unsympathetic boundary treatments detract from the rural character.
4. Some of the narrow lanes and main roads through valleys are busy with fast traffic and require appropriate rural traffic calming measures.
5. Parts of the valleys are well managed for recreation, with good interpretation, several waymarked footpaths, cycle routes and small scale car parks.
6. In some popular areas (e.g. St Catherine's Wood) informal paths are being eroded on steep banks, damaging ground flora.
7. Much of the woodland appears to be unmanaged with some stag-headed mature trees overrun by ivy, a domination of sycamore, and few young trees to ensure continuity of tree cover. This results in a continued decline in woodland quality and loss of biodiversity.
8. Bracken invasion is evident where former còtills are reverting to scrub and woodland. This was raised as a concern in the 1999 Countryside Character Appraisal and is still a localised problem.
9. Wet meadows that are no longer managed are becoming invaded by weed species.
10. There are some instances of Japanese knotweed and other invasive species.

Forces for change

Landscapes and seascapes are dynamic and are constantly affected by a variety of forces for change, which may be natural (e.g. coastal erosion) or man-made (e.g. development pressure, and changes in farming practices). The following table illustrates the main forces for change acting on this Character Type, and how they will potentially affect the landscape/ seascape. Recommendations for addressing these issues are provided in the following section.

Issue	Potential impacts on sensitive special qualities	Character Areas affected
Marine development	<ul style="list-style-type: none"> N/A 	
Infrastructure	<ul style="list-style-type: none"> Additional reservoir development or other large scale infrastructure could diminish the undeveloped, rural character, particularly the sense of tranquillity. It could directly impact on the landform and woodland, and the enclosure they provide. 	All
Housing	<ul style="list-style-type: none"> Further housing development could diminish the undeveloped, rural character, introducing suburban elements and lighting that affect the sense of tranquillity. It could also directly impact on the woodland and affect the experience of recreational users. Felling of trees to provide views from properties within or close to the <i>Enclosed Valleys</i> impacts on the wooded character and increases the visual prominence of development. Housing on adjacent areas of the <i>Interior Agricultural Plateau</i> LCT can also impact on this LCT, especially where it is apparent on the skyline. 	All
Land management	<ul style="list-style-type: none"> Fields that are no longer cultivated or grazed may revert to scrub, bracken and woodland, affecting the pattern of land use, and resulting in loss of grassland habitats. Woodlands have limited age and species diversity, and have not really recovered from WW2 felling, or the 1987 storm. As a result they are dominated by quick-growing species and are vulnerable to loss through tree disease or old age. They also support limited biodiversity. 	All
Recreational pressure	<ul style="list-style-type: none"> An increase in the amount of traffic and visitor parking could have a direct effect on the sense of tranquillity. Additional recreational traffic could inhibit the recreational use of Green Lanes and require more highly engineered roads which would reduce the rural character. Increasing interest in active recreation may require further infrastructure, potentially generating more traffic on rural lanes. Erosion of paths on popular routes can damage habitats and lead to soil erosion. 	All
Climate change	<ul style="list-style-type: none"> Variations in seasonal weather patterns could result in changes to the extent, composition and survival of the tree cover. Tree safety along path routes could become more of an issue. Warmer weather will provide conditions for new pests and diseases, leading to loss of/ damage to trees. Ash Dieback, Phytophthora, and Oak Processionary Moth are of particular current concern. Extreme weather conditions could necessitate additional water storage infrastructure or result in further water abstraction, reducing the flow of streams. 	All

Strategy and Guidelines

Strategy

The overall strategy for this Character Type should be to protect its undeveloped, wooded character, and its distinctive valley floor meadows.

Further development should be resisted, particularly on steeper slopes, where extensive earthworks would be required, where it would breach the skyline, or where it would result in the loss of woodland.

The biodiversity of the Character Type should be enhanced through improved woodland management, linking habitats, and expanding woodland where appropriate. Water quality and supply in streams should be enhanced.

Accessibility should be improved through improved pedestrian/ cycle linkages between valleys (creating circular routes), and from urban areas into valleys. This will enable the *Enclosed Valleys* to fulfil their potential in improving people's health and wellbeing, and will raise people's awareness of these landscapes. It will also enable the *Enclosed Valleys* to become destinations in their own right, rather than simply a route to elsewhere.

Character Type-Specific Management Guidelines

Protect

- Protect the predominantly undeveloped, small scale, intimate wooded character of the valley landscape.
- Protect and enhance the valley-floor meadows.
- Protect the occasional long views within valleys.
- Encourage more sensitive boundary and highways treatments to protect rural character.
- Protect the sunken lanes on valley sides, resisting insensitive highways treatments.

Manage

- Enhance the management of existing areas of woodland to increase their landscape, habitat and recreational value. Aim for greater diversity of age and species, and utilise traditional woodland management techniques - such as coppicing – where appropriate.
- Improve the landscape treatment around reservoirs and other infrastructure to integrate them better within the rural environment.
- Improve the management and linkage of wet meadows to enhance their habitat value.
- Continue to manage Japanese knotweed and other invasive species to prevent them getting out of control.
- Encourage active management of abandoned cōtills, to promote reversion to woodland, or to coastal heath/ grassland.

Plan

- Plan for further broadleaved tree planting to help integrate existing buildings.
- Plan to link habitats, for example through reinforcing of hedgerows which link woodland areas, and creation of new grasslands to connect existing valley-floor meadows.

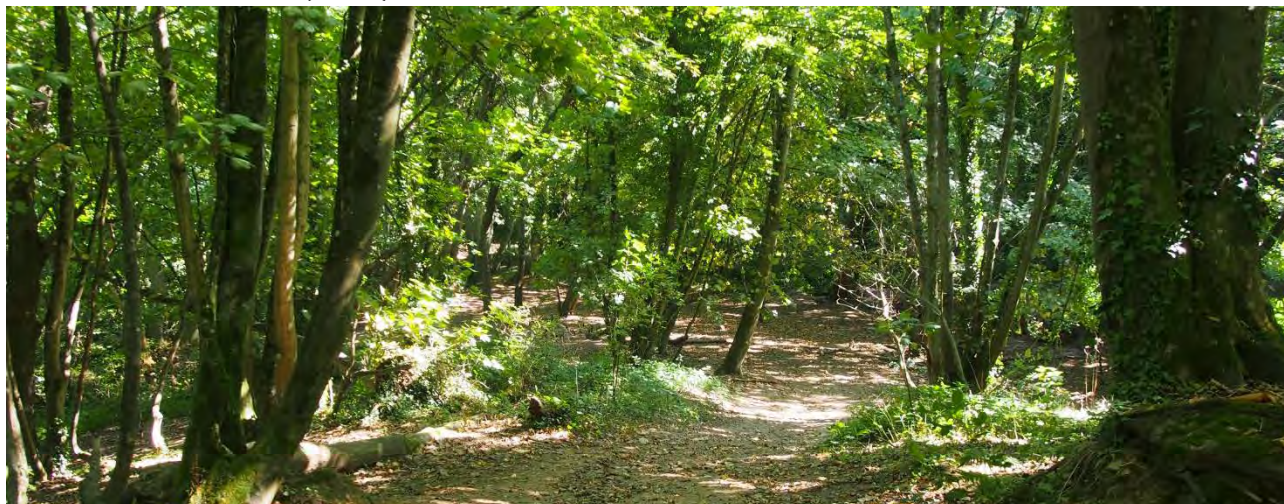
- Resist any further development where it would increase the apparent scale of development, require extensive earthworks, breach a skyline in views from a valley or result in loss of woodland. This also applies to extensions to or redevelopment of existing buildings.
- Should any development take place, this should be adjacent to existing buildings, and small in scale in order to retain intact rural character. Avoid new isolated buildings.
- Support planting of new broadleaved woodland where appropriate, for example in the Mourier Valley.
- Identify opportunities for sustainable woodland products, e.g. chestnut pale fencing, for which there would be a local market, in order to increase both the economic value and biodiversity of woodlands.
- Explore the potential to link existing paths to form longer walking routes, connecting nearby urban areas and adjacent valleys. Include some small scale parking areas and secure cycle storage.
- Consider expanding the Coastal National Park to include parts of this Character Type (such as the St Martin's Valleys) which fulfil the necessary criteria.
- Consider additional protection for woodland in St Catherine's Valley, which contains a higher proportion of mature trees than elsewhere.
- Consider additional protection for trees and woodlands to reduce future felling associated with development.
- Work with farmers and utility providers to improve water quality and supply, for example through reducing abstraction, and reducing chemical enrichment from fertilizers and sewerage discharge. This should improve drinking water quality, and also improve water quality around the coast (particularly in St Aubin's Bay).

Further Information

Please refer to the **Landscape Design Guidance (Part 5)** for more information on relevant topics, specifically:

- Accommodating New Development
- Enhancing Rural Character
- Views and Visibility

Relevant **Coastal Units (Part 4)**: 3, 4, 5, 6, 7, 11, 13



Single-age sycamore-dominated woodland in the Enclosed Valleys Character Type

Character Type E: Interior Agricultural Plateau



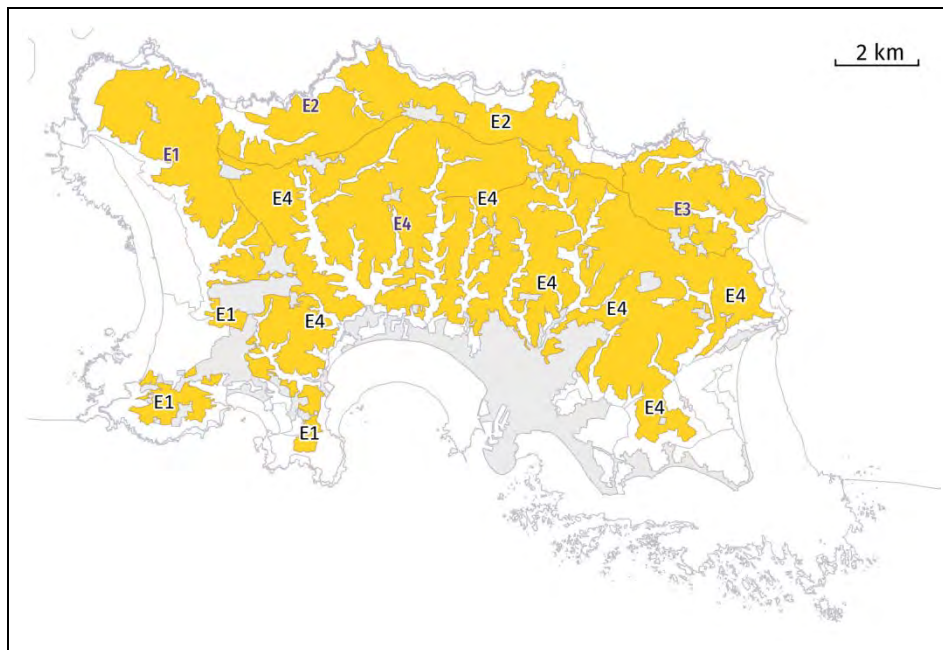
A typical view within the Interior Agricultural Plateau, potato harvesting

Summary Description

This Character Type comprises the rural heartland of Jersey. It is the most extensive of all the Character Types, and covers the majority of the land area. It is separated from the sea by the *Cliffs and Headlands*, *Escarpment* and *Coastal Plain* Character Types. The *Enclosed Valleys* cleave through the *Interior Agricultural Plateau*, and there are close physical, cultural and visual connections between these Character Types.

The *Interior Agricultural Plateau* is a settled and managed landscape, comprising a patchwork of small agricultural fields. Stone-built historic farmsteads are scattered throughout, isolated or clustered in small hamlets. Many exhibit traditional Jersey vernacular features, including rounded arches, apple presses, and multi-functional farm buildings. The *Interior Agricultural Plateau* forms the setting for many of Jersey's rural settlements, and their distinctive church towers form prominent landmarks which also provide orientation within the network of winding lanes. There are many archaeological sites, reflecting the long history of settlement, including La Hougue Bie, one of the best-preserved Neolithic structures in Europe.

The enclosing nature of the vegetation means that there are relatively few long views, and much of the Character Type is visually contained, with a small scale and intimate feel.



E1: Western Coasts and Headlands Farmland

E2: North Coast Farmland

E3: North East Farmland

E4: Southern Plateau and Ridges Farmland

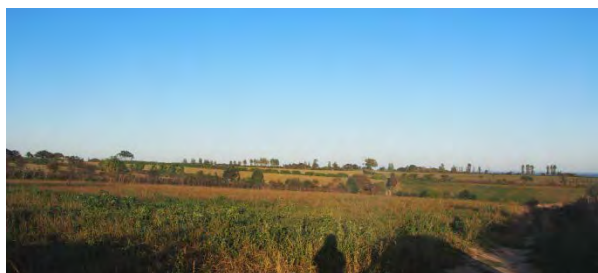
Key Characteristics of *Interior Agricultural Plateau* Character Type

- Underlying geology comprises many different rock types, but most of the area is covered in loess drift deposits, giving fertile soils.
- Landform is a plateau which gently slopes towards the south. Deep incised valleys create ridges between them.
- Numerous springs, small streams, valley heads and occasional reservoirs.
- Land cover is dominated by agriculture-including potatoes, cattle, arable crops, orchards, horse paddocks etc. Seasonal changes include ploughed land, plastic crop covers and flower fields.
- Semi-natural habitats include stone walls, hedgerows, trees, verges, wet meadows and fallow fields planted with bird-supporting crops.
- Mature trees occur in woodland, hedgerows, shelter-belts and parkland. Branchage leads to distinctive close-cut hedgerows alongside roads.
- Landscape dominated by patchwork patterns of small, semi-regular shaped fields bounded by hedges and/ or banques. Some local variations in field patterns and boundaries.
- Settlements include parish centres, hamlets and isolated farms. They are linked by an intricate network of narrow lanes, and wider roads.
- A landscape which has changed relatively little in the last 200 years. Historic features such as lanes, farms, field patterns, villages, manors and churches remain key components.
- Views often contained by vegetation, giving an intimate feel. Where long views do occur, features such as church towers and windmills form landmarks.
- Fields give the landscape a strong regular pattern, with contrasts in texture between hedges and fields.
- Strongly rural and peaceful feel, especially away from main roads and larger settlements.

Natural Influences and Sites

The *Interior Agricultural Plateau* occurs over all bedrock types. There are places where this influences land use and character, such as former brick pits or quarries. Generally though, the drift geology (wind-blown glacial sediment known as loess) has had the greatest impact on the landscape. This is because the fertile soils which it creates are excellent for farming.

The land forms a gently-sloping plateau. Its highest point is over 100m above sea level near the north coast, and it then slopes down towards the south. The *Enclosed Valleys* are incised into the plateau, dividing the plateau into a series of north-south ridges. At the valley heads there is a seamless transition between the *Enclosed Valleys* and the *Interior Agricultural Plateau* and the boundary between them cannot easily be defined.



Sloping plateau landform of the Interior Agricultural Plateau to the north of St Clement

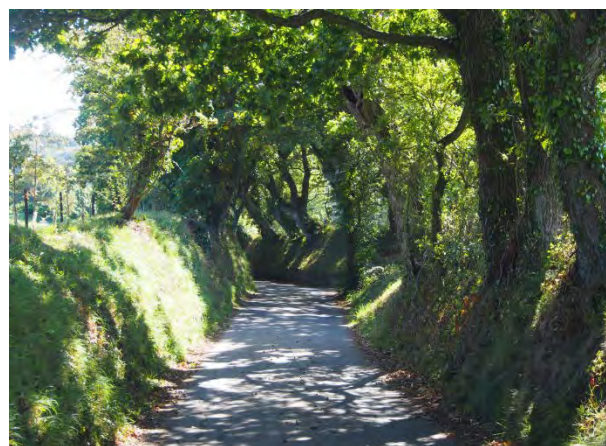
The intricate network of hedgerows and earth or stone banques which line the lanes and divide the fields has an important biodiversity function. It provides habitat for a range of flowers, insects, birds and animals, but also plays a crucial role linking larger areas of habitat such as woodland and wet meadow.



Hedgerow between fields linking areas of woodland above the Vaux de Lecq valley.

Because these patches of habitat are relatively isolated and narrow, they are also vulnerable to loss through changes in land management, or through climate change.

Many of the mature trees are found alongside lanes or in hedgerows or shelterbelts. They create the impression of a well-vegetated landscape, help to screen development, and also act as a habitat corridor between woodlands.



Mature trees and steep grassy banques line a narrow lane near Trinity, and help to link North Coast Enclosed Valleys woodlands

Bird habitats within the *Interior Agricultural Plateau* have been increased by the sowing of seed-rich crops on potato fields whilst they are fallow.



Seed crop to support farmland birds

Designated Nature Conservation Sites:

SSI Geological	La Solitude East and West
SSI Ecological	Small parts of Les Blanchés Blanques; Le Petit Pré; Les Landes l'Est
Environmentally Sensitive Areas (ESAs)	Small parts of: Beaumont; St Peter's Valley Complex; Vallée de Vaux; Grands Vaux; Rozel; North Coast; Les Landes; St Ouen's Bay; Noirmont-Portelet

Cultural Influences and Sites

There is a wide range of archaeological sites within the *Interior Agricultural Plateau*, reflecting its long history of settlement and exploitation. The most famous site is La Hougue Bie, an intact Neolithic passage grave with a surviving mound, which is itself topped with two medieval chapels. La Hougue Bie is considered to be one of the best-preserved Neolithic sites in Europe, and is therefore of international archaeological importance. Other prehistoric sites are located around the periphery of the *Interior Agricultural Plateau* in elevated positions at the crest of the *Escarpment* or close to the coast above the *Cliffs and Headlands*. These include ritual sites such as dolmens as well as defensive sites such as the inland part of Le Câtél de Rozel Iron-Age promontory fort. Further evidence of early occupation of the *Interior Agricultural Plateau* includes flint and pottery scatters. Much later archaeological sites include Les Câtieux (Le Chastel Sedement), a medieval refuge where women, children and animals would be sheltered during times of invasion.

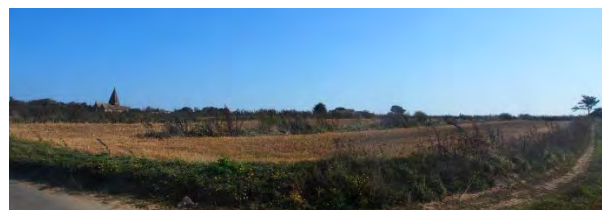


Entrance to La Hougue Bie Neolithic passage grave

Centuries of farming have shaped the landscape of Jersey's rural interior, with its character created by the gradual evolution of farming systems. In late medieval times the dominant crop was sheep, providing wool for knitting Jersey stockings. By the late 18th Century much of the island was used for growing apples for export as cider, and many apple presses and cider barns survive from

this period. Barley, corn and rye were grown for local consumption, and sheep were grazed on commons. Jersey cattle and Jersey Royal potatoes have dominated the island's agriculture since the 19th Century, along with horticulture, although these are now declining and new crops such as tea, grapes and hemp are emerging. Seasonal changes can be striking, such as the plastic crop covers in spring.

Crops require shelter from the elements on the windswept plateau, and so a patchwork of fields has been created throughout Jersey, surrounded by a combination of hedgerows, shelter belts and stone or earth banques. The earliest fields are thought to be the relatively large, square fields surrounded with large boulder walls, which may date from initial clearance in prehistoric times. There are also some surviving Medieval strip fields, with the best examples near St Ouen's Parish Church (Listed Place).



Strip fields west of St Ouen's Parish Church

The small size of Jersey's fields is partly due to the partage system of dividing inherited land between children. This has also led to the creation of 'family hamlets' to enable viable farming. The *Interior Agricultural Plateau* contains an outstanding range of surviving vernacular agricultural buildings. The most well-known feature is the round headed Jersey Arch found in gateways and doorways, but there are also many different types of farmstead layouts, buildings and features which are unique to Jersey. The styles of farmhouses reflect changing fashions (such as the Georgian taste for symmetrical frontages) but almost all are constructed of local pink granite, with relatively little wood. Many of the oldest farmsteads are located at the heads of valleys, with a convenient water supply. The frequent place-name 'fontaine' indicates a local spring.



Early farm buildings and Jersey arch at Hamptonne

Manors are located throughout the *Interior Agricultural Plateau* and are constructed in different styles – from large farmhouses to chateaux. Some (such as Rozel Manor) are set within extensive grounds.

The *Interior Agricultural Plateau* contains a dispersed pattern of settlements which form parish centres. These vary in form, with some strongly nucleated and others more scattered. However, all contain village facilities such as schools and parish halls. Their distinctive historic churches (often with tall spires to act as a daymark) are a key component of Jersey's character.

The farms, hamlets and parish centres are linked by a network of paths and lanes, and some major roads. These include several of General Don's Military Roads, which linked lanes to enable efficient movement of troops around the island. The ancient Jersey laws of branchage (cutting of hedges to keep highways clear) has led to unusual hedge patterns alongside roads.

Designated Cultural Heritage Sites:

Listed Buildings (Grade 1/2)	Numerous, including many historic farmsteads, manors, churches, chapels, German Occupation Sites and agricultural structures.
Listed Places (Grade 1/2)	Several, including prehistoric monuments; flint scatter sites; historic field systems
Areas of Archaeological Potential	Numerous, including settings to monuments; hoard find spots and fields with names suggesting archaeological potential e.g. 'Hougue'

Perceptual Qualities

The patchwork pattern of the fields is most obvious from the air, as there are few high points from which to view it. Landform and enclosing vegetation mean that much of the *Interior Agricultural Plateau* has an intimate and enclosed feel, and is strongly pastoral. There are relatively few long views, especially from roads, due to banques, hedgerows and trees. Much of the Character Type therefore has a small-scale, domestic and farmed feel. There is a greater sense of exposure close to the coast, and a softer, more wooded feel in areas containing parkland and mature trees.



A typical enclosed view within the *Interior Agricultural Plateau*

However where longer views do occur, churches or other tall structures such as windmills and communications masts often form landmarks and provide orientation.



St John's Parish Church seen across fields

Despite being a small island, sea views are relatively rare, and tend to occur on the edges of this Character Type. These areas also form the horizons in views from the sea. There is often a contrast between the farmed areas, and the adjacent rugged coastlines.

Natural Capital and Ecosystem Services

Type of Ecosystem Service	Existing contributions	Opportunities
Cultural Services	<p>The <i>Interior Agricultural Plateau</i> is often less visited by tourists than the coastal Character Types, but still makes an important contribution to the sense of history, and enables positive aesthetic experiences. Some of the historical sites (e.g. La Hougue Bie and Hamptonne) are important recreational and educational attractions, as well as being of importance to research and education.</p> <p>The network of Green Lanes enables physical recreation and exercise, and promotes well-being.</p>	<p>There is potential to increase the recreational value of Green Lanes (and their use for daily travel) by linking routes for ease of use by walkers and cyclists.</p>
Provisioning Services	<p>The fertile soils are important natural capital, and the primary land use within the <i>Interior Agricultural Plateau</i> is the production of food, particularly milk and potatoes. In addition, springs, streams and reservoirs provide and store fresh water, and wood cut from trees and hedgerows is a source of fuel.</p>	<p>Changing agricultural markets open up opportunities for new crops and land uses. If ecosystem services are considered from the outset, these could be of benefit for biodiversity.</p>
Regulating Services	<p>Soils absorb rainwater and slow run-off, helping to regulate water flows and water quality.</p> <p>Soils and vegetation help in the regulation of climate through carbon storage, and also regulate air quality by absorbing pollutants</p>	<p>These roles will become increasingly important in mitigation and adaptation to climate change</p> <p>There are opportunities to change land management practices to reduce pollutants and make farming more sustainable.</p>
Supporting Services	<p>The <i>Interior Agricultural Plateau</i> provides habitats and habitat links for a range of species. It helps in soil formation, and photosynthesis.</p>	

Character Areas

Within the *Interior Agricultural Plateau* Character Type there are four distinctive Character Areas. Each one has a unique 'sense of place' as a result of its combination of landscape elements, particularly vegetation, field patterns and sense of exposure.

Character Area E1: Western Coast and Headlands Farmland

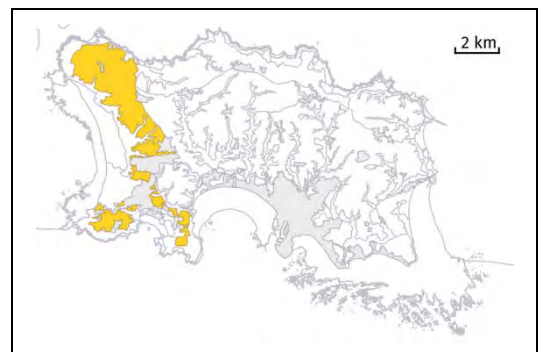


View of open, exposed farmland in the Western Coast and Headlands Farmland, near Les Landes

This Character Area is located in the west of Jersey, including the north-west and south-west headlands. It is distinguished from other Character Areas by its sense of openness and exposure, and relative lack of trees. Field boundaries are often low granite walls or earth banques, with some hedgerows. These are sometimes supplemented with wire fencing or tape dividing paddocks. It is underlain by hard granite rocks, with thin soils derived from the bedrock rather than loess drift. These soils are less fertile than elsewhere in Jersey, but warm quickly in the spring, making them suitable for early potatoes. They are also used as horse paddocks, particularly around the racecourse at Les Landes.

This area also contains some of the probable oldest fields in Jersey, with boulder walls which may be the result of first- stage clearance in prehistoric times. It also contains the most extensive surviving area of Medieval strip fields, west of St Ouen, which includes the church and windmill.

Because of its open and exposed location on the plateau there are relatively few settlements (either farms or villages) although St Ouen's Church forms a landmark over much of the area. The few farms are set in sheltered hollows in the landform. Historically much of this area would have been common land, used for grazing sheep. Recent enclosures are relatively large and more regular than elsewhere, and the south-west of the area provides the context for 20th Century development at the airport, prison, La Moye and Les Quennevais/Red Houses. The Character Area is important in views from the coast and sea, from where it forms the horizon, and it contains several dolmen sites.



Character Area E2: North Coast Farmland



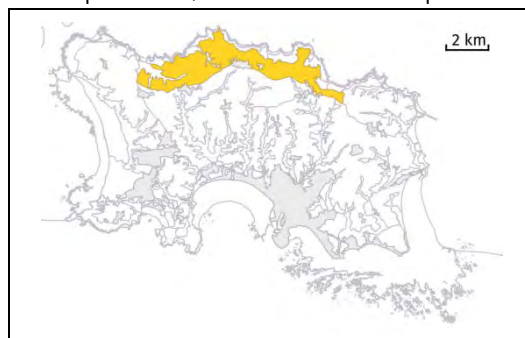
View looking east along the North Coast Farmland from north of St John's Village.

This Character Area is located along the north coast of Jersey, between St Ouen in the west and Bouley Bay in the east. The settlements of St Ouen, St Mary, St John and Trinity are located along the main coast road which forms the southern boundary of the Character Area.

This is an intricate landscape of small fields, which contrast with the rough heathland of the adjacent *Cliffs and Headlands* Character Type. It includes the highest land in Jersey (at Les Platons) and is mostly above 100m asl. From here the land slopes gently down towards the tops of the north coast cliffs, and it therefore forms the horizon in views from the sea and coast. It is underlain by hard igneous rocks, including granite, rhyolite, diorite and andesite, with thin soils derived from the bedrock, and little cover of loess drift. Fields are generally enclosed with earth banques or granite walls topped with hedgerows of bramble, gorse, hawthorn and elder which provide some shelter. Despite the poor soils, some of the walled fields (those with boulder walls) are thought to be very early in origin.

The North Coast Farmland Character Area has a strong sense of openness, elevation and exposure. These are enhanced by the expansive views (including distant views of the sea), the nearby presence of rugged cliffs and coastal heath, and the wind-sculpted trees.

There is little settlement in the more exposed parts of the Character Area, but buildings and villages are found in more sheltered locations along the inland margin. A series of communications towers form landmarks along the north coast and can be seen from across the island.



Character Area E3: North East Farmland

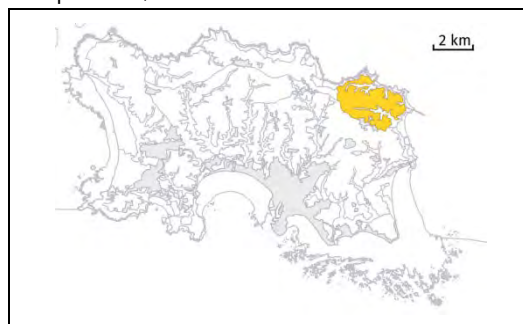


View of Rozel Manor and parkland setting, within the North East Farmland

This Character Area is located in the north-east of Jersey, and includes the farmland to the north of St Martin's village, around Rozel and St Catherine. It has a number of influences which contribute to its distinctive character. The underlying geology is sedimentary conglomerate rather than igneous, and is overlain by deep deposits of loess. These create fertile soils and lend a gentler character to the landscape. This is enhanced by the relatively sheltered location and sunny aspect of the Character Area. Some of the earliest potatoes in Jersey are grown in Rozel.

Much of the Character Area is associated with Rozel Manor, and the parkland trees associated with the estate contribute to the area's gentle and well-vegetated feel. There are estate walls (of conglomerate stone), lodges and avenues. The fields are also relatively large, with a high proportion of hawthorn in hedgerows. There is a very gradual transition between the *North East Farmland* and the *North East Wooded Valleys*, and the two types are closely related.

The *North East Farmland* has seen relatively little intrusive development, and its traditional rural character remains largely intact. It also has more of a French feel than some other parts of Jersey – a combination of aspect, vegetation and architecture. Coastal views look across the Le Ruau channel towards Les Écréhous, with the Normandy coast forming the horizon beyond.



Character Area E4: Southern Plateau and Ridges Farmland



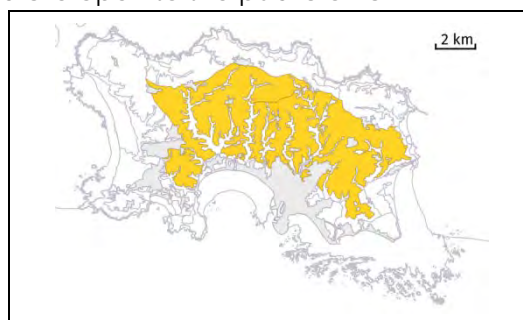
View from one ridge to another across wooded valley within the Southern Plateau and Ridges

This is the largest of the Character Areas within the *Interior Agricultural Plateau*, and covers much of the central and southern parts of Jersey. It provides the context for many of the rural Parish centres, as well as some of the St Helier suburbs. Each of these settlements has a distinct character.

The landform comprises a gently-sloping plateau, which in places has been carved into a series of ridges by the deep incised valleys which run from north to south. This creates a complex landform with a repeating pattern of views over valleys and across to villages. It has varied bedrock geology, but above this are deep loess deposits creating rich, fertile soils and there are numerous springs. Much of the area is therefore used for arable crops (mostly potatoes) or cattle grazing, although there are also pockets of orchards, horticulture, vineyard and paddocks.

As well as La Hougue Bie, this Character Area has outstanding built heritage, including many historic farmsteads, manors, churches, houses and agricultural structures such as apple crushers, dovecotes and 'Jersey arch' gateways. Some of the best examples (e.g. The Elms, Le Rât, Hamptonne) are owned by the island's heritage bodies, and are open to the public on a permanent or occasional basis.

Farms and settlements are connected by a maze of deep lanes, tracks and some wider roads. Most are lined with hedgerows, often with mature trees. The patchwork of small fields is bounded by banques and/ or hedgerows, which often include a high proportion of hazel, hawthorn and hedgerow oaks.



Sensitivities, Condition and Forces for Change within the *Interior Agricultural Plateau* Character Type

Sensitive Special Qualities

- A well wooded and strongly rural landscape, with a sense of enclosure and intimate scale.
- Intricate pattern of small rectangular arable and grazed fields, enclosed by a dense network of hedgerows with hedgerow trees, small woodlands and stone walls.
- A dispersed settlement pattern with some generally well integrated isolated dwellings and small settlements, clustered around churches.
- A rich legacy of historic buildings, particularly relating to Jersey's agricultural heritage.
- Long views to church towers.
- Outstanding Neolithic monuments, including La Hougue Bie passage grave, which is one of the best-preserved Neolithic sites in Europe.
- A network of narrow winding lanes, fringed by lines of mature broadleaved trees, and branchage hedgerows.
- The woodland of parts of the *Enclosed Valleys* Character Type is closely related to this Character Type and provides further enclosure.

Landscape Condition

1. Some recent housing, equine and agricultural developments disrupt the characteristic settlement pattern and detract from the rural character, particularly where the boundary treatments are suburban in character.
2. Increasing amounts of traffic have required more highly engineered highways solutions, adversely affecting the rural character of some of the narrow lanes.
3. Changes in agricultural practices have resulted in some abandoned glasshouses.
4. Tree lines along lanes and field boundaries have many gaps, and some hedgerows have also been lost, adversely affecting the distinctive pattern of small fields and reducing the screening of existing development.
5. Positive agricultural landscape change is taking place through management initiatives such as the LEAF scheme.
6. Some stag-headed mature trees are overrun by ivy with little replacement planting evident.
7. Increased use of security and flood lighting is increasing levels of light pollution in rural areas.

Forces for change

Landscapes and seascapes are dynamic and are constantly affected by a variety of forces for change, which may be natural (e.g. coastal erosion) or man-made (e.g. development pressure, and changes in farming practices). The following table illustrates the main forces for change acting on this Character Type, and how they will potentially affect the landscape/ seascape. Recommendations for addressing these issues are provided in the following section.

Issue	Potential impacts on sensitive special qualities	Character Areas affected
Marine development	<ul style="list-style-type: none"> • There may be long-distance views to offshore marine developments, particularly from high ground. 	All

Issue	Potential impacts on sensitive special qualities	Character Areas affected
Infrastructure	<ul style="list-style-type: none"> Additional communications masts sited within open areas may adversely affect the rural character and intimate scale of this landscape. There is also a large quarry site to the south of St Mary's Village. 	All
Housing	<ul style="list-style-type: none"> Poorly designed or sited housing development away from villages could further impact on the rural character, potentially introducing suburban elements and increasing light pollution. Poorly designed or sited housing development associated with villages could affect settlement character (for example through the loss of pastures which, in some cases, form the setting to the historic cores of some villages). Housing development would generate more traffic, which could inhibit the recreational use of Green Lanes and require more highly engineered roads, also reducing the rural character. 	All
Land management	<ul style="list-style-type: none"> Hedgerow removal and field amalgamation associated with changing farming practices threaten the distinctive pattern of small fields, and potentially reduce the screening of existing development. Livery infrastructure can increase the amount of clutter in the landscape, such as fencing, surfacing and isolated buildings, which can adversely affect the rural character, and introduce an 'urban fringe' feel. Pressure to provide new agricultural workers' accommodation can result in additional dwellings which may not always be well designed or sited. Sensitive conversion of redundant agricultural buildings is preferable to new-build. Large agricultural buildings (associated with farm amalgamation) can introduce industrial-style buildings, lighting and surfacing into this rural landscape. Pressure to convert redundant agricultural buildings (for example for residential, business or recreational use) can lead to change in character, and additional traffic. Decline of crops grown under glass results in abandoned glasshouses. Redevelopment of such sites can be very intrusive unless the site is appropriate for development, and the development is of a suitable scale, well designed and screened. New agricultural crops may require new infrastructure such as polytunnels, lighting and security fencing, which affect the area's traditional rural character. Positive impacts are being achieved through land management initiatives such as LEAF. 	All
Recreational pressure	<ul style="list-style-type: none"> Increasing interest in active recreation may require further infrastructure (e.g. car parks, footpaths, signage) and potentially increase the volume of traffic on rural lanes. 	All
Climate change	<ul style="list-style-type: none"> Variations in seasonal weather patterns (for example prolonged drought or more intense storms) could result in changes to the extent, composition and survival of the tree cover. Variations in seasonal weather patterns could result in changes to land management practices and land use, adversely affecting the rural character, the strong field pattern and sense of enclosure. 	All

Strategy and Guidelines

Strategy

The overall strategy for this Character Type should be to protect the strongly rural character of the remaining less developed areas.

Any new housing development should be carefully located adjacent to existing settlements in order to maintain the separation of the settlements and the pattern of dispersed dwellings. Positive new uses should be sought for redundant farm buildings in order to protect them from collapse, but any adaptations should respect their scale and traditional character.

The intimate pattern of small fields, enclosed by hedgerows and boundary walls should be maintained and enhanced. This would support and enhance their function as habitat links, connecting woodland and grassland sites.

The outstanding archaeology of this Character Type should be protected, and awareness of its importance increased.

Character Type-Specific Management Guidelines

Protect

- Protect the strongly rural character of the less developed areas of this Character Type, the separation of existing settlements and the pattern of dispersed dwellings and hamlets.
- Protect archaeological sites and their settings.
- Protect historic fabric, including farmsteads, and their settings.
- Protect the intimate pattern of small fields, enclosed by hedgerows and boundary walls.
- Protect any remaining areas of pasture close to settlement centres, which provide an important setting for churches, such as St Martin.
- Protect the less developed areas of this Character Type from further development, including the narrow ridges between the *Enclosed Valleys*.
- Protect the rural character of narrow lanes, discouraging further development that would generate additional traffic and the introduction of road furniture, engineering and signage.

Manage

- Manage hedgerows to improve their landscape and habitat value.
- Manage woodlands and grasslands to help ensure their long term viability. Extend and link habitats where possible.
- Manage agricultural land as sustainably as possible, working with farmers to minimise use of fertilizer and agricultural chemicals which are detrimental to water quality.
- Promote best practice in equine land management to minimise the visual impacts of horse paddocks and associated features in the landscape.

Plan

- Any new development should preferably take place within or adjacent to existing settlements. It should be well-integrated within the existing field boundaries, which can be supplemented with additional hedgerow and tree planting to provide a soft edge and filter views of development from the surrounding landscape.

- Particular care needs to be taken if new development is taking place along roads and at settlement gateways, in order to ensure that the rural character is maintained, and a sprawling suburban feel is avoided.
- Should housing development take place outside settlements, it should be of similar scale and form to traditional rural buildings, and its impacts on views and landscape character must be considered. This is also true for extensions and redevelopment of existing buildings.
- Boundary treatments and gateways to new/ restored rural dwellings should maintain/ enhance rural character, for example avoiding ornamental gateways, tarmac and close-boarded fencing (see design guidance in Part 5).
- Plan to restore field boundaries, replanting hedgerows and tree lines or repairing boundary walls. This is especially important in some open areas where existing buildings can have a large impact in views.
- Explore the potential to create recreational routes through farmland that link with Green Lanes to promote access to the countryside, reduce car use, and the recreational pressure on other areas. Such recreational routes should be low key in terms of design and materials. If associated low-key accommodation is provided (such as camping barns) they should be in re-purposed existing buildings.
- Site masts close to field boundaries or trees to maximise screening, site low-level auxiliary equipment behind native-species screen planting, and encourage mast-sharing.
- Consider expanding the Coastal National Park to include parts of this Character Type which fulfil the necessary criteria, specifically the *North East Farmland* Character Area.
- Develop alternative uses for redundant agricultural buildings which enable them to remain viable, and not fall into disrepair, whilst still remaining sensitive to their rural character and context.
- If new agricultural buildings are required, they should follow the guidelines on design, siting and materials provided in the *Design Guidelines* (Part 5).
- Develop a long-term restoration plan for infrastructure sites such as the quarry south of St Mary's Village.

Further Information

Please refer to the **Landscape Design Guidance (Part 5)** for more information on relevant topics, specifically:

- Accommodating New Development
- Enhancing Rural Character
- Views and visibility.

Relevant **Coastal Units (Part 4)**: 1, 2, 3, 4, 5, 6, 7, 14



Temporary fencing around horse paddocks



Large-scale agricultural building



Tea plantation – a new crop in Jersey

Character Type F: Rocky Shores and Bays



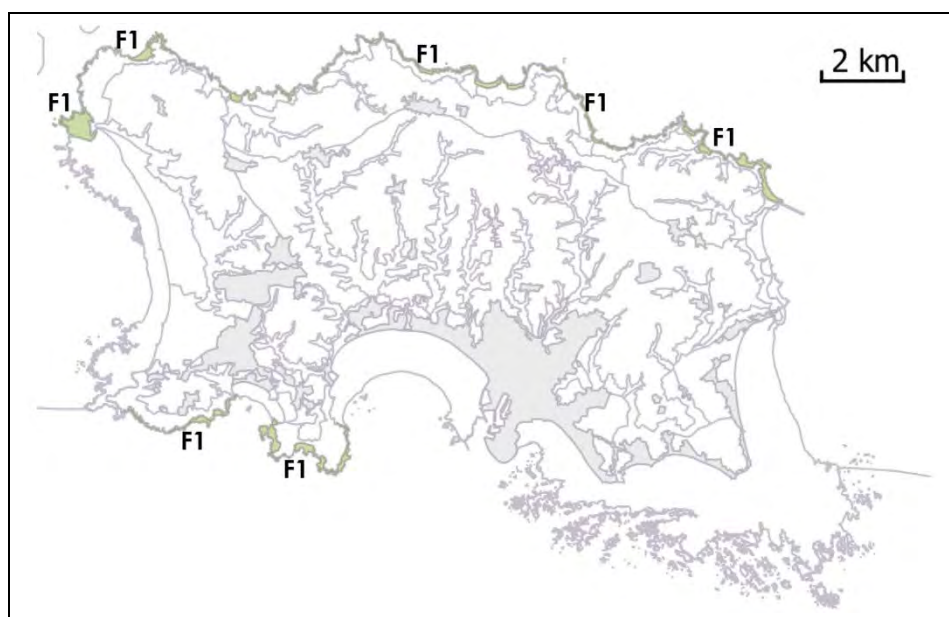
Rocky Shores and Bays near Grève de Lecq, showing inaccessible sheer cliff bases, bays, caves and islets. The earthworks of Le Câtél de Lecq Iron Age hillfort can be seen on the cliff top.

Summary 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.



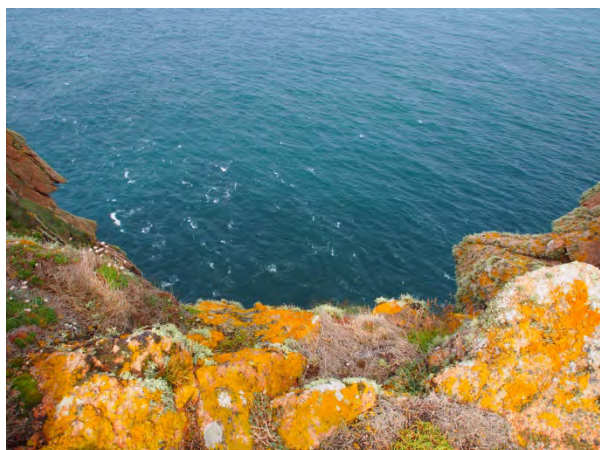
F1: North and South-west Coast

Key Characteristics of the *Rocky Shores and Bays* Character Type

- Very complex underlying geology, dominated by granites in the west, and a mixture of igneous and conglomerate rocks in the east.
- Many coastal and shoreline features, including wave-cut platforms, caves, islets, stacks, pebbly and sandy bays.
- Wide tidal range of up to 12m, exposing shoreline features at low tide.
- Land/ sea uses in accessible areas include recreation and littoral fishing.
- Natural habitats include intertidal rock platforms, small patches of seagrass, pebble and sand beaches, bare rock and coastal water.
- Structures within the Character Type limited to harbours, slipways and defensive structures. There is no other development.
- Historic features include the lower parts of a series of Iron Age coastal forts, as well as Napoleonic and WW2 structures.
- Close visual relationship with early cave occupation sites in adjacent *Cliffs and Headlands* Character Type.
- Much of the area is inaccessible, and is therefore most easily appreciated from nearby cliff tops or from a boat.
- Outstanding and very popular views from accessible shoreline in bays.
- Dramatic contrasts in colours, textures, scents and feel depending on season and weather.
- Remote shorelines have outstanding sense of tranquillity, remoteness, wildness, exposure and an elemental quality. Some bays are more influenced by tourism, but still very attractive.

Natural Influences and Sites

The hard underlying igneous rocks have been shaped by the sea into a series of intricate rocky landforms, including wave-cut platforms, islets, caves and stacks. In areas of weaker rock (or where streams meet the sea), bays have been created with sand, shingle or rock platforms exposed at low tide. Elsewhere the cliffs are almost sheer, and drop straight into deep, clear sea.



Sheer drop from granite cliff into clear sea, Grosnez

Unique rock platform habitats support distinct marine communities of seaweeds, seagrass, fish, and crustaceans. They merge with the adjacent subtidal diverse rock platforms, which are also associated with encrusting organisms (e.g. corals, sponges and bryozoans). These environments are very fragile, and the area is therefore covered by a Marine Protected Area designation, where no mobile fishing gear can be used.



Rock platform on conglomerate, La Coupe

This is a geologically-complex and varied area, and the many geological SSIs represent geological features and example exposures of different rock types.

The intertidal area along this coast is relatively narrow, and steeply sloping. It has a high tidal range and is also very exposed to the power of wind and waves. There are few sea walls or sea defences, enabling a natural transition between water and land.

Designated Nature Conservation Sites:

SSI (Geological)	Le Petit Etaquerel; Le Pulec; Le Pinnacle; La Cotte à la Chèvre; Île Agois; Sorel Point; Giffard Bay; Belle Hougue Caves; Les Rouaux; Bouley Bay and Les Hurets; L'Islet; La Tête des Hougues; La Cotte de St. Brélade
SSI (Ecological)	Portelet; Noirmont.
Marine Protected Area: No Mobile Gear Zone (NMGZ)	North Coast; St Brélade; Fliquet; St Aubin and Small Roads

Cultural Influences and Sites

The cultural history of this Character Type is closely linked to the adjacent Cliffs and Headlands, and many of the designated sites boundaries include both Types. These include the famous cliff caves at La Cotte a la Chèvre and La Cotte de St. Brélade, with their evidence for early human occupation. There is also a series of Iron Age coastal forts along the northern cliffs. Further evidence for Iron Age occupation has been found at L'Île Agois, which contained pottery from both England and France. Later, L'Île Agois contained an early medieval settlement which has been interpreted as the site of an early Christian hermitic monastic site.

Much of the shoreline within this Character Type is dangerous and inaccessible, so most human activity has taken place within the bays. Vraicing (collecting seaweed) took place here historically, and it is likely that the secluded bays were ideal for loading and landing contraband. Local names for bays,

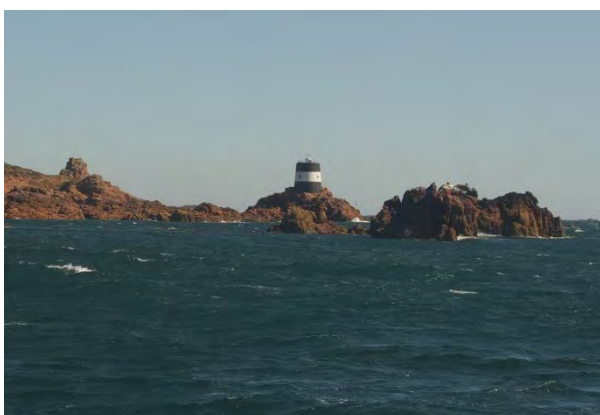
rocks and other coastal features have been passed down between generations.

There are several small harbours and/ or slipways within the *Rocky Shores and Bays* Character Type, at Le Pulec, Grève de Lecq, Bonne Nuit, Bouley Bay, Rozel and Fliquet. The harbour quays were constructed during the oyster-export boom of the mid-19th Century. Today they are used by fishing and leisure boats, and are listed because of their special heritage interest. Many ships were wrecked on this dangerous coast.



Harbour Quay at Bonne Nuit Bay

There are also some defensive sites located at the base of the cliffs or on rocky outcrops. These are mostly towers from the Napoleonic period (Listed Buildings), but there are also some WW2 German occupation structures, most of which are listed.



Noirmont Tower Napoleonic defence

Recreation within the Character Type includes angling, beachcombing, sea kayaking, climbing, coastering, paragliding, droning and relaxing on the beaches. There is also a dive centre at Bouley Bay.

Designated Cultural Heritage Sites:

Listed Buildings (Grade 1/2)	Numerous, including slipways, harbours, forts, towers, and German Occupation sites
Listed Places (Grade 1/2)	La Tête de Plémont (part); Le Câtél de Lecq (part); L'Île Agois; Belle Hougue Caves; La Cotte de Saint Brélade (part)
Coastal National Park (2011 Island Plan)	Portelet Tower is an outlier of the Coastal National Park

Perceptual Qualities

The bases of many cliffs are not accessible, and are therefore appreciated from the coast paths, or from the sea. However, bays provide much easier access, and are popular destinations. The bays are relatively small and intimate in scale, and it is possible to experience the close physical and visual connection between land and sea, which creates an illusion of space and remoteness.

Away from the tourist hotspots, the coast feels more elemental, and there are places where it is not possible to see another person or building. This creates a sense of remoteness, wildness and tranquillity, as well as exposure, and danger.

There are views of the *Rocky shores and Bays* of the south-west coast from ferries in and out of St Helier. Therefore, this part of the Character Type is seen by many people and contributes to their impression of Jersey.

The character of the *Rocky shores and Bays* changes dramatically depending on weather and season, which affects the colour, texture and the sense of exposure.



Summer colours at Plémont beach

Natural Capital and Ecosystem Services

Type of Ecosystem Service	Existing contributions	Opportunities
Cultural Services	<p>This Character Type provides the setting for key cultural sites including early cave occupation sites, and Iron Age defensive sites. It therefore contributes to an understanding of these sites and has educational value.</p> <p>The Character Type offers opportunities for tourism and recreation (particularly in accessible bays) where people can enjoy positive aesthetic experiences and engaging with the sea and natural environment. These are beneficial to health and wellbeing.</p>	Retaining the Character Type as an undeveloped environment will protect these settings, and also enable it to continue to provide benefits to people's health and wellbeing
Provisioning Services	Limited fishing (potting and angling) provides food and contributes to the local economy. Historically seaweed gathered here was used as fertilizer.	Continue sustainable management of fishing to ensure that fish stocks remain good, and that fragile coastal habitats are not damaged.
Regulating Services	<p>Shoreline rocks help to dissipate wave energy, and to slow waves before they make landfall. This is particularly important during storms and high tides, and where settlement occurs near to the coast.</p> <p>Coastal environments help to improve air and water quality through filtration, mixing, mineralisation and photosynthesis.</p>	These ecosystem services are going to become increasingly important in the context of climate change and sea level rise.
Supporting Services	Habitats within the Character Type support a wide range of marine organisms, thereby contributing to biodiversity and a healthy natural environment. Photosynthesis by shoreline plants creates oxygen and therefore contributes to supporting all life.	

Character Areas

Character within the *Rocky Shores and Bays* is relatively homogenous, and this Character Type has not therefore been subdivided into distinct Character Areas.

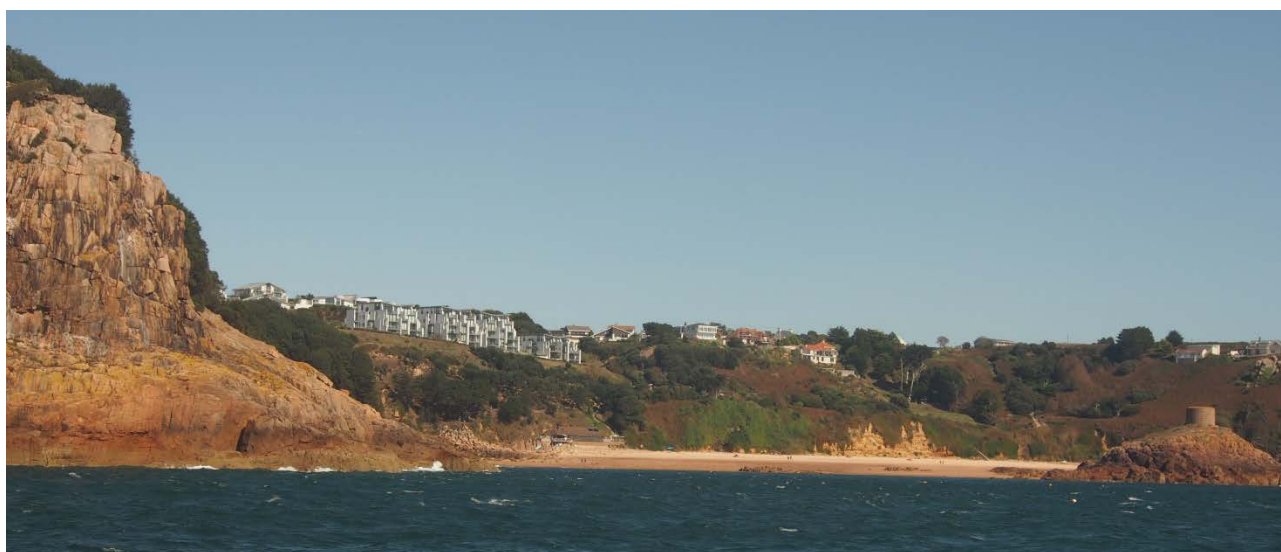
Sensitivities, Condition and Forces for Change within the *Rocky shores and Bays* Character Type

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.

Landscape Condition

1. At present, there is little development within this Character Type, and it therefore retains its natural character, and remains an unmodified interface between land and sea.
2. Coastal developments (particularly on adjacent cliff tops) can have significant impacts on the setting of this Character Type, especially when they occur in areas which are otherwise undeveloped. This is a particular problem where coastal properties are redeveloped as much larger and more prominent structures than previously. It results in the *Rocky Shores and Bays* losing their sense of remoteness and naturalness, and instead feeling overlooked. Some of these developments have taken place since the *1999 Countryside Character Appraisal* was produced.
3. There are localised issues with anti-social behaviour such as dog fouling on beaches, and carelessness by recreational users (such as not replacing rocks when low water fishing). There are also some issues with marine leisure, particularly in the south-west of Jersey, such as jet skis from St Brelade's Bay. However, the majority of the area is generally in good condition, and the more remote stretches of coastline remain largely unaffected by human activity.
4. The natural form of the shoreline has been modified to the east of Ronez Quarry at Sorel Point.



Rocky Shores and Bays scenery at Portelet Bay, with new cliff-top development behind

Forces for change

Landscapes and seascapes are dynamic and are constantly affected by a variety of forces for change, which may be natural (e.g. coastal erosion) or man-made (e.g. development pressure, and changes in farming practices). The following table illustrates the main forces for change acting on this Character Type, and how they will potentially affect the landscape/ seascape. Recommendations for addressing these issues are provided in the following section.

Issue	Potential impacts on sensitive special qualities	
Marine development	<ul style="list-style-type: none"> Onshore infrastructure associated with marine energy generation schemes would impact on the undeveloped quality of the Character Type. 	
Infrastructure	<ul style="list-style-type: none"> Changes in sea defences and shoreline management could impact on coastal dynamics and beach profiles. Pollution incidents would damage sensitive coastal habitats. 	
Housing	<ul style="list-style-type: none"> New coastal housing or other visible developments impact on the setting and context of this Character Type. 	
Land /sea management	<ul style="list-style-type: none"> Mobile fishing gear risks damage to fragile and important habitats. The Character Type is therefore covered by a No Mobile Gear Zone. 	
Recreational pressure	<ul style="list-style-type: none"> Inconsiderate recreational use such as fouling by dogs or littering reduces people's enjoyment of the area. They also reduce its sense of wildness and tranquillity. Careless behaviour such as not replacing rocks correctly when low-water fishing can damage sensitive intertidal or shallow marine habitats. Too many visitors risk damage to sensitive marine habitats. Impacts from marine leisure (jet skis etc.), particularly in the south-west around St Brelade's Bay 	
Climate change	<ul style="list-style-type: none"> Increased sea level rise due to climate change will change coastal dynamics. This is likely to lead to increased levels of coastal erosion, including beach scour, and attrition of rock platforms and coastal cliffs. 	

Strategy and Guidelines

Strategy

The overall strategy for this Character Type is to retain it as a natural interface between land and sea, and to protect its undeveloped character. Further damage to its setting should be avoided. The most remote areas should remain inaccessible and not be subject to human interference.

The distinctive marine environments, and the habitats which they support, should be protected through continued careful management of fishing and recreation. Visitors should be encouraged to visit the more accessible areas, but this should not result in demand for larger-scale recreation facilities or infrastructure. The simplicity of many of the bays is an intrinsic part of their character.

This Character Type forms the interface between the *Shallow Sea* and the *Cliffs and Headlands* Character Types, and it therefore needs to be managed seamlessly with both of them.

Character Type-Specific Management Guidelines

Protect

- Protect the natural interface between land and sea, and avoid introducing new man-made elements.
- Protect the outstanding sense of remoteness and wildness which can be experienced in some locations within this Character Type.
- Protect the character of the bays, ensuring that development inland remains low-key, and does not adversely impact on the setting of this Character Type.
- Protect the settings of historic clifftop/ island sites.
- Protect marine and intertidal habitats from damage by recreation, development or fishing.

Manage

- Manage fishing within the Character Type, continuing to enforce 'No Mobile Gear Zones' to prevent damage to fragile habitats (seagrass, kelp forest and diverse rock platform) by fishing equipment. Ensure seamless marine management with the adjacent *Shallow Sea* Character Type.
- Manage recreation where necessary, for example through campaigns against dog fouling on beaches. Try to avoid putting signs or other 'clutter' such as bins within this Character Type, as they are detrimental to its natural character.

Plan

- There should be a general presumption against development within this Character Type.
- Carefully consider the visual impacts on this Character Type of proposed development in nearby Character Types. If the impacts of such development appear to be unacceptable then it should be resisted. Consider views from both land and sea.
- Consider expanding the Coastal National Park to include this Character Type.
- If there is a requirement for onshore facilities for offshore energy schemes, ensure that they are located in bays with existing structures, and keep them as low-key as possible.
- Continue work to record historic rock and coastal names before this traditional oral knowledge is lost.
- Monitor rates of coastal erosion and change, to aid future planning.
- Seek to ensure that the land/sea interface at Ronez Quarry is kept as natural as possible.

Further Information

Please refer to the **Landscape Design Guidance (Part 5)** for more information on relevant topics, specifically:

- Views and Visibility

Relevant **Coastal Units (Part 4)**: 2, 3, 4, 5, 6, 12, 13, 14

Character Type G:

Bays with Intertidal Flats and Reefs



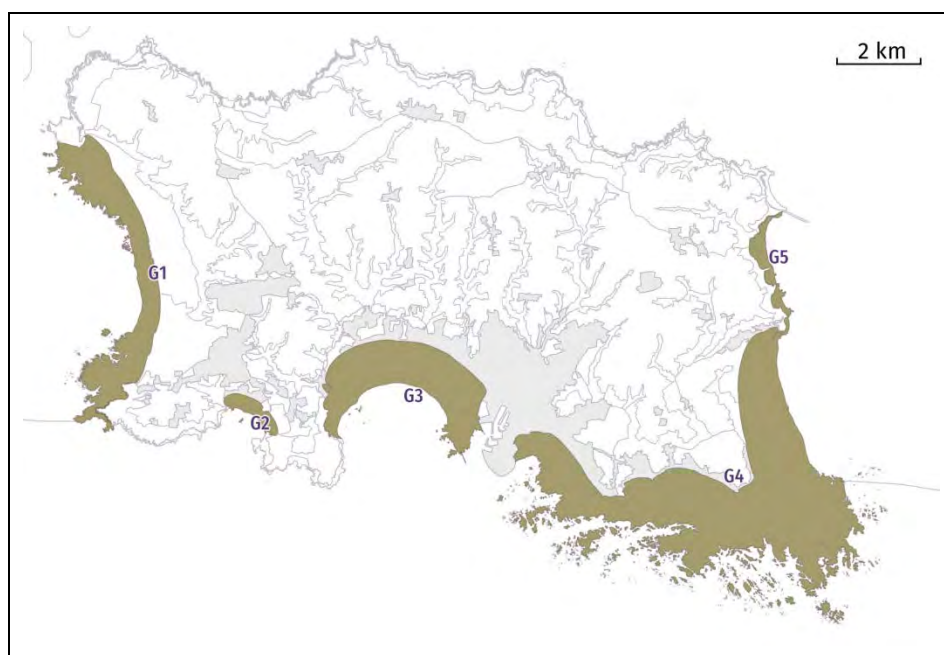
Bay with Intertidal Flats and Reefs scenery as seen from the slipway at Le Hocq

Summary 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, and covers 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.



G1: St Ouen's Bay Intertidal Zone

G2: St Brelade's Bay Intertidal Zone

G3: St Aubin's Bay

G4: South East Coast Intertidal Zone

G5: St Catherine's and Anne Port Intertidal Zone

Key Characteristics of the *Bays with Intertidal Flats and Reefs* Character Type

- Underlying geology varies, but generally the largest sandy bays occur over Jersey shale, and reefs on harder igneous rocks.
- Topography includes gently-shelving beaches, and steeper areas of rocky reefs, platforms and small islands. This is an intertidal landscape of channels, pools, ridges and summits.
- Jersey's large tidal range (the world's 3rd biggest) makes this a unique seascape.
- The vast majority of the intertidal area is in its natural state. Some parts are used for recreation, and there is also some oyster farming in the east.
- Extensive natural intertidal habitats, including flooded gully complexes, rich sediment environments, intertidal seagrass beds, shingle and bare rock.
- No settlement, although some offshore towers used as heritage lets and a youth adventure centre.
- Occasional historic features relating to environmental exploitation, including walls, fish traps, vraicing tracks, etc. Some features may date back to the prehistoric period.
- Several defensive structures constructed on islets within bays or beyond headlands.
- Outstanding views from within the Character Area looking back towards the land, and out to sea. The Character Area is also key to coastal views from land, and makes a significant contribution to Jersey's sense of place.
- Contrasting colours and textures between smooth or ridged sand, and rough rocky reefs.
- An outstanding sense of tranquillity, remoteness, wildness and exposure to the elements. Parts of the scenery here has been described as a 'moonscape.'

Natural Influences and Sites

The *Bays with Intertidal Flats and Reefs* are a rare and unique intertidal environment, and form Jersey's only untouched and natural landscape. They comprise a panorama of sand, shingle, rock pools, channels and reefs which are revealed at low tide, and their extent is due to Jersey's exceptional tidal range (approx. 12m) and strong currents.

Until about 8000 years ago these areas would have been dry land. Evidence of these early land surfaces exist in the form of peat deposits and a 'fossil forest' in St Ouen's Bay, and layers of clay visible to the south-east of Jersey. Green Island also contains a rare example of glacial loess cover which provides evidence of past environmental conditions.

The reefs generally comprise igneous rocks – mostly granite, but also diorite and gabbro. Around St Catherine's Bay, the underlying geology is conglomerate. There is also a large isolated conglomerate rock near Seymour Tower; how it got to that location is not known. The largest bays (St Ouen's Bay and St Aubin's Bay) are underlain by softer shales.



Isolated conglomerate rock on granite reef near Seymour Tower

This Character Type includes extensive shallow sandy bays, as well as large areas of rocky reef. Because the underlying igneous rocks are so hard, coastal process are slow, so the pattern of shallows, deeps, channels, ridges and reefs has changed very little in decades. In some places (such as St Ouen's

Bay and Ouaisné) the presence of sea walls has changed the natural dynamics of the beach.

The *Bays with Intertidal Flats and Reefs* contain a wide range of exceptionally rich intertidal habitats which form important breeding grounds for crustaceans and fish. The principle broad biotopes are flooded gullies; medium to coarse sandflats; gravelly sand; intertidal seagrass (*Zostera marina*) beds and exposed bedrock. Biodiversity sampling has so far revealed 1,023 individual species, some of which are not found anywhere else in the British Isles. Species include seaweeds, shellfish, clams, fish, birds (breeding and feeding), sand-dwellers and salt-tolerant plants and algae. Ormers (a type of large sea-snail) are also found here, but they are becoming increasingly rare.



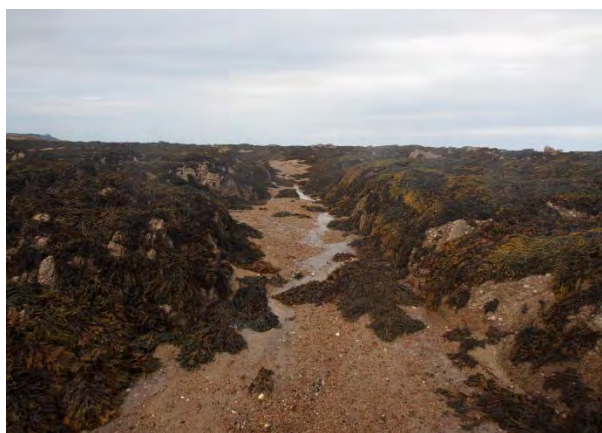
This granite rock provides a home for an ormer, as well as numerous types of seaweed, limpets, barnacles and algae

Designated Nature Conservation Sites:

SSI (Geological)	La Motte (Green Island), Le Croc and Le Nez; Anne Port Bay; Le Petit Etacquerel
SSI (Ecological)	St Aubin's Fort
Ramsar	Jersey's South East Coast Ramsar Area
Marine Protected Area: No Mobile Gear Zone (NMGZ)	St Aubin's and small Roads; St Brelade's; South East; East Coast

Cultural Influences and Sites

The natural environment of the *Bays with Intertidal Flats and Reefs* contains a range of man-made features. The oldest features are thought to relate to a relict prehistoric landscape, and include walls and standing stones. Centuries of exploitation of intertidal resources have left their subtle marks, including V-shaped medieval fish traps, and stones to support bass lines. 'Vraicing tracks' enabled carts to get to the shoreline quickly to collect seaweed, and are often associated with slipways on the coast.

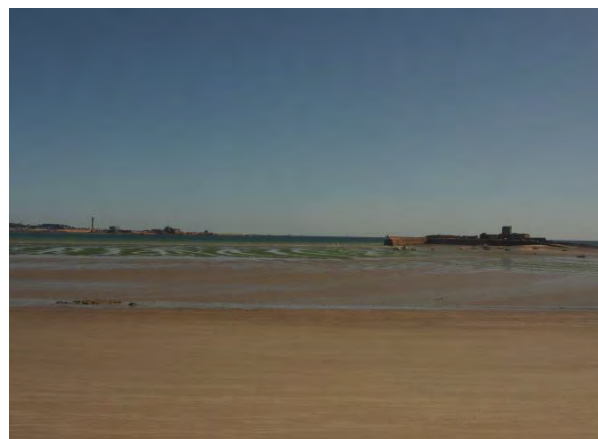


Vraicing track near La Rocque Harbour

There are also more substantial structures, built for defence or navigation. The oldest defensive sites are St Aubin's Fort and Elizabeth Castle, constructed in Tudor times on islets at opposite sides of St Aubin's Bay. Elizabeth Castle incorporates St Helier's hermitage. Both can be reached by causeways across the sand at low water. Seymour Tower (over a mile offshore to the south-east of Jersey) was constructed in the 1780s, Icho Tower, and La Rocco Tower were built slightly later.

There are several harbours and quays associated with the more sheltered bays on the east and south coasts, such as at St Aubin, Gorey and St Catherine's Bay. Although these harbours provided havens for shipping, the reefs and islets were (and remain) a grave danger. Within the Character Area there are therefore several lighthouses, beacons and navigation marks to

aid ships into harbour and avoid rocks. The most well-known of these is Corbière lighthouse. There are two known shipwreck sites (HMS Severn and Lynwood) within the Royal Bay of Grouville, and a cluster around Elizabeth Castle.



St Aubin's Fort (right) and Elizabeth Castle (left) in St Aubin's Bay

This Character Type is also associated with historic shipbuilding activity. Hundreds of wooden sailing ships were constructed on the sands of St Aubin's Bay and the Royal Bay of Grouville. These were ephemeral industries, and few traces remain, but they were very important to Jersey's history and economy. Other related industries such as ropemaking and ironworking also took place nearby. There is a long history of oyster farming in the Royal Bay of Grouville which continues today.

Today, the *Bays with Intertidal Flats and Reefs* are primarily used for recreation. The long waves in St Ouen's Bay make it a venue for surfing, and there are tidal lidos at Havre des Pas and West Park. Elsewhere, people visit the area at low tide for low-tide fishing, ornithology and 'getting away from it all.' Recent years have seen a rise in popularity of guided 'foraging' expeditions. This is however a potentially dangerous area, with sudden changes in tides and currents. Often knowledge of this landscape and how to enjoy it safely is passed down between generations. Navigation marks are also part of the local cultural heritage. The unique place names and rock names describe the area's topography and history.

Designated Cultural Heritage Sites:

Listed Buildings (Grade 1/2)	Corbière lighthouse; La Rocco Tower; St Aubin's Harbour; St Aubin's Fort; Elizabeth Castle and Hermitage; La Rocque Harbour; Seymour Tower; Havre des Pas Bathing Pool; Gorey Harbour; numerous slipways; numerous German Occupation Sites
Listed Places (Grade 1/2)	St Ouen's Bay Peat Beds; Icho Tower and Islet; La Motte/ Green Island; Grève d'Azette menhir
Coastal National Park (2011 Island Plan)	La Rocco Tower, Elizabeth Castle, Corbière Lighthouse and St Aubin's Fort are outliers of the Coastal National Park

Perceptual Qualities

This Character Type is exceptional for its raw beauty. It has been described as 'Jersey's last wilderness' and also as a 'moonscape'. These descriptors attempt to capture its extraordinary sense of wildness, remoteness and tranquillity. Here, there is a genuine sense of isolation and also of vulnerability to the forces of nature. It is not a relaxing environment, but it is a strongly elemental one, with an enhanced awareness of open space, exposure, weather, incoming tides and currents. There are few places where it is possible to experience such a lack of human influence within the immediate surroundings. It is unique to Jersey, and possibly the world.

It is a strongly dynamic place, changing constantly with the rhythm of the tides, but the geomorphological features within it are surprisingly constant.



'Moonscape' intertidal landscape as seen from slipway near La Pulente

Where human influences (such as vraicing tracks) occur, it is possible to feel a strong sense of connection with the past. This may be because they are experienced physically, rather than simply through distant observation. The presence of defensive towers (either within the Character Type or immediately adjacent to it on the coastal edge) also add to the sense of history.

These towers, along with lighthouses, beacons and other onshore features take on an added importance as landmarks, aiding safe passage back to shore. When topography or fog block views of landmarks it is possible to quickly become disorientated. Aside from practical purposes of orientation, the landmarks also form focal points in views.

This Character Type contains a wide range of colours, patterns and textures, both in the sweeping views across it, but also up close within it. The different patterns of smooth and ridged sand, shingle, rock and water combine to create varied scenes. Variations in light, aspect and weather are also important, and the *Bays with Intertidal Flats and Reefs* are particularly dramatic at sunrise and sunset. At low tide, this Character Type is a key feature in views out to sea from land, particularly when viewpoints are elevated.



Gentler intertidal scenery in St Catherine's Bay



La Rocco Tower forms a focal point in views of St Ouen's Bay.

Natural Capital and Ecosystem Services

Type of Ecosystem Service	Existing contributions	Opportunities
Cultural Services	The Character Type contains cultural heritage relating to past exploitation of intertidal environments, defence and navigation. It also provides outstanding opportunities for people to get close to nature, and to experience a unique, wild and elemental landscape. As such it contributes to people's well-being and appreciation of the natural environment. It also provides opportunities for education and research, and limited opportunities for tourism and recreation.	The fragility and inherent danger of this environment means that there are limited opportunities to increase visitor numbers. However, there are opportunities to raise awareness of this unique environment and its importance, for example through exhibitions, webcams etc.
Provisioning Services	The Character Type supports limited and informal low-water fishing, and also commercial oyster farming. Traditionally, seaweed has been harvested from here, and used as fertilizer.	Care must be taken that the resources are not over-exploited.
Regulating Services	<p>The Character Type regulates against extreme marine events such as storm surges by dissipating energy and slowing waves (particularly in rocky areas). Reefs and beaches therefore protect coastal areas and seawalls from tidal and storm damage. This in turn reduces the need for hard sea defences (although it doesn't remove the need for them altogether).</p> <p>Water and air quality are improved by filtration, mineralisation and photosynthesis.</p>	The role of this Character Type in regulating marine dynamics/ events, air quality and water quality is likely to increase in response to climate change.
Supporting Services	<p>The shallow marine environments found within this Character Type provide a number of supporting services, including habitat for marine species at larval stage, and increasing genetic diversity. It also forms specialist habitats for shallow water marine species.</p> <p>Seagrass beds have an important function in carbon sequestration, helping to mitigate climate change.</p>	Limiting damaging activities will enable the Character Type to continue to fulfil its supporting functions.

Character Areas

Within the *Bays with Intertidal Flats and Reefs* Character Type there are five distinctive Character Areas. Each one has a unique 'sense of place' as a result of its combination of landscape elements.

Character Area G1: St Ouen's Bay Intertidal Zone

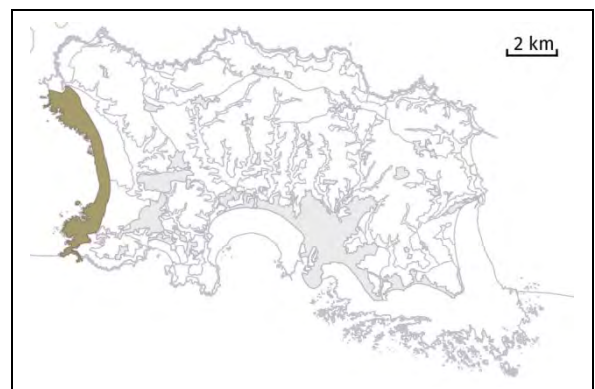


Aerial view of the southern end of St Ouen's Bay at low tide. The circular La Rocco Tower can be seen towards the bottom right of the image.

This Character Area comprises most of Jersey's west coast, and is approximately 6km long. It forms Jersey's largest sandy beach, and also includes areas of rocky reef, particularly at the northern and southern ends of the bay. This is one of the few locations in Jersey where a very large scale landscape can be experienced, and the bay is also unusual in that it is backed by a largely undeveloped coastal edge. This further adds to its character.

The exposed beach has a long fetch, and receives the full force of Atlantic breakers. It is therefore popular for surfing. Much of the underlying geology is of soft Jersey shale, which has been eroded by the sea to create a gently curving bay. Prehistoric peat and land surfaces (including remains of a 'fossil forest') are buried beneath the beach. Harder granite rocks form the reefs and headlands at either end of the bay.

These headlands (Corbière to the south and L'Etacq to the north) frame views from within the bay and are important landmarks. The scarp forms the backdrop to views inland. La Rocco Tower, built on an islet in the reef and only accessible on foot at low tide, forms a strong visual feature within the bay.



Character Area G2: St Brelade's Bay Intertidal Zone

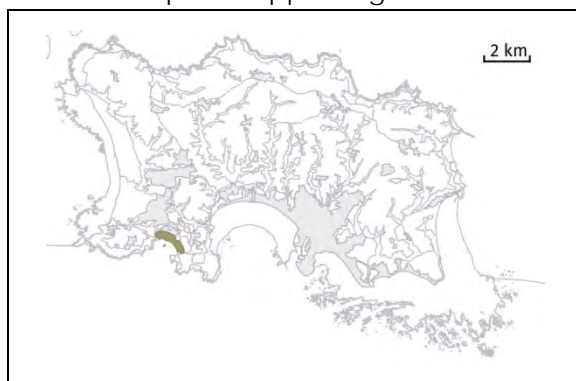


View of St Brelade's Bay from the Promenade on a summer's day.

This Character Area is located in the south-west of Jersey. It comprises a relatively small and contained sandy bay enclosed by granite cliffs. It is very popular with tourists, and there are several hotels and other visitor facilities adjacent to the bay. It is valued for its scenery, its relative shelter for swimming, and the fact that there is some sand uncovered at high tide, so the beach can be enjoyed all day. The width of the beach ranges from approximately 10m at high tide to approximately 300m at low tide.

A small promontory of exposed rock (Le Grouin) extends into the bay and divides it into two sections at high tide, with Ouaisné to the east and the busier tourist area to the west. Le Grouin, along with the cliffs and headlands at the seaward ends of the bay, are distinctive features which contribute to its sense of place. The headlands protect the bay from westerly winds, but it is still subject to ocean swell under certain conditions. The sand and rock pools support high marine biodiversity.

The beach stops with a sea wall (partly a German anti-tank defence) at the east end, and a promenade at the western end. Inland, to the east at Ouaisné, there is an area of undeveloped coastal plain which includes sand dunes and coastal slacks. A well-treed escarpment forms the backdrop to the whole character area. On the seaward side, the Character Area merges with the *Shallow Sea* Character Type.



Character Area G3: St Aubin's Bay Intertidal Zone



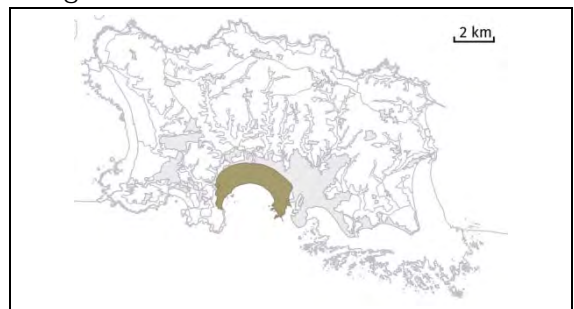
View north-east across the intertidal area from St Aubin's Fort

This Character Area is located on the south coast of Jersey, immediately to the west of St Helier. It is bounded by Noirmont Point to the west, and La Collette to the east. It is a large, sweeping, sandy bay, and its 'horseshoe' shape reflects its erosion from soft Jersey Shale. The intertidal area is exceptionally wide, containing over 4km² of intertidal sand, and the shallow profile of the beach means that tides advance and retreat very quickly.

The bay has a long history of settlement, and has been protected from attack since Tudor times. St Aubin's Fort (constructed on a rocky islet) and the nearby harbour were two of Jersey's earliest anchorages. At the opposite side of the bay is another rocky islet which is the site of St Helier's Hermitage, and also the Tudor Elizabeth Castle. These sites are both important focal points within the bay. St Aubin's Bay has a wooded setting to the west and north, formed by trees on the *Escarpment*, the *Enclosed Valleys* around St Aubin, and the trees on the eastern side of Noirmont Point. The bay's eastern setting is more developed, and includes St Helier waterfront and harbour and the La Collette industrial area.

The bay provides important habitats for roosting winter wading birds, and also contains valuable *Zostera* (seagrass) beds. In summer, nutrient enrichment of water flowing from streams into the shallow bay can cause sea lettuce to flourish.

St Aubin's Bay Intertidal Zone is popular for tourism and recreation. Its sheltered conditions, lack of rocks and proximity to St Helier and St Aubin's Harbours mean that it is particularly popular for watersports.



Character Area G4: South East Coast Intertidal Zone



Evening view across the South East Coast Intertidal Zone from La Rocque Harbour towards Seymour Tower

This Character Area is located in the south-east of Jersey, and extends from La Collette to Gorey, including the Royal Bay of Grouville. Although it can be thought of as two bays in visual terms (and covers two Coastal Units) it has a consistency of character and can therefore be considered as a single Character Area. It contains the largest expanse of rocky reef within the Character Type, extending approximately 3km out to sea.

Its magnificent seascape is revealed at low tide, and includes sandy bays (Havre des Pas, Grève D’Azette, St. Clement’s Bay and the Royal Bay of Grouville) as well as extensive areas of rocky reefs made up of a range of granites, diorites and gabbros. These form a network of reefs, islets, channels, pools and ridges which have been described as a ‘moonscape’. Within the Character Area, the Seymour and Icho towers, lighthouses and beacons form seamarks, and coastal features (such as Mont Orgueil) form distinctive landmarks. Vraicing tracks criss-cross the reefs providing channels between slipways and the sea, and there is evidence of prehistoric and later archaeology associated with exploitation of the area’s resources. There is a popular Art Deco tidal lido at Havre des Pas, originally constructed in 1895.

The area is extremely important for its biodiversity, and is designated a Ramsar site for its rich ecological value and character. Many rare species thrive here. The Royal Bay of Grouville is the least exposed bay in Jersey. It is popular for watersports, and there is a long and continuing history of oyster growing.



Character Area G5: St Catherine's and Anne Port Intertidal Zone

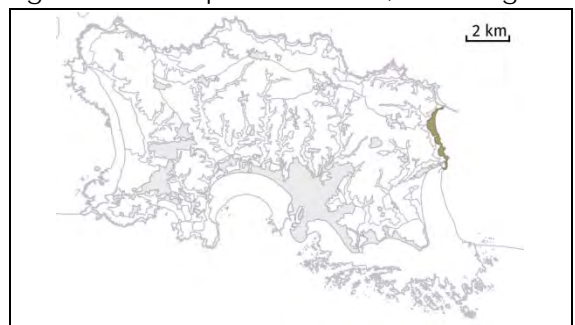


View from Archirondel Tower, looking south across the southern part of St Catherine's Bay at Archirondel

This Character Area is located in the north-east of Jersey, and comprises a series of sheltered coves between Gorey Harbour and St Catherine's Breakwater. It has a distinctive feel compared to the other Character Areas within this Type, and forms a transition between the rugged north coast and gentler south coast of Jersey.

Its underlying geology is complex, but it is dominated by Rozel conglomerate rocks. The reefs are not as extensive as elsewhere, and the shoreline is relatively steeply sloping, meaning that there is less beach visible at low tide. At high tide, the sea comes right up to the land, so there is little or no beach. The aspect of this Character Area means that it is sheltered from prevailing south-westerly winds. Its proximity to the French coast means that there is limited fetch, so waves are generally of lower energy.

There is a scattering of houses along the coastal road, but generally settlement is limited. The low cliffs are often wooded, which adds to the sense of softness and enclosure. The Character Area contains an important legacy of defensive structures dating from the Napoleonic wars, including the monumental St Catherine's Breakwater, the unfinished Archirondel Breakwater, and two Jersey Round Towers, including Archirondel Tower with its distinctive red and white painted seaward face. Some of these features are located within the adjacent *Cliffs and Headlands* Character Type, but they nevertheless act as prominent landmarks within the area, and add to the sense of place.



Sensitivities, Condition and Forces for Change within the *Bays with Intertidal Flats and Reefs* Character Type

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.

Landscape Condition

1. With the exception of careless recreational activities (such as not replacing rocks when low water fishing), the majority of the area is generally in good condition and is largely unaffected by human activity.
2. The Character Type has seen relatively little change since the publication of the 1999 *Countryside Character Appraisal*, although recent research has increased understanding of its habitats and species.
3. Damage to seagrass beds from mooring chains is an issue at St Catherine's Bay, Anne Port and Royal Bay of Grouville.
4. Growth of sea lettuce is a problem in summer, particularly in St Aubin's Bay, as several streams flow into this bay carrying enriched levels of nutrients.
5. There are localised issues of damage to biodiversity hotspots by vehicles, e.g. around Icho Tower, Seymour Tower, Grouville Bay and St Aubin's Bay.
6. Concessions for oyster farming are currently limited to areas where it will do relatively little damage to sensitive habitats. Driving tractors across the sand to access the oyster beds is a pollution risk and may also lead to sand compaction.
7. Some onshore developments are very visible from this Character Type, and can also affect the setting of landmark features (for example development on the coast near La Corbière, and within the setting of Elizabeth Castle).

Forces for change

Landscapes and seascapes are dynamic and are constantly affected by a variety of forces for change, which may be natural (e.g. coastal erosion) or man-made (e.g. development pressure, and changes in farming practices). The following table illustrates the main forces for change acting on this Character Type, and how they will potentially affect the landscape/ seascape. Recommendations for addressing these issues are provided in the following section.

Issue	Potential impacts on sensitive special qualities	Character Areas affected
Marine development	<ul style="list-style-type: none"> • Energy generation schemes, such as a tidal lagoon or shallow water wind turbines (and their associated onshore infrastructure), would impact on the undeveloped character of the Character Type, particularly in Character Areas where there are not currently views of infrastructure. • Infrastructure associated with marine power/ telecommunications cables may impact on sensitive habitats and the undeveloped character. 	All

Infrastructure	<ul style="list-style-type: none"> Reclamation of intertidal areas for development would impact on the undeveloped character and may affect marine habitats within this Character Type. They would also be visible from it and would impact on its setting, and the settings of historic landmarks. Changes in sea defences and shoreline management could impact on coastal dynamics and beach profiles. 	G3, G4
Housing	<ul style="list-style-type: none"> New coastal housing and built development would impact on the setting of this Character Type, and potentially on the settings of heritage landmarks and focal points within views. Impacts are likely to be greatest in Character Areas where the setting is currently relatively undeveloped. 	All
Land /sea management	<ul style="list-style-type: none"> Oyster farming risks impacting on fragile marine environments unless sites are very carefully chosen. Land management practices on land (such as use of agricultural chemicals) impacts on environmental quality of beaches, such as excessive growth of sea lettuce. This impacts on character and recreational use due to visual and smell impacts. It also affects intertidal seagrass beds. Mobile fishing gear risks damage to fragile and important habitats. Mooring chains can cause damage, particularly to intertidal seagrass beds. Dumping of seaweed can also affect seagrass beds. 	<p>G3 (land management)</p> <p>G4 (Oyster farming)</p> <p>G1, G2, G3 (mobile fishing gear)</p>
Recreational pressure	<ul style="list-style-type: none"> Inconsiderate recreational use such as fouling by dogs, or use of jet skis too near the shore reduces people's enjoyment of the area. They also reduce its sense of wildness and tranquillity. Careless behaviour such as not replacing rocks correctly when low-water fishing can damage sensitive intertidal or shallow marine habitats. Vehicles compact sand habitats, damage intertidal seagrass beds, and are also a pollution risk. Too many visitors risk damage to the sensitive marine habitats, including seasonal (winter) disturbance to wading bird habitat. Use of historic properties as heritage lets could have low-level impacts on character and habitats. Light pollution from occupied properties may be an issue unless carefully managed. 	All
Climate change	<ul style="list-style-type: none"> Increased sea level rise due to climate change will change coastal dynamics, and increase coastal erosion. It would also reduce the size of this Character Type as more ground would be covered at low tide. Water quality in streams affects intertidal environments, particularly in dry summer months. This would be exacerbated by climate change, as droughts are likely to become more extreme. 	All

Strategy and Guidelines

Strategy

The overall strategy for this Character Type should be to protect its natural character and minimise the impacts of human activity.

Awareness of the importance and rarity of this Character Type should be raised both for local people and for visitors. People should be encouraged to visit and enjoy beaches and accessible reefs. However, recreation should be within 'safe levels' where sensitive marine habitats and vulnerable species (such as ormers) are not damaged and over-exploited. If necessary, a system of zoned management should be put in place so that people are discouraged from visiting the most sensitive parts of the reefs. However, this should not result in signage or other 'clutter' appearing within this unspoilt Character Type.

Any commercial activities, such as oyster farming should also be subject to strict spatial controls.

It will be necessary to carefully consider (and mitigate if necessary) any large infrastructure schemes within this Character Type relating to shoreline management, energy generation or communications.

The 'knock-on' implications of land management and development control decisions taken in connected Character Types and urban areas should also be carefully considered.

Character Type-Specific Management Guidelines

Protect

- Protect the outstanding 'naturalness' of this Character Type and the extremely important and rare intertidal / shallow marine habitats which it supports.
- Protect cultural features (such as historic towers, lighthouses, Elizabeth Castle and St Aubin's Fort) and their settings (Note - the settings may include parts of adjacent Character Types).

Manage

- Manage recreation, encouraging local people and visitors to enjoy areas which are relatively robust, but minimising disturbance to particularly sensitive habitats.
- Where necessary, develop spatial zoning for some activities to minimise conflicts between user groups, and also to keep harmful activities away from the most sensitive areas. However, the zoning should be done without intrusive signage which itself reduces the sense of wildness.
- Discourage non-essential vehicles from accessing beaches.
- Continue to enforce 'No Mobile Gear Zones' to prevent damage to fragile habitats (e.g. seagrass, maerl and kelp beds) by fishing equipment.

Plan

- There should be a general presumption against development within this Character Type.
- If offshore/ marine energy; shoreline management; land reclamation or undersea cable schemes need to be considered, keep them away from the areas of most sensitive habitat. Minimise impacts on historic/ landmark features and their settings, and try to ensure that

they are seen within the context of existing development, rather than introducing new infrastructure into an area which is currently undeveloped.

- Provide additional protection for key landmarks and their settings, such as Corbière Lighthouse, Elizabeth Castle and St Aubin's Fort. Views from both land and sea should be taken into account.
- Continue to plan for aquaculture, limiting concessions to areas of least sensitivity.
- Consider expanding the Coastal National Park to include this Character Type.
- Identify and enact solutions to water quality issues.
- Continue work to record historic rock and coastal names before this traditional oral knowledge is lost.
- Monitor rates of coastal erosion and change, to aid future planning.
- Explore opportunities for zoning to protect scientifically/ archaeologically valuable quaternary deposits.

Further Information

Please refer to the **Landscape Design Guidance (Part 5)** for more information on relevant topics, specifically:

- Views and Visibility

Relevant **Coastal Units (Part 4)**: 1, 7, 8, 9, 10, 11, 13



Oyster farming in the Royal Bay of Grouville



Intertidal Reef viewed from Seymour Tower, looking towards La Collette

Character Type H

Offshore Reefs and Islands



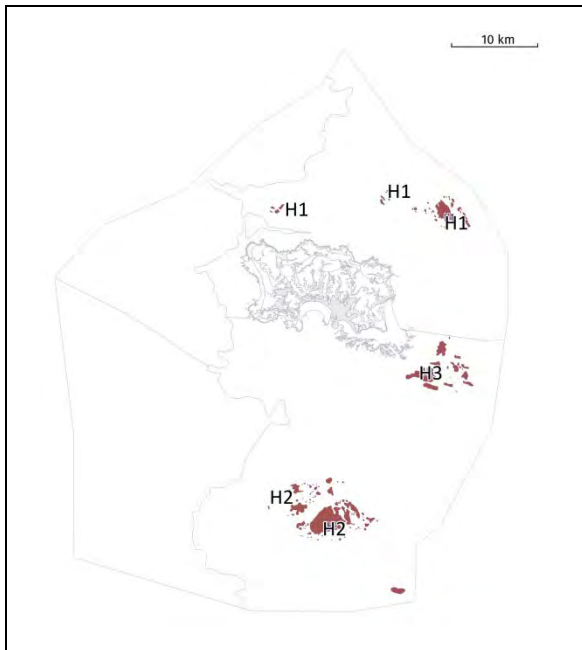
Offshore Reef and Island scene on Les Minquiers

Summary 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 ever-changing 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.



H1: Les Écréhous

H2: Les Minquiers

H3: Les Anquettes

Key Characteristics of *Offshore Reefs and Islands* Character Type

- Underlying rocks are primarily hard granites, exhibiting rarely-seen geological features.
- Landform comprises largely submerged plateaux, which until c. 7000 years ago, were connected to the French coast. Variations in landform create rocks, islets, reefs and gully complexes.
- Extensive tidal range and strong currents. Small areas above high-tide mark appear at high water as isolated rocks and islets. Approx. 150km² of reefs and sandbanks emerge at low water.
- An array of rare natural habitats of international importance occurring in subtidal, intertidal and littoral areas. These include reefs, sandbanks, seagrass beds, kelp forests, rock platforms, islets and flooded gully complexes.
- Outstanding biodiversity, including birds, marine and salt-tolerant plants, fish, crustaceans and marine mammals.
- Most of the reefs are inaccessible, even at low tide. Some small-scale fishing (potting and line fishing) occurs, but most visitors are there for recreation.
- Clusters of huts on Les Minquiers and Les Écréhous, but no permanent habitation.
- Rich prehistoric archaeology, as well as evidence of medieval occupation. Huts are rare surviving examples of Jersey vernacular buildings.
- Danger to shipping reflected in number of shipwreck sites, and distinctive beacons and buoys.
- Reefs closest to Jersey form seascape features in views from the coast.
- A unique environment with a sense of other-worldliness. Creates a deep sense of remoteness, wildness, tranquillity and detachment.
- Reefs are beautiful, dangerous and change constantly with tides and weather.

Natural Influences and Sites

Les Minquiers and Les Écréhous reefs are both underlain by foliated granodiorite which predates the other granite rocks found on Jersey. It is thought to be about 640 million years old, and dates from the Neoproterozoic period, making it some of the oldest visible geology in Britain. There are also outcrops of other igneous rocks of similar age, including quartz diorites (in the north-west of Les Minquiers) and Orthoquartzite (at Les Sauvages). At Les Maisons (in the west of Les Minquiers) the rocks appear to be folded bedding planes of sedimentary rocks, but are actually alternating layers of granite and pegmatite that have been bent and twisted by extreme pressure. This probably represents the carapace of the granite batholith that forms the centre of the reef, and is thought to be the only place where this type of geology is exposed in such a fashion.



Twisted layers of granite and pegmatite at Les Maisons

Les Anquettes share the same basic igneous geology as the other reefs, but also have a significant sedimentary component.

In common with other waters around Jersey, the *Offshore Reefs and Islands* are subject to large tidal ranges (approx. 12m between low and high water) and strong currents. The currents are partly a result of the gyres which form as water circulates around the Channel Islands and reefs.

The sea-bed environments are often of high or moderate energy, and substrates include pebble-cobble, coarse sand, gravel, rock-

boulder and mixed coarse sediments. Intertidal substrates are exposed at low tide. Some are permanent, whilst others are ephemeral and dynamic features.



La Taille shingle bank at Les Écréhous is approx. 1km long



Intertidal rock and sand, Les Écréhous

These substrates provide a wide diversity of intertidal and subtidal habitats, many of which support very high levels of marine biodiversity. A number of key habitats are found within the *Offshore Reefs and Islands*. Kelp forests often grow on subtidal rock platforms and are a key habitat for juvenile fish species.



Kelp Forest, Les Minquiers
Photo: Paul Chambers

Flooded gully complexes are rock platforms with significant bodies of sea water remaining at high tide. They maintain exceptionally high biodiversity and are thought to be unique to Jersey. Some sandy sediments attract high diversity infauna and abundance of burrowing fauna such as molluscs, worms and crustaceans. This habitat is also associated with feeding wading birds and traditional low water fishing. Subtidal diverse rock platforms are associated with encrusting organisms such as corals, sponges and bryozoans. They provide habitats for adult crustaceans and fish, but are easily damaged.



Sponge, Les Minquiers

Photo: Paul Chambers

Maerl beds (particularly extensive around Les Écréhous) are formed by free-living (i.e. not attached to the seabed) coralline algae which grow very slowly. It is a very high biodiversity habitat and a key habitat for juvenile crustaceans, molluscs and fish. Maerl is very slow growing, and Jersey's beds may be up to 1000 years old.



Seaweed and Maerl, Les Écréhous

Photo: Paul Chambers

Seagrass beds are a high biodiversity habitat and an indicator for inshore water quality.



Seagrass, Les Minquiers

Photo: Paul Chambers

Les Sauvages comprises a small reef to the south-east of Les Minquiers. It rises vertically from the seabed, and is crossed by deep vertical canyons.

All these habitats support a very wide range of marine life, sometimes world-class in its diversity and abundance. The *Offshore Reefs and Islands* are home to many species of fish, crustaceans, plants and birds. The surrounding seas have an important role in maintaining marine life in the Channel, and are home to larger marine mammals such as dolphins and seals. They provide food for breeding and migrating birds, and also a habitat for nesting birds. As a result some rocks are covered in thick white guano deposits. Ramsar designations reflect the importance of the reefs' bird life.



Dolphins near Les Écréhous

Photo: Paul Chambers

Vegetation growing on the *Offshore Reefs and Islands* has to be able to cope with the extreme conditions including wind, salt spray, occasional storm waves, drought and lack of soil. As a result there are no trees. Some of the islands' indigenous flora may have arrived

by land before sea levels rose. Others may have been brought there deliberately. Many species of lichen thrive in the clear air, and tree mallow also grows abundantly.

Designated Nature Conservation Sites:

Ramsar Sites	Les Minquiers; Les Écréhous and Les Dirouilles; Les Pierres de Lecq (Paternosters)
Marine Protected Areas	Minquiers, Écréhous and Jersey Coastal MPAs

Cultural Influences and Sites

Until approx. 7000 years ago, when they were cut off by rising sea levels, the *Offshore Reefs and Islands* would have been westward projections of the French Coast. They were also much more extensive than they are now, and would have been suitable for human habitation. Archaeological excavation on Les Minquiers and Les Écréhous has revealed evidence for early Neolithic occupation in the form of pottery and axe heads. Les Minquiers also has evidence for later prehistoric occupation in the form of hearths and evidence for food preparation, although it would have been an island by this time.

In 1203, the 'Island of Escréhou' was granted permission by the king for the building of a priory, although there was already an earlier church on the site. Part of the charter required the monks to keep a light burning on the reef. The remains of the priory can be seen at the southern end of Maître Île.



Medieval ruins on Maître Île, Les Écréhous

In the following centuries, the reefs were used sporadically for fishing, vraicing (collecting seaweed) and smuggling. But they were dangerous places, and contested territory between the English and French. English sovereignty over the reefs was declared by the International Court of Justice in 1953.

Granite from the reefs makes excellent building stone, and significant quarrying has taken place there. Granite from Les Minquiers was used in the construction of Fort Regent in the early 19th Century, and stone from Les Écréhous can be seen in buildings in Trinity, St Martin and Rozel. Evidence of quarrying can be seen in the rock workings, and also in the initials carved by quarrymen.

In 1750 there were no permanent buildings on the islands. The huts on Les Minquiers are thought to date from 1805 onwards – they were certainly constructed by the end of the 19th Century. The huts on the islets are known as 'fishermen's huts' and are some of the last remaining examples of small-scale vernacular Jersey buildings. Historically, such buildings would have been a frequent sight in Jersey. Les Minquiers has a single islet (Maitresse Île) with a cluster of huts above the high water mark, accessed by a slipway. There are a group of huts on the summit of Marmotier on Les Écréhous, with other huts on isolated islets. Today most of the huts are privately owned, with a small number in Government hands, and one leased from the Crown. Huts are highly prized by the boating community, and both Les Minquiers and Les Écréhous have residents' associations.



Huts on Maitresse Île, Les Minquiers

The other structures present on the reefs are the many beacons and buoys warning ships of the dangers of submerged or surface rocks. There are many different designs of beacons, some of which are lit. Inevitably though there are also many shipwreck sites, with clusters on the Paternosters, Les Anquettes (around the Violet Channel) and the west and north-west of Les Minquiers. *Heron* on the Paternosters is popular with divers. Even with modern navigation, several wrecks still occur on the reefs every year, mostly leisure and fishing boats.

The *Offshore Reefs and Islands* have provided inspiration for various books, including *Toilers of the Sea* by Victor Hugo, and *The Wreck of the Mary Deare* by Hammond Innes.

Today, the accessible parts of the reefs are very popular for recreation. Trips are made from Jersey and France on private boats and also on charter boats and ribs.

Designated Cultural Heritage Sites:

Listed Buildings	La Marmotiere
Listed Places	La Maitresse Île, Les Minquiers; Maître Île, Les Écréhous
Wreck sites – not currently designated (not all have physical remains)	Concentrations on Paternosters, plus isolated wreck sites on Les Minquiers, Les Écréhous and Les Anquettes
Coastal National Park (2011 Island Plan)	Les Minquiers, Les Écréhous, Les Dirouilles and the Paternosters are currently within the Coastal National Park

Perceptual Qualities

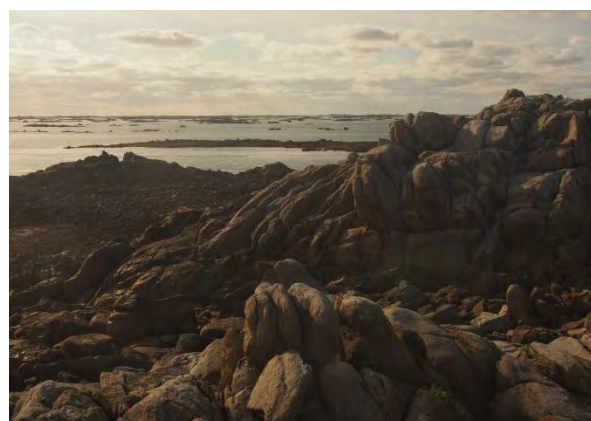
The emergence of these vast and unique archipelagos of rock and sand as the tide recedes, and then their gradual loss as the tide rises, is an extraordinary sight.

Contrast is a constant theme when describing the *Offshore Reefs and Islands*. It can refer to the difference between high and low tide; the difference in the textures of ridged sand and jagged rocks, or the change from calm sunny tranquillity, to dangerous, wild and exposed seas.



Hut on Marmotier at low and high tide

People visit the *Offshore Reefs and Islands* to experience their raw beauty and vast scale. They are places to escape to, and on quiet days they feel like a different world. Out here there is an opportunity to get close to nature, and to experience profound remoteness, wildness and tranquillity. However, on calm summer days, when there are many visitors, they can feel more crowded and some of the sense of tranquillity and isolation is lost.



Empty seascape within Les Minquiers



Les Écréhous on a calm summer day

Photo: Paul Chambers

In views from the sea, the reefs appear as jagged rocks on the skyline, creating a very real sense of danger (see Character Area I). Les Écréhous and the Paternosters are focal points in the seascape from the northern Jersey coast. From the reefs there are distant views of Jersey and the French coast.

Natural Capital and Ecosystem Services

Type of Ecosystem Service	Existing contributions	Opportunities
Cultural Services	<p>The Offshore Reefs and Islands provide a number of cultural services, including recreation and sport (sailing, kayaking, diving, fishing, etc.), opportunities to watch and engage with nature, enjoy positive aesthetic experiences, and to escape from everyday life, with associated benefits to health and wellbeing.</p> <p>They are also of benefit to research and education, and to the local economy through the tourism industry.</p>	<p>Visitor numbers are limited by the difficulties of access, fragility of the habitats and the risk of losing the sense of tranquillity which make the Offshore Reefs and Islands so distinctive and special. However, there are opportunities to raise awareness public of these unique places and their value.</p>
Provisioning Services	<p>The Offshore Reefs and Islands offer limited opportunities for commercial fishing (primarily through potting and line fishing). Fishing and other wild harvesting is also undertaken recreationally.</p> <p>In the past, seaweed has been harvested for use as fertilizer.</p>	<p>Care must be taken not to over-exploit these resources</p>
Regulating Services	<p>The Offshore Reefs and Islands help in biochemical and climate regulation through the transfer and transport of biochemical materials (nutrients, carbon etc.). They also help to regulate oceanic/ aerial chemicals and water quality, for example through filtration and photosynthesis.</p> <p>Reefs and associated sandbanks offer protection from natural hazards such as storms by dissipating wave energy before it reaches the coast.</p>	<p>The role of this Character Type in regulating marine dynamics/ events, air quality and water quality is likely to increase in response to climate change.</p>
Supporting Services	<p>The Offshore Reefs and Islands provide nursery habitats for early stages of fish / crustaceans' life cycles, and habitats for their later maturity. This helps maintain populations of marine species and promotes genetic diversity. Interaction between species through the food chain also supports food web dynamics.</p> <p>Seagrass beds assist in carbon sequestration.</p>	<p>Limiting damaging activities will enable the Character Type to continue to fulfil its supporting functions.</p>

Character Areas

Within the *Offshore Reefs and Islands* Character Type there are three distinctive Character Areas. Each one has a unique 'sense of place' as a result of its combination of landscape elements.

Character Area H1: Les Écréhous



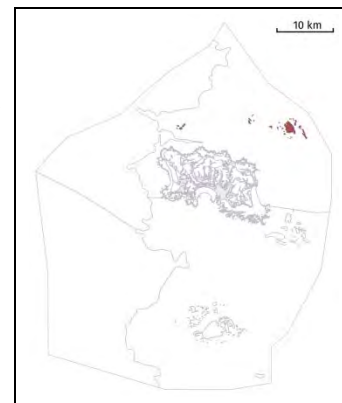
Les Écréhous view from Maître Île towards Marmotier. Lichen and tree mallow can be seen in the foreground, with the La Tialle shingle causeway linking the inhabited islets on the horizon.

Les Écréhous are located approx. 7nm north-east of Jersey. They are surrounded by the Shallow Sea Character Type, and are a key feature in views looking out to sea from the north coast of Jersey. Also included within this Character Area are two other reefs – Les Dirouilles (immediately to the west of Les Écréhous) and the Paternosters, which are located further to the west. Both Les Dirouilles and the Paternosters are uninhabited, and relatively little researched.

Of all the reefs within the Character Type, Les Écréhous has the strongest sense of being settled, and of being a location for recreation. It is a beautiful and extra-ordinary place to visit, and as it is relatively accessible from both France and Jersey, it can become crowded with visitors in summer.

There is a cluster of huts on Marmotier islet, with isolated properties on other islets which are linked by the La Tialle Causeway – a shingle bank over 1km long. Les Écréhous have a greater extent of soil-cover than Les Minquiers, and have evolved their own unique vegetation, including tree mallow, lichen, cow parsley and bluebells. Native animals include rabbits, pipistrelle bats and seals, as well as a rich bird life.

Marine habitats include extensive maerl beds, kelp forests and flooded gully complexes, and there is also a large sandbank – L'Écrivière – which extends to the south-east.



Character Area H2: Les Minquiers

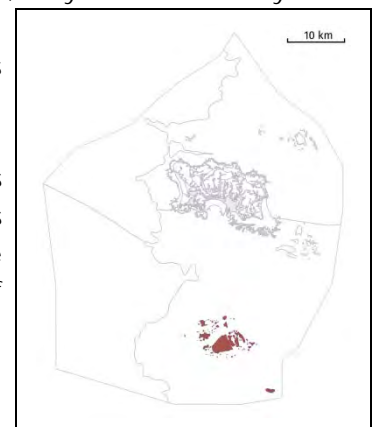


View looking north-west from Maitresse Ile in Les Minquiers at mid tide. The reefs and sandbanks extend for miles. Guano covers the rocks in bird nesting areas.

Les Minquiers are located approx. 12nm south of Jersey, and form one of the largest reef systems in Europe. It is a stunning seascape of reefs, islets and sandbanks which emerges as the tide recedes – its area varies from approx. 0.01km² at high tide, to 21km² at low tide. It is larger than Les Écréhous, and has a stronger sense of remoteness and isolation. This is partly due to its greater distance from Jersey and France, which increases the visual separation from land. This distance, and the navigational difficulties of accessing the anchorage, mean that there are fewer visitors.

There is a cluster of traditional stone huts which appear to cling to the summit of Maitresse Île, the largest islet uncovered at high tide. Although the huts form a focal point, they are dwarfed by the scale and drama of the reef, which retains its rugged and uncompromising quality. The rocks, reefs, and numerous beacons create an ever-present sense of danger, as well as beauty.

Les Minquiers has less soil than Les Écréhous, and its vegetation was damaged by weed killer spraying in the 1970s. Nevertheless, it supports important breeding bird populations, and contains an array of valuable marine habitats. The Character Area includes the nearby isolated reef of Les Sauvages, which is home to outstanding marine life.



Character Area H3: Les Anquettes

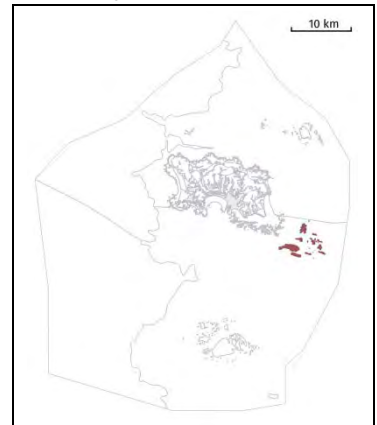


Petite Anquette Beacon Photo: Paul Chambers

This Character Area is located to the south-east of Jersey, south-east of the Violet Channel. It is slightly deeper than the other reefs, with less of the reef emerging at low tide, but it is otherwise very similar. Because the reef is less exposed, it is not inhabited, and it has only been recognised as a reef relatively recently. This is, therefore, a new Character Area. It is named after the two large rocks (Grande Anquette and Petite Anquette) at the centre.

Shallow and emergent rocks are marked by a series of buoys and beacons, many of which are illuminated.

The northern part of Les Anquettes contains very extensive maerl beds which may be thousands of years old. It supports high levels of biodiversity, and forms a key habitat for juvenile crustaceans, molluscs and fish.



Sensitivities, Condition and Forces for Change within the *Offshore Reefs and Islands* Character Type

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.

Landscape Condition

1. The *Offshore Reefs and Islands* can become crowded in summer, impacting on their tranquillity. On calm summer days 80+ boats can be counted in the anchorage areas at Les Écréhous. Large numbers of visitors are also brought by commercial charter and rib companies which have been established in recent years (one company brought 10,000 people to the reefs in one year). The large number of visitors impacts on the remote and tranquil character of the Offshore Reefs and Islands, and also has practical implications.
2. Anti-social behaviour is not usually a major problem, but recorded incidents include fires, drunkenness, noise, use of residents' moorings by visitors, and inappropriate responses to the lack of toilet facilities. Again, this impacts on the special qualities of the Offshore Reefs and Islands.
3. Recorded disturbance of habitats and wildlife takes various forms, including disturbance of seals by boats, trampling of vegetation and soil erosion by visitors, disturbance of breeding birds, fires and barbeques.
4. Maerl beds at Les Écréhous and Les Anquettes, and seagrass beds around Les Minquiers have been damaged by mobile fishing gear. The introduction of No Mobile Gear Zones is addressing this, but not all areas are covered.
5. Since the 1999 Countryside Character Appraisal was undertaken, the *Offshore Reefs and Islands* have been given some protection through the designation of Listed Places and Listed Buildings. They are also included within the Coastal National Park as defined in the 2011 Island Plan.

Forces for change

Landscapes and seascapes are dynamic and are constantly affected by a variety of forces for change, which may be natural (e.g. coastal erosion) or man-made (e.g. development pressure, and changes in farming practices). The following table illustrates the main forces for change acting on this Character Type, and how they will potentially affect the landscape/ seascape. Recommendations for addressing these issues are provided in the following section.

Issue	Potential impacts on sensitive special qualities	Character Areas affected
Marine development	<ul style="list-style-type: none"> Offshore energy facilities in the vicinity of the reefs would impact on views, potentially reducing their sense of isolation. The <i>Offshore Reefs and Islands</i> are potentially highly vulnerable to marine pollution incidents (such as an oil spill) which could have catastrophic consequences for marine life. 	All
Infrastructure	<ul style="list-style-type: none"> There has been historic quarrying of stone at Les Minquiers and Les Écréhous. Any resumption of mineral or aggregate extraction would have significant impacts on the naturalness, remoteness, tranquillity and biodiversity of the <i>Offshore Reefs and Islands</i>. Weather monitoring masts and beacons add man-made elements to otherwise natural seascapes. 	All
Housing	<ul style="list-style-type: none"> Repairs or extensions to huts (particularly when carried out using unsympathetic modern materials) can alter the islands' distinctive built character. 	H1, H2
Land and sea management	<ul style="list-style-type: none"> Conflicts between residents/ visitors and nesting birds can result in a decline in bird numbers. Loss and damage to soil is a major concern, as it is such a scarce resource on the islands. Soil can be compacted by footfall, and inadvertently damaged during repair work on huts or during management of vegetation. The use of chemicals such as herbicides, pesticides or fungicides can be highly damaging to the environment. Use of mobile fishing gear (dredging and trawling) can be highly damaging to seabed habitats such as seagrass and maerl beds. 	All
Recreational pressure	<ul style="list-style-type: none"> Large numbers of visitors (arriving in their own boats, or on commercial rib trips) impact on the sensitive special qualities of the area, particularly the sense of tranquillity and remoteness. This problem is likely to get worse in coming years, as the commercial trip market is lucrative, and a new marina is being built at Carteret. Visitors and residents can also disturb wildlife, including seals and breeding birds, and inadvertently damage sensitive habitats. 	H1 (to a lesser extent H2)
Climate change	<ul style="list-style-type: none"> Sea level rise will have a significant impact on the <i>Offshore Reefs and Islands</i>. The area exposed at low tide will be reduced, resulting in loss of intertidal habitat. The area exposed at high tide will also be reduced, leading to a loss of area for huts and habitats above the high water mark. Rising sea levels and warmer seas will affect coastal dynamics such as currents, so mobile features such as sandbanks could change more frequently. Rising temperatures are likely to impact on the species of plants, birds fish and marine organisms which can live here. 	All

Strategy and Guidelines

Strategy

The overall strategy for the *Offshore Reefs and Islands* is to protect and enhance their outstanding special qualities and character.

They are considered to be the 'Jewel in Jersey's Crown' and should therefore remain as unchanged as possible. Visitor management may be required, but in so doing, it is important that the *Offshore Reefs and Islands* retain their rugged, elemental quality and do not feel too 'manicured' or cluttered with signs, artificial paths, and facilities.

They should remain a haven for a wide range of marine and bird life, with thriving habitats on the sea bed, and in intertidal and dry areas. Their unique cultural heritage should also be protected.

Monitoring and knowledge of the *Offshore Reefs and Islands* should be increased. There is still a great deal to understand and discover about these environments (and what needs to be done to protect them). Technology such as satellite imagery and remote underwater photography should be utilised to aid this process, particularly in the most inaccessible and sensitive areas.

Character Type-Specific Management Guidelines

Protect

- Protect the unique and isolated character of the Offshore Reefs and Islands, and their sense of detachment and distinctiveness from the Jersey mainland.
- Protect cultural heritage including archaeological sites, and standing buildings. Huts are rare surviving examples of traditional Jersey vernacular building and should not be repaired with modern materials such as plastic windows.

Manage

- If considered necessary, control visitor numbers, for example by introducing a limited number of visitor moorings, or introducing a quota system for commercial operators.
- Consider managing anti-social behaviour by introducing a reef permit access system which would pay for seasonal wardens. Wardens could also be paid for through a per-visitor charge on commercial operators.
- Raise awareness of the vulnerability of the reefs, and visitors' responsibilities, through information and interpretation. However, any signage should be limited and should be sensitively designed and sited so it is not detrimental to the special qualities of the area.
- Work with residents' associations to agree defined bird nesting areas, and formalise these with seasonal ropes and temporary signage to protect birds from disturbance. Access to some uninhabited bird nesting areas could be closed off to residents, visitors, boats and drones during the nesting season (March-August).
- Agreed walking routes could be established around the main islands which avoid the most sensitive areas to prevent damage to wildlife and habitats.
- Minimise damage to vegetation and soil, and avoid the use of pesticides, herbicides, etc. Avoid introducing new species of plants or animals, as these could impact on the existing ecology.

Plan

- There should be a presumption against development, mineral extraction and aquaculture on the *Offshore Reefs and Islands*.
- Identify additional sensitive wildlife zones around the reefs (e.g. seal haul sites at Bigorne Rock) where vessels cannot enter. These would need to be added to charts and respected by leisure and commercial boat users.
- Consider designating the main islands as ecological SSIs, so enforcement action can be taken if damage to their special ecological interest occurs.
- Ensure that no offshore energy generation takes place on the reefs or within their immediate setting.
- Consider seeking additional protection for Les Sauvages to avoid damage from dredging by fishing boats, through modifications to the Bay of Granville Agreement.
- Integrate management plans for the various organisations covering the Offshore Reefs and Islands (for example Ramsar Management Authority, Jersey National Park, Residents' Associations, Ports of Jersey, etc.).
- Develop an emergency plan for marine pollution incidents to protect the Offshore Reefs and Islands, for example following a spillage from an oil tanker.
- Work with Residents' Associations to promote good practice with regard to building repair, and retain the special character of huts through the use of traditional materials and building techniques. Any unused materials should be removed from the islands.
- Regularly monitor the condition of the reefs' archaeology, botany and bird life. Use satellite imagery to record longer-term changes in the marine environment, sediment, topography and vegetation.
- Develop a programme of research for lesser-understood reefs including the Paternosters, Les Dirouilles and Les Anquettes.

Further Information

Please refer to **the Landscape Design Guidance (Part 5)** for more information on relevant topics, specifically:

- Views and Visibility

Relevant Coastal Units (Part 4): 2, 3, 4, 5, 6,

Character Type I: Shallow Sea



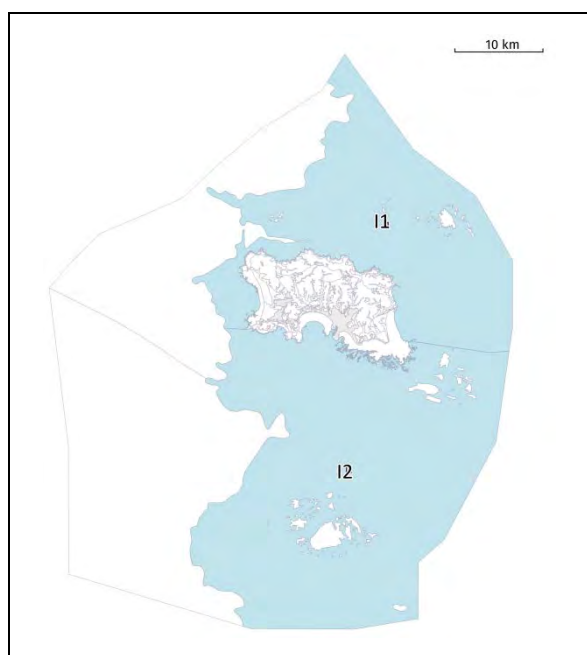
Shallow Sea view, looking east towards the French coast

Summary 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 the Character Type 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.



I1: North East Shallow Sea

I2: South East Shallow Sea

Key Characteristics of the *Shallow Sea* Character Type

- Complex underlying geology of both sedimentary and igneous rocks, with the latter concentrated around reefs.
- Bathymetry ranges from approximately 10-30m water depth. Deeper channels separate the shallower areas associated with the Jersey coast and the reefs.
- The sea is generally high energy, reflecting the strong tides and currents occurring around islands and reefs. Water temperature shows seasonal variation.
- Seabed habitats are a mixture of high energy rocky, coarse, and mixed sediments. Key habitats include maerl beds, subtidal seagrass beds and kelp forests.
- Primary sea use is fishing (mainly shellfish). Part of Type is within 3nm limit, otherwise within Bay of Granville Agreement area.
- Many navigation features warning of subsurface hazards, including buoys, beacons and lighthouses.
- Vessels include fishing boats, ferries (St Helier to St Malo, Granville and Carteret) and a range of recreational vessels.
- Several wreck sites due to the hazardous nature of these waters. Wrecks include passenger, freight and military vessels. Some are active dive sites.
- Forms the immediate sea in views from the Jersey coast, ferries, and from the Offshore Reefs and Islands. Therefore it contributes strongly to coastal settings.
- Navigation marks and surrounding islands and reefs form seamarks in views from within the Character Type, and add to sense of danger. The Jersey and French coasts are also often visible.
- A dynamic seascape, with patterns constantly changing as a result of tides, currents, waves, weather and time of day. Skies contribute to mood and sunsets can be spectacular, especially over islands and reefs.

Natural Influences and Sites

This Character Type occupies relatively shallow water, reaching a maximum of 30m depth at its western boundary with the Deep Sea Character Type. Its bathymetry gradually becomes shallower towards the east. There are patches of much shallower sea (less than 10m) around the coast of Jersey (adjacent to the intertidal Character Types F and G) and in the vicinity of the *Offshore Reefs and Islands*.

This variation in bathymetry is partly a result of the varied underlying geology. Generally the shallowest areas are associated with granite seabed. The deepest areas are limestone, and in between are areas of shales. Of particular interest is the relatively deep Le Ruau Channel, between Jersey and Les Écréhous. This is a palaeochannel, and until approximately 8,700 years ago would have been a river channel separating two larger land masses. At the time it would have been possible to walk between Jersey and France at low tide, across what are now the *Shallow Sea* and *Offshore Reefs and Islands* Character Types.

The Character Area is subject to strong tides and currents, including the gyres which circulate around Jersey and Les Minquiers. There are particularly strong flows between Jersey and Les Minquiers, and Jersey and Les Écréhous. Consequently, the seabed is relatively exposed, although there are some slightly more sheltered areas to the east of Jersey. Seabed substrates include high energy infralittoral rock, some coarse sediment and some mixed sediment. The seabed is relatively well-vegetated due to the presence of light on the seabed. The rocky and seaweed-covered seabed supports semi-demersal species of fish, such as wrasse, bream and bass, as well as shellfish such as crabs and lobsters. There are also low concentrations of pelagic fish such as mackerel, squid and cuttlefish. Dolphins are also frequently sighted in these waters.

The seabed within this Character Type contains a range of habitats including tide-

swept rock (supporting turf sponges); high-diversity coarse sand; maerl beds and clam beds. Close to the Jersey coast and around Les Minquiers are patches of subtidal seagrass: a key biodiversity habitat and important nursery area for fish and shellfish. Maerl beds occur around the Violet Channel, Anne Port and Les Écréhous, and consist of free-living (i.e. not attached to the seabed) coralline algae which grow very slowly. Close to the Jersey coast there is a small area of kelp forest off Rozel, and extensive areas of subtidal diverse rock platform. The latter is home to encrusting organisms such as corals, sponges and bryozoans, and also provides habitat for adult crustaceans and fish.



Maerl bed near Les Écréhous
(Photo: Paul Chambers)

Water temperatures have greater temperature range (approx. 10 °C) than the Deep Sea, ranging from 8°C in winter to 18°C in summer. The shallowest coastal waters experience greater temperature changes.

These shallowest areas (associated with the coast or *Offshore Reefs and Islands*) are often of biodiversity importance, and some are therefore within Ramsar and/ or Marine Protected Areas (MPAs). Within MPAs, use of mobile fishing gear is not permitted, in order to protect fragile seabed habitats.

Designated Natural Heritage Sites:

Ramsar Sites	South-East Coast of Jersey (part); Les Pierres de Lecq (the Paternosters) (part); Les Écréhous and Les Dirouilles (part); Les Minquiers (part)
Marine Protected Areas (MPA)	South East; North East; Écréhous

Cultural Influences and Sites

This is a hazardous area of water for shipping, with many submerged rocks. Consequently, there are many shipwrecks within it, although the number of incidents has reduced since engines replaced sails, and with the advent of GPS-based navigation systems, which show a skipper their position in relation to surrounding hazards.

Because of the high-energy conditions on the seabed, most wrecks break up quite quickly. Nevertheless, there are numerous shipwreck sites within this Character Type, some of which are shown on the marine chart. Concentrations of wrecks within this Character Type are found in and just outside St Aubin's Bay; the area around the Violet Channel (to the south-east of Jersey), and off Corbière. Many different types of boats have been wrecked, including passenger vessels, freight vessels, fishing boats, military vessels and minesweepers. There are also some wrecks of planes, including an RAF bomber off the north coast of Jersey.

Several wrecks are regularly visited by divers, including *Schokland*, *Armed Trawler*, *La Cap*, *GE2* and *La Mauve*, which was deliberately sunk off Bouley Bay as a diving attraction.



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

Illustration from www.divernet.com

As would be expected in a hazardous area, there are numerous navigation marks within this Character Type. These include buoys, lighthouses and beacons. Many are illuminated at night.

Fishing (mainly netting, potting and line fishing, and diving for scallops) takes place within this Character Type. The sea up to the 3nm limit is fully within Jersey's control. Between the 3nm limit and the Bailiwick boundary fishing can be undertaken by Jersey-based and French boats, and is subject to the Anglo-French Bay of Granville Agreement. Fishing is restricted where it could damage fragile marine habitats. Historically, the *Shallow Sea* to the east of Jersey has been a rich source of oysters. Harvests peaked in the 19th Century.

This Character Type is very popular with recreational sailors from both Jersey and France, who sail through it to access Les Écréhous and Les Minquiers, as well as harbours onshore. Recreational boats within the Character Type include sailing boats, motor boats, jet skis, ribs, etc. The Character Type includes the busy approach to St Helier Harbour, which is used by ferries, freight boats and recreational vessels.

Cultural Heritage Sites:

Wreck sites

Concentrations of wreck sites at St Aubin's Bay, Corbière, Violet Channel. Note – not all sites contain physical remains

Perceptual Qualities

The presence of coasts, reefs and islands (and their associated navigation marks) creates stunning seascapes, but also adds a genuine sense of danger.



Les Minquiers reef, as seen from the Shallow Sea: beautiful but deadly

At night, awareness of the reefs may come through the presence of navigation lights, and in poor visibility it may also come through bells mounted on buoys.

On clear days, land can usually be seen in more than one direction, which enables orientation, and reduces the sense of isolation which may be felt further from the coast. However, in poor visibility, the sense of isolation is greatly increased. At night the presence of the French Coast, Jersey and the other Channel Islands can be seen through the lights onshore. The lack of light pollution within this Character Type means that skies are dark and starry, and sunsets/ sunrises are spectacular.



The Paternosters in the middle distance and Sark on the horizon

Colours and patterns of the sea and sky are constantly changing as a result of tides, waves, currents, weather, time of day and season. These dynamic forces don't only affect the appearance of the Character Area; they also affect how it is experienced with other senses, such as the feel of spray and the pitching of a boat, the smell and the taste of salt. Sounds can also be very different, from the gentle lapping of water in a calm sea, to the bubbling water under the bow of a fast sailing boat, to the crashing of waves against a boat or land.

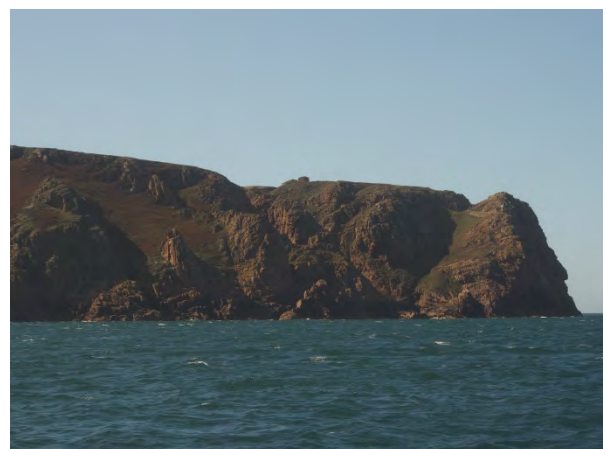
This Character Type occurs close to the coast of Jersey and the *Offshore Reefs and Islands*. It consequently forms a large proportion of the panoramic views out to sea which can be enjoyed from the coast, and from the

Offshore Reefs and Islands. It therefore plays a key role in both the marine setting of Jersey, and in the marine setting of the *Offshore Reefs and Islands*.



View across the Le Ruau Channel from Mont Orgueil, showing how the Shallow Sea contributes to views from this key landmark and visitor attraction.

From out at sea it is possible to appreciate the coastline from different angles than on land, and to see sections of the coast which are otherwise inaccessible. Historically, an understanding of the relationship between land and sea was essential for safe navigation through these 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.



Unfamiliar view of Jersey's northern cliffs, taken from the Shallow Sea Character Type

Natural Capital and Ecosystem Services

Type of Ecosystem Service	Existing contributions	Opportunities
Cultural Services	The Character Type contains several wrecks which are of historical interest, and also provide recreational opportunities for diving.	
Provisioning Services	Fishing within the Character Type provides an important food source, which also contributes to the local economy.	
Regulating Services	The oceans play a fundamental role in mitigating climate change by acting as a heat and carbon sink	Reducing ocean stress (for example by regulating fishing to ensure its sustainability) will improve the ocean's health and enable it to continue to contribute to many ecosystem services.
Supporting Services	<p>Oceanic micro-organisms are at the bottom of the food chain, and therefore support all other marine life.</p> <p>They also support life on the planet more generally by absorbing carbon dioxide and producing oxygen, on which all life depends.</p>	

Character Areas

Within the *Shallow Sea* Character Type there are two distinctive Character Areas. Each one has a unique 'sense of place' as a result of its combination of landscape elements.

Character Area I1: North East Shallow Sea



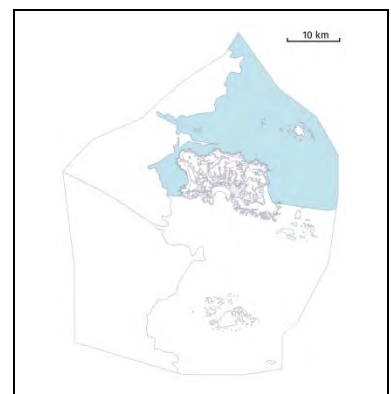
View of the North East Shallow Sea from La Tête de Frémont. Les Écréhous are a feature within the seascape, and the French coast can be seen on the horizon

This Character Area is located offshore in the north-east of the Bailiwick, and extends from the seaward edge of the intertidal areas around Jersey's western, northern and eastern coasts, out to the Bailiwick boundary. To the west is the *Deep Sea* Character Type. The Paternosters, Les Dirouilles and Les Écréhous (within the *Offshore Reefs and Islands* Character Type) occur within it, and Les Anquettes (also within the *Offshore Reefs and Islands*) are to the south. It is popular with recreational sailors from both Jersey and France visiting Les Écréhous.

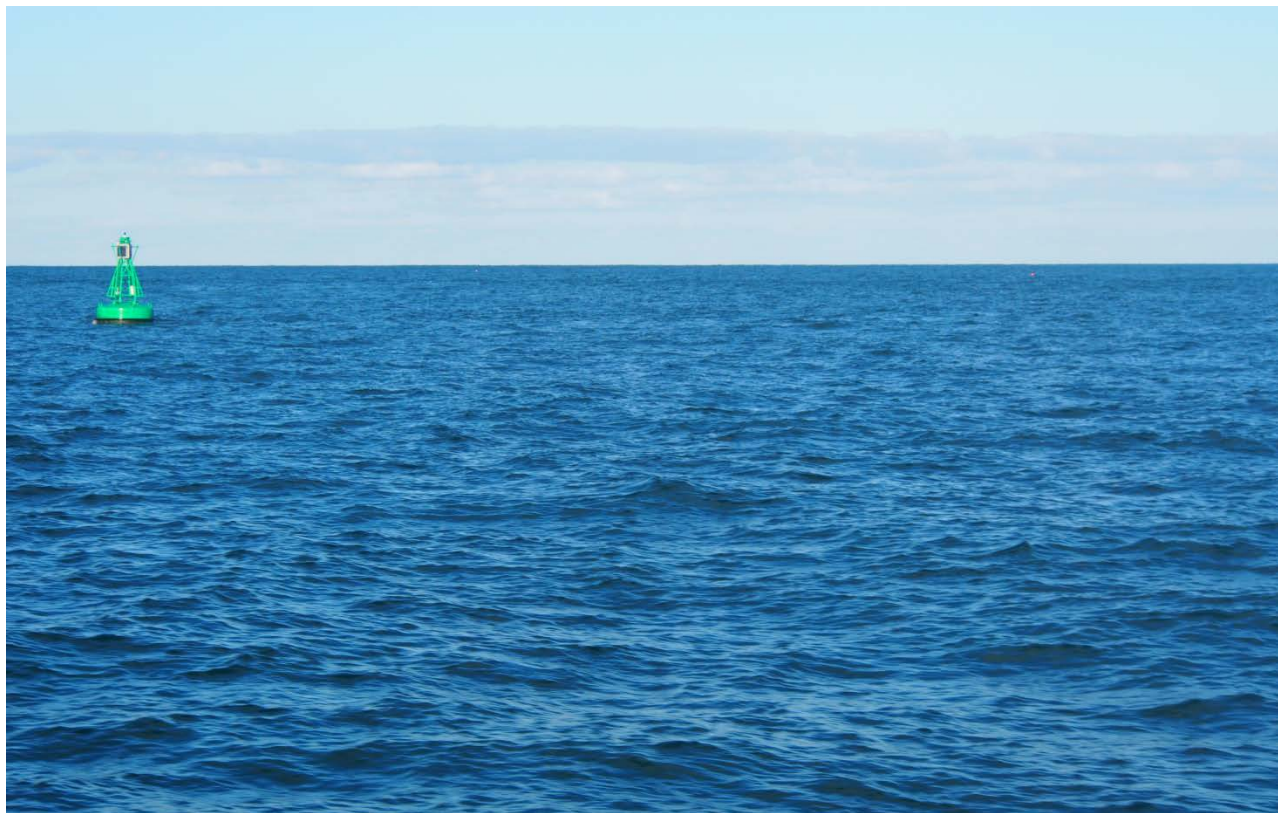
The North East Shallow Sea is highly visible from much of the Jersey coast, particularly when seen from the tops of the high northern cliffs. Within it, views of Les Écréhous, the Paternosters, the cliffs of the Jersey coast, Sark, and the French coast contribute to its sense of place.

It includes the relatively deep Le Ruau channel which runs between Jersey and Les Écréhous. The Le Ruau channel is a palaeochannel, which – at a time of much lower sea levels - would have been a river channel flowing from mainland France into the sea. At that time, Les Écréhous would have been part of the French landmass.

Generally, the seafloor in this Character Area is more dominated by sedimentary rocks. Seabed habitats are very varied, but have some less exposed areas.



Character Area I2: South East Shallow Sea



View within the South East Shallow Sea. The buoy is marking the northern edge of Les Minquiers

This Character Area is located offshore in the south-east of the Bailiwick. Its outer boundary follows the Bailiwick boundary, and its inner boundary follows the low water mark at the edge of the intertidal areas around Jersey's southern and south-eastern coasts. To the west is the *Deep Sea* Character Type. This Character Area surrounds the *Offshore Reefs and Islands* of Les Minquiers (in the south) and Les Anquettes (in the north). It also includes the expanse of water which separates Jersey and Les Minquiers. This forms the approach to St Helier Harbour, and is therefore one of the busiest stretches of water in the Bailiwick. It is also one of the most hazardous, due to its shallow water and submarine rocks.

This Character Area contains some of the greatest concentrations of shipwreck sites, although not all contain wrecks on the seabed as many have been salvaged. There are however a number of wrecks which are visited by divers within this Character Area.

The numerous buoys, beacons and lighthouses (which aid safe passage into St Helier Harbour, and warn of reefs) contribute to the sense of place and provide orientation.

The seafloor is primarily dominated by igneous rocks, and seabed habitats are mainly high-energy, with rocky, coarse or mixed substrates.



Sensitivities, Condition and Forces for Change within the *Shallow Sea* Character Type

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.

Seascape Condition

1. Degradation of Violet Channel maerl beds since 1960s, although now protected by a No Mobile Gear Zone.
2. Decline in some fish species, such as bass

Forces for change

Landscapes and seascapes are dynamic and are constantly affected by a variety of forces for change, which may be natural (e.g. coastal erosion) or man-made (e.g. development pressure, and changes in fishing practices). The following table illustrates the main forces for change acting on this Character Type, and how they will potentially affect the landscape/ seascape. Recommendations for addressing these issues are provided in the following section.

Issue	Potential impacts on sensitive special qualities	Character Areas affected
Marine and coastal development	<ul style="list-style-type: none"> • Offshore windfarms may impact on the environmental conditions on the sea bed. Wind farms (within this Character Type, but also visible from it, including onshore wind farms on the French coast), would impact on views, introducing man-made elements into an otherwise natural seascape. • Tidal marine energy systems within this Character Type may impact on the character of the seabed. Together with their shore-based infrastructure, they may impact on the marine settings of Jersey and the <i>Offshore Reefs and Islands</i>. • Coastal developments in Jersey are visible from the sea, even if they may not be easily seen from land-based viewpoints. • Further land reclamation and cable infrastructure may also impact on <i>Shallow Sea</i> seascapes and habitats. 	All
Sea management	<ul style="list-style-type: none"> • Overfishing is likely to lead to depletion of fish stocks. • Damage to fragile seabed habitats (e.g. maerl beds and subtidal seagrass beds) from trawling and dredging gear. • Pollution and water disturbance from ferries and other commercial vessels could potentially impact on water quality and conditions. 	All
Climate change	<ul style="list-style-type: none"> • Increased ocean temperatures are likely to lead to a number of effects on this Character Area, including: <ul style="list-style-type: none"> • Migration of species in response to changing sea temperatures. • Increased acidity of the water due to increased concentration of carbon dioxide. This affects the ability of marine organisms and shellfish to build shells and skeletal structures. It can also 	All

exacerbate other physiological stresses leading to reduced growth and survival rates.

- Rising sea levels, resulting in an increased volume of water, and uncertain effects on currents and circulation, particularly in conjunction with rising water temperatures.
- Changes in marine species and growing seasons, and a reduction in the diversity and abundance of species.

Strategy and Guidelines

Strategy

The overall strategy for this Character Type is to protect and enhance the marine settings of Jersey, and the *Offshore Reefs and Islands*, as well as the pelagic and benthic environment.

Proposed marine or coastal developments will need to consider their impacts on marine settings, and how they will appear in views from the sea. This includes any offshore energy generation; further land reclamation or undersea cable proposals, and their associated coastal infrastructure. Any such proposals should also minimise negative impacts on the pelagic and benthic environments, and ensure that no protected areas of seabed are affected.

Fishing should continue to be managed to achieve sustainable fish stocks in the long and short term, and to promote improvement in the condition of the seabed and water column. This should be achieved through a long term vision and strategy for sustainable fishing, drawn up collaboratively by relevant organisations.

Ferry companies should minimise the impact of their vessels on the marine environment, through reduction of both air and water pollution, and through good vessel design and maintenance.

Character Type-Specific Management Guidelines

Protect

- Protect Jersey's marine setting, particularly in views from key coastal viewpoints.
- Protect key landmarks and their settings in views from the sea (for example Mont Orgueil).
- Protect pelagic and benthic environments, particularly rare habitats such as subtidal seagrass and maerl beds. Consider additional Marine Protected Areas if required.

Manage

- Manage fishing to increase its long term and short-term sustainability, through continually-monitored adjustments to inshore fisheries planning, and international agreements.

Plan

- Take into account the impacts of coastal development on views from the sea, and consider the impacts of proposed marine or coastal development (including further land reclamation, renewable energy and undersea cabling) on Jersey's marine setting.
- The visual and environmental impacts of proposed marine energy schemes should be carefully considered. Such facilities should be sited to minimise their impacts on views of landmarks, and also on views from key viewpoints.
- Work with ferry and shipping companies to reduce air and water pollution from vessels.
- Continue work to record historic rock names before this traditional oral knowledge is lost.
- Consider expanding the Coastal National Park into this Character Type to include areas of valuable habitats, for example those associated with reefs.

Further Information

Refer to **Landscape Design Guidance (Part 5)** for more information on relevant topics, specifically:

- Views and Visibility

Relevant **Coastal Units (Part 4)**: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Character Type J: Deep Sea



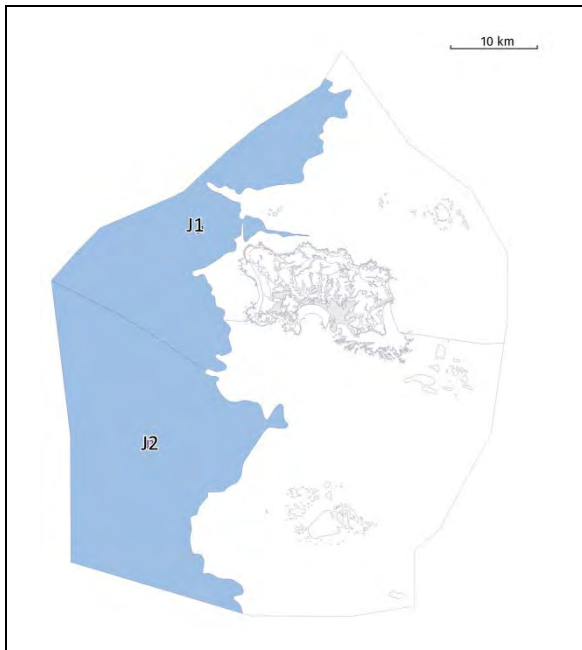
Deep Sea view, looking south-west from the west of Les Minquiers

Summary 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.

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.



J1: North West Deep Sea

J2: South West Deep Sea

Key Characteristics of the *Deep Sea* Character Type

- Underlying geology of Eocene limestone, with a relatively coarse substrate of rocks, cobbles and some mixed sediment.
- Bathymetry shallowest in east (30m depth) and gets gradually deeper towards the west.
- A high-energy marine environment, with relatively little deposition of sediment.
- All of the Character Type is within the Jersey Fishery Zone.
- Navigation features associated with nearby reefs.
- Shipping includes ferries (Jersey – Guernsey/ Poole or Portsmouth), fishing boats, commercial boats and recreational craft.
- Wreck of the *Princess Ena* and a small number of unnamed wrecks.
- Can be seen from the west and south-west of Jersey, and also from Les Minquiers and the Paternosters reefs.
- Jersey (south west, west and north-west coasts), the Paternosters and Les Minquiers can be seen from different parts of the Character Type, along with Sark, Herm, Jethou, Brecqhou and Guernsey
- Character of open sea varies greatly with weather, light, season and wind direction. Patterns of sky and water are constantly changing.
- Feels exceptionally isolated, especially when looking away from land.

Natural Influences and Sites

This Character Type occupies the deepest water in the Bailiwick. Its eastern boundary follows the 30m depth contour, and its bathymetry slopes gradually down towards the west, reaching 50m depth at the Bailiwick boundary. Much of the Character Type is underlain by Eocene limestone, laid down in warm, shallow, tropical sea conditions about 55 million years ago.

Tides and currents are relatively strong, creating a high energy environment which scours the seabed, preventing much deposition of sediment. The strong tides and currents result from exposure to Atlantic waves, and also the complex gyres which occur in this part of the English Channel, where the water circulates around individual islands and reefs.

Below approximately 30m depth, the sea water temperature range is relatively small, as deeper waters heat up and cool down in response to seasonal changes more slowly than shallow waters. This is because their larger mass takes longer to heat, but also retains its heat more effectively. The temperature range within this Character Type is approximately 6°C, ranging from 10°C in the winter to 16°C in the summer.

Within this Character Type is the 'Jersey-Guernsey Front', where deeper colder waters (influenced by the oceanic waters of the English Channel) meet warmer coastal waters. The boundary is often visible on satellite photographs.

The water depth within this Character Type means that there is relatively little penetration of light to the seabed. As a consequence there is relatively little growth of seaweed.

Nevertheless, there is still variation in the circalittoral marine habitats within this Character Type, which include exposed, high energy rock-boulder, pebble-cobble, gravel and mixed coarse substrates. Some of the coarse sand areas support a high diversity of species.



Seabed with mixed coarse substrate
(Photo: Paul Chambers)

Flat sediment dominated areas support demersal species of fish, such as rays, flatfish, catsharks, goby and gurnard. The Character Type also supports a range of pelagic fish which live within the water column. These include black bream, bass, mackerel, squid, cuttlefish and scad (horse mackerel). The density of these species (and therefore their commercial viability in terms of fishing) increases with distance from shore. Other larger pelagic species found within the Character Type include dolphins, porpoises large sharks and bluefin tuna.

There are currently no designated nature conservation sites within the Deep Sea Character Type.

Cultural Influences and Sites

The relative lack of hazards to shipping within the Deep Sea Character Type means that there are few shipwrecks. The most notable is the *Princess Ena*, a passenger steamer which sank to the west of Les Minquiers in 1935, following a fire. There were no passengers on board and the crew escaped. It is possible to dive to the wreck in certain tidal conditions.



The 'Princess Ena' photo: www.wrecksite.eu

Fishing is the main commercial activity within the Character Type. A small part of the Character Type is within Jersey's 3 nautical mile limit, where Jersey fishing boats have exclusive access. The remainder of the Character Type is covered by the 'Bay of Granville' agreement, where both Jersey and French both are allowed to fish.

There are relatively few navigation features, reflecting the lack of hazards. However, there are two illuminated bell buoys marking the north-west and south-west extents of Les Minquiers.



Offshore fishing boat

Cultural Heritage Sites:

Wreck sites

Wreck of the 'Princess Ena' and two other unnamed wrecks

Perceptual Qualities

The Deep Sea Character Type is a highly dynamic environment. Conditions can change quickly from being calm and sunny

through to high waves, wind and lashing rain. The weather makes a big difference in how this Character Type is experienced, and the patterns of water, clouds and light are constantly changing.

Buoys marking the presence of reefs, and lighthouses such as Corbière, which are visible from this Character Type, are constant reminders of the dangers nearby. They are particularly apparent at night. Lights on Jersey and Guernsey can also be seen at night, but the skies are dark and the stars clear, especially when looking towards the west.

During the day, islands and reefs form focal points in views and aid orientation. Different combinations of Jersey, Guernsey, Sark, Herm, Jethou, Brecqhou, the Paternosters, Les Minquiers, Les Écréhous and – on clear days – the French coast can all be seen. To the south-west, horizons are open, with water meeting sky, and only occasional boats to provide features.



Sark, Herm and Jethou on the horizon, in a photo taken near the Bailiwick boundary

This is a seascape which is experienced with all senses, not just visually. The motion of a boat is an intrinsic part of being within this Character Type. Awareness of the sea through other senses, including taste, smell and sound is dependent on both the size of the boat, and the weather and sea conditions at the time.

Natural Capital and Ecosystem Services

Type of Ecosystem Service	Existing contributions	Opportunities
Cultural Services	The Character Type contains a small number of wrecks which are of historical interest, and also provide recreational opportunities for diving.	
Provisioning Services	Fishing within the Character Type provides an important food source, which also contributes to the local economy.	
Regulating Services	The oceans play a fundamental role in mitigating climate change by acting as a heat and carbon sink	Reducing ocean stress (for example by regulating fishing to improve its sustainability) will improve the ocean's health and enable it to continue to contribute to many ecosystem services.
Supporting Services	<p>Oceanic micro-organisms are at the bottom of the food chain, and therefore support all other marine life.</p> <p>They also support life on the planet more generally by absorbing carbon dioxide and producing oxygen, on which all life depends.</p>	

Character Areas

Within the *Deep Sea* Character Type there are two distinctive Character Areas. Each one has a unique 'sense of place' as a result of its combination of landscape elements.

Character Area J1: North West Deep Sea

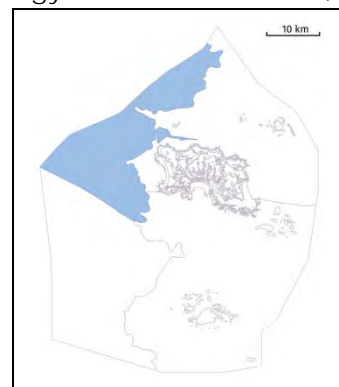


View towards Jersey from a ferry in the North West Deep Sea Character Area

This Character Area is located in the north-west of the Bailiwick, and extends to the Bailiwick boundary. In this part of the Character Type there is a much greater awareness of land in relatively close proximity. It is possible to see detail of the coasts of Jersey and Sark, and the coasts of Guernsey and Herm more generally. The northern reefs, including the Paternosters and Les Dirouilles (part of Les Écréhous) are a part of the seascape, as are ferries operating between Jersey and Guernsey/ the UK. In the northern part of the Character Area, the French coast can be seen on the eastern horizon. At night, lighthouses and illuminated buoys warn of these land masses, and lights on shore can also be seen.

On the sea bed, the particle sizes of substrates are relatively small, with a greater proportion of exposed mixed coarse and gravel substrates. Much of the underlying geology is Eocene limestone, with patches of Palaeolithic sediments around geology near Sark, and granite around the Paternosters.

Tides and currents are dominated by flows along the channel between Jersey and Sark, they therefore flow roughly north-east to south-west and vice versa.



Character Area J2: South West Deep Sea



View towards Les Minquiers from the South West Deep Sea

This Character Area is located in the south-west of the Bailiwick, and like the North West Deep Sea, it extends to the Bailiwick boundary. However, within this Character Area there is much less awareness of surrounding land. The south-west coast of Jersey is visible from the northern part of the Character Area, but it is difficult to see details of the coast. Les Minquiers can be seen to the east, appearing as isolated rocks at high tide, and more extensive reefs at low tide. It is also possible to see some of the beacons and buoys which warn of their presence. The distant French coast can be seen in clear conditions on the southern horizon, but views to the west are open, with no features other than ships breaking the horizon.

The sea bed is relatively homogenous in character. It is relatively rocky, and is dominated by exposed circalittoral rock-boulder and pebble-cobble substrates, with occasional patches of mixed coarse and gravel substrates.

The dominant currents within this Character Area also flow around the southern side of Guernsey, and are therefore in a north-westerly to south-easterly direction (or vice versa). They also form part of the gyre which circulates around Les Minquiers.



Sensitivities, Condition and Forces for Change within the *Deep Sea* Character Type

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.

Seascape Condition

1. Damage to sea bed habitats by dredging and trawling.

Forces for change

Landscapes and seascapes are dynamic and are constantly affected by a variety of forces for change, which may be natural (e.g. coastal erosion) or man-made (e.g. development pressure, and changes in fishing practices). The following table illustrates the main forces for change acting on this Character Type, and how they will potentially affect the landscape/ seascape. Recommendations for addressing these issues are provided in the following section.

Issue	Potential impacts on sensitive special qualities	Character Areas affected
Marine development	<ul style="list-style-type: none"> • Offshore windfarms may impact on the character of the sea bed, and also on surface views, introducing man-made elements into an otherwise natural seascape. • Tidal marine energy systems and undersea cabling may also impact on the character of the seabed. 	All
Sea management	<ul style="list-style-type: none"> • Overfishing is likely to lead to depletion of fish stocks. • Damage to seabed habitats from trawling and dredging gear. • Ferries also dominate offshore marine use in parts of this Character Type. Pollution and water disturbance from ferries would potentially impact on water quality and conditions. 	All
Climate change	<ul style="list-style-type: none"> • Increased ocean temperatures are likely to lead to a number of effects on this Character Area, including: <ul style="list-style-type: none"> • Migration of species in response to changing ocean temperatures. • Increased acidity of the water due to increased concentration of carbon dioxide. This affects the ability of marine organisms and shellfish to build shells and skeletal structures. It can also exacerbate other physiological stresses leading to reduced growth and survival rates. • Rising sea levels, resulting in an increased volume of water, and uncertain effects on currents and circulation, particularly in conjunction with rising water temperatures. • Increased ocean stratification (lack of mixing within the water column). 	All

- Changes in marine species and growing seasons, and a reduction in the diversity and abundance of species.

Strategy and Guidelines

Strategy

The overall strategy for this Character Type is to protect and enhance the pelagic and benthic environment.

This should be achieved through a long term vision and strategy for sustainable fishing, drawn up collaboratively by relevant organisations.

Ferry companies should minimise the impact of their vessels on the marine environment, through reduction of both air and water pollution, and through good vessel design and maintenance.

Any offshore energy proposals should be designed to minimise their environmental impact on the seabed and benthic environment, and also their visual impact on the surface.

Character Type-Specific Management Guidelines

Protect

- Protect pelagic and benthic environments, with additional Marine Protected Areas if required to reduce damage from mobile fishing gear.
- Protect the marine settings of Offshore Reefs and Islands, and views of Deep Sea from Jersey's coasts.

Manage

- Manage fishing to increase its long term and short term sustainability through continuously-monitored inshore fisheries planning, and through the Bay of Granville Agreement. Work with skippers of trawlers / dredgers to raise awareness of the fragility of some marine environments.

Plan

- The visual and environmental impacts of proposed marine energy schemes should be carefully considered. Such facilities should be sited to minimise their impacts on views of landmarks, and also views from key viewpoints.
- Work with ferry and shipping companies to reduce air and water pollution from vessels.

Further Information

Please refer to the **Landscape Design Guidance (Part 5)** for more information on relevant topics, specifically:

- Views and Visibility

Relevant Coastal Units (Part 4): 1, 2, 3, 14

Part 4: Coastal Units



Jersey's Coastal Units

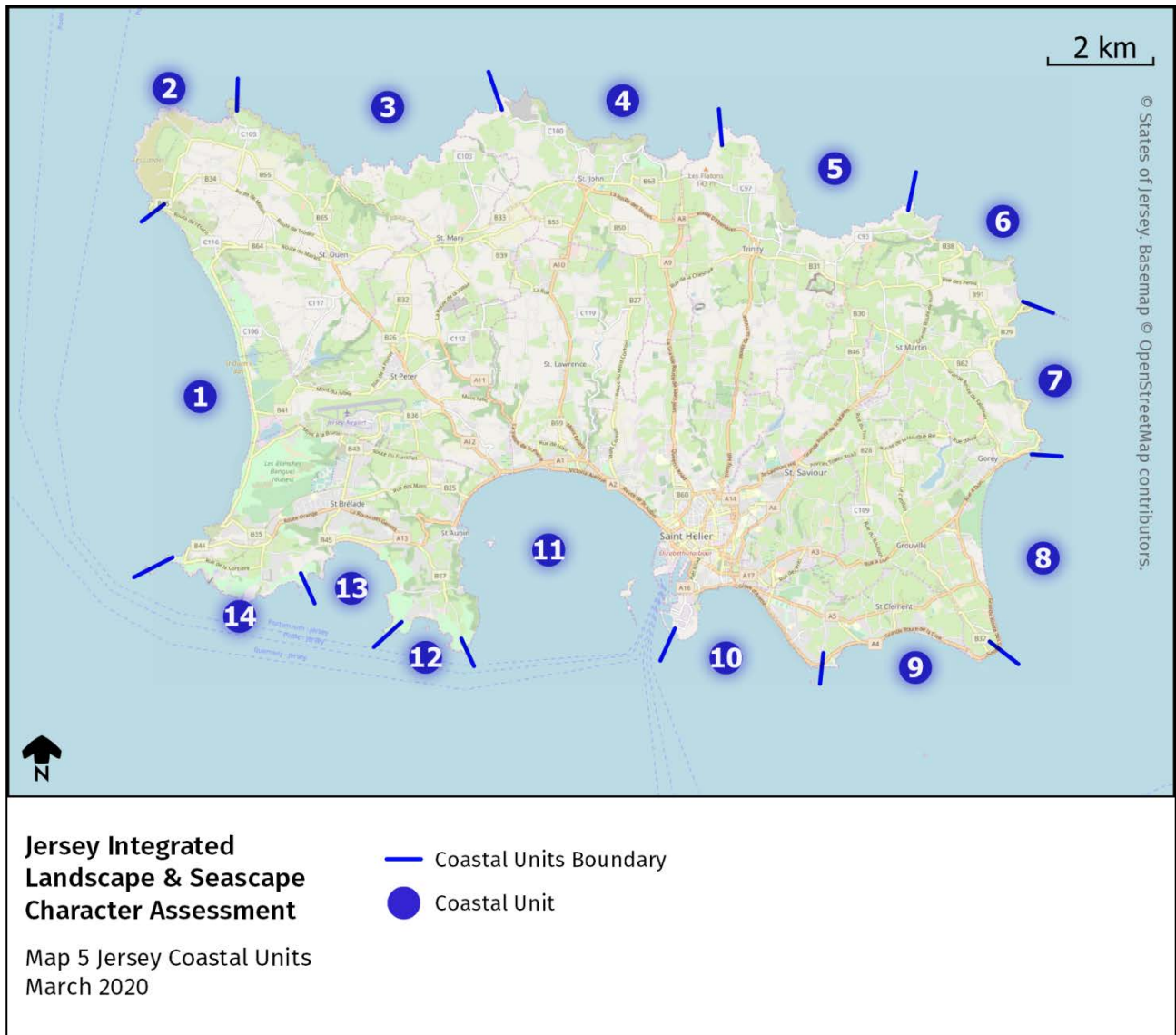
The concept of the 'Coastal Unit' has been devised specifically for this project. The Coastal Units form an additional layer of assessment focussing on the most complex area of Jersey (the coast) where many different Character Types and Character Areas meet and/or are intervisible. The Coastal Units form a 'string of beads' around the coast of Jersey (see Map 5) and are defined using visual units (usually bays separated by headlands). They describe how the various Character Types and Areas fit together to create bigger compositions, and thereby help to cement the project as an *Integrated Landscape and Seascape Character Assessment*. They also help to focus on the particular sensitivities associated with different parts of Jersey's coastline, and provide guidance on how the Coastal Units can be enhanced in the future.

The Coastal Units form a framework to describe how the terrestrial, intertidal and marine Character Types and Character Areas are visually, physically, culturally and functionally related to each other. For example, the St Ouen's Bay Coastline Unit would encompass the *Escarpment* (Character Area C3); the *Coastal Plain* (Character Areas B4 and B5); parts of the *Cliffs and Headlands* (Character Areas A1 and A2); *Bays with Intertidal Flats and Reefs* (Character Area G1), and *Shallow Sea* (Character Area I1). Together, all these Character Types and Areas create the single visual unit of St Ouen's Bay. They are physically linked (for example the connections between the marine currents, sandy beach and the coastal dune system) and also culturally linked (for example farmhouses on the coastal plain linked with fields on the west facing scarp, and slipways to transport vraic at low tide for use as fertilizer).

14 distinctive Coastal Units have been identified around the coast of Jersey, as shown in the table below and Map 5.

Number	Coastal Unit Name
1	St Ouen's Bay
2	Grosnez
3	Grève de Lecq
4	Bonne Nuit
5	Bouley Bay
6	Rozel
7	St Catherine's Bay
8	Royal Bay of Grouville
9	St Clement's Bay
10	Grève D'Azette
11	St Aubin's Bay
12	Portelet
13	St Brélade's Bay
14	Corbière

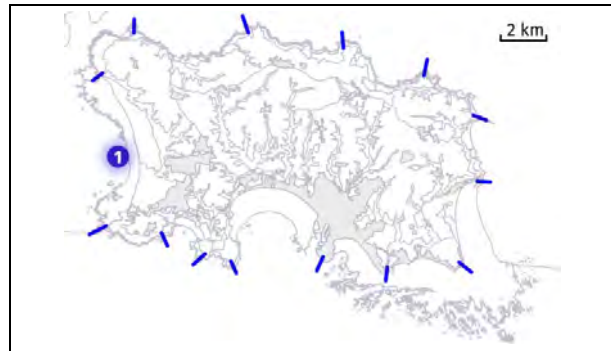
The following pages contain a series of profiles, one for each Coastal Unit. Each one contains its location; constituent Character Areas; description; photos of the Coastal Unit as seen from land and sea; sensitivities and guidance.



Coastal Unit 1: St Ouen's Bay

Location

This Coastal Unit covers the entire west coast of Jersey, forming a long and gentle curve of sandy beach backed by a coastal plain and escarpment, and extending from the rocky headland of L'Etacq in the north and the point and near off-shore island of Corbière in the south.



St Ouen's Bay looking south from above L'Etacq

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Type B Coastal Plain* :- Les Quennevais Dunes (B5) and St Ouen's Bay (B6)
- *Type C: Escarpment* – St Ouen's Bay Escarpment and Valleys (C4)
- *Type F: Rocky Shores and Bays* – North and South-west Coasts (F1)
- *Type G: Bays with Intertidal Flats and Reefs* – St Ouen's Bay Intertidal Zone (G1)
- *Type I: Shallow Sea* – North-East Shallow Sea (I1)
- *Type J: Deep Sea* – North-West Deep Sea (J1)

In addition, small parts of the following Character Type/Areas are visible in the backdrop of this Coastal Unit:

- *Type A: Cliffs and Headlands* – North Coast Heathland (A1) and South West Heathland (A2) – parts of this Character Type play a key role as they form the headlands containing the ends of the bay.
- *Type E: Interior Agricultural Plateau- Western Coast and Headlands Farmland*(E1) – Buildings in these areas are visible on the skyline above the *Escarpment* (C4) backing St Ouen's Bay.



The southern part of St Ouen's Bay as seen from the sea

Description

This is an open and expansive Coastal Unit but with strong containment provided by the prominent rocky headlands which book-end the bay to the north and south and by an escarpment which forms the inland extent of the unit. Much of this Coastal Unit (the *Coastal Plain* and *Escarpment*) is within the Coastal National Park.

The coastal edge comprises a gently curving sandy beach backed by a concrete anti-tank barrier which supplements an earlier granite sea defence wall. A narrow band of dunes lies directly behind the beach and these dunes reduce in height and width in the northern part of the bay. The sea is open and expansive with large waves often occurring due to the westerly orientation of the bay. There are long views to Guernsey and other islands. The shallowly graded coastal edge has a long tidal reach with extensive areas of sandy beach and intertidal reefs revealed at low tide. La Rocco Tower, which sits on a small rocky outcrop in the shallow waters of the bay, forms a key focus in views, especially at high tide when it appears as an island.

A gently undulating to flat coastal plain provides the hinterland to the coast. This comprises a mix of farmland, wetlands, aggregate quarry site, water bodies and the complex and largely stable Les Quennevais Dunes. The steep, but relatively low, escarpment which visually contains the unit to the east comprises a pre-historic coastal cliff. Housing development, a reservoir dam and infrastructure associated with the airport is noticeable on the scarp slopes and visible on its skyline, along with the distinctive tower of St Ouen's Church. The escarpment is covered with scrubby woodland, grassland, former quarries and small fields including cõtils. The escarpment is particularly rugged in the north, with exposed rock and sheer slopes.

This is a diverse Coastal Unit, with a rich scenic contrast between the coast and sea, the farmland of the coastal plain and the rough-textured heath and woodland on the escarpment. The complexity of intertidal reefs, the broad sweep of sandy beach, interlocking dunes, inland water body and wetlands and small fields bounded by hedge-banks additionally enhances the diversity of the area. The height of the escarpment which contains the unit to the east is exaggerated by its visual juxtaposition with the low-lying coastal plain. This Coastal Unit is relatively well-settled with housing located in the hinterland escarpment and coastal plain, as well as dispersed large buildings (including restaurants, apartments and housing) and car parks located close to the

coastal edge. The presence of built development diminishes the sense of wildness that is experienced in this exposed and elemental seascape.

The Five-Mile Road is aligned parallel with, and close to, the coast, although views to the coastal edge and sea from the road are restricted by dunes. Elevated roads traversing the escarpment and the Les Landes headland provide open views over much of this Coastal Unit. There are viewpoints marked on the Ordnance Survey map above L'Etacq, above La Garriere Quarry, and another above La Pulente. The footpath between La Pulente and Corbière also gives long views along the length of this coast. The eye of the viewer is particularly drawn by La Rocco Tower, the rocky headlands at the northern and southern ends of the bay, and the upper edge of the escarpment to the east.

Much of this Coastal Unit has a geological foundation of Jersey Shale, which has often been eroded and overlaid with wind-blown sands. There is a clear physical connection between the long fetch, sandy seabed, prevailing winds, and the accretion of sand dunes. However, this process has been interrupted since the 1940s by the sea wall, which limits the amount of wind-blown sand.

Culturally, while the exposure of this coast means there are no harbours, links between the coast and the hinterland farmland are evident in the historic granite paved slipways and lanes which were constructed for collection of seaweed (vraic) as fertilizer. Farms located on the coastal plain grow potatoes on the cōtils on the escarpment above. Sand extraction has also historically taken place near the dunes and a quarry is still present.

Another cultural connection within the Coastal Unit is the land ownership of St Ouen's Manor, owned by the Malet de Carteret family. St Ouen's Pond (La Mare au Seigneur) at the Wetland Centre is the former manorial pond, now owned and managed by the National Trust for Jersey.

This coastline is popular with surfers due to its exposure to the Atlantic which produces strong waves; it is also well-known for spectacular sunsets.

Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Housing and other development	The skyline of the rocky headlands which contain the northern and southern ends of the bay and the top of the escarpment to the east of the bay are highly sensitive to buildings and infrastructure due to their prominence in long views from the coast and sea. Large houses sited on the slopes of the escarpment or close to its top also appear to diminish the height of the escarpment and detract from its character.	Further housing located on and close-by the escarpment should be restricted with only smaller and lower buildings, constructed using recessive coloured materials and finishes, allowed. Prominent skyline locations on the escarpment should be avoided. This guidance should, where operationally possible, additionally apply to airport infrastructure. Cumulatively, built development (and particularly large apartment blocks and individual houses) located close to the

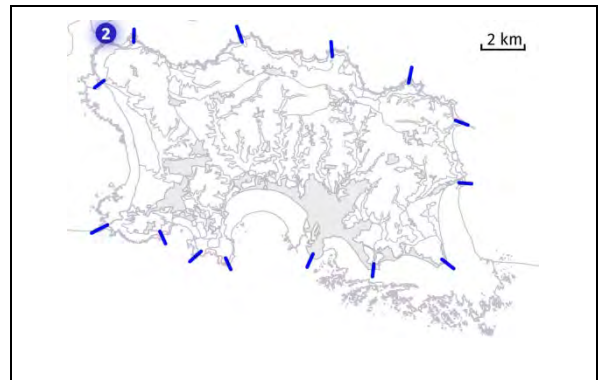
Key forces for change	Coastal sensitivity	Guidance
Housing and other development (Continued)	The cumulative effect of multiple houses sited on the escarpment and coastal plain, particularly where these are large and constructed using light-reflective materials/finishes, together with development sited close to the coast, affects the scenic contrast that occurs between the character types which make up this Coastal Unit and also reduces the sense of wildness that can be experienced along the coast and from the sea.	coast would further diminish the sense of wildness associated with this exposed bay. Additional development of new buildings, car parks and housing close to the coast (and particularly west of the Five-Mile Road) should be discouraged with any refurbishment, extension or redevelopment of existing buildings being appropriately scaled and designed to minimise intrusion and fit with the character of the coast.
Large-scale land use change	At present there are some large-scale land uses within the Coastal Unit, such as the Simon Sand quarry, and golf courses. The Coastal Unit will be sensitive to change if and when these land uses cease operation.	There is a need for long-term management plans for the restoration of large-scale land uses once they cease operation. This is a positive opportunity to prepare restoration plans which enhance landscape character and biodiversity.
Marine renewables	This Coastal Unit would be sensitive to visible marine development (for example, floating wave devices and off-shore wind farms) due to the presence of elevated views from roads and footpaths which traverse headlands, dunes and the escarpment, elevated views from houses, and the popularity of the bay for recreation.	Tidal and wave developments should be designed to minimise visual intrusion. Any ancillary onshore development associated with marine development should not be located adjacent to the coastal edge but east of the Five-Mile Road, in more visually contained areas. Any off-shore wind farms should be sited to avoid significantly impacting on key views from this Coastal Unit including those to the other Channel Islands.
Land management	The characteristic small hedged/banked arable fields found on the <i>Coastal Plain</i> and the <i>Escarpment</i> contribute to the scenic diversity of this Coastal Unit. Changes to land management may occur with an increasing trend for horse paddocks replacing agricultural land evident in places. Traditional banked hedges are under threat, as these could be replaced by more visually intrusive fencing around paddocks.	Small hedged cõtils used for growing early potatoes and other crops are a key characteristic of the northern part of the coastal plain and parts of the <i>Escarpment</i> in this Coastal Unit. Changes to farming methods which resulted in the enlargement of fields and removal of traditional banked hedged enclosures should be discouraged. Intrusive fencing around horse paddocks should also be discouraged especially where sited on the more prominent slopes of the escarpment.

Key forces for change	Coastal sensitivity	Guidance
Recreation and Leisure	The St Ouen's Bay Coastal Unit contains several large and well-used car parks serving beach users. Recently there has been increased overnight use of these carparks by campervans, effectively turning them into campsites. There is also potential for mobile food vans and kiosks to set up in car parks. These activities increase visual clutter, detracting from the simplicity and naturalness of the coast and potentially diminishing the sense of seclusion and wildness experienced.	Reduce overnight camping in car parks. Where necessary, use low-key and sympathetic materials, such as timber and boulders, to prohibit or reduce accessibility to car parks for large vehicles, and ensure appropriate regulation of their use.
Coastal management	The maintenance of existing defences in St Ouen's Bay is proposed within the <i>Jersey Shoreline Management Plan</i> (2020). The level of flood protection may decrease over time as flood risk increases due to the changing coastal processes and impacts of climate change.	Any repair of existing defences should be designed to enhance the sense of wildness associated with this coast. This should include restoration of natural vegetation cover behind the beach. Repairs to existing defences should also respect the heritage value of some of the structures (such as anti-tank walls and coastal bunker nests) which are Listed.

Coastal Unit 2: Grosnez

Location

This Coastal Unit forms a headland lying on the far north-western point of Jersey. It extends from the promontory of L'Etacq, which contains the northern end of St Ouen's Bay, to the headland of La Tête de Plémont. Grosnez comprises the highest and most exposed cliffs at the extremity of the headland.



Grosnez Coastal Unit from Les Landes. Sark can be seen on the horizon

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Cliffs and Headlands - North Coast Heathland (A1)*
- *Interior Agricultural Plateau – Western Coast and Headlands Farmland (E1)*
- *Rocky Shores and Bays – North and South-west Coasts (F1)*
- *Offshore Reefs and Islands – Les Écréhous (H1)*
- *Shallow Sea – North East Shallow Sea (I1)*
- *Deep Sea – North West Deep Sea (J1)*



Grosnez Headland from the sea

Description

This dramatic cliff-girt headland, composed of hard igneous rocks, has a strongly exposed and elemental character. The coastal edge is fissured by narrow vertiginous inlets and the cliffs are the highest in Jersey. Fragmented islets and rocks lie at the foot of the cliffs, breaking the deep blue-green sea into a swirl of bright-white crashing waves. A sandy beach, towered over by cliffs, is exposed at low tide at Plémont and is reached by narrow steps. The gently domed heathland which backs the coastal edge provides vivid colour. Grass and heath cover steep slopes between craggy lichen-covered rock outcrops on the upper cliffs. Farmland extends closer to the coast to the east. Much of this Coastal Unit is included within the Coastal National Park.

A WW2 German range-finding tower and a small white-washed beacon are perched above sheer craggy cliff faces, and the remains of Grosnez Castle (a Medieval refuge) is set back from the cliff top and located close to a small car parking area.

There are elevated views from this coast to Sark, Herm and Guernsey, and the near-shore Paternosters reef. This headland is popular with visitors and lies on the route of the Jersey North Coast Path. The coast is wild and rugged with restricted access to inlets, caves and beaches. There is limited visibility of the more developed hinterland of the *Interior Agricultural Plateau* from cliff paths although larger buildings in the racecourse area and clustered housing can be seen on the skyline from the network of paths on the heathland itself, and from the sea. The car park on the point is visible above the cliffs from the sea.

This elevated location, at the north-west of Jersey has been an important look-out for millennia, where the visual connections between land and sea (and their defensive role) is key. One of the oldest occupation sites on Jersey – La Cotte à la Chèvre – provides a connection with some of our earliest ancestors, although they would have looked out over a dry plain and a river channel, rather than the sea. Le Pinnacle is a prehistoric site which appears to have been used into the Roman period. Both form part of the large Les Landes Prehistoric Landscape. Other structures which are sited to take advantage of this visual connection are the medieval castle refuge at Grosnez, the lighthouse, and Les Landes German range-finding tower.

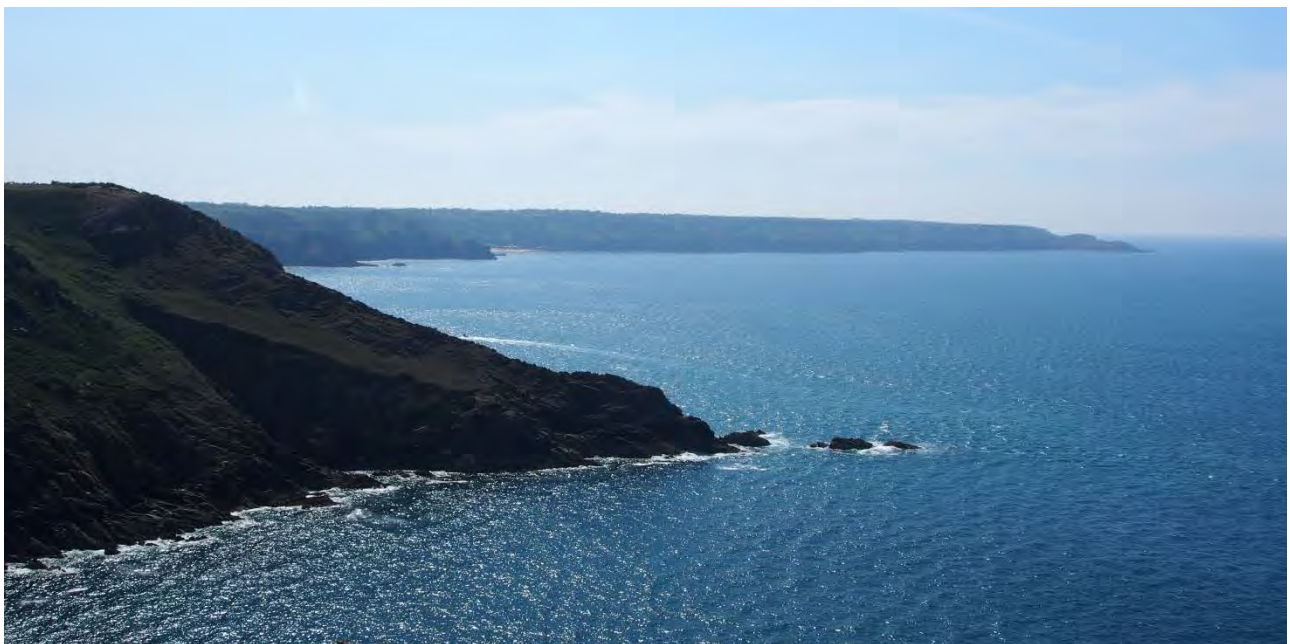
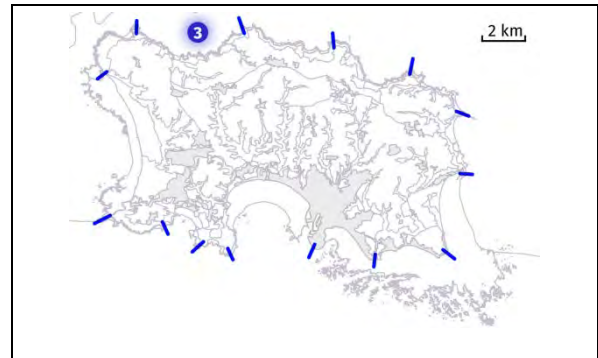
Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Housing / built development	This Coastal Unit has a high landscape and visual sensitivity due to its wild character and popularity with visitors	It is important to retain the naturalistic hinterland to the coast to preserve a sense of wildness. New built development should be discouraged close to the coast and within the heathland and the visibility of any redevelopment or extension of existing development in the hinterland appropriately scaled and carefully designed to minimise visibility from coast/sea.
Marine renewables	This Coastal Unit is of high landscape and visual sensitivity to visible marine development which could adversely affect the sense of huge space, uncluttered seaward views and strong sense of wildness.	Visible tidal/wave renewables and near off-shore wind farms should be discouraged in this highly sensitive Coastal Unit
Land management and recreation	Existing access facilities are low-key comprising worn informal paths, the coast path, a car park on the headland and another near Plémont beach. The area is also used for a variety of leisure and recreation uses including the racecourse, access to the German bunkers (which is being increasingly formalised), model aircraft club and shooting range. The racecourse, although set back from the coast, is also visible.	Consideration should be given to relocating the majority of car parking space (leaving a small area for low-mobility access) away from the headland to minimise visibility both from the sea and from the coast in order to enhance the wild qualities of this Coastal Unit. Coastal heath should be protected by establishing priority paths which could limit access in more fragile areas. All recreational use of this area should remain low-key and should avoid the introduction of further hard surfaces, signage, and structures which could introduce visual clutter. Additional prominent buildings and structures associated with the racecourse (particularly those in highly-visible light colours) should also be discouraged.
Coastal management	Outside of the beach at Plémont, the coast is difficult and dangerous to access. The cliffs are steep and therefore the intertidal area is very narrow.	Retain the wild and natural character of the shoreline

Coastal Unit 3: Grève de Lecq

Location

This Coastal Unit comprises a broad bay on the rocky north coast of Jersey contained by the headlands of Plémont to the west and Sorel Point to the east.



Grève de Lecq Coastal Unit from Sorel Point

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Cliffs and Headlands - North Coast Heathland (A1)*
- *Interior Agricultural Plateau – North Coast Farmland (E2)*
- *Enclosed Valleys – North Coast Valleys (D3)*
- *Rocky Shores and Bays – North and South-west Coast (F1)*
- *Offshore Reefs and Islands – Les Écréhous (H1)*
- *Shallow Sea – North East Shallow Sea (I1)*
- *Deep Sea-North West Deep Sea (J1)*



Grève de Lecq Coastal Unit from the sea

Description

This is an irregular coastline with steep, craggy cliffs and numerous tiny inlets, promontories, caves and littered rocks providing a diverse edge. The cliff edge is cut by narrow wooded valleys which spill down to the coast from the interior farmland. The small clustered settlement of Grève de Lecq, and its popular sandy beach, lies at the outlet of one of these valleys and is one of the rare accessible points along this coast.

The cliffs are relatively well-vegetated with bracken and grass studded with gorse. Woodland extends down upper cliff faces in places, filling narrow gullies and dips in the landform. Woodland within the *Enclosed Valleys* also spreads on steep slopes around the more sheltered inlets. The wooded valleys, cliffs and headlands are within the Coastal National Park.

The small white-washed beacon at Sorel Point, the 18th century military barracks and tower at Grève de Lecq, and its small harbour tucked below cliffs, are key built features along this coast. L'Île Agois, an offshore islet towards the east of the Coastal Unit, is a Late Iron Age and Early Medieval settlement site, which may have been an early Christian hermitage.

The Paternosters reef is centrally placed in views from this coast and the island of Sark is often seen behind them on the northern horizon. The narrow Jersey North Coast Path is aligned on steep bracken-covered slopes above the rocky cliff edge. Light-coloured buildings in the *Interior Agricultural Plateau* are visible but not prominent, being small and partially screened by woodland and undulating landform.

The valley at Grève de Lecq was one of the few vulnerable locations along this part of the north coast, as a force invading here could use the Vaux de Lecq valley to quickly access the interior of Jersey. As a consequence, the bay has been defended over many centuries, and these have left their mark on the landscape. On the headland to the east of Grève de Lecq are the earthworks of the Iron-Age promontory fort of Câtel de Lecq. At the mouth of Vaux de Lecq are an early Jersey Round Tower and a military barracks dating from the late 18th Century, as well as several WW2 German defences.

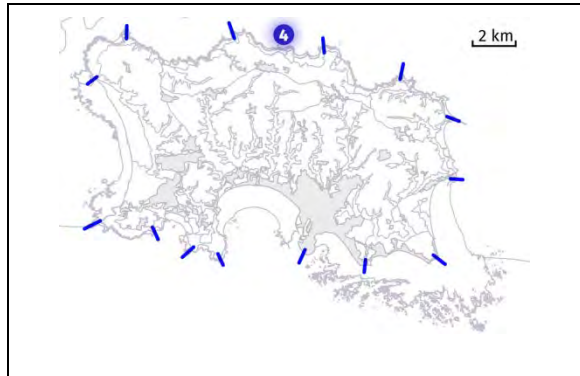
Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Housing and built development	This Coastal Unit has a high landscape and visual sensitivity due to the presence of well-used coastal footpaths. Views are more contained from the settlement and beach at Grève de Lecq, which is a key destination for visitors.	Buildings and other structures should avoid being sited intrusively on sensitive skylines and on steep vegetated slopes to conserve the little developed character of this Coastal Unit. The redevelopment and /or extension of existing development should be responsive to its sensitive landscape context in terms of design, materials and colour. New building or redevelopment and/or extension of existing development within the Grève de Lecq area should be appropriately scaled and carefully sited and designed to protect the setting of historic features and avoid dominating this intimately-scaled and scenic inlet.
Marine renewables	This Coastal Unit is of high landscape and visual sensitivity to visible marine development.	Visible tidal/wave renewables and near off-shore wind farms should be discouraged in this highly sensitive Coastal Unit

Coastal Unit 4: Bonne Nuit

Location

This broad bay is visually contained by the headlands of Sorel Point and La Belle Hougue which form the western and eastern extents of the Coastal Unit.



Bonne Nuit Bay from La Tête de Frémont

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Cliffs and Headlands - North Coast Heathland (A1)*
- *Enclosed Valleys – North Coast Valleys (D3)*
- *Interior Agricultural Plateau – North Coast Farmland (E2)*
- *Rocky Shores and Bays – North and South-west Coast (F1)*
- *Offshore Reefs and Islands – Les Écréhous (H1)*
- *Shallow Sea – North-East Shallow Sea (I1)*



Bonne Nuit Bay from the sea

Description

This Coastal Unit forms a varied coastline of subtle bays and rocky promontories. Shallow seas close to shore influence the translucent blue-green of the water where it overlays sand. A low cliff face is backed by steep bracken-covered slopes which are occasionally broken by rocky outcrops. Large rocks at the foot of the cliff edge, eroded stacks and occasional islets create a fragmented coastline. Shingle and sandy beaches occur at Bonne Nuit where a wooded valley cuts down to the coast. A clear dark band marks the high tide line along the coast and rocky reefs extend into the inter-tidal zone in places. Woodland tips down steep slopes and fills narrow gullies; scrub and wind-shorn trees occur on more exposed slopes.

The operational Ronez Quarry east of Sorel Point, although large, is generally well-screened in views along the coast. Bonne Nuit comprises a small clustered former fishing village with harbour. The 18th Century La Crete Fort and the near off-shore island of Cheval Rock form local landmarks in this area. Newer buildings in Bonne Nuit dominate the intimate scale of this narrow inlet. Small hedged fields within the *Interior Agricultural Plateau* are often visible above the coastal edge.

The narrow Jersey North Coast Path is aligned on steep bracken-covered slopes above the rocky cliff edge and provides expansive views along this coast and to the low-lying Les Écréhous reef. Much of the Coastal Unit is within the Coastal National Park. A tall transmission tower, mast and radar infrastructure are visible on the skyline above the coastal edge. These are located within the *Interior Agricultural Plateau*.

The exposure and inaccessibility of this steep rocky coast limits connections between sea and land with Bonne Nuit providing the only safe harbour. Its isolation meant that it was historically used by smugglers loading and unloading contraband.

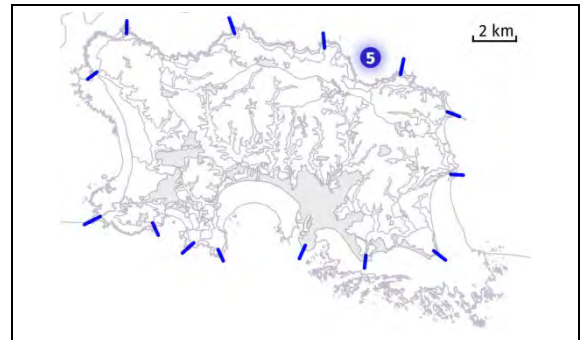
Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Built Development	This Coastal Unit has landscape and visual sensitivity due to the presence of the well-used coastal footpath and in terms of views from Bonne Nuit which is a popular visitor destination. It is also within the Coastal National Park.	Buildings and other structures should avoid being sited intrusively on sensitive skylines and on steep vegetated slopes, in order to conserve the little developed character of this Coastal Unit. The redevelopment and /or extension of existing development should be sensitive to its landscape context in terms of design, materials and colour. New building or redevelopment and/or extension of existing development within Bonne Nuit should be appropriately scaled and carefully sited and designed to avoid dominating the small scale and scenic character of this bay.
Infrastructure	Ronez Quarry is currently active within this Coastal Unit, and may expand in the future. It impacts on the wild character of the coast, and also on the interface between land and sea.	Minimise the visual impacts of any future quarry expansion, particularly in views from the North Coast Path, and ensure that the land-sea interface is kept as natural as possible.
Marine renewables	While there are some sensitivities in relation to visible marine renewables this Coastal Unit is less wild and intact in some places than other parts of the northern Jersey coast particularly where quarry operations and tall structures influence character and views.	Visible tidal/wave renewables could potentially be accommodated close to the more developed parts of this coast, in the Ronez area for example, and where the setting of historic features and the settlement of Bonne Nuit would not be adversely affected. Nor should they be located in the more wild and natural stretches of the coast.

Coastal Unit 5: Bouley Bay

Location

A north-east facing broad, and relatively deep, bay contained by the headlands of La Belle Hougue to the west and White Rock to the east.



Bouley Bay from the harbour

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Cliffs and Headlands - North Coast Heathland (A1)*
- *Enclosed Valleys – North Coast Valleys (D3)*
- *Interior Agricultural Plateau – North Coast Farmland(E2)*
- *Rocky Shores and Bays –North and South-west Coast (F1)*
- *Offshore Reefs and Islands – Les Écréhous (H1)*
- *Shallow Sea – North East Shallow Sea (I1)*



Bouley Bay from the sea, showing the steep wooded hillside behind the coastal settlement

Description

This Coastal Unit has an irregular coastline, with rocky wave-cut platforms and a low rock cliff backed by steep vegetated slopes which are occasionally broken by craggy outcrops. The coastal edge is fragmented and has a distinctly rugged appearance with rocky outcrops and islets interspersed with beaches composed of pebbles, sand and boulders. Narrow gullies are often crammed with scrubby vegetation, and dark clefts split rock faces. Occasional jagged promontories break into rocky knolls and islets on the coastal edge. The broader beach at Bouley Bay, punctuated by the distinctive rocky outcrop of L'Islet, lies at the foot of a narrow valley and is backed by an arc of steep wooded hill slopes.

Wind-sculpted trees colonise steep bracken and gorse-covered hill slopes and extend close to the coast, often forming focal features on islets and promontories. Little built development is visible in the hinterland to the coast with Bouley Bay comprising the main settlement which is reached by a narrow road which snakes down steep slopes. A large, unoccupied, hotel dominates the settlement while some housing, including recent holiday chalets, is located further up into the narrow valley. A small pier is positioned on a narrow rocky promontory, above which sits the historic Fort Leicester, and a granite-paved slipway is also present on the beach. Diving platforms and boats are moored within the bay.

There are long views from this coast to the Les Écréhous reef and to the distant French coast. There are also expansive views from an area of heathland perched high above Bouley Bay at Jardin D'Olivet and from the elevated Jersey North Coast Path. Farmland within the hinterland is often contained in a slight dip behind the domed hills which align the coast and views of this are limited to more elevated locations, where the scenic contrast between small hedged fields and open rougher heathland covering the coastal hills is revealed. Much of this Coastal Unit is within the Coastal National Park.

The steepness of the cliffs behind Bouley Bay (it is accessed by a series of hairpin bends) means that there are limited connections between the coast and the central part of Jersey. Nevertheless, Bouley Bay is a relatively deep harbour, and historically accommodated relatively large boats. The

harbour pier was constructed in the early 19th Century for use by oyster cutters when sales of oysters were booming.

Bouley Bay has also been a key defensive location along Jersey's north coast and the L'Etaquerel Fort and Leicester Battery are key features in this Coastal Unit.

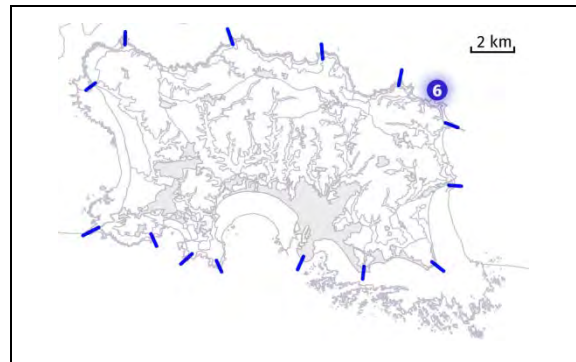
Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Built Development	This Coastal Unit has some visual sensitivity due to the presence of well-used coastal paths (which offer elevated views) and in terms of views from Bouley Bay which is a key visitor destination. The relatively less-developed character of this coast is also sensitive particularly in the wider context of the more developed coast in other parts of Jersey	Buildings and other structures should avoid being sited on sensitive skylines and on steep vegetated slopes to conserve the little developed character of this Coastal Unit. The redevelopment and /or extension of existing development should be sensitive to its landscape context in terms of design, materials and colour. New building or redevelopment and/or extension of existing development within Bouley Bay should be appropriately scaled and carefully sited and designed to avoid dominating this small-scale settlement and adversely affecting the scenic character of the coast.
Marine Development	Landscape and visual sensitivities to visible marine developments are similar to those described above for built development.	Visible tidal/wave renewables and near off-shore wind farms should be discouraged in this sensitive, less developed Coastal Unit

Coastal Unit 6: Rozel

Location

This Coastal Unit has a north-east aspect and is defined by White Rock to the west and the long St Catherine's breakwater on the east coast of Jersey.



Rozel Harbour and Bay

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Cliffs and Heathlands - North East Low Wooded Edge (A3)*
- *Enclosed Valleys – St Martin's Valleys (D4)*
- *Interior Agricultural Plateau – North East Farmland (E3)*
- *Rocky Shores and Bays – North and South-west Coast (F1)*
- *Offshore Reefs and Islands – Les Écréhous (H1)*
- *Shallow Sea – North East Shallow Sea (I1)*



Fliquet Bay from the sea. St Catherine's Breakwater is on the left of the photo

Description

This Coastal Unit has a markedly different character to the higher cliff scenery of the northern coastline of Jersey because of the influence of the Rozel Conglomerate geology which creates a lower and more intricate rocky shoreline with numerous coves, inlets and craggy promontories. Seaweed-shrouded rock platforms pattern sandy beaches and accommodate numerous pools. This coastline also has a well-wooded character, particularly where the *St Martin's Valleys* penetrate the coast, increasing shelter and influencing its predominantly small-scale character.

Farmland is occasionally visible from the coast, the steep hedged potato fields on the northern side of Rozel being an example, but usually it is screened by the low but steep coastal edge which is covered with rough bracken, scrub and woodland. Much of the Coastal Unit is within the Coastal National Park.

The settlement of Rozel is set around a small cove with shingle-sand beach at the outlet of St Martin's Valleys. It is strongly contained by wooded slopes and has an intact clustered form and character, mainly comprising small traditional buildings and historic pier. Le Couperon Barracks (1809) is a key feature within Rozel. Occasional large modern houses are prominently sited on steep slopes near the settlement and in other intrusive locations along this coast.

The more benign nature of this Coastal Unit is reflected in the presence of a number of slipways and piers allowing access between land and sea. Lower and more gently graded slopes backing the coast have also facilitated access, with some roads aligned along the coast. Historic connections with the sea include oyster fishing and collection of *vraic* (seaweed) as fertilizer for farmland. This coast has also been important because of its proximity to Les Écréhous and to France.

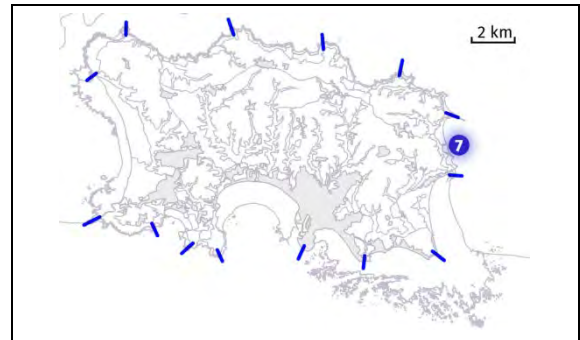
Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Built Development	This Coastal Unit is of high landscape and visual sensitivity due to its relatively less-developed character and the presence of coastal paths, beaches and roads (and also views from the sea and St Catherine's Breakwater). Existing large individual houses are often visually intrusive and conflict with the scale, character and siting of the traditional buildings which are a key characteristic of this Coastal Unit.	Discourage any further housing on more visible hill slopes in the Rozel area in order to protect the setting of this settlement and conserve its distinctive character: the redevelopment and /or extension of existing development here, and throughout this Coastal Unit, should be sensitive to its landscape context in terms of scale, design, materials and colour. Any new building or redevelopment and/or extension of existing development throughout this Coastal Unit should be carefully sited and designed, avoiding sensitive skylines and prominent slopes. Any residential development, including the redevelopment of existing buildings, should be of a small scale to fit with the character of this relatively less-developed coast. Large-scale buildings should be avoided.
Marine renewables	This Coastal Unit is of high landscape and visual sensitivity to visible marine development (such as tidal/wave renewable energy projects and near off-shore wind farms)	The intricate nature and small scale of this coast could be significantly affected by larger visible marine developments and they should therefore be discouraged.

Coastal Unit 7: St Catherine's Bay

Location

This Coastal Unit lies on the east coast of Jersey. It extends from the long St Catherine's Breakwater in the north to the distinctive rocky headland of Le Mont St Nicholas on the northern side of Mont Orgueil Castle.



View north along St Catherine's Bay from Le Saut Geffroy. St Catherine's Breakwater can be seen on the horizon

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Cliffs and Headlands - North East Low Wooded Edge (A3)*
- *Enclosed Valleys – St Martin's Valleys (D4)*
- *Interior Agricultural Plateau - Southern Plateau and Ridges Farmland (E4)*
- *Bays with Intertidal Flats and Reefs - St Catherine's and Anne Port Intertidal Zone (G5)*
- *Shallow Sea – North East Shallow Sea (I1)*



St Catherine's Bay from the sea. Mont Orgueil is on the left of the photo

Description

Rozel Conglomerates outcrop in St Catherine's Bay and create an intricate rocky shoreline comprising low cliff, small craggy promontories and bays of sand and shingle pattered with eroded rocky outcrops. Shore profiles are relatively steep, and the intertidal area narrow, although this coast is generally sheltered with low energy waves. The interior farmland is visible with small hedged fields present on sloping ground above low cliff faces and, in places, on less steep slopes falling directly to the coastal edge. This is a well-wooded coast with a mix of woodland, including ornamental plantings within the grounds of larger properties, giving a bosky and lush appearance.

The impressively long St Catherine's breakwater, built in 1840, is a key feature, as are the red and white-striped Archirondel Tower (both built to counter the Napoleonic Threat), and the Medieval coastal fortress of Mont Orgueil. Settlement is often sited close to the coast, and features many traditional buildings. While some more modern and larger buildings are present, these are not generally prominently sited.

There are long views to the French coast and the sequence of bays, woodland and rocky promontories experienced from the narrow road which weaves along the coast produces a scenic seascape and a strong sense of tranquillity and seclusion. Parts of the Coastal Unit are within the Coastal National Park.

The historic vulnerability of this coast from attack from France means that it was heavily defended for several centuries. The defensive structures such as Mont Orgueil, Victoria Tower, Archirondel Tower and St. Catherine's breakwater therefore form prominent landmarks along this stretch of coastline. St Catherine's Breakwater was intended to form the northern arm of a harbour able to hold the English Naval fleet in the event of an attack on France. The southern arm was started near Archirondel but not completed.

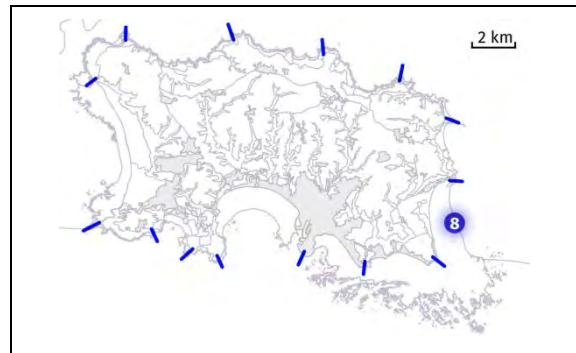
Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Built Development	This Coastal Unit is of high landscape and visual sensitivity due to its relatively less-developed character and the presence of well-used coastal paths, beaches and roads (and also views from the sea and St Catherine's Breakwater). Historic monuments such as Mont Orgueil (and their settings) are of particular sensitivity.	<p>Discourage built development in more rural locations to conserve the less developed and secluded character of this Coastal Unit. Any further development should be sited within existing settlements. Any residential development, including the redevelopment of existing buildings, should be small scale to fit with the character of this relatively less-developed coast and large scale buildings should be avoided.</p> <p>The setting of Mont Orgueil and other historic sites should be protected. This includes discouraging the development of new buildings inland of the historic sites, which will appear in their settings when viewed from the sea. The redevelopment and/or extension of existing buildings in these areas should be sensitively scaled and designed and have regard to their impact on the setting of Listed Buildings, including when viewed from the sea.</p>
Marine renewables	This Coastal Unit is of high landscape and visual sensitive to visible marine development (such as tidal/wave renewable energy projects and near off-shore wind farms)	The tranquillity and scenic character of this bay could be significantly affected by larger visible marine developments and they should be discouraged.

Coastal Unit 8: Royal Bay of Grouville

Location

The Royal Bay of Grouville lies on the eastern coast of Jersey. It comprises a broad, subtly curved, sandy beach backed by a coastal plain and escarpment. The bay is emphatically contained to the north by Mont Orgueil Castle which sits atop a rocky promontory. The low-lying point of La Rocque forms the southern extent of this Coastal Unit.



Royal Bay of Grouville looking towards Mont Orgueil, from Gorey Common

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Bays with Intertidal Flats and Reefs – South-East Coast Intertidal Zone (G4)*
- *Coastal Plain – Grouville Coastal Plain (B1)*
- *Escarpment – Grouville-St Saviour Escarpment (C1)*
- *Shallow Sea – South East Shallow Sea (I2)*



Royal Bay of Grouville from the sea

Description

The coastal edge comprises a broad and very gently sloping sandy beach resulting in a wide intertidal area. The beach often has a sparkling, light-filled appearance due to the aquamarine colour of shallow water overlaying extensive pale sand. Rocky outcrops are exposed at low tide in the southern part of the bay and these extend to form the large expanse of reef which lies off the south-eastern coast of Jersey. There are open and expansive views from the bay out to sea with the Seymour Tower on the reef forming a near-distance focal point and the distant coast of France being visible on the horizon.

A concrete seawall lines much of the bay. In the Gorey area the seawall is constructed of dressed granite and accommodates a smart esplanade set above the beach and edged by attractive ornamental planting. The tightly clustered historic core of Gorey and its small harbour nestles below the massive Mont Orgueil Castle which is set on a sheer-sided granite knoll at the northern end of the bay. The castle dominates views across this Coastal Unit.

The middle and southern stretches of the coast are backed by the low-lying *Coastal Plain*. In the north the steep-sided and wooded *Escarpment* provides an immediate backdrop and is linked to the rocky outcrop upon which Mont Orgueil Castle is situated. The *Escarpment* comprises a pre-historic coastline feature and extends to form an arc of farmed and wooded slopes west of the coastal plain in the middle section of the bay, where it is generally lower and less steep. The *Coastal Plain* accommodates a gently undulating golf course, the Royal Jersey, laid out on former sand dunes and links grassland. The golf course is within the Coastal National Park. A public road is aligned tight against the coast at Gorey. It diverts inland behind the golf links before re-joining the coast in the southern part of the bay.

This Coastal Unit is densely settled at Gorey with large houses and apartments stepped-up steep slopes and with occasional buildings also visible on the largely wooded skyline of the *Escarpment*. Settlement is also concentrated at the foot of the escarpment to the west of the golf course although is visually discrete being partially screened in views from the coast by woodland. The southern part of the bay is fringed by residential development from Ville-es-Renauds to La Rocque

and includes a mix of newer properties, older traditional small farms and cottages as well as a string of 18th Century defensive Jersey Round Towers located along the coast.

This Coastal Unit is highly visible in elevated views from the key visitor attraction of Mont Orgueil Castle and from the beach, esplanade and harbour at Gorey and off-shore from the reef.

This Coastal Unit has a strong recreational connection. The esplanade at Gorey and the beach are well-used and Gorey harbour provides anchorage for marine leisure craft and some commercial fishing activity. Oyster farming takes place on the intertidal rocky reef. Small scale walking tours (with oyster tastings) to the reef are increasingly popular with visitors at low tide.

Historically this area has been a popular and relatively easy location to gather vrac (seaweed) at low tide, to use as fertilizer on the fields. There are several slipways onto the beach which would originally have been used by carts for this purpose.

Coastal sensitivities and guidance

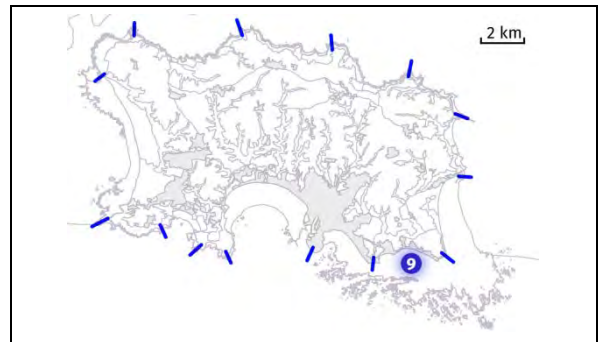
Key forces for change	Coastal sensitivity	Guidance
Built Development	This Coastal Unit has a high visual sensitivity due to the popularity of the bay and its well-settled nature. Elevated views are possible from housing on the escarpment and aligning the coastal edge and from the beach, esplanade and also from off-shore. The skyline of the <i>Escarpment</i> and arc of steep slopes forming the back-drop to Mont Orgueil Castle are highly sensitive to development.	<p>It is important to retain the clear identity and separation of the densely clustered settlement of Gorey. The golf course presents a prominent green gap along the coast and this should be conserved as it is important in both protecting the distinctive identity of Gorey, but also providing a contrast to the near-continuous densely built-up coastal edge on the southern coast of Jersey stretching from St Aubin to La Rocque and around to Ville-es-Renauds. The <i>Coastal Plain</i> is less sensitive where it is set back from the coastal edge and is additionally screened by other buildings and trees, although much of this area is already developed.</p> <p>The development of further large buildings sited on the steep scarp slopes around Gorey, and particularly intruding on the skyline, should be prevented in order to protect the setting of Mont Orgueil Castle where they would detract from its visual focus and character. The redevelopment and /or extension of existing development here should be sensitive to its landscape context in terms of scale, design, materials and colour. Woodland in the Gorey area (both within gardens and around farmland) softens and reduces the intrusion of many</p>

		<p>buildings and this should be protected and managed.</p> <p>The farmed and wooded character of the <i>Escarpment</i>, which is important in providing a largely rural backdrop to the bay, should also be conserved.</p>
Marine Developments	<p>This Coastal Unit is of high visual sensitive to visible marine development (such as tidal renewable energy projects) sited in the bay where there could be significant impact on views from the beach, esplanade and sea and also impacts on the setting and views to/from Mont Orgueil Castle.</p> <p>Existing oyster farming located in the inter-tidal zone within reef areas has a relatively low visual impact from the coast as it merges with rocky outcrops in this undulating seascape. It is however more visible close-by when walking on the reef at low tide.</p>	<p>Careful consideration should be given to marine developments which may adversely affect the setting and views from/to Mont Orgueil Castle. Other marine developments should be sited to minimise effects on sensitive habitats, and views, with any onshore infrastructure carefully sited away from less developed coast and sensitive habitats.</p> <p>Shellfish farming should be spatially limited to areas where it does not damage sensitive intertidal habitats.</p>
Coastal management	<p>The <i>Jersey Shoreline Management Plan</i> recommends an approach of 'Adaptive Management' in this CA. In the medium term, beyond 2040, this may involve improvement of sea defences</p>	<p>Improvement works to existing sea defences could incorporate facilities to enhance access for pedestrians and cyclists along the coast and enrich the experience of walking along the bay. This could be done, for example, by establishing a continuous coastal path and/or creating 'pocket parks' with planting and seating where the hinterland is less built up.</p>

Coastal Unit 9: St Clement's Bay

Location

St Clement's Bay is contained by the low-lying point of La Rocque in the east to La Motte (Green Island) to the west. A relatively broad and flat area of coastal plain provides the hinterland to the coast and is backed by a low escarpment which forms the landward extent of the Coastal Unit.



View east from Le Hocq towards La Rocque at low tide

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Coastal Plain – St Clements-St Saviour Coastal Plain (B2)*
- *Escarpment – Grouville-St Saviour Escarpment (C1)*
- *Shallow sea – South-East Shallow Sea (I2)*
- *Bays with Intertidal Flats and Reefs – South East Coast Intertidal Zone (G4)*



St Clement's Bay from the sea at high tide. Icho Tower can be seen in the centre of the photo.

Description

The shallow shoreline gradient of this coast results in a very wide intertidal range, extending over 2km. Large areas of intertidal rocks and reefs are exposed at low tide and create intricate patterns of pale sand, low rugged rocks, pools, clumps of seaweed and occasional higher protruding craggy outcrops, creating an otherworldly scene. This is a dramatic and strongly dynamic seascape with the character significantly changing between high and low tides.

A rock-armoured bank and, in places, a low sea wall backs the beach within the bay. There is a pier and harbour at La Rocque and a number of granite-paved slipways along this coast.

The *Coastal Plain* behind the point of La Rocque is very low-lying and its rich loess soils have traditionally supported market gardening although many glasshouses currently appear in poor condition and some are unused. A spur of the escarpment extends close to the coast at Le Hocq and the characteristic small hedged fields and broadleaved woodlands on steep, but low, slopes provide a rural backdrop. Another arc of flatter farmland and housing backs the coast in the western part of the bay.

This Coastal Unit is well-settled with near continuous housing and a road aligning the coast. Older low stone-built farms and cottages are commonly orientated along lanes perpendicular to the coast. Stone walls often shelter gardens.

Seymour Tower and Icho Tower, sited far out on the reef, are key focal points in seaward views from this coast and there are also distant views of the French coast. The coastline has almost continuous settlement along the coast road, although elevated seaward views are restricted to rare open parts of the *Escarpment*.

This Coastal Unit contains historic physical connections between land and sea, in the form of lanes down to the shore which end in slipways, such as at Le Hocq. These provided access to the coast before the coastal road was built, and were used for the transport of fish and vrac (seaweed). The lanes and slipways are a focus for historic settlement.

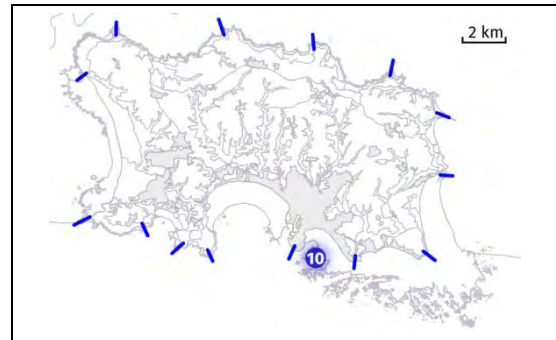
Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Housing	This is a well-settled Coastal Unit with limited inter-visibility between the coast and low-lying hinterland. While this reduces sensitivity to built development which is likely to be located inland from the coast, the generally small scale of existing housing is a distinctive characteristic of the La Rocque area in particular.	Any new development on the skyline and steep outward slopes of the <i>Escarpment</i> (especially where it lies close to the coast) should be discouraged. The redevelopment and /or extension of existing development here should be sensitive to its landscape context in terms of scale, design, materials and colour. Housing on the <i>Coastal Plain</i> should be carefully designed to fit with the often compact and tightly clustered layout and detail of older buildings
Marine Development	The reef, which is a key feature of this Coastal Unit, is of exceptionally high biodiversity. It would be highly sensitive to marine developments which could affect its distinctive and strongly natural character.	Marine developments should be discouraged in this Coastal Unit, and spatial planning should continue to be used to ensure that aquaculture is kept away from the most sensitive habitats.

Coastal Unit 10: Grève d'Azette

Location

This Coastal Unit extends from La Motte (Green Island) in the east to La Collette in the west. Inter-visibility between the hinterland and coast is limited due to the low-lying nature of the *Coastal Plain* and its dense urban character.



Grève D'Azette from Havre des Pas

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Coastal Plain – St Clements-St Saviour Coastal Plain (B2)*
- *Shallow sea – South East Shallow Sea (I2)*
- *Bays with Intertidal Flats and Reefs – South East Coast Intertidal Zone (G4)*

In addition, the eastern part of the urban area of St Helier is visible forming the landward boundary of the Coastal Unit.



Grève D'Azette at high tide from the sea

Description

The broad and very shallowly-sloping sandy beach of Grève d'Azette is interrupted by areas of extensive low rocky reef. A sea wall and broad esplanade aligns the western part of this coastline. A circular bathing tidal lido, built in 1895, forms a feature in the western part of the beach and contributes to the elegant character of the historic resort of Havre des Pas. This is a dynamic and constantly changing seascape with the reef contracting and expanding with the tides, and the bathing pool visibly altering with the tidal ebb and flow.

A busy road, individual houses and larger apartment blocks align the coast and the immediate hinterland is also densely developed. A long arm of reclaimed land at La Collette contains this Coastal Unit to the west and industrial and storage buildings influence its character. The industrial chimney at La Collette, and the flats at Les Marais are particularly noticeable, as tall structures are very prominent in flat coastal locations. Woodlands on the steep slopes surrounding Fort Regent provide an attractive backdrop to settlement in the north-west.

Views inland are generally restricted by dense seafront development aligning the coast road, although views of the distant *Escarpment* are possible from parts of the beach and from the sea. Views out to sea from the beach and esplanade are simple and expansive, focussing on the horizon of sea and sky but also on the intricate patterning of the reef.

This Coastal Unit exhibits a strong tourism and recreation connection between the on-shore buildings, intertidal area and the sea, particularly around the Victorian resort and tidal bathing pool at Havre des Pas.

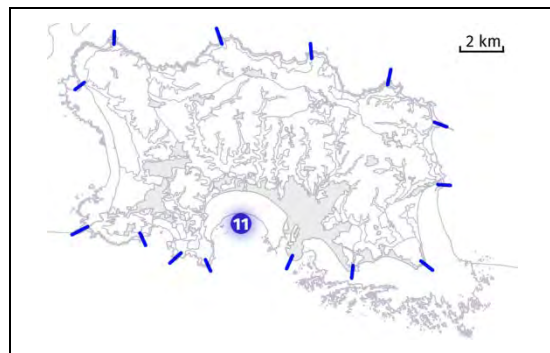
Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Built Development	This Coastal Unit has limited sensitivity to additional housing and other developments due to its already densely urban character.	The distinctive character of Havre des Pas should be respected in the design of any new buildings or renovations. Traffic management along coastal routes would enhance character and the experiential qualities associated with this historic resort.
Marine renewables	This Coastal Unit has some sensitivity to visible marine developments (such as tidal/wave renewable energy projects and near off-shore wind farms) due to its relative popularity for recreation, and its well-settled nature. The character and views from this Coastal Unit are however strongly influenced by industry in St Helier and this reduces sensitivity to some degree.	Care should be taken to minimise visibility of marine renewable projects and to locate any necessary on-shore infrastructure in the La Collette/St Helier Port area where it would fit better with the existing industrial character of built development, rather than in this Coastal Unit.
Coastal management	The <i>Jersey Shoreline Management Plan</i> recommends an approach of ‘Adaptive Management’ in this Coastal Unit due to increased flooding risk. In the present and medium term, this may involve improvement of sea defences.	Any works to existing sea defences could incorporate facilities to enhance safe access for pedestrians and cyclists along the coast. Opportunities to improve the quality of the esplanade in the Grève D’Azette/La Mare area and reduce the influence of traffic should be taken.

Coastal Unit 11: St Aubin's Bay

Location

St Aubin's Bay lies on the southern coast of Jersey and comprises a broad arc of sandy beach contained in the east by the western edge of St Helier (which is defined by the green space of Westmount) and, to the west, by the wooded headland of Noirmont. The northern extent of this Coastal Unit is formed by a low escarpment which follows the curve of the bay.



St Aubin's Bay from promenade at West Park, looking towards St Aubin

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Bays with Intertidal Flats and Reefs – St Aubin's Bay Intertidal Zone (G3)*
- *Coastal Plain – St Aubin's Bay Coastal Plain (B3)*
- *Enclosed Valleys – Southern Valleys (D1)*
- *Escarpment – St Aubin's Bay Escarpment (C2)*
- *Shallow Sea – South East Shallow Sea (I2)*

In addition, parts of the urban areas of St Helier, St Aubin, and the settlements which line the bay between them also contribute to this Coastal Unit.



St Aubin's Bay from the sea, leaving St Helier Harbour

Description

This is an open and expansive bay, but one which has a predominantly settled and developed character. The dense urban core of St Helier and the large infrastructure of its port area, which is accommodated on an arm of reclaimed land extending into the sea at La Collette, provides the eastern backdrop to this Coastal Unit and influences its character. The western part of the bay is far less developed with extensive woodland covering the headland which culminates in the rocky promontory of Noirmont. Noirmont is within the Coastal National Park.

The coastal edge comprises a broad and very gently sloping sandy beach resulting in a wide intertidal area. At low tide the beach is patterned with sand ridges and shimmering, shallow pools of water. In hot summers, nutrient enrichment from the streams which flow into the bay causes swathes of bright-green sea lettuce to grow on the sand. The sheltered southerly aspect of the bay generally produces calm seas with few waves. There are long views to a simple horizon of sea and sky from the bay. Rocky reefs are exposed at low tide at either ends of the bay and Elizabeth Castle and St Aubin Fort form prominent features sited on rocky outcrops in these areas.

A seawall and broad esplanade edges much of the beach and a busy road (Victoria Avenue, which forms a dual carriageway between Bel Royal and St Helier) is also aligned close to the coast. The esplanade was originally constructed as a railway line, and is well-used by walkers and cyclists. In the east, traffic and car parking dominates while a narrow strip of ornamental planting provides a buffer against the road in parts of the Beaumont and St Aubin area. The western headland between St Aubin and Noirmont is more irregular and natural in character with a rocky shore interspersed with sandy bays.

A low-lying arc of land extends between the coast and the base of the *Escarpment* which contains this Coastal Unit to the north. Much of this flat land accommodates housing although pockets of farmland and public parks are also present between dispersed groups of built development. While much of the housing development backing the bay appears sporadic or comprises ribbon development along the coast, the settlements of Beaumont and St Aubin are more defined, being based around a tightly clustered core of older buildings, and in the case of St Aubin, additionally focussed around its historic small harbour.

The low *Escarpment* which backs the bay is cut by the deeply incised and wooded *Enclosed Valleys* which spill down to the coast. The slopes of the *Escarpment* are largely developed in the eastern part of the Coastal Unit but are generally more intact to the west where they are more wooded, providing an attractive backdrop to settlements and a visual connection to the less developed headland of Noirmont (within the *Cliffs and Headlands* Character Type).

This Coastal Unit is highly visible on the approach to Jersey from the sea, from the focal features of St Aubin's Fort and Elizabeth Castle and from the beach and esplanade. The well-settled character of the bay increases visual sensitivity.

St Aubin's Bay has very strong cultural connections between land and sea, particularly related to transport and trade. St Aubin's was one of the earliest harbours in Jersey, and pre-dates the artificially-dredged harbour at St Helier. The bay was defended by St Aubin's Fort, and – from the 16th Century – by Elizabeth Castle. The proximity of the bay to main settlements, and its flat topography, mean that it has long been used for transport routes. Ferries would have worked across the bay before the coast road was constructed in the 19th Century, along with a railway line. The construction of seawalls for the road and railway changed the character of the coast from open dunes and marshes to a hard edge between land and sea. Today the railway line is a popular promenade and cycle path. Prior to the construction of the airport in the 1930s, aeroplanes landed on the sand at St Aubin's Bay. Wooden ships were also built here until the 19th Century, and there were large boatbuilding sheds set up behind the beach.

Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Housing	This Coastal Unit has a high visual sensitivity due to the popularity of the bay and its well-settled nature. The skyline of the wooded headland which extends from Noirmont to Beaumont, and the top of the escarpment which continues further east around the bay, are particularly sensitive to buildings and infrastructure due to their prominence in long views from the bay and sea. Landscape sensitivity is reduced to some degree, due to the well-settled nature of much of this Coastal Unit and the urban influence of St Helier and its port, although the identity and setting of distinct settlements and historic structures are an important consideration.	<p>The clear identity and separation of the distinct settlements of St Aubin and Beaumont should be conserved. Existing areas of open space between these settlements (formed by small fields, fine older properties set in ornamental grounds and the wooded scarp) should be retained. Clustered smaller older buildings located within the core of these settlements should not be dominated by substantially larger buildings sited on prominent steep slopes above them, and especially breaking the skyline of the wooded ridge which provides an attractive backdrop and additionally draws the eye.</p> <p>Some areas of remnant farmland are generally less visible on the low-lying <i>Coastal Plain</i> (where it is additionally screened by buildings from key views along the coast) than on the more prominent slopes of the <i>Escarpment</i>. There may be opportunities for well-designed housing to</p>

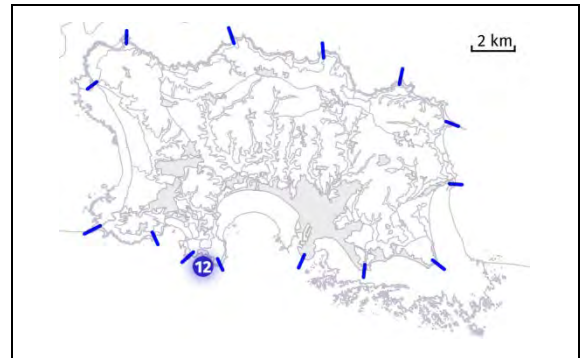
Key forces for change	Coastal sensitivity	Guidance
Housing (contd.)		<p>be accommodated within more visually discrete parts of the <i>Coastal Plain</i>.</p> <p>Farmland and woodland between loose clusters of housing on the <i>Escarpment</i> should be retained although some limited potential development opportunities may exist on open ground to the west of St Helier, where it could be designed to soften an existing intrusive line of houses seen on the skyline of the escarpment. The <i>Wooded Valleys</i> are also important in breaking up development on the escarpment containing the bay, and woodland should be conserved and managed to ensure its longevity.</p>
Urban development in St Helier	Future development in St Helier and within its port area may additionally affect character and views within this Coastal Unit. The core of St Helier includes many large buildings especially close to the Port. This dense urban area is separated from more dispersed housing to the west by the wooded escarpment.	The firm settlement edge of St Helier should be retained. Development should be avoided in prominent locations on the escarpment and where it would breach the skyline. The redevelopment and /or extension of existing development here should be sensitive to its landscape context in terms of scale, design, materials and colour.
Marine renewables	There would be some sensitivity to visible marine development (for example tidal barrage/devices) located in the intertidal area particularly in elevated views from housing set on the <i>Escarpment</i> . Views to and the setting of Elizabeth Castle and St Aubin's Fort are also highly sensitive, although this Coastal Unit is already well-developed which reduces sensitivity in terms of coastal character to some degree.	Care should be taken to minimise visibility of marine renewable projects and to locate any necessary on-shore infrastructure in the La Collette/ St Helier Port area, where it would fit better with the existing industrial character of built development rather than in this Coastal Unit. However, the La Collette/ St Helier Port area is still highly visible within the bay, so structures would need to be low in height and carefully designed to minimise their visual impact, and their impacts on the setting of Elizabeth Castle.

Key forces for change	Coastal sensitivity	Guidance
Coastal management	<p>The <i>Jersey Shoreline Management Plan</i> recommends an approach of 'Adaptive Management' and 'Advance the Line' in parts of this Coastal Unit due to increased flooding risk. In the present and medium term, this may involve improvement of sea defences and their extension further out to sea. The eastern part of the esplanade is dominated by cars and traffic on the dual carriageway and is consequently less attractive for walking and cycling than the western area where intervening planting provides a degree of screening.</p>	<p>Any works to existing sea defences should be carefully designed to protect key views to St Aubin's Fort and Elizabeth Castle and their settings. Opportunities to enhance public access and enjoyment of the coast, for example, extending esplanades and creating linear parks with substantial ornamental planting, could be taken as part of these works where possible. Consideration should be given to removing all but essential car parking and using planting to buffer road traffic.</p>

Coastal Unit 12: Portelet

Location

This Coastal Unit comprises the small south-facing bay of Portelet which is strongly contained by the rocky headlands of Noirmont to the east and Portelet Common to the west.



Portelet from Noirmont

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Cliff and Headlands – South West Heathland (A2)*
- *Rocky Shores and Bays – North and South-west Coast (F1)*
- *Shallow sea- South East Shallow Sea (I2)*



Portelet from the sea

Description

This deeply recessed bay has a hidden and intimately-scaled character due to the strong containment provided by rugged elevated headlands either side and the steep slopes backing the beach. The beach comprises an arc of golden sand punctuated by rocky outcrops and L'Île au Guerdain, topped with a Martello-type tower and reached via a sandy causeway at low tide. A low cliff of partially vegetated rock edges the beach. A mix of smaller dwellings are located closer to the beach and are loosely associated with a narrow, wooded valley at the western end of the beach. Recently constructed large apartments located on the steep slopes above the bay dominate the small scale of this Coastal Unit.

The headlands have an exposed and rugged character, patterned with outcrops of pink-gold granite crags. Both headlands are rimmed with reefs and boulders lying at the foot of exposed rocky cliffs. Noirmont features many WW2 defences, including range-finding tower, bunkers and gun placements, located on high vantage points. Noirmont was one of the most heavily fortified areas of Jersey during WW2, where German structures contributed to the 'Atlantic Wall', defended St Aubin's Bay and attacked enemy shipping. One of the guns remains *in situ* and some of the bunkers can be accessed via steps.

Views to the sea are strongly channelled from the bay, and open and expansive from the headlands. L'Île au Guerdain forms a key focus in the bay. A scenic composition emanates from the contrasts of blue-green translucent shallow waters overlying sand and the rich-russets and purples of bracken and heather covering the steep rocky slopes of the headlands. Much of this Coastal Unit is within the Coastal National Park.

Ferries arriving/ departing St Helier pass fairly close to Portelet, so this Coastal Unit contributes to passengers' impressions of Jersey.

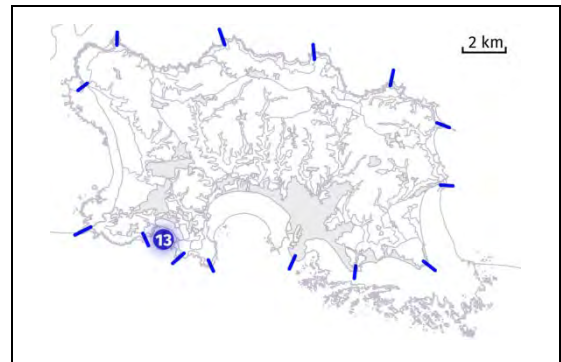
Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Built Development	This Coastal Unit is of high sensitivity to additional built development which could further erode the hidden and intimately-scaled character of this bay. The headlands are also of high sensitivity because of their wild rugged character and visual prominence	Housing and other development should avoid being sited on prominent steep slopes above the bay and on skylines. Any redevelopment and /or extension of existing development here should be sensitive to its landscape context in terms of scale, design, materials and colour. New building or redevelopment and/or extension of existing development on lower slopes, should be small in scale and built of recessive-coloured materials. No built development should take place on the headlands.
Marine renewables	This Coastal Unit is of high visual sensitivity to visible marine development (such as formalised moorings or marinas, tidal/wave renewable energy projects and near off-shore wind farms) which would be likely to dominate its small scale and scenic character.	Marine development should be discouraged in this Coastal Unit.
Coastal Management	Sensitivity is high to changes which could affect the scenic contrast between the rugged headlands and the wooded bay.	Heathland on the headlands and woodland within the more sheltered bay should be managed to ensure its longevity. Car parking on the Noirmont headland should be relocated to prevent views of vehicles from the sea. Rationalisation of benches and signage would also reduce clutter and enhance the wild character of this headland

Coastal Unit 13: St Brelade's Bay

Location

This Coastal Unit extends from the headland of Portelet Common in the east to the point of La Grosse Tête (west of Beauport) to the west. It is physically and visually contained by the steep slopes of the *Escarpment* inland.



St Brelade's Bay from Portelet Common

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Cliffs and Headlands - South West Heathland (A2)*
- *Coastal Plain – Ouaisné (B4)*
- *Escarpment – St Brelade's Bay Escarpment (C3)*
- *Enclosed Valleys – St Brelade Valleys (D3)*
- *Rocky Shores and Bays – North and South-west Coast (F1)*
- *Bays with Intertidal Flats and Reefs – St Brelade's Bay Intertidal Zone (G2)*
- *Shallow Sea – South East Shallow Seas (I2)*



St Brelade's Bay from the sea

Description

St Brelade's Bay comprises a broad sweep of golden sand, broken by the rocky outcrop of Le Grouin and contained by granite headlands lying either end of the bay which frame views from the beach. A concrete sea wall curves round the beach. The western end was constructed as an esplanade, but the eastern end was built later, during German occupation, as an anti-tank defence. The esplanade, ornamental gardens and large hotels which closely align the coast, give an attractive and established resort feel to the western part of the bay. Ouaisné Common, comprising sand dunes and heath, studded with low trees and scrub, backs the eastern part of the bay and is of high biodiversity importance for the rare habitats and species which survive here. The steep scarp slopes which arc around the bay are densely wooded, but also contain some built development. Large houses are perched above this woodland on the prominent skyline of the escarpment, overlooking the bay.

The headlands which contain the bay have a rugged and exposed character and are vegetated with heath and clumps of gorse. The small sandy cove of Beauport lies to the west of St Brelade, nestled between craggy promontories, and is only accessible by foot. There are elevated and expansive views from the headlands out to sea and across the beach. The headlands, Ouaisné and the escarpment behind Ouaisné are within the Coastal National Park.

Ferries pass close to the headlands which frame the bay, so these are seen by many people, and contribute to passengers' impressions of Jersey.

St Brelade's Bay is very popular with visitors, and was one of the first areas to be developed for tourism. Prior to this it was a small fishing village nestled at the foot of a wooded valley. The medieval quay, church, cemetery and Fishermen's Chapel (where fishermen would attend service before heading off on long sea voyages) remain at the western end of the bay, close to the sea.

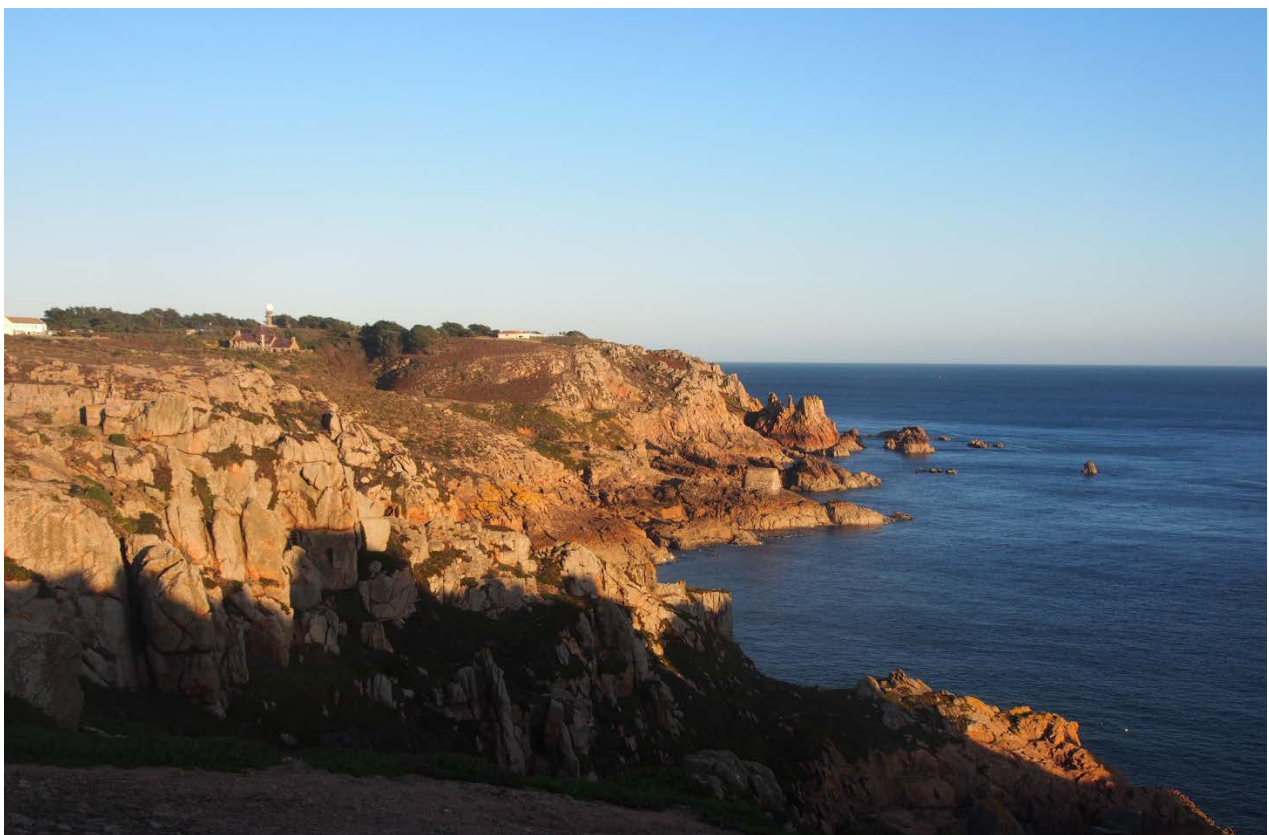
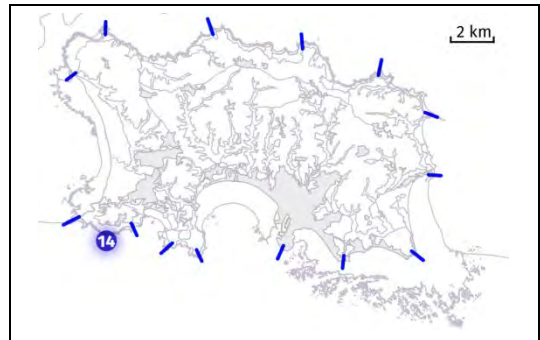
Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Built Development	Sensitivity is high to further built development within the bay due to potential effects on its character and in terms of views from this popular coastline. The headlands are also of high sensitivity because of their rugged, secluded character, the contrast they provide to the often densely developed south coast of Jersey and their visual prominence from the bay and the sea.	Housing and other development should not be sited on the prominent slopes, scarp and skyline seen behind the bay. The redevelopment and /or extension of existing development here should be sensitive to its landscape context in terms of scale, design, materials and colour. Any new buildings should be located on lower slopes within the more developed western end of the bay (i.e. avoiding Ouaisné). The scale and massing of any new, redeveloped or extended buildings within this Coastal Unit should be carefully considered relative to the scale of the escarpment and the setting of the older core of St Brelade (at its western end around the church). No built development should occur on the headlands or around smaller secluded coves such as Beauport.
Marine renewables	This Coastal Unit is of high sensitivity to visible marine development (such as tidal/wave renewable energy projects and near off-shore wind farms) which would be likely to affect its scenic character.	Marine development should be discouraged in this Coastal Unit.
Land management	Sensitivity is high to changes which could affect the scenic contrast between the rugged headlands and the wooded bay.	Heathland at the eastern end of the bay and on the headlands and escarpment woodlands should be managed to ensure their longevity. The sand dune system at Ouaisné also needs to be protected, and managed as necessary to retain the range of micro-habitats within it.
Marine recreation	Marine recreation such as jet skis based in St Brelade's Bay can impact on character and tranquillity.	Encourage considerate use of motorised craft, avoiding the quietest times of day, and keeping away from the most tranquil parts of the Coastal Unit, such as Beauport.

Coastal Unit 14: Corbière

Location

This Coastal Unit is located in the south-west corner of Jersey, and extends from the promontory of La Grosse Tête to the rocky promontory of Corbière to the west.



Looking east along the Corbière coast

Constituent Character Areas

The following principal Character Types/Areas comprise this Coastal Unit:

- *Cliffs and Headlands – South West Heathland (A2)*
- *Interior Agricultural Plateau – Western Coast and Headlands (E1)*
- *Rocky Shores and Bays – North and South-west Coast (F1)*
- *Shallow Sea – North East Shallow Sea (I1) and South East Shallow Sea (I2)*
- *Deep Sea – North West Deep Sea (J1)*



Corbière Lighthouse and coast from the sea

Description

The dramatic south-western tip of Jersey culminates in a peninsula of craggy exposed rock and the iconic Corbière tidal island and lighthouse. The coastal edge is irregular and deeply fissured, broken into rocky fragments, islets and occasional pinnacles. Low cliffs, clad with banks of scrubby vegetation, sweep abruptly up from the sea and are capped by sloping heathland. This is an exposed and rugged coastline where a distinct sense of wildness can be experienced, particularly in stormy conditions. Much of the Coastal Unit is within the Coastal National Park.

The heathland above the coast is covered with patchy bracken, scrub and scree. There are areas of creeping fig and worn paths criss-cross the area. Buildings are generally set back from the top of the cliffs. The exception to this is a WW2 range-finding tower prominently located above craggy steep slopes, and a cluster of older buildings associated with the lighthouse and the former Corbière railway station, which sit close to the coast.

There are expansive views out to sea and northwards to the other Channel Islands and St Ouen's Bay. Sunsets experienced from the western extremity of this coast are often magnificent. This coast is also prominent in views from the sea and from the ferry on the approach to Jersey. Corbière lighthouse forms a landmark feature, and is one of the quintessential views of Jersey.

No safe harbours or slipways are present along this exposed and inaccessible coastline. The lighthouse is reached by a causeway track and is a popular destination for visitors.

Coastal sensitivities and guidance

Key forces for change	Coastal sensitivity	Guidance
Built Development	This Coastal Unit generally has a high visual sensitivity due to the popularity of the headland and because of the iconic views of the lighthouse seen from land and sea	<p>Further built development which impacts on the setting or views of Corbière lighthouse, or on the remote character of the <i>Cliffs and Headlands</i> should be discouraged.</p> <p>Any new development, including redevelopment and/or extension to existing buildings, on the outer edge of the <i>Interior Agricultural Plateau</i> should be designed to minimise visibility from the sea (i.e. low, small buildings using materials with a recessive colour).</p>
Marine renewables	The point at Corbière is particularly sensitive to visible marine developments (such as near off-shore wave/tidal devices and off-shore wind farms) principally because of iconic views of the lighthouse.	Marine developments, which could affect the character and views around the more sensitive point and lighthouse, should be discouraged.
Land and recreation management	Invasive plant species (e.g. Hottentot fig) and visitor pressure have adversely affected the character of Corbière Point.	Management of heathland should be undertaken with the aim of encouraging native vegetation cover, creation of priority paths (allowing stabilisation and vegetation in eroded areas), relocation of car parking and improved design of seating and signage to reduce clutter and enhance views to the lighthouse.

Part 5: Landscape Design Guidance



5.1 Introduction

This Landscape Design Guidance provides basic island-wide advice on a range of topics relating to the built environment. It is not intended to be a fully comprehensive guide, but instead forms a series of best-practice pointers, relating to the following themes:

5.2	Accommodating New Development	<ul style="list-style-type: none"> • Fitting buildings into the landscape • Property boundaries and approaches • Retaining settlement identity and enhancing settlement edges
5.3	Enhancing Rural Character	<ul style="list-style-type: none"> • Siting and design of large agricultural buildings • Fencing (general, equine and security) • Telecommunications masts • Siting and design of car parks • Visitor management • Landscape materials • Rural lanes • Highways materials
5.4	Understanding views and visibility	<ul style="list-style-type: none"> • Why views and visibility matter • How to consider views and visibility in relation to a proposed development • Settings of key landmarks • Intervisibility between land and sea

In addition to built features, trees and hedgerows are also key to Jersey's landscape character. In the Mid-20th Century, following felling for fuel during WW2, there were many fewer trees on the island than today. Since then, numbers of trees have gradually increased, and further tree planting is ongoing. It is important that the location of tree planting and the choice of species respect the island's sense of place and local distinctiveness. Guidance on tree and hedgerow planting can be obtained from Jersey Trees for Life, and the Government of Jersey.

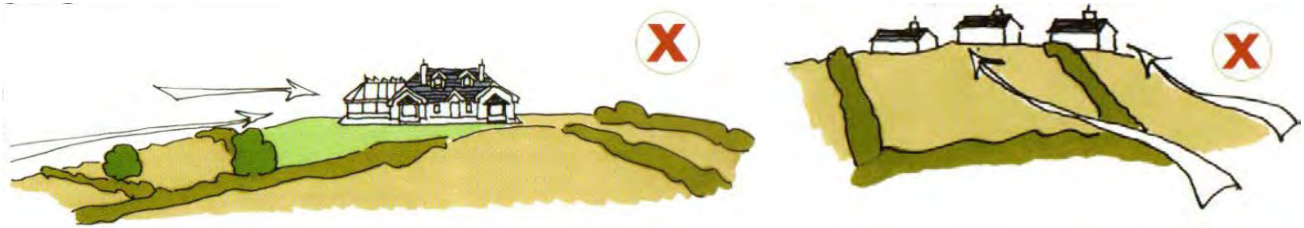
The hand-drawn illustrations included in this section are from the *Cork Rural Design Guidance* (2003). They are reproduced with the kind permission of the author, Mike Shanahan of MSA Architects, Clonakilty, Co. Cork.

5.2 Accommodating New Development

Fitting Buildings into the Landscape

The successful siting of a new building in a rural or coastal area requires care and consideration. Some sites are more prominent because, for example, they are adjacent to popular places or paths, are visible from an important road or ferry route, or lie on the coast or open hillside. The more prominent a site, the harder it will be to successfully integrate a new building into its setting. Much can be learned by observing traditional buildings, which tended to make good use of landform and woodland for shelter and worked with the contours, not against them. This traditional approach can help to ensure that even the most contemporary building sits well in the landscape.

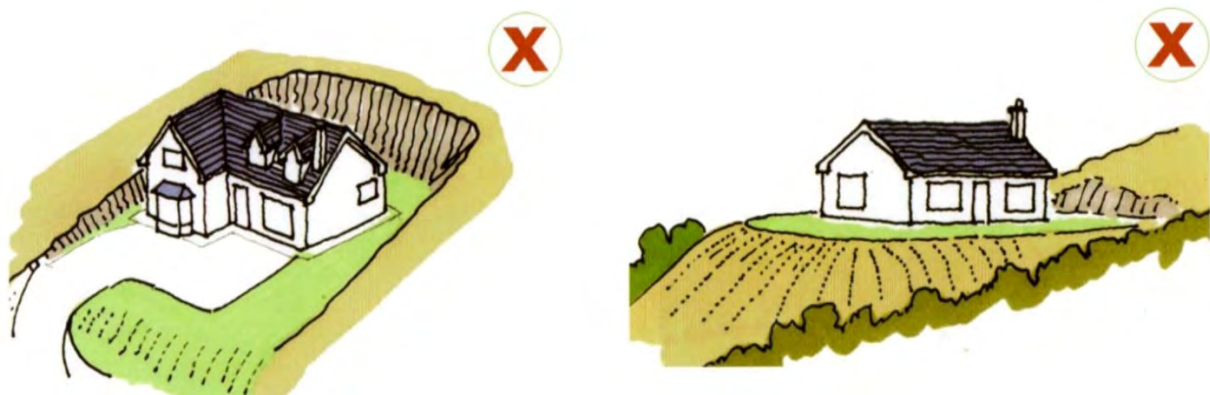
Avoid prominent, exposed slopes where the building would be highly visible and exposed to the worst effects of wind and weather.



Buildings tucked into the base of the escarpment emphasise its height and allow the escarpment to dominate the scene.

It is important to **work with the slope of the land** when considering where to place a building, in order to avoid the need for extensive excavations or mounding. These can increase the prominence of a building, disturb the natural landform, vegetation and drainage and can be expensive and wasteful in terms of the energy used for construction.

Excessive excavation can also cause slippage problems, while mounding exposes the building more to the elements, resulting in greater heat losses and weathering and makes it more difficult to integrate it well into the surrounding landscape.



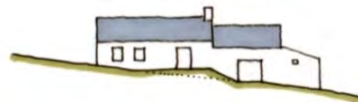
For sloping sites it is much better to design the building to reflect the fall of the land, changing the internal floor levels to suit. Building with the contours in this way allows a better integration with the land and takes advantage of the shelter provided by the landform to reduce energy losses and exposure.



1½ and 2 Storey Split



Contemporary Monopitch Split



Traditional Stepped Levels

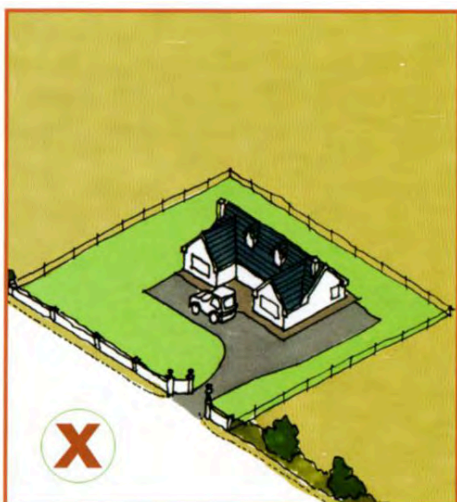


Building with stepped levels, working with the landform



This house uses modern materials, but the scale, massing and roof pitches are traditional. It also relates well to the adjacent traditional house. The flat site minimises the need for groundworks

To help integrate the building into the landscape, **leave existing walls, hedges and ditches intact** wherever possible. **Avoid car parking areas between the building and the road**, which can increase their visual impact, instead forming an entrance courtyard to the side of the house if the landform allows. Keep paved areas and mown grass to a minimum, avoiding the creation of an artificial looking platform and **allow the planting to run up to the building** to help its integration. Use local stone and gravel where possible in preference to asphalt and concrete, which can have a suburban character that would contrast with the rural or coastal character.



Look at the way traditional buildings are grouped together in the landscape. Often they form an **informal cluster** of buildings scattered around a court. More **linear patterns** are often common near

the coast, where buildings are often **orientated** with their gable towards the prevailing wind, or on sloping ground, where they are built along the contours. However, ribbon development, where properties are evenly spaced, and located one plot deep along coastal or suburban roads, is not to be encouraged. In rural and coastal areas, **avoid anonymous, suburban style layouts**, where houses are clustered around cul-de-sacs and where deep house plans and small gardens make it difficult to reconcile any slopes.

Property Boundaries and Approaches

The treatment of property boundaries and entrances can make a big difference to the way in which a building sits in the landscape and how it relates to other buildings nearby. Prominent gates and suburban style fencing, lighting and large expanses of paving can greatly increase the impact of a new building. Much can be learned from the traditional treatment of boundaries, gates and approaches. In the past these tended to be low-key and functional, reflecting the rural or coastal character of the area.

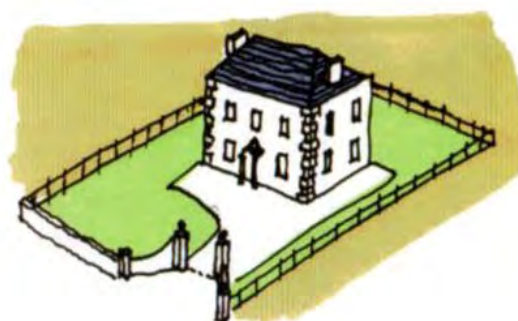
To help retain the rural/coastal character and integrate the building into the landscape, **leave existing walls, hedges and ditches intact** wherever possible. Setting a building against a backdrop of trees is one of the best ways to integrate a new development within the landscape. Where trees exist they should be retained, but care should be taken to ensure an appropriate distance between tree root systems and building foundations, so that neither is compromised.

Where new boundaries need to be formed, use similar materials to those used locally – typically timber fencing, post and wire fencing, native hedges and granite stone walls. Where realignment of hedgerows for visibility splays is unavoidable, incorporate new hedgerows and/ or traditional banks into the design.

It is important to **get the relationship between a building size and its plot right**. Generally, the larger the plot, the bigger a building can be successfully integrated, without seeming to overwhelm the land and impinge on the boundaries. Well planted boundaries can mitigate this effect to a degree, but on an open site a large building will appear out of scale.



Well planted boundaries help a building to sit well in the landscape

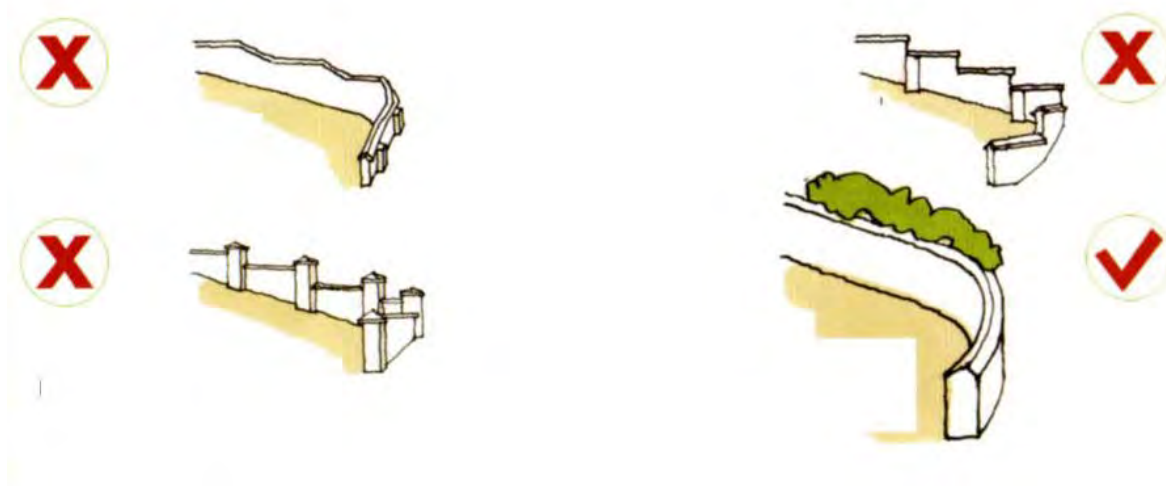


A large building appears out of scale on a small open plot

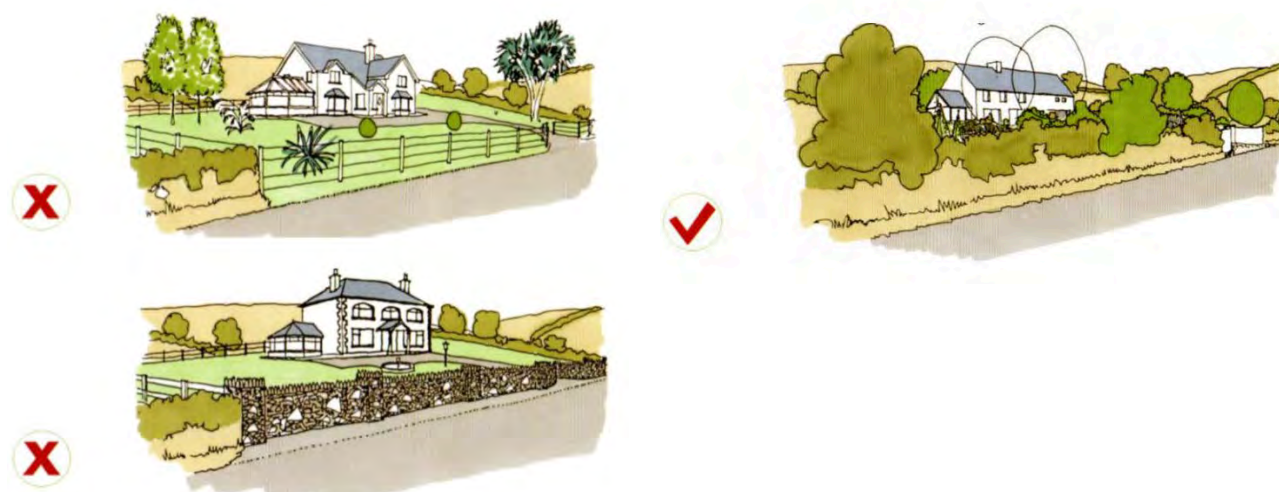
Car parking can be visually intrusive, especially when seen from the south as it reflects the glare of the sun. Buildings and planting should screen parking areas as far as possible, and for this reason parking is generally better located to the side of a building, or within courtyards, rather than between the building and the road. Large paved areas next to roads can be very visible to passers-by.

Lighting for access routes should be discrete, preferably low-level cats eyes or bollards, which can be movement activated. Avoid standard lighting columns which are often a source of light pollution. If unavoidable, ensure any high-level lights point downwards to the ground to reduce glare.

Boundary walls and slopes should avoid narrow walls with ramps, steps or fussy ornamental features; opt instead for a simple wall of generous dimensions that follows the slope. Fencing can have a big visual impact and appear discordant within a rural or coastal context. Use traditional designs in preference. **Avoid suburban style fences** that are highly machined, close-boarded, or require large sections to be stained or painted, as these can have a big visual impact and conflict with the rural/coastal character.



The open space associated with a building should be considered as an integral part of the development, not as an afterthought. Avoid suburban style fences and lighting, concrete block walls and the regimented use of non-native fast-growing conifers.



Stone walls are a distinctive feature of much of rural and coastal Jersey and conserving existing examples can help to ground new buildings in the landscape. Traditional walls tend to be substantial, composed of random, coursed dry stone, mostly with a simple cope of stones placed horizontally, and sometimes held in place with mortar.



Random coursed stone wall with horizontal cope, St Aubin's Bay

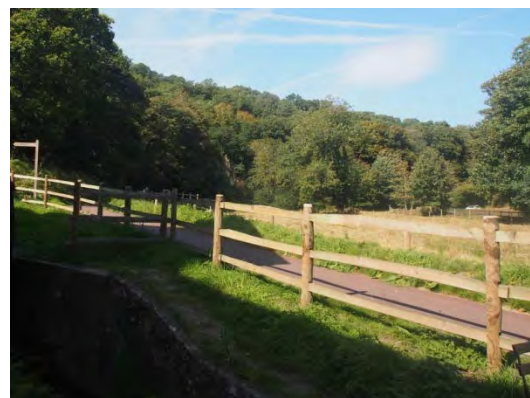


Contemporary interpretation of a traditional wall. St Ouen's Bay

Traditional entrances tend to be small in scale and simple in design, with well-crafted wrought iron gates hung from substantial pillars. Avoid overly elaborate lighting and entrance gates and keep stonework simple



Traditional gate posts, St Brelade



Cleft chestnut post-and-rail

Retaining settlement distinctiveness and enhancing settlement edges

Within the agricultural interior of Jersey, settlement was traditionally sparse, consisting of **isolated or clustered farmhouses**, often set in sheltered hollows at the heads of valleys. Larger, more **nucleated settlements**, for example St John's and St Martin's were more tightly grouped around parish churches, which formed a landmark and provided a clear structure to these compact settlements. Other settlements, such as Trinity and St Mary's are looser in form, although still have a parish church as a focal point. The scale and density of buildings tends to increase towards the centre of settlements. However, in several village pasture has remained in the centre of the settlement, which adds to local character and distinctiveness, and also contributes to the setting of historic buildings.

Along the cliffs and headlands, any settlement tended to be confined to **bays at the mouths of steep sided valleys** which provided shelter. **Fishing villages**, such as St Aubin, St Brelade, Gorey and La Rocque, developed on the coastal plain around sheltered harbours. A **linear pattern** of settlement tended to occur where properties followed roads along the base of the escarpment. Examples of such scarp-foot villages, which also contain parish churches, are St Clement and Grouville. St Helier remained a distinct settlement until its expansion in the 19th and 20th Centuries.



A typical valley-head cluster of buildings, Le Bourg



Scarp-foot settlement, Grouville

Valleys were not widely settled in the past, although those closer to St Helier and St Aubin, as well as some of the valleys along the north coast that provided shelter from the wind, contained some degree of development by 1800.

These traditional patterns (which responded to the need for defence and shelter) have, to varying degrees, become obscured by more recent development layouts. These include buildings (often large) located on escarpment crests or cliff tops to maximise sea views; suburban sprawl, and ribbon development along coast and ridge roads. Much of this ribbon development is only one plot deep, with properties evenly spaced, creating a disproportionately large impact.

Consequences of these more recent development trends have been to give an impression of continuous urbanisation, and to increase the visual impact of development within the landscape.

Looking forward, it is helpful to **take cues from traditional settlement layouts** in order to enhance local distinctiveness, and to minimise the visual impacts of built development within the landscape.



Open space retained which forms the setting to St Martin's Church



New development in St Clement echoes the scale, proportion and form of the traditional buildings.



Housing at Grève de Lecq, with traditional proportions, and an irregular layout which provides variety in the layout and aids its integration into its surroundings.

Settlement form is very important. Developments of **mixed scale, density, form and layout** are easier to integrate than uniform layouts. A mix of different building heights and types can help to create visual diversity that is similar to that of traditional settlements, but avoids slavishly copying old buildings. Arranging buildings in more varied groups provides opportunities for more **varied spaces and relationships** that can reduce the visual impact of straight building lines, for example, and help their integration.



A mix of different building heights and types can help to create visual diversity which is similar to that of traditional settlements, but avoids pastiche. Photos: MSA Architects

New development around existing settlements requires particularly careful design. In traditional settlements, shelter and enclosure were derived from the scale, grouping and density of buildings, as well as landform. Modern requirements for large scale, individual house plots make it difficult to integrate new developments successfully on the edge of settlements. Modern developments tend to be driven by functional criteria, including density and privacy standards, vehicle movement and parking, as well as developer profit. These results in characteristically uniform developments that bear little relationship to their context and can dilute the identity and character of traditional settlements. The spatial arrangement of the development needs to be considered visually as well as functionally. Therefore, views of new development, both from within and towards the existing settlement, need to be considered if the new development is to be integrated successfully – see *Views and visibility*.

In the past, settlements were often limited by **physical boundaries**, such as roads, woodlands, landform, the sea or watercourses. These physical landscape elements are important to the identity of a settlement and help define its character as well as its physical limits. New development should **respect these elements** if it is to integrate satisfactorily.

Proposals for new development should be based on a **thorough analysis** of the landscape and visual elements of the development **site** and its **context**. This can help to identify existing landscape features which could function as a new settlement boundary, such as tree-lines, roads and streams. Generally, landscapes with a strong landscape framework already in place may accommodate new development more easily without too great an adverse effect on landscape character.

It may be necessary to evolve a **planting strategy** to ameliorate the visual impact of new development, and to help define the edge and the character of the settlement. A substantial landscape buffer between new low-density development and a traditional settlement can help to integrate the new with the old, providing that the buffer does not adversely affect the setting of the settlement or affect its landscape character (for example through the introduction of tall conifer hedges). Buffers can also act as **Green Infrastructure corridors**, enabling movement of people and wildlife. **Views of landmarks** that are important to the identity of settlements such as parish churches, for example, should remain open.

Open, undeveloped land around existing settlements allows views of the settlement and helps to define its limits and character. Open space is important in separating settlements, but also allows the settlement to be clearly defined in relation to its rural context. When locating new development on settlement peripheries, it is important that the functions of such open space can still continue. The edge of the built-up area provides a **gateway** to the settlement that is evident on approach from its rural surroundings. Ribbon development along roads disrupts this relationship and adversely affects the character of the settlement. It should therefore be avoided.

It is important that any new development is of a **suitable scale** so it does not disrupt the pattern of hedgerows and tree belts which provide screening.

5.3 Enhancing Rural Character

Siting and design of large agricultural buildings

When new buildings such as sheds or polytunnels (or structures such as solar farms) are required, these can be more successfully integrated within the landscape where there is a robust framework of tree belts and hedgerows to provide screening.

Tree belts and hedgerows are characteristic of Jersey and large new structures should be sited to take advantage of any screening that they offer. Where possible, developments should be sited **close to the field boundary**, in order to maximise the screening benefit and to reduce the need for lengthy access routes. Field boundaries should not be removed to accommodate new development. Where buildings have to be sited in more open areas, field boundaries that have been lost or eroded should be **restored**, using species that are characteristic of the area to provide a robust landscape framework.

Avoid exposed sites which are highly visible, and try to locate buildings in hollows or folds in the landform, which provide **natural shelter and screening**. Where possible, site new farm buildings **close to old ones** so that there is a sense of continuity. **Work with the existing contours** wherever possible, minimising use of cut and fill. On sloping sites, align buildings parallel to the contours and use stepped rooflines to follow the slope. Use **materials** which are recessive in colour and non-reflective so that they can integrate better into the landscape. **Avoid lightspill** from skylights, floodlights and security lighting.

Fencing

Fencing is an essential part of the rural landscape, as a means of enclosing stock and controlling access. Traditionally, two types of fencing have been used.

Post and wire or wire mesh fences require more expertise to erect, but are generally cheaper. Post and wire fences have the least visual impact, the posts giving the fence a vertical emphasis as the wires tend to be less visible.

Timber post and rail fences are generally easier to erect and repair but materials are more expensive. These fences have a strongly horizontal emphasis that can be visually intrusive, especially if more than three rails are used. Cleft chestnut fencing can use rails of smaller section as the timber is relatively sturdy, reducing its visual impact.

Fencing can have a big visual impact and appear discordant within a rural or coastal context. Use traditional designs in preference, and avoid suburban style fences that are highly machined, close-boarded or require rails of large sections that need to be stained or painted. These can have a big visual impact and conflict with the rural/coastal character.

Equine fencing and structures

Grazing horses often requires subdivision of paddocks. Usually white tape electric fencing is used, but this is very visually intrusive, and adds a lot of 'visual clutter' into the landscape. There are alternatives which are less prominent, and more in keeping with traditional landscape character.

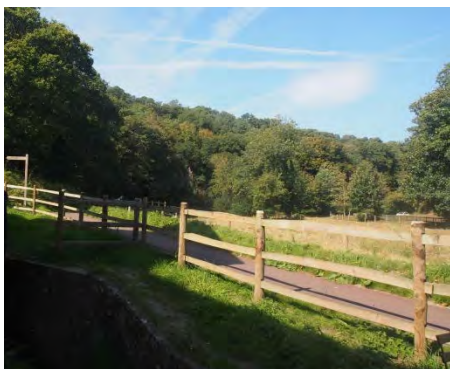
For permanent fencing, **cleft chestnut post-and-rail** is sturdy, can be made from locally-sourced timber, and is natural in colour. Using cleft rather than machined timber gives a more rural character.

For semi-permanent fencing, **post-and-wire** is a relatively cheap alternative, and is much less intrusive than white tape.

If electric fencing is required, using **several single strand wires** supported by plastic (or ideally timber) posts is a relatively unobtrusive solution.

If a temporary fence is required, using **green tape and posts** is less intrusive than white.

Where possible, fences should follow existing field boundaries, or run parallel to them.



Cleft Chestnut post-and-rail fencing in St Peter's Valley



Multi-strand wire fencing

Shelters for horses should ideally sit in corners of fields, close to trees or hedgerows. This provides additional shelter and screening, and also helps to integrate them within the landscape. Shelters should be constructed of natural materials such as local stone or timber, rather than concrete or blockwork. Roofs can be of timber, or corrugated iron which tends to dull over time.

Security fencing

Security fencing may be needed to protect high value crops, such as hemp, as well as around solar farms. The fence line should be kept as close to existing field boundaries as possible, to benefit from the visual screening afforded by existing trees and hedgerows. Where fencing has to cross open areas, it may be necessary to restore pre-existing field boundaries, or to plant new hedges and tree lines to provide screening. These should follow the existing field pattern as far as possible and use species that are common locally.

The fencing should be recessive in colour (e.g. dark green) and not reflective in its finish.

Consider using existing glasshouses for high-value crops, where the necessary security measures can be put in place without needing to erect security fencing in open rural areas.

Telecommunications Masts

Telecommunications masts (and their associated infrastructure) should ideally be sited where they are seen in the **context of trees or woodland** or with a backdrop of land rather than sky. Locate masts as close to the field boundary as possible, in order to reduce the length of any vehicle access required and to take advantage of the screening provided by existing hedgerows or tree belts. This will help to integrate the structure within the landscape. Where necessary, existing hedgerows should be supplemented with new trees or hedging plants of appropriate species.

Avoid masts appearing above the **skyline in sensitive locations such as scarp tops**. It may be that a larger number of well-sited masts are needed in order to achieve coverage. Try to avoid placing masts in open landscapes such as the *Cliffs and Headlands*; site them within enclosed farmland or woodland landscapes instead. Mast sharing should be encouraged to minimise the number of masts needed.

The **infrastructure** at the bases of masts should be screened with native hedge plants and fencing should be as unobtrusive as possible.

The **colour** of the mast should reflect the backdrop against which it is seen. For example use a non-reflective dark green for masts seen against woodland, or a light grey for one seen against the sky.



A well-integrated mast located close to the field boundary



Discrete infrastructure at the base of the mast



Dark coloured mast to blend with trees on hill behind



Mast set within woodland, and below the horizon so it doesn't break the skyline

Siting and design of car parks

It is generally easier to site a car park within a complex landscape that has undulating landform and plenty of built elements and vegetation that will help to screen it. Flat, open landscapes present more of a challenge, where some form of mitigation is more likely to be necessary. Understanding the landscape character can help to inform mitigation, for example, whether the existing woodland or hedgerow pattern or dune formation can be modified to provide screening. Earthworks are least obtrusive when they are designed to complement existing landform and screen planting should similarly reflect the native vegetation.

Avoid prominent locations, close to the edge of a cliff or beach or on a ridge for example, where vehicles would be seen silhouetted against the sky or sea. Consider the views from nearby roads, footpaths, dwellings or places of historic or archaeological interest.

The design of the car park should respond to the existing landform, ground conditions and site features. Rectilinear layouts with cars in straight lines introduce urban forms that are generally harder to integrate in rural areas. If ground levels need to be modified, parking spaces on areas of fill are generally more obtrusive than those in areas of cut.

For all but the smallest car parks, the layout needs to be self-evident if the full capacity is to be achieved safely. The car park layout should be readily understandable without the need for signs. To minimise clutter, any signage should provide effective communication with the minimum number of signs. For medium sized car parks, it is possible to divide the area into smaller parking clusters. Existing features such as mounds, boulders or trees and shrubs can be used to define and separate clusters and help to screen the vehicles. Retaining existing landscape elements will help to integrate the car park within the landscape.



Boulders sourced locally make a low maintenance vehicle barrier, though would be better not set out in straight lines



Crushed stone or hoggin are generally more suitable than metalled surfaces for rural car parks and access tracks



Salvaged granite setts used to demarcate parking spaces within crushed stone surfacing

When siting car parks, it is important to accommodate a variety of users, such as cyclists and to link car parks to footpaths and other trails. Car parking should form an integral part of a wider countryside management initiative. The design and location of signage, vehicle barriers, seating, ground surfacing, etc. should ideally be consistent within each landscape character type.

Visitor Management

Signage can play an important role in visitor management, helping to orientate and direct people towards facilities such as car parks or toilets and away from sensitive areas, where visitor activity

could result in damage to the environment. Providing maps on interpretation panels showing car park locations, trails, and details of walks and places to visit can give people the confidence to explore further. Information and signage is particularly important for visitors with limited mobility, providing guidance on where to park and which areas are easily accessible.

The protection of sensitive areas also requires care in the planning and design of other recreational infrastructure. Paths can be designed to gently steer users away from sensitive areas, by the use of subtle landform or planting areas. Fencing and signage should be used sparingly, as they can add clutter and detract from the landscape experience.

Landscape materials

Materials used in rural landscapes should reflect those traditionally used in the area. Pre-cast concrete kerbs and paviors are not generally suitable for rural areas as they appear too urban. Consider instead using local stone, chunky timber sleepers or logs, to reflect the rural context better. In some cases, it may be possible to use locally salvaged materials, such as granite setts, which are likely to integrate well. Boulders sourced locally can help to define edges or assist in traffic management.

Unmetalled surfaces, such as crushed stone, gravel, hoggins, wood chippings or reinforced grass provide a range of options that may be more suitable for different rural locations. They are usually permeable or semi-permeable to water, so do not add to the storm water burden, and are more easily integrated within a rural setting. They do require periodic maintenance, however, depending upon the level and type of use.

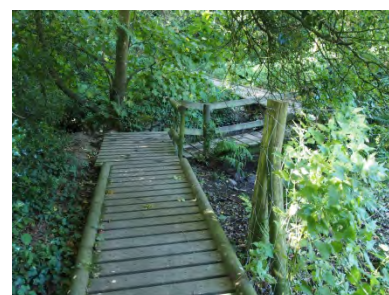
Walls or hedges can provide a good framework for new infrastructure, such as car parks or picnic areas. It is important that their design and construction reflects the local traditions of the area. This helps to integrate the new feature into the landscape, as well as maintaining traditional skills.



Chunky timber sleeper steps help control erosion on popular routes



Cycle parking and retaining wall in chunky timber appear appropriate in this coastal location



Board walk at Fern Valley allows access and keeps visitors away from sensitive wetland habitat

Rural lanes

Jersey boasts some fine rural lanes, many of which are designated as Green Lanes, where walking, horse riding and cycling are encouraged. These rural lanes are typically narrow and winding, have no kerbs and are edged by lines of trees. Many are deeply sunken, the steep banks and tree canopy creating a characteristic tunnel of vegetation. The general absence of kerbs, barriers, drainage, lighting, line painting or signage contributes to their rural character and increases their appeal to recreational users.



A typical Jersey rural lane



Footpath set behind hedgerow, St Ouen

However, to improve safety in lanes which are busier with traffic, it may be necessary to make some additional provision for walkers. Where space is available, part of the adjacent field or woodland can be used for a new path. A low barrier or hedge next to the road provides some segregation between road and footpath, this is especially important on the outside of bends. Where there are banks next to the road, it may be possible to create a path above the road, which would provide additional segregation. A hedge or fence on the field side of the path maintains security for the landowner, although it's important to bear in mind that hedges on both sides of a narrow path can seem overly constrictive and require regular maintenance.

Light pollution from street lighting is a concern in some parts of Jersey, and any street lighting should be designed to minimise light-spill. Lighting design should take into account both the required level of illumination, and its duration. Urban-style street lights should be avoided if possible in rural areas.

Highways materials

Ideally the materials used on rural roads should reflect those traditionally used in the area. Pre-cast concrete kerbs introduce an urban aspect to rural lanes that detracts from their rural character. Consider instead using local stone, chunky timber sleepers or logs, to reflect the rural context better. In some cases, it may be possible to use locally salvaged materials, such as granite setts, which are likely to integrate well.

It is important that any barriers or fences also reflect the rural character; examples include stone walls, chunky timber barriers and timber rail or post and wire fences. If hedges are planted, they should use species appropriate to the local area.



Chunky timber, reinforced with galvanised metal, provides a robust vehicle barrier that is appropriate for rural locations – though would integrate better without pre-cast concrete kerb



Granite sets used in St Mary's Village to create a traffic-calming feature which also contributes to local character and provides an attractive setting for the church and cemetery.

5.4 Views and Visibility

Why views and visibility matter

Jersey is full of stunning views of land and sea. However, the integrity of these views is threatened by inappropriately - sited or designed development.

Development in the following locations is of particular concern:

- Highly prominent locations, such as the top and crest of the *Escarpment*.
- Open coastal landscapes such as the *Cliffs and Headlands* and open, undeveloped parts of the *Coastal Plain*.
- Largely natural seascapes, including intertidal areas and offshore islands.
- Previously undeveloped sites, or where an existing smaller building is replaced by a much larger one.
- Where development impacts on the setting of historic sites or key landmarks.
- Where development is out of scale or character with its landscape/ seascape context.

Considering views and visibility of new development helps to avoid development in inappropriate locations, and also helps to avoid negative impacts on landscape character.

How to consider views and visibility in relation to a proposed development

The following sequence shows how to understand the implications of a proposal on views and visibility

Stage 1: Site Analysis

Consider the wider landscape and seascape context of your site before you focus on the site itself. Note factors such as elevation, topography, screening vegetation and the landscape and seascape context of your site. Start with the wider context, then existing buildings.

Stage 2: Research

Identify which Character Type and Character Area your site is within. If it is in a particularly sensitive location (such as the *Cliffs and Headlands*, the open undeveloped parts of the *Coastal Plain*, the top or crest of the *Escarpment* (this can include the edges of the *Inland Agricultural Land*) or natural seascapes (such as the intertidal areas or offshore reefs and islands) then it may not be a suitable location for development.

Read the relevant Landscape Character Type profiles (Part 3), Coastal Unit Profile (if applicable) (Part 4) and Landscape Design Guidance (Part 5). Remember that if your site is close to the boundary of two Character Types, you will need to consider both.

Stage 3: Determine the extent of visibility

To do this manually, go to your site and look out. Note the area you can see (e.g. beaches, headlands, settlements, roads, ferry routes).

It is also possible to identify the extent of visibility using a ZTV (Zone of Theoretical Visibility) map, which is generated using computer software. There are examples of broad ZTVs for three of Jersey's key historic sites on the following page. Most ZTV maps only take account of 'bare ground' conditions, and do not allow for the presence of buildings or trees which may provide screening.

Stage 4: Identify viewpoints from which your site will be seen

Take the findings from Stage 3 and identify key viewpoints within the extent of visibility. These may include landmarks, headlands, viewpoints, beaches, settlements, historic sites, ferry routes, paths, and roads. Your development will probably be visible from these places, so the impacts on views from them must be considered in the design of your development and any associated landscape treatment.

You will also need to check whether your site is within the setting of the three historic landmarks of Mont Orgueil, Corbière Lighthouse and Elizabeth Castle (see following section).

Some sites will not be appropriate for development as the impacts on views and character will be too great. In this case, it may be necessary to consider alternative sites.

Stage 5: Development design

This should take into account the relevant sections of the Landscape Design Guidance, and also the impact on views from viewpoints identified in stage 4. Remember that a site which appears against a backdrop of land in one view may be a skyline feature when seen from another viewpoint.

You will need to consider visual impacts of the building itself (which will be affected by its height, scale, massing, materials, etc.) and – crucially – the screening effects of trees or other garden vegetation (either existing, or designed as part of the scheme). Vegetation which has a screening function should not subsequently be removed.

Settings of key landmarks

The surroundings in which a heritage asset is experienced are described as its setting.

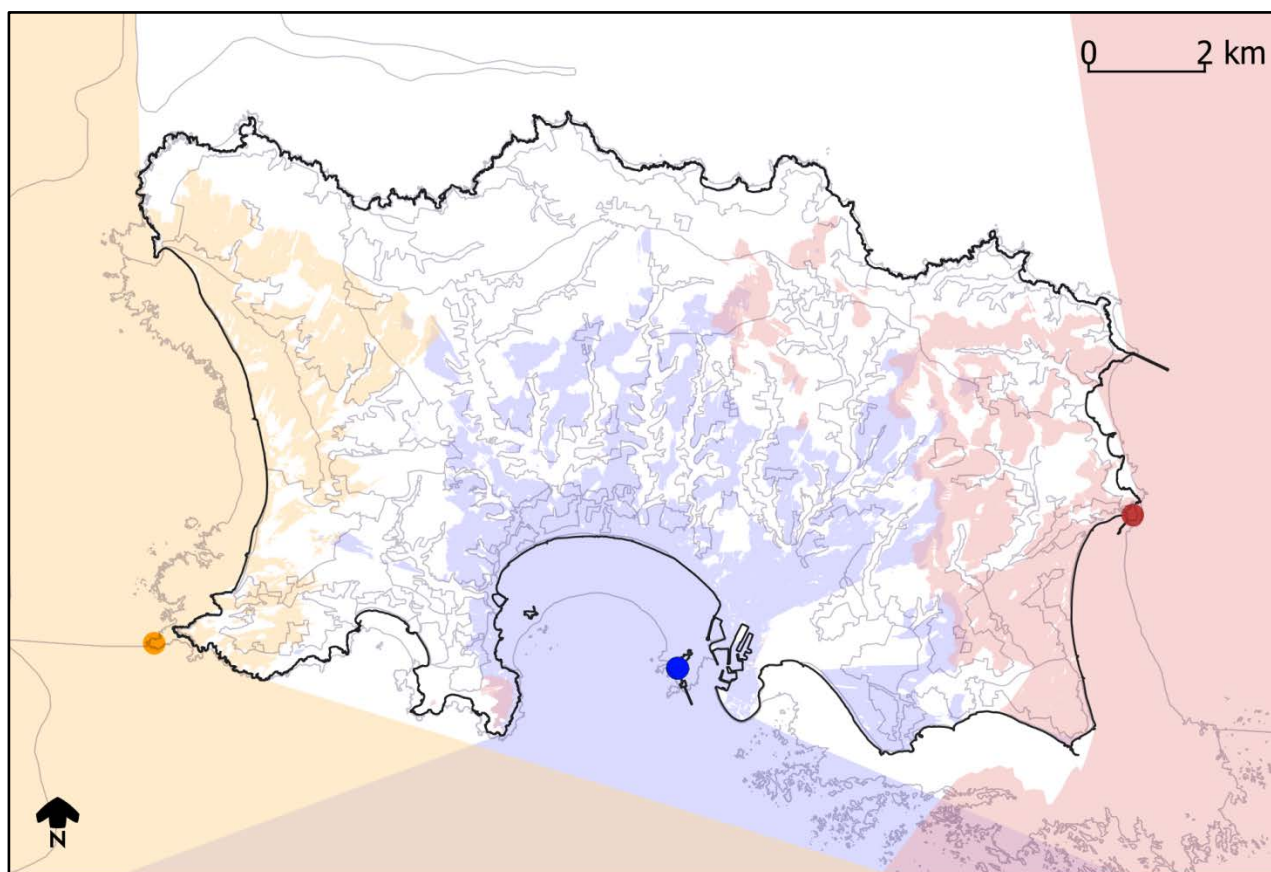
Jersey has many historic sites and buildings, which are seen and experienced within their landscape/ seascape settings.

Three of Jersey's landmarks form focal points in iconic views of the island: Mont Orgueil, Corbière Lighthouse and Elizabeth Castle. It is therefore important that the settings of these sites are protected.

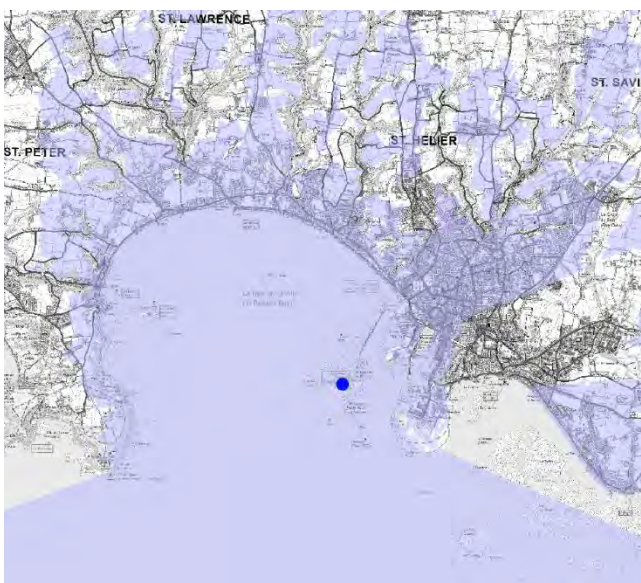
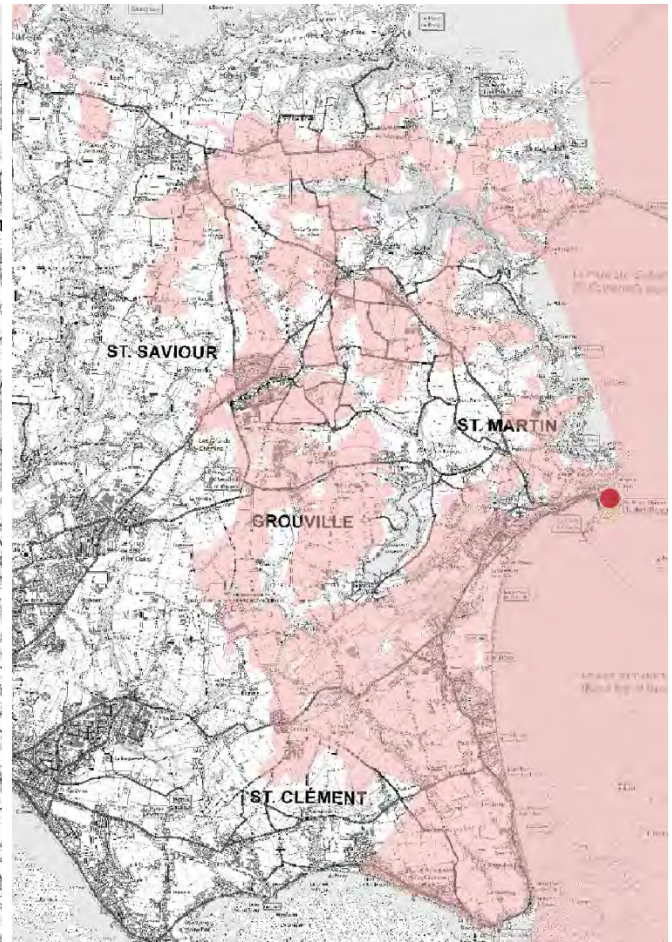
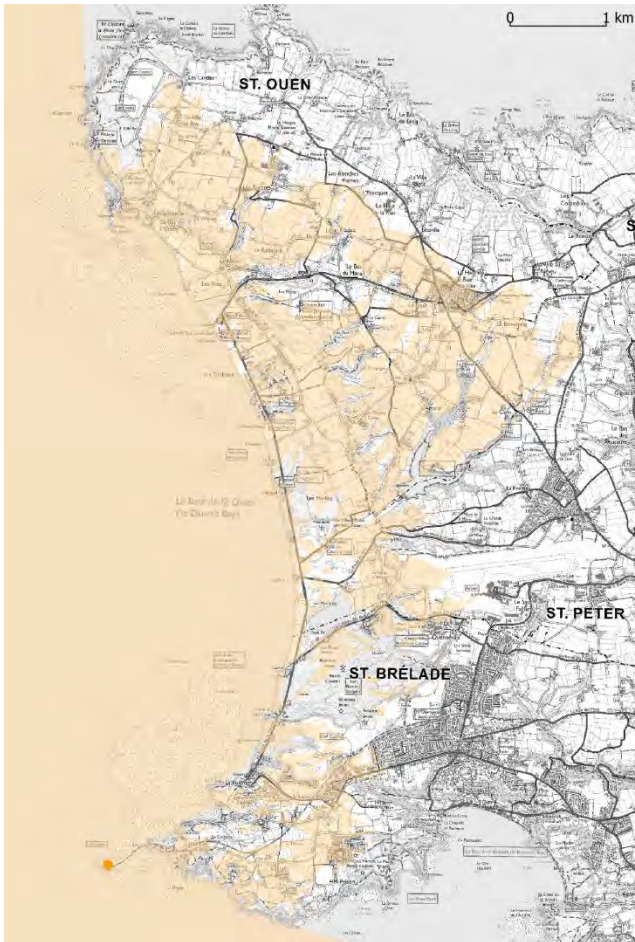
To aid identification of the visual settings, Zone of Theoretical Visibility (ZTV) maps have been produced using computer software for each of the above landmarks. They use a digital model of the landform to calculate the maximum theoretical extent of visibility. They are based on a 'bare ground' scenario and don't take into account the screening effects of trees or buildings.

Nevertheless, they provide a good guide to the areas of land and sea within which potential impacts on setting need may to be considered. Within these broad areas there will be particularly important viewpoints, such as ferry routes, visitor car parks, headlands and official viewpoints.

The following example map shows the extent of theoretical visibility for Mont Orgueil, Corbière Lighthouse and Elizabeth Castle.



It is possible to create more detailed maps showing the area around each landmark, which are presented on a basemap. These detailed maps can be used to identify viewpoints, and to see whether a proposed development site may be within the visual setting of a key landmark. Examples of ZTV maps for each of the landmarks above are presented on the following page.



Extracts of ZTV maps for Corbière (top left), Mont Orgueil (top right) and Elizabeth Castle (bottom left).

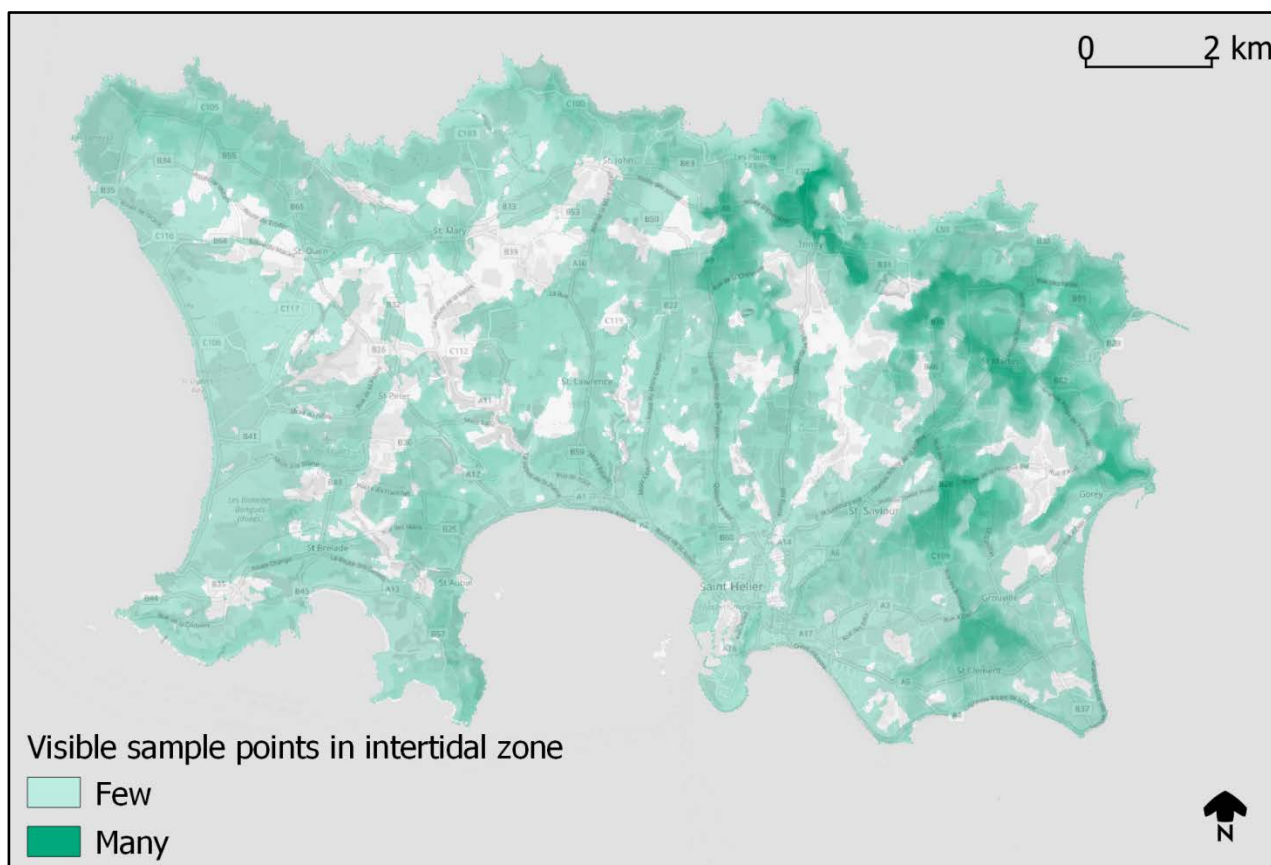
The ZTV maps take into account the height of the landmark, so the areas shaded can be considered to have theoretical visibility of the top of each landmark.

Intervisibility between land and sea

Jersey's island location means that its marine setting is fundamental to its sense of place. Views to coastal and offshore features such as the intertidal zone, the other Channel Islands, the French coast, and the sea itself all contribute to Jersey's marine setting. 'Heatmaps' such as those below can help in understanding the level of intervisibility between Jersey and various elements of its marine setting. They can help to ensure that appropriate consideration has been given to assessing the relationship between terrestrial and marine areas as part of understanding the implications of a proposal on views and visibility.

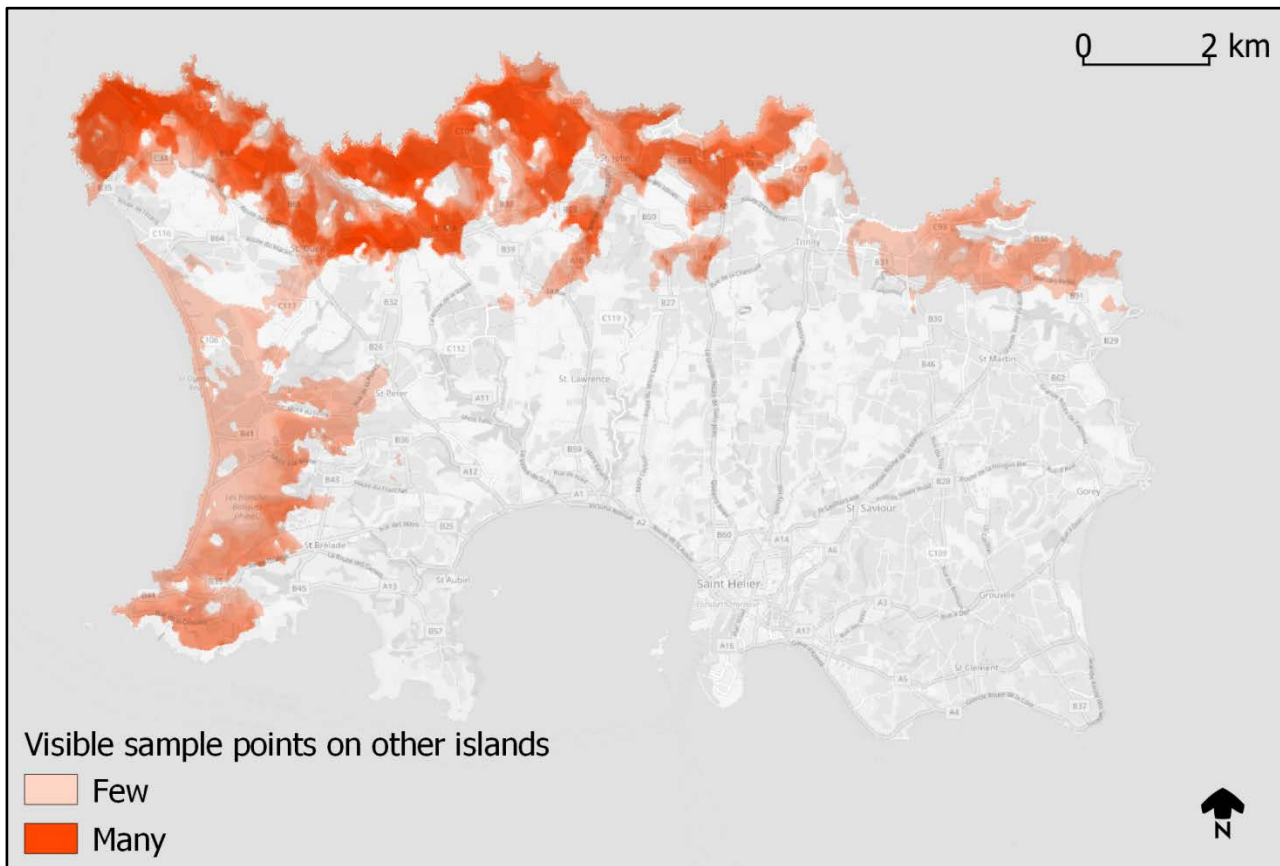
It is important to remember that they are based on a 'bare ground' model which does not allow for the screening effects of trees or buildings. The methodology for the map creation is provided at the end of this section.

Visibility of the Intertidal Zone



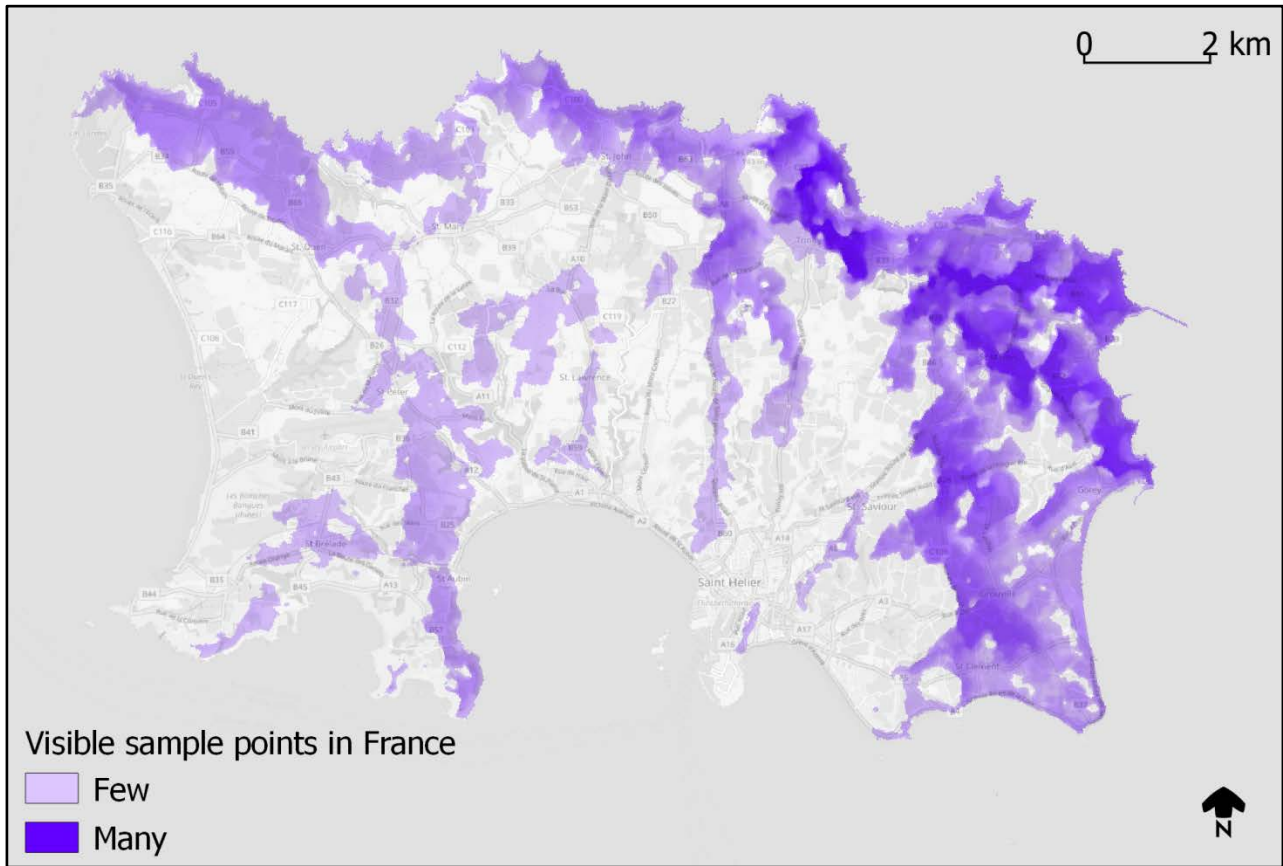
This map shows the visibility of the intertidal zone as seen from land. The darker the shading, the greater the amount of intertidal land that can be seen. The greatest amount of intertidal land can be seen from high land in the north-east (this includes views of Les Écréhous) and from the escarpment in the east and south-east (with views over the extensive intertidal zone in Grouville Bay and St Clement's Bay). In reality, the presence of trees and buildings means that views to the intertidal zone are considerably more restricted than shown on this theoretical map.

Visibility of the other Channel Islands



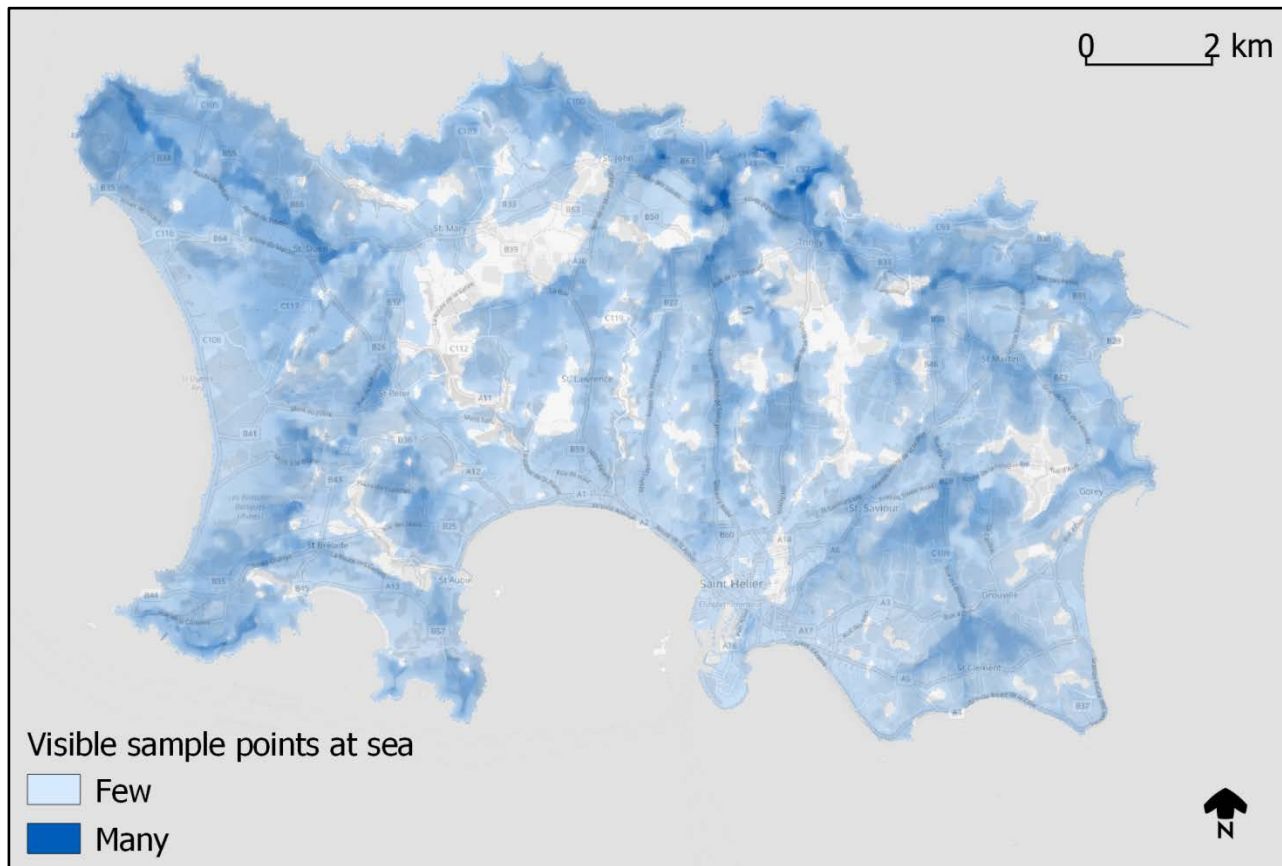
This map shows the visibility of the other Channel Islands as seen from Jersey. The darker the shading, the greater the amount of the other Channel Islands that can be seen. The greatest visibility of the other Channel Islands is from the north-west coast and high land, from where it is possible to see multiple Channel Islands, including Guernsey, Sark, Herm and Jethou. From the west (St Ouen's Bay) it is only possible to see Guernsey, and from the north-east coast it is only possible to see Sark. There is no visibility to the other Channel Islands from the south or east of Jersey. In reality, the presence of trees and buildings means that views to the intertidal zone are considerably more restricted than shown on this theoretical map.

Visibility of France



This map shows the visibility of France as seen from Jersey. The darker the shading, the greater the amount of France that can be seen. As would be expected, the amount of France which is visible is greatest in the east, particularly from the high land in the north-east. In reality, the presence of trees and buildings means that views to France are considerably more restricted than shown on this theoretical map.

Visibility of Sea



This map shows the visibility of sea as seen from land. The darker the shading, the more sea that can be seen. The darkest shading, from where the largest amount of sea is visible is from 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.

Methodology for creating the visibility heatmaps

To create the maps, a digital elevation model from the EU Copernicus programme was used (EU-DEM v1.1) as this gave elevation information for France and other Channel Islands. The data was clipped to a 50km buffer from Jersey.

A grid of sample points at a 1km spacing was created for France, other Channel Islands and the intertidal zones, and at a 2km spacing for sea. The larger grid for sea was used to speed up the processing of the marine zone to a reasonable time.

For each of the 25m cells of the EU-DEM on Jersey a count of sample points of each type that would be theoretically visible to an observer at 1.5m above the island surface was calculated. This count gives an indication of the visibility of France, other Channel Islands, intertidal zones and sea.

The analysis does not take account of vegetation, buildings or atmospheric conditions that would limit views, therefore it is an over-estimate of the number of sample points that are actually visible.

Part 6: Appendices

Appendix A: References and Sources of Further Information

Amphibian and Reptile Conservation Jersey Multi-Species Distribution, Habitat Suitability and Connectivity Modelling (2018)

Aubin, C.N. *A Glossary for the Historian of Jersey* 2011 Jersey Heritage

Chambers, P. et. al. *Les Minquiers – A Natural History* 2016 Charonia Media

Couling, David *Wrecked on the Channel Islands* (1982) Stanford Maritime

Council of Europe *European Landscape Convention* (2000)

Gouvernement d'Jerri *Marine Resources Annual Report* (2018)

Jersey Heritage *Historic Farmsteads and Landscapes in Jersey: Their Character and Local Distinctiveness* Historic Building Study no. 2 (2008)

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Appendix B: Changes made to Character Type and Character Area Boundaries

Changes to 1999 Character Types and Areas following 2019 review

Change made	Location	Reason
Identification of scarp slope (Character Type C) previously shown as Interior Agricultural Land (Character Type E)	West of Mont Orgueil	Assumed previous cartographic error, as the location is consistent with the character of Character Type C.
Identification of scarp slope (Character Type C), previously shown as Interior Agricultural Land (Character Type E)	North of La Rue des Pres Trading Estate	Assumed previous cartographic error, as the location is consistent with the character of Character Type C.
Identification of scarp slope (Character Type C) and Coastal Plain (Character Type B), shown as Interior Agricultural Land (Character Type E) on digitised version and Character Type B on original.	Area of land between A3 and A6, around Le Petit Menage.	Clarification of previous cartographic inconsistencies.
Additional area of offshore reef (Character Type H) identified at Les Anquettes	Offshore, to east of Jersey	Recent undersea studies have revealed an additional reef of similar composition to Les Minquiers and Les Écréhous, but less exposed.
Rationalisation of Interior Agricultural Land (Character Type E) from eight Character Areas to four.	West, centre and east of Jersey	Whilst some of the Character Areas identified within the previous Appraisal are apparent on the ground, others are very subtle and have resulted in an unnecessarily complicated sub-division.
Rationalisation of Enclosed Valleys (Character Type D) from five Character Areas to four	Southern enclosed valleys	Whilst most of the Character Areas identified within the previous Appraisal are apparent on the ground, others are very subtle and have resulted in an unnecessarily complicated sub-division.
Split St Aubin's Bay and St Brelade's Bay Coastal Plain and Scarp	St Aubin's Bay and St Brelade's Bay	Splitting these into separate Character Areas enables the locally distinctive features and circumstances to be expressed and given adequate weight. The sense of place of the two bays is quite different. This was acknowledged within the text of the 1999 CCA.

Site of Plémont Holiday camp changed from Character Type E to Character Type A	Plémont Headland	When the 1999 CCA was written, this site was still a holiday camp. It has since been demolished and is being restored and managed as coastal grassland.
St Aubin's Fort and Elizabeth Castle changed from Character Type A to Character Type G	At Aubin's Bay	Correction of presumed cartographic error when the map was digitised. Both sites are clearly within Character Type G (Bays with Intertidal Flats and Reefs) and not outliers of Character Type A.
Headland at Le Petit Etacquerel changed from Character Type C (Escarpment) to Character Type A (Cliffs and Headlands)	Le Petit Etacquerel	The characteristics of the headland are closer to Character Type A than Character Type C.
Coastal land changed from Character Type C (Escarpment) to Character Type B (Coastal Plain)	Le Bas de L'Etacq	This area has characteristics of the Coastal Plain, and is a natural extension of it. It is therefore assumed to be a cartographic error during digitisation.
Escarpment changed from Character Type E (Interior agricultural land) to Character Type C (Escarpment)	Area east of Ouaisné dunes at the eastern end of St Brelade's Bay	This area is steep land rising behind the dunes with characteristics of the Escarpment. It is shown as escarpment in the 1999 Appraisal, so is assumed to be a cartographic error during digitisation.
Area inland of Le Grouin Point headland (St Brelade's Bay) changed from Character Type A (Cliffs and Headlands) to Character Type C (Escarpment) and Character Type B (Coastal Plan).		
Les Sauvages reef added to Character Type H	Les Minquiers	Area has the characteristics of the Offshore Reefs and Islands, and is of very high biodiversity importance.

In addition to the above boundary changes, two Character Type names were changed:

Character Type E was changed from *Interior Agricultural Land* to *Interior Agricultural Plateau*. Using a topographic term made it consistent with all the other terrestrial Character Type names.

Character Type F was changed from *Cliff Edge with Deep Sea* to *Rocky Shores and Bays*. This was to remove any confusion with the new *Deep Sea* Character Type (not used in the 1999 CCA as it did not extend into marine areas) and also to acknowledge the presence of the small bays which are important elements of this Character Type.

Appendix C: Attendees at Stakeholder Consultation Workshop

The following people attended the ILSCA Stakeholder Consultation Workshop, held at the Royal Jersey Showground on 31st October 2019.

Name	Organisation (where applicable)
Amy Hall	Jersey Bat Group
Andrew Le Quesne	
Andy Howell	
Charles Alluto	Jersey National Trust
Christopher McCarthy	
David Moon/ Jane Blakely	
Derek Major	
Fiona Fyfe*	Fiona Fyfe Associates
Gerard Farnham	Jersey Trees for Life
Glyn Young	Durrell
Ian Mitchell	Les Écréhous Residents Association
Jerry Neil	Jersey National Park
Jim Hopley	Jersey National Park
John Baker	Jersey Action Group
John Le Gresley	Les Minquiers Residents Association
John Pinel*	Growth, Housing and Environment (Natural Environment)
John Refault	
Kevin Pilley*	Strategic Policy, Planning & Performance (Island Plan Team)
Marc Woodhall*	Growth, Housing and Environment (Natural Environment)
Marie-Louise Backhurst	Société Jersiaise
Marion Jones*	Strategic Policy, Planning & Performance (Island Plan Team)
Mark Bowden	Jersey Water
Maxine Fergusson	La Comité du Commune Rurale de St Jean
Michael Stentiford	Jersey National Park
Moz Scott	St Brelade's Bay Association
Nicola Robinson	
Paul Chambers*	Growth, Housing and Environment (Marines Resources)
Ralph Nichols	Société Jersiaise
Roger Hills	Jersey Heritage
Steve Tanner	Ports of Jersey

*Client/ consultant team

Appendix D: Glossary of Acronyms and Technical Terms

AAP Area of Archaeological Potential

ESA Environmentally Sensitive Area

GIS Geographic Information System

ILSCA *Integrated Landscape and Seascape Character Assessment*

MPA Marine Protected Area

NMGZ No Mobile Gear Zone

SSI Site of Special Interest (may be ecological or geological)

Abreuvoir Watering-place for animals

Alluvium Material deposited by a river

Ash die-back Disease affecting ash trees (also called Chalara) caused by the fungus *Hymenoscyphus fraxineus*.

Banque Bank holding up higher land or separating fields

Branchage The branches of a tree, which must not overhang the neighbouring property/ road.

Bronze Age Archaeological period c. 2,000-700BC.

Carbon sequestration The absorption and storage of atmospheric carbon in, for example, trees and soils.

Coping stones The stones which form the top of a wall.

Côtil Field or land on hillside or slope.

Dispersed (settlement) A scattered settlement pattern with buildings spread out without a clear centre.

Ecosystem services The benefits gained by people from the natural environment. (See section 1.4 for more information and associated terminology).

Fontaine Spring.

Geodiversity The natural range of geological features (rocks, minerals, fossils, structures) geomorphological features (landforms and processes) and soil features that make up the landscape.

Holocene Geological period c. 0.01 million years ago to present.

Improved (pasture) Fields used for grazing stock which have been made more fertile through the application of artificial fertilizer, liming, draining etc.

Iron Age Archaeological period c.400BC-43AD.

Lavoir Washing place for laundry.

Linear development A settlement pattern which follows a line, such as a road or river bank.

Mesolithic Archaeological period c. 10,000BC-4,000BC.

Moulin Mill.

Natural Assets The elements of nature that produce value and benefits (directly and indirectly) to people (See section 1.4 for further explanation and associated terminology).

Neolithic Archaeological period c.4,000-2,000 BC.

Ramsar Site Wetlands of international importance that have been designated under the criteria of the Ramsar Convention on wetlands, for containing representative, rare or unique wetland types, or for their importance in conserving biological diversity.

Riparian Of, or on, a riverbank.

Salinization The processes of increased quantity of salt in the soil or groundwater, affecting the species which can grow.

Time-depth Ability to see a range of historic features which have been created over many years.

Vernacular Architecture concerned with domestic and functional rather than public or monumental buildings. It generally utilizes locally-available materials and techniques to create buildings with a distinctive local character.

Vraic Seaweed.

INSIDE BACK COVER

