

# H: OFFSHORE REEFS AND ISLANDS

## INTRODUCTION

The Bailiwick of Jersey includes several groups of uninhabited islands and reefs which lie off the coast of the main island. Les Écréhous and Le Plateau des Minquiers lie approximately 9 km (6 miles) to the north-east and 20 km (13 miles) south of the main island respectively. To the west of Les Écréhous are the smaller reefs of Les Dirouilles and Paternosters. At high tide the reefs are little more than small rocky projections above water level while at low tide a vast area of fertile rock plateau is uncovered which, combined with the intertidal areas around mainland Jersey, effectively doubles the area of the Bailiwick. In 1956 the International Court of Justice at the Hague upheld Jersey's sovereignty over Les Écréhous and Le Plateau des Minquiers; a claim which had been disputed by France.

This simple characterisation has been based on a desk study of existing information. The main sources are noted in Appendix 2. We would note that, to date, there is relatively little data on the offshore islands particularly with respect to archaeology, past land use and biodiversity and the reefs provide an important opportunity for future research. The following characterisation therefore represents a summary of present knowledge and information. Further research will considerably enhance our understanding of these important areas and increase their significance.

The whole area of offshore reefs and islets is considered to form one main character type. There are nevertheless significant differences between the two main reefs of Les Écréhous and Le Plateau des Minquiers particularly in terms of their geographic location, relative isolation and biodiversity. For this reason they are described individually as separate character areas. There is very little information on the two smaller reefs of Dirouilles and Paternosters. Geographically and geologically they are considered to form a single natural group with the main reef of Les Ecrehous. The smaller sub reef of the Pipette which lies to the west of Minquiers has been included in the Minquiers character area. The character types and areas are illustrated on Figure 8.

### CHARACTER TYPE

#### H Offshore Reefs and Islands

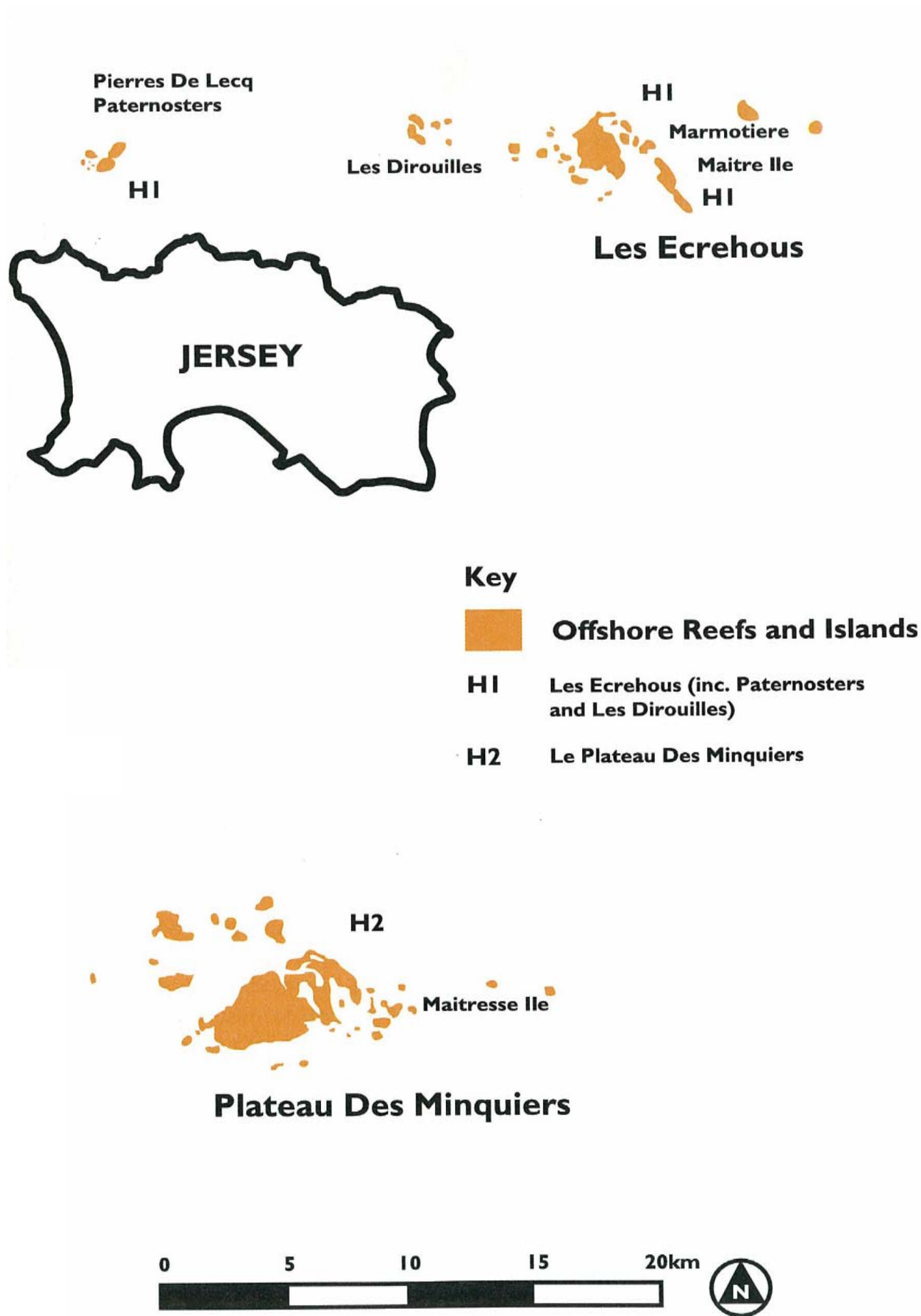
### CHARACTER AREA

H1 Les Ecrehous (including Paternosters and Les Dirouilles)

H2 Le Plateau des Minquiers




**FIGURE 8. OFFSHORE REEFS AND ISLAND CHARACTER TYPES AND AREAS**





## OFFSHORE REEFS TYPE H: OFFSHORE REEFS AND ISLANDS

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LOCATION	CHARACTER AREAS
 A map showing the location of offshore reefs and islands. The main island of Jersey is outlined in the center. To the north and south of Jersey, several smaller islands and reefs are marked with dark grey shapes. The word 'LOCATION' is written in bold at the top left of the map area.	<ul style="list-style-type: none"><li data-bbox="842 376 1252 504">• H1. Les Écréhous (including Paternosters and Les Dirouilles)</li><li data-bbox="842 521 1270 555">• H2. Le Plateau des Minquiers</li></ul>

### NATURAL INFLUENCES

The offshore reefs and islands are composed of foliated granodiorites which were emplaced before the principal granite rocks on Jersey. They represent a distinctive and separate geological entity which have a different origin to that of the main island. Each comprises an extensive granodiorite mass which has been planed by the action of the sea over the millennia to create a largely submerged rock plateau with upstanding rocks and peaks projecting above sea level. Some of the larger islets retain a thin soil cover and support vegetation and have, in the past, been inhabited.

The warming of the climate at the end of the last Ice Age bought about a gradual rise in sea levels which has continued intermittently to the present day. Between approximately 7000 BC and 5000 BC Jersey maintained a physical link with the Cotentin. At this time there were three westward projections of land from the French coast. To the south of Jersey and roughly equal in size lay a land mass formed by Les Minquiers, to the north was a much smaller peninsula the western tip of which is now marked by Les Dirouilles . Les Écréhous formed part of this projection. As sea level rose each of these became an island severed from the Normandy coast. Les Écréhous and Minquiers were slowly submerged so that only the rocky heads of the great granodiorite plateau remained at high tide. The shallow gradients of the plateau combined with the massive tidal range means that at low tide a vast area is uncovered which, combined with the intertidal areas around mainland Jersey, effectively doubles the area of the Bailiwick. The solid rock is readily eroded and the submerged landscape includes substantial shingle and sand banks, some of which are only revealed on low spring tides. On each of the main reefs a few small rocky islets remain emergent at high tides. These support a thin covering of sandy peaty soil and a characteristic vegetation.

The rocks of the offshore reefs are likely to be of considerable geological interest although as yet none have been proposed as geological SSI. The materials which have accumulated in the sheltered hollows and crevices are also of great interest preserving a record of human occupation dating back to at least the Neolithic, and paleo-environmental evidence of past sea level and climatic change.

In terms of biodiversity the offshore reefs and islands are unique and support a specialised flora and fauna adapted to the isolation and harsh conditions (salt spray, winter storms, summer drought and the minimal soil resource). They form an ecological entity of special interest and support an indigenous flora, some of which may have arrived by land before the islands were cut off by rising sea levels. A number of characteristic plants have gained a foothold on the reefs some of which are absent from Jersey and the other Channel Islands. A special association of invertebrate fauna also survives. The reefs of both Les Écréhous and Plateau des Minquiers are of great significance for their seabird colonies (of Channel Islands Importance) and hold important breeding populations of birds such as terns. They also provide a valuable refuge for migrant passerines.

The diverse and extensive intertidal habitats which include rock platforms, sand and shingle banks and sheltered shallows support a wealth of marine life, although again, these have, to date, been the subject of few studies. The huge intertidal areas are particularly attractive to waders and two notable marine mammals - bottle-nosed dolphins and grey seals can frequently be seen in the seas surrounding the reefs. Despite relatively little data it is clear that Jersey's offshore reefs play an important role in maintaining the diversity of marine life in the Channel.

## **CULTURAL INFLUENCES**

The evolving physical geography of the offshore reefs has had a defining influence on their historical development. The continuing rise in sea levels during early prehistoric times, coupled with the erosion of superficial geological deposits eventually caused all three peninsulas to be severed from the Normandy coast. It is generally believed by palaeo-environmentalists that the severance occurred during the fifth millennium BC. The Minquiers and Écréhous plateaux would each have covered many square miles in the Neolithic period and supported human settlement, animal life and vegetation on a meaningful scale, but the continuing effects of sea level rise and erosion have reduced them to their current much reduced areas. Both Les Écréhous and Les Minquiers have been exploited by man from prehistoric times. The Écréhous peat beds are only the fourth location in the Channel Islands to yield pottery dating from the earliest Neolithic period. The peat beds contain the stumps of trees which grew on the Écréhous in prehistoric times and two Neolithic stone axe-heads may have been associated with woodland clearance on the plateaux. The Minquiers include a rare middle/late Bronze Age and late Iron Age occupation site. The archaeological evidence on both reefs points to the existence of a significant land mass inhabited by man, and domesticated animals such as sheep and pigs dating from prehistoric times have been found on Les Écréhous. Some sort of habitation, at least on a temporary basis, is likely to have continued through the Roman period and the Dark Ages.

Les Écréhous were the site of a Cistercian Priory, from the thirteenth century, which modified an existing early Christian chapel. Little is known of the medieval history of Les Minquiers. Both reefs were uninhabited by the fifteenth century and in the early modern period they are portrayed from surviving records as dangerous places, on the edge of the law, with passing visitors using the natural resources of *vraic*, fish and stone that the islands had to offer.

Both reefs have been extensively quarried in the past. On Les Écréhous both surface collected and quarried granite was shipped back to Jersey where it was used as rough building stone. Écréhous granite is confined to the parishes of Trinity and St Martin on Jersey, with the major use of the stone in eighteenth century farmhouses and cottages in the Rozel area. The granite of the Minquiers was of a better quality and could be quarried in large blocks and dressed to a fine finish. The main use of Minquiers stone was for the construction of Fort Regent between 1806 -1814.

The "fisherman's huts" found on both Les Minquiers and Les Écréhous are important examples of local vernacular architecture. The earliest huts on both reefs date from the eighteenth century. A single-celled, single story cottage with a gable end fire place was the basic vernacular type common to Jersey and Brittany in this period and there are very few surviving examples.

From around 1830 onwards the way in which the reefs were used by Jersey people began to change. Peace with France in 1815 made the reefs more accessible and secure and growing numbers of people began to reside on the islands permanently, invest in grander properties and exploit the leisure potential of the islands.

Agitation between Britain and France in the 1880's led to increased official interest in the reefs and both Les Minquiers and Les Écréhous were provided with substantial flagstaffs. These represented the first move in a visible display of British sovereignty over the reefs. After the Second World War the sovereignty issue flared up again, when French fishermen, who operated in Jersey's territorial waters between 1939 - 1945, persuaded their government to lay claim to the reefs. The dispute was settled in The International Court of Justice in 1953 in Jersey's favour. Since the war many of the historic huts on the reefs have fallen into disrepair or been substantially modified. Leisure activities on the reefs have now completely replaced earlier land uses. The boating community makes extensive use of the islands and increasing numbers of day trippers come out to the reefs from Jersey and France.

**Character Areas:** The offshore reefs and islands have been sub-divided into two separate character areas. These are Les Écréhous (which includes the adjacent smaller reefs of Les Dirouilles and further to the west Paternosters) and Le Plateau des Minquiers

**H: OFFSHORE REEFS AND ISLANDS  
EVALUATION OF ENVIRONMENTAL FEATURES, ATTRIBUTES AND SERVICES**

ATTRIBUTES AND SERVICES	REASON WHY IMPORTANT	SCALE OF IMPORTANCE	TREND/THREAT	RECREAT-ABLE
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**ABLE FEATURE: IGNEOUS GEOLOGY**

Characteristic topography revealed at low tide, comprising granodiorite masses planed by the action of the sea plus unique configuration of the upstanding rocks and reefs.	Local character	Channel Islands	The landform has been affected by quarrying. Extraction no longer occurs.	No
Distinctive foliated granodiorite	Geodiversity	As yet unknown	The geology has been little studied. It is not under immediate threat.	No
Important building material quarried for use on many of Jersey's distinctive buildings.	Local economy	Jersey	The extent of quarrying in the past has threatened the survival of the reef system. It has now ceased.	No

**FEATURE: SOFT ROCK COVER/ SAND & PEAT SEDIMENTS**

Palaeo-environmental resource (evidence of past environmental changes and human occupation)	Archaeological/ past environmental changes	European	In the past the soil resource has been eroded by quarrying and development. Today, excessive visitor pressures are a significant threat. Any form of ground disturbance (e.g. tree planting) has the potential to have a major effect on the sensitive archaeology.	
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**FEATURE: INDIGENOUS FLORA AND FAUNA**

Unique indigenous flora – adapted to the harsh conditions. Includes species that may have arrived by land before the reefs we cut off by sea level rise, as well as species not found on Jersey.	Biodiversity (flora)	Channel Islands	The distinctive flora of the reefs has been altered by herbicide application (Le Plateau des Minquiers) and introduction of rabbits (Les Écréhous). It is threatened by the introduction of non-indigenous species including garden plant and misguided tree planting. Increased disturbance by humans (e.g. trampling erosion) also threatens fragile flora	V.difficult to re-establish/ revegetate in those isolated conditions.
Strands of tree mallow provide an important refuge for breeding seabirds and migrant passerines. Cover of sea beet in the rocks provides shelter and protection for oystercatcher chicks.	Biodiversity (birds)	Channel Islands	As above	As above



ATTRIBUTES AND SERVICES	REASON WHY IMPORTANT	SCALE OF IMPORTANCE	TREND/THREAT	RECREAT-ABLE
The habitat is thought to support a unique association of invertebrates. Although these have to date been relatively little studied. The insect fauna provides abundant food for migrant birds in spring and autumn.	Biodiversity	As yet unknown	No baseline data and therefore difficult to establish trends. Loss/ changes to the habitat will lead to loss/ changes in the invertebrate population	No not practical

#### FEATURE: EXTENSIVE INTERTIDAL AREAS (ROCKS & REEFS)

Diverse intertidal habitat including shingle banks, sand banks, reefs and rock platforms likely to support a wealth of marine life (as yet little studied)	Biodiversity (marine)	(At least) Channel Islands	Threatened by increased disturbance, including marine pollution and introduction of alien species. The marine biodiversity has been the subject of relatively little research. There is no baseline against which to measure changes.	No
The tidal range & shallow gradients of the reefs exposes a huge intertidal area which is particularly attractive to waders. The Minquiers is a candidate Ramsar site	Biodiversity (birds)	International (Minquiers is a candidate Ramsar site)	As above	No
As the tide falls the rapid emergence of the huge spaces of Les Écréhous and Le Plateau des Minquiers is a dramatic event.	Sense of place/ local character	Channel Islands	No trend/ threat (apart from longer sea level changes)	No
Intertidal peats – archaeological resource with potential to yield important information on past environmental change.	Archaeological	European	No threat at present, although any change in tidal patterns (e.g. brought about by quarrying of sand/shingle banks) could result in their destruction.	No
Extremely productive area for fish and crustacean.	Local economy	Channel Island & France	The productivity of the areas is threatened by marine pollution, over fishing and increased human disturbance.	No

#### FEATURE: VERNACULAR BUILDING TYPES

Rare early examples of Jersey vernacular, domestic architecture	Cultural history	Channel Islands	The distinctive architectural character is threatened by inappropriate repairs/ restoration and recent modern buildings	No, but design guidance could help more re. more appropriate repairs and come modern buildings could be removed.
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ATTRIBUTES AND SERVICES	REASON WHY IMPORTANT	SCALE OF IMPORTANCE	TREND/THREAT	RECREAT-ABLE
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#### FEATURE: ARCHAEOLOGICAL REMAINS

Neolithic- post medieval sites	Archaeological/ cultural history	Channel Islands	Increased visitor pressures are a threat. Lack of archaeological survey/ recording means that the full extent of the resource remains unknown.	No
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#### FEATURE: WILDERNESS AND REMOTENESS

The uninhabited reefs and rocks are an important part of the horizon view from the more developed coast of Jersey. The seas around the reefs are notorious for their strong tidal streams and hazardous rocks.	Local character/ sense of place	Channel Islands	The special sense of remoteness and wideness is being eroded by increasing human disturbance	No
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### EVALUATION

Jersey's offshore reefs and islets preserve an extremely important collection of environmental features which are valued at the highest level. Les Minquiers form part of an internationally important wetland worthy of designation as a Ramsar site. They are significant as possibly the largest reef system in Europe and this combined with the massive rise and fall of the tides makes Jersey's offshore reefs a unique feature. The archaeological remains and distinctive vernacular architecture are at least of Channel Islands importance. The remoteness and isolation of the reefs has meant that the majority of the environmental features and attributes have been the subject of comparatively little research and survey and there is a paucity of information against which importance can be measured and change monitored. None of the environmental features are considered to be re-creatable and they are all extremely sensitive and vulnerable to change. Increasing human disturbance has the potential to have a major impact on the delicate natural balance. These include both small scale incremental changes such as gradual erosion of the soil cover by trampling or inadvertent introduction of non-indigenous species as well as major impacts such as the threat of marine pollution.

### MANAGEMENT PRIORITIES

**The management priorities are for research, protection (through appropriate statutory designation) and management. Some outline recommendations are given below:**

- **There is an urgent need for special designation** to ensure statutory protection and conservation of the ecological, archaeological and historic value of the offshore reefs and to conserve their unique and special character.
- **A policy and code of practice to limit disturbance by humans is a priority** to include restrictions on access (e.g. during the bird breeding season) and recommendations

controlling/regulating the introduction of plants and animals, lighting of fires. disposal of refuse. collection and removal of specimens/materials etc. The code of practice should stress the importance and sensitivity of the area. It should be widely publicised and distributed to all hut occupiers and the boating community (including those arriving from the French mainland). It could, for example, be included in future editions of the Channel Islands Pilot.

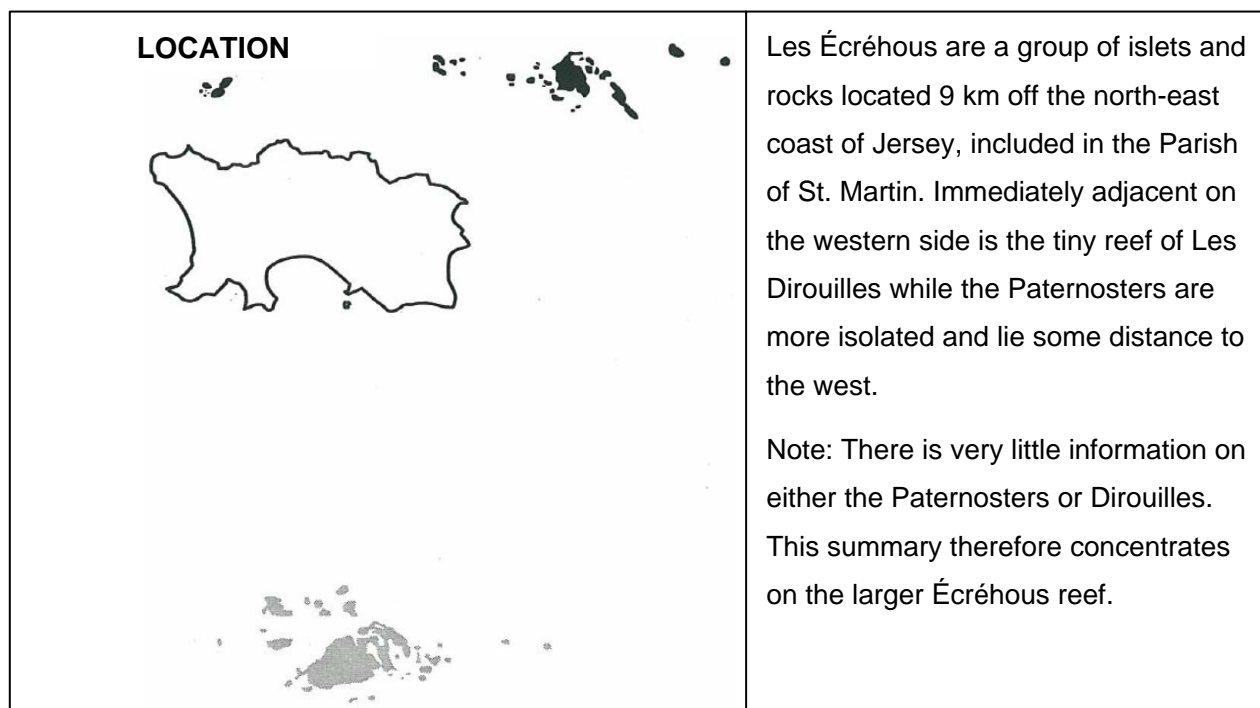
- **A policy and course of action for dealing with marine pollution** incidents within the offshore reefs is required. The use of hot water or steam jets to clean rock surfaces could be extremely detrimental to the ecology of these sensitive habitats.
- **The older buildings which retain a substantial part of their historic fabric should be listed** and given statutory protection to preserve their character. Leases for the huts and houses should include stringent conditions on appropriate repairs. Preparation of a design guide which illustrates the importance of the architectural resource is recommended.
- **Any proposals for creation to facilitate easier access should be resisted** (e.g. helicopter landing or safe anchorage). The reefs must remain remote and isolated.
- **Further research, survey and monitoring is a priority** to include 5 yearly seabird census, and informal monitoring of vegetation change. Relatively little is known about the evolution of the landscape of the offshore reefs and links to the history of erosion and inundation of the French coast. This is a research priority for the future.
- **Monitoring of stocks of fish, crustacea and bivalves** is required. If needed measures should be put in place to ensure the sustainable management of this resource.

## **LEVELS OF PROTECTION AND CAPACITY TO ACCEPT CHANGE**

The whole area of Jersey's offshore reefs and islands are included within the Marine Protection Zone. It is recommended that they should have the absolute highest level of protection with a presumption against any new development. The only building work that can be permitted is the sensitive repair and restoration of the existing architectural resource and even this will require strict conditions to ensure that the work does not have an adverse environmental impact (e.g. stockpiling of material or ground disturbance). Capacity for change is limited to appropriate and sensitive management designed to sustain and enhance the environmental character of the offshore reefs and islands. A policy and code of practice to minimise human impact and disturbance is a priority. It is strongly recommended that further research and survey is undertaken on all environmental aspects to provide a baseline for future monitoring.



## CHARACTER AREA H1: LES ECREHOUS (INCLUDING LES DIROUILLES AND PATERNOSTERS)



### NATURAL INFLUENCES

**Landform and Intertidal Area:** Les Écréhous are an archipelago of small islets, rocks and reefs covering an area of between 0.2 and 41 km<sup>2</sup> dependent on the height of the tide. At low tide the Écréhous reef complex is dominated by a central emergent platform almost 4km<sup>2</sup> in area with numerous outlying rocks. The extensive shoal area is orientated along an axis orientated roughly west-north-west to east-south-east. The rocks and reefs are all individually named and include Rocheport, Bouvet, Sabloniere, Bigorne and Grosse Tete. At high tide only three of the larger islets - La Maitre lie, La Marmotiere and Le Blianque lie and a scattering of rocky heads project above the water.

**Geology:** The majority of the exposed rock is made up of the characteristic 'foliated granodiorite'. Granodiorite is readily eroded by the sea and extensive shingle banks have built up which form a prominent and important part of the Écréhous landscape. A massive shingle bank, known as La Taille, forms a causeway in the centre of the reef; this impressive curving, linear feature extends for nearly a kilometre and is up to 75m wide in places and connects the main islets of La Marmotiere and Le Blianque lie. A further short curving length of shingle bank protects the west side of the largest and most southerly isle of La Maitre lie. There is a large sand bank over 2km in length at the south-eastern tip of the archipelago, known as L'Ecriviere, which is only exposed at the lowest tides.

**Sediment and Soil Cover:** In general the rocky projections have virtually no soil cover, with only shallow pockets of humus in the clefts. On the largest isle, La Maitre lie, there is a covering of shallow sandy soil with remnants of head (loess and rock fragments) accumulated at Cave Cove. In addition, a large amount of sediment has built up within a basin behind the shingle banks at the southern end of

the island. This marsh area has in the past provided cultivable soil and produced a hay crop. It now supports a lush growth of tree mallow. The seabed also includes traces of peat beds which are periodically uncovered by the tide off Le Blianque Tie and a separate peaty deposit is known to occur beneath the shingle bank enclosing the marsh on La Maitre Île.

The geology of Les Écréhous reefs has a separate and different origin to that of Jersey and is of considerable interest. It has, as yet, no special designation. The soft materials and sediments which are extremely important for the information they may yield on past environmental change and human occupation similarly have no protection.

**Biodiversity:** The flora of Les Écréhous is dominated by salt tolerant plants (halophytes), the few salt intolerant plants that exist on the islands being located in the lower lying marsh areas. The floral composition of the islands has altered little in the last 100 years, the main impacts on the vegetation arising from rabbit grazing. Bluebells are unexpectedly found on Les Écréhous and cow parsley is common there but remains rare on Jersey. The flora continues to evolve slowly, the sea clubrush being recorded for the first time in 1995. The flora may start to change more quickly though, as tourist boats start to introduce other plant species. Rabbits and pipistrelle bats are the only species of mammals on Les Écréhous. In contrast birds are abundant, the tidal range making the islands particularly attractive to waders, with oyster catchers being seen in their hundreds. Grey herons and little egrets are common whilst shags regularly use the rocks around the reef. Hundreds of sandwich and common terns gather in the shallows in autumn. The mallow on La Maitre Île is an important refuge for migrant passerines. The whole area is considered to be of Channel Island importance for seabirds.

The marine and intertidal habitats comprising a diverse habitat of rock, sand, shingle and mud support a wealth of marine life and provide excellent fisheries. A small number of grey seals are often seen on and around Les Écréhous and Dirouilles, additionally what is thought to be one of the largest populations of bottle nosed dolphins in the British Isles is also regularly seen in the area particularly to the south of Les Écréhous, but also ranging between Les Écréhous and the Minquiers. Marine biodiversity has to date been relatively little studied and this is an important area for future research.

## **CULTURAL INFLUENCES**

**Past Land Use and Archaeology:** Les Écréhous are one of the richest archaeological sites in Jersey. The Blianque Tie peat is one of only four sites in the Channel Islands to have yielded early Neolithic pottery and flints, confirming prehistoric occupation on land that is now far below the modern high water mark. It has been argued that the Channel Islands were integrated into the Neolithic trading network of north-west Europe and polished stone axe heads which were often traded over long distances, have been found on the reef suggesting that Les Écréhous were part of this wider network. A rare Neolithic menhir has also been found.

Finds of "Briquetage" - the crudely made objects of fired clay that were used in coastal salt production. suggest that Les Écréhous was the site of an Iron Age salt production industry, with its output probably exported to the Cotentin. It has been suggested that Le Ruau Channel, the stretch of water between the northern cliffs of Jersey and Les Écréhous peninsula, was a major prehistoric seaway into France. The

prehistoric fortifications such as Le C atel, Le Pinnacle, and Mont Orgueil that line Jersey's north and east coast are thought to have guarded the southern flank of this waterway, while Les  cr ehous formed the northern land edge.

Roman period artefacts found on the reef were manufactured in Normandy, Brittany and possibly southern Britain and the presence of clay fired tiles suggests a permanent settlement on the island at this time. Rare examples of Dark Age pottery have also been found. The most important Dark Age find on the Island is a ritual burial site. The site is associated with the Neolithic menhir and may represent the Christianisation of prehistoric stone monuments, a practice common on the Atlantic coast of Europe. It has been suggested that an early Christian community was established on the reef in the sixth or seventh century. The Dark Age burial site was built over by a chapel of an early Christian design, possibly as early as the eighth or ninth century. In 1203 Les  cr ehous was given to the Cistercian Abbey of Le Val-Richer, on the condition that a chapel for souls be built and a beacon lit to keep ships off the rocks. A new chapel was built in the thirteenth century and a medieval field and well shaft have also been found, suggesting a thriving community at this time. During the fourteenth century the monastic community was gradually run down and the Assize roll of 1309 notes only two monks and a servant and describes the hardship of life on Les  cr ehous. The prior had established a house at Archirondel in Jersey by the end of the thirteenth century and by the fifteenth century it seems that the island was abandoned by the order.

In the sixteenth century Les  cr ehous began to be taken over by fishermen, smugglers and others who came and went on an irregular basis. Wars with France, Spain and the English Civil War made Les  cr ehous and the surrounding seas a dangerous place. Access to the reef was prohibited in 1646 and prohibitions were renewed throughout the century. Les  cr ehous was pivotal in the smuggling trade between Jersey and France in the 1690's when England was at war with France. The French would light fires on the reef and boats from Jersey and France would make for the island and trade in lead and powder. Fishermen and vraickers continued to use the reef in the eighteenth century. The rocks of Les  cr ehous were particularly favoured as a source of vraic to manure the soils of Jersey and families used to spend extended periods there in the summer months, collecting, drying and burning the weed. Collection of the broken stone that litters Les  cr ehous began in the sixteenth century. Slots and pockets typical of seventeenth and eighteenth century wedging quarrying techniques have been found on Le Maitre  tie as well as nineteenth century blasting holes. By the end of the eighteenth century all three islets of Les  cr ehous had "fishermen's huts" built upon them.

From 1830 the way Jersey people used Les  cr ehous began to change. Peace with France in 1815 made the reef more secure and accessible. In 1832 a hut was constructed for the first semi-permanent residents since the fifteenth century. The cottage was significantly more substantial than anything that had been constructed before, and the property was recorded as having an attached garden. This marked a new phase in the development of Les  cr ehous with the nineteenth century seeing increasing numbers of permanent residents attracted to the reef many of whom were there for leisure and to enjoy typical Victorian pursuits such as sketching and antiquarian research. In the first half of the twentieth century the use of Les  cr ehous by full time fishermen gradually declined in favour of the leisure interest of the professional and middle classes, with new and ever larger huts constructed on the reef. In the 1920's Jesse Boot (later Lord Trent) took on a general lease of La Maitre  tie from the crown, effectively securing

the islet as a private holiday resort. A rival private resort was set up first on Le Blianche lie and subsequently on La Marmotiere by the Lemprieres. In the inter-war years families would camp on the shingle bank of Le Blianche Île to shoot wild fowl. After the Second World War, leisure interests took over the reef completely and there was a fresh spate of building using modern materials.

**Buildings and Landmarks:** The St Mary's Priory site on Le Maitre lie has three main historical phases. The primary chapel was built on the site of the Dark Age ritual burial and was of a similar design to many such buildings in the early Christian West, with a simple rectangular form. It is thought to have been constructed in the eighth or ninth century. In 1203 the Cistercian order acquired the site and rebuilt the chapel, probably using French masons. A new stone vaulted chapel was built in the middle of the thirteenth century, to a typical Channel Islands' design. Further buildings were also added in this period. In its thirteenth century heyday the chapel was completely limewashed inside and outside and the windows embellished with painted glass.

The fishermen's huts on Les Écréhous date from the eighteenth, nineteenth and twentieth centuries and the earliest examples are important records of early Jersey vernacular architecture. By 1850 there were 17 huts with the interior divided into two functional areas - eating and sleeping possibly with a boarded partition in between. Later huts are characterised by the use of brick as the main building material rather than local granite, and in the twentieth century prefabricated concrete blocks and asbestos slates have been used.

As well as Flagstaff Hill and Weathercock Hill significant landmarks on Les Écréhous include The Rocking Stone and La Dent on La Marmotiere, which are thought to be products of post medieval quarrying. The rock known as Prieres des Femmes derives its name from a late nineteenth century story. When a ship returning to France was holed on the reefs at low water the thirty passengers, all women, managed to crowd onto a small rock while the crew swam to safety on La Marmotiere. During the night the tide rose and the following morning the rock was bare. It is said that the screams can still be heard when spring tides wash over the rock.

**Current Use and Management:** The dozen or so houses on La Marmotiere are owned and leased out by the States. The leases are much prized by the Jersey boating community. There are also a number of privately owned huts which are seeing increasing leisure use. The reef remains an important fishing ground for both Jersey and French boats.

#### **ESSENTIAL CHARACTER**

- at low tide Les Écréhous are clearly visible from much of the North Coast of Jersey and are an important and distinctive feature of the distant seascape;
- geology comprised of 'yellow' foliated granodiorite. The extensive shingle bank 'La Taille' is one of the most distinctive features of the reef landscape;
- La Maitre Île contains a covering of shallow, sandy soil with remnant of soft rock cover which is an important geological and archaeological resource;
- the lush growth of tree mallow is the characteristic plant of Les Écréhous;



- the peat beds which have formed in the marshy area and beneath the shingle banks on La Maitre Île and the seabed around Blianque Île are possibly one of the richest archaeological sites in Jersey. Include a range of other important archaeological sites dating from the Neolithic to post-medieval;
- considered to have been of outstanding importance in antiquity, forming part of a much larger prehistoric landmass on the northern edge of a seaway from the Atlantic;
- to those who have stayed on the islets, the rapid emergence of this huge, isolated archipelago as the tide falls, is a dramatic and memorable event. The sunsets that can be experienced from Les Écréhous are equally spectacular.

## SUMMARY OF ENVIRONMENTAL FEATURES

CHARACTER TYPE	CHARACTER AREA
<b>H: Offshore Reefs and Islands</b>	<b>H1: Les Écréhous (plus the Paternosters and Dirouilles)</b>
<b>Igneous geology</b>	<p>Foliated granodiorite. A distinctive 'yellow' colour which has been quarried for building in north-east Jersey. The rock is readily eroded to create extensive shingle and sandbanks.</p> <p>The rocks and reefs provide an important area for breeding seabirds. During spring and summer Le Blianque Île holds the Channel Island's largest breeding colony of common terns.</p>
<b>Soft materials and sediments</b>	<p>Small pockets of soft materials, sediments and soils have accumulated in hollows and crevices on the main islets. The sediments are an important archaeological resource.</p>
<b>Indigenous flora and fauna</b>	<p>Distinctive flora characterised by tree mallow. The largest isle contains a small area of peaty ground where non-coastal plants flourish. Includes bluebells and cow parsley, the latter being rare on Jersey. The vegetation provides an important cover for seabirds and migrant passerines.</p>
<b>Extensive intertidal areas</b>	<p>Diverse intertidal and marine habitats support a wealth of marine life. Large</p>

### Archaeological remains

intertidal areas particularly important for waders.

Clean, well-oxygenated waters plus diversity of habitats provide a rich fishing ground for a range of species, particularly crab and lobster. Fish stocks are also good and they are an important nursery area.

Tenuous traces of peat beds uncovered by the tide off Le Bliancue lie - likely to be a prehistoric land surface (has yielded Neolithic pottery and flints).

Evidence of Neolithic occupation and ritual activity in the form of flints and former granite menhir. Iron Age/ early Roman finds. Early Christian activity including chapel and later the Cistercian Priory on La Maitre Île.

### Vernacular building types

Important post-medieval domestic vernacular architecture found in the 'hut' settlements.

### Wilderness and Remoteness

The isolation, treacherous seas and vast expanses uncovered at low tide make wilderness and remoteness a distinguishing characteristic.

## EVALUATION

**Integrity of Character:** Les Écréhous and the smaller reefs of the Paternosters and Les Dirouilles create an outstanding marine landscape which varies, twice daily, from a tiny 0.2km<sup>2</sup> to an area in excess of 41 km<sup>2</sup> dependent on the height of the tide. The rapid uncovering of a vast rocky plain as the tide falls is a remarkable phenomenon. The minute area which remains emergent at high tide contains evidence for an extraordinary continuum of human history. They are a unique resource which must have the highest level of protection.

### Key Environmental Capital

The entire area of Les Écréhous, Paternosters and Dirouilles represents an important part of Jersey's key environmental capital in terms of biodiversity, archaeology and environmental history. They are one of Jersey's richest archaeological sites and the synthesis in Warwick Rodwell's recent comprehensive history of the Écréhous reef<sup>1</sup> states, "*The comparative insignificance of the reef today belies its importance in antiquity*".

There is considerable scope for further research into all these aspects. The environmental potential of the area remains, as yet, largely unknown.

## Threats

The main threat relates to the increasing human disturbance to the fragile environment of Les Écréhous. They are easier to reach than the Minquiers and lie just 8 miles from Carteret, a significant fishing port and site of a new 300 berth marina. Recent years have seen a great increase in tourist visits from both Jersey and the French mainland and this is likely to continue. Some of the effects of increasing disturbance are outlined below:

- The common tern colony is subject to human disturbance with a consequent negative effect on breeding success. Until 1981 Les Écréhous were still a home to colonies of sandwich terns; however due to human disturbance this species is now largely absent from the reefs and their nests have not been seen since 1983.
- Increased visitor pressures have resulted in trampling and erosion of vegetation. Damage and clearance of the tree mallow on La Maitre lie has reduced the amount of cover available for breeding seabirds and migrant passerines. Quarrying and trampling has also led to erosion of the important soft rock cover and soil resource.
- The (re) introduction of rabbits to the islands in the early 1970s decimated much of the native vegetation with only the Stinking Iris remaining. The elimination of rabbits has allowed many species to regenerate. Further planned or accidental introductions (e.g. rabbit or rats) could have a devastating effect on native flora and fauna.
- Recent planting of garden shrubs around the formerly inhabited areas may have a significant effect on the native flora by altering the make-up of the soil and providing artificial shelter. The increase in tourism may result in more species being introduced to the islands.
- Japanese seaweed began to colonise gullies and areas of slacker tides in the mid 1980s. This highly invasive plant has not had the devastating effect predicted and it has had difficulty in gaining a foothold in any areas exposed to Atlantic swell. Reports suggest that the extent of its colonisation has now stabilised and the underwater canopy may in fact have a beneficial effect in providing shelter for juvenile fish. Regular survey and monitoring will be required.
- During the twentieth century a number of modern huts and chalets have been built on Les Écréhous and many of the original early nineteenth century domestic buildings have been altered out of all recognition. Modern materials including asbestos, corrugated iron, prefabricated concrete bricks and tiles and plastic window frames contribute to the decline in architectural aesthetics and building standards and loss of the vernacular building character.
- Further quarrying of the rock or excavation of sand and shingle banks would have a major effect on the integrity of the reef system.

- Watersports in the vicinity of the reef can not only cause physical damage to the reef system but also destroy the special qualities of wilderness and tranquillity.

## **MANAGEMENT PRIORITIES**

The management priorities identified for all of Jersey's offshore reefs apply to Les Écréhous, Paternosters and Dirouilles.


- **Special measures to limit the impact of human disturbance** are required on Les Écréhous which is the most accessible of all Jersey's reefs.

## **LEVELS OF PROTECTION AND CAPACITY TO ACCEPT CHANGE**

The whole of the reefs and intertidal areas of Les Écréhous, Paternosters and Dirouilles are included within the Marine Protection Zone. It is recommended that they should have the highest level of protection with a presumption against all forms of development.

**Capacity:** There is no capacity to accept any development, apart from sensitive repairs and restoration of the architectural resource. Capacity for change is limited to appropriate management to conserve and enhance environmental character. The priority is for research to build up data to provide a baseline for future monitoring.

## CHARACTER AREA H2: LE PLATEAU DES MINQUIERS

<p><b>LOCATION</b></p>  A map showing the location of Le Plateau des Minquiers. It features a large white outline of Jersey in the center. To the south of Jersey, there is a cluster of smaller, dark grey shapes representing the Minquiers. Further south, there are several small, dark grey dots representing other islands in the Channel Islands. The word 'LOCATION' is written in bold at the top left of the map area.	<p>Le Plateau des Minquiers are an extensive area of rocks and sand located some 20 km south of Jersey and included within the Parish of Grouville. They are the most southerly British European territory</p>
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### NATURAL INFLUENCES

**Landform and Intertidal Area:** Le Plateau des Minquiers consist of an extensive area of rock, reef and sand which at low tide covers more than 100km<sup>2</sup>. At high tide this area decreases to little more than 0.1 km<sup>2</sup>. The reef extends east/west about 16 km and north/south for about 11km. Of this great rock plateau only nine small heads remain emergent at high water. The largest one, La Maitresse Île, is approximately 100m long by 50m wide and shaped roughly like a 'Y' with the stem pointing to the north.

**Geology:** The majority of the exposed rock is made up of the characteristic 'foliated granodiorite' with small outcrops of diorite and pegamite. There are several sand and shinglebanks. A great quantity of rock has been quarried from La Maitresse Île and its surroundings which provided the material for the construction of Fort Regent. The effect of such extensive quarrying has been to admit the sea from the southwest up the 'fork' of the 'Y'.

**Sediment and Soil Cover:** Only the largest isle retains a thin soil cover of sand and hard peaty sand. Much of this cover was washed away as a result of erosion from quarrying activity in the nineteenth century. A party of archaeologists who visited the isle in 1928/29 showed in preliminary excavations a well defined series of successively deposited layers, with clear evidence of human occupation in the Neolithic and Iron Ages. Unlike Les Écréhous there appear to be no areas of accumulated soft rock sediments or peats.

**Biodiversity:** The small rocky islet of La Maitresse Île supports a few salt tolerant plants including sea beet and tree mallow. The vegetation was almost entirely destroyed in autumn/winter of 1972/1973 when the island was sprayed with weedkiller, in preparation for tree planting (which thankfully never took place). Since 1973 the vegetation has slowly recovered. The reef is of Channel Islands Importance for

seabirds and breeding birds including shag and cormorant. The extensive intertidal area provides feeding for large numbers of waders during passage periods and in winter, the tree mallow on La Maitresse Île is an important refuge for passage migrants.

There is limited information on marine ecology, although it is widely acknowledged that the wealth of marine habitats including rocky shoreline, shingle banks and sandy flats are likely to support a rich flora and fauna. A small number of grey seals are often seen on and around the Minquiers and Pipettes. Additionally what is thought to be one of the largest populations of bottle nosed dolphins in the British Isles is also regularly seen in the area, particularly to the south of Les Écréhous, but also ranging between Les Écréhous and Les Minquiers.

A research study has recently (1993) been undertaken by the University of Portsmouth Marine Laboratory to investigate the rocky shoreline communities on La Maitresse Île. These initial investigations show a richness and sufficient degree of difference from neighbouring areas to warrant further detailed examination. The rocky shores were found to be of particular interest for the ratio of algal groups and a number of other unusual features. Rapid investigations of the sandy areas suggested that these could also yield a rich diversity of animals. The report concluded that Les Minquiers reef is vital in maintaining the diversity of the marine fauna of the Channel. They provide an essential biotic reservoir as well as being important sources of nutrition for resident and migratory populations of both birds and fish in the Bay of St. Malo.

## **CULTURAL INFLUENCES**

**Past Land Use and Archaeology:** The middle/late Bronze Age and late Iron Age occupation site on Les Minquiers is a rare prehistoric occupation site with considerable importance for the study of sea level changes during this period. The site has been severely eroded by the sea and by past quarrying, but a 1928 expedition found a preserved hearth, flint scrapers and piled bones of seals. It has been suggested that Les Minquiers may have supported a migratory camp for seal hunting in the prehistoric period. Little is known about the history of Les Minquiers during the early historic period, but the reef would have been used for fishing, vraicing and smuggling activities. The Court Rolls of Noirmont dating from 1615 and 1617 record the activity of fishermen on the reef. Quarrying was likely to have been carried out from at least medieval times. Many of the quarrymen cut their initials in the rocks and the oldest date found so far is 1792. The distinctive granite began to be cut in a far more systematic and intensive manner for the construction of Fort Regent, between 1806 and 1814. At this time the reef was excavated to such an extent that it was considered to be in danger of disappearing. The area provides a rich fishing ground and has been fished particularly for shellfish by both Jersey and French fishermen. They have been the subject of protracted territorial disputes between the two countries.

**Buildings and Landmarks:** It is believed that in 1748, when Jean Hamon was ship wrecked on Les Minquiers there were no habitations or shelters in existence. The earliest "huts" are thought to date from the second half of the eighteenth century and the response of local fishermen to the threat to the reef makes it clear that they used and valued Les Minquiers. By 1869 there were known to be 17 huts, and 19 in 1883. In the 1880s the huts on Les Minquiers were twice the number of those on Les Écréhous and the community was arranged into a hamlet flanking a single street. Although the buildings on Les Minquiers

have never been historically researched or archaeologically recorded, the variety of construction styles and building materials suggest a wide range of building dates. The low ceiling height, use of stone rather than brick, and central of the fire on the gable wall, suggest an eighteenth century date for some of the cottages making them rare examples of early Jersey vernacular architecture.

Unrest between Britain and France in the eighteenth and nineteenth centuries led to increased activity on Les Minquiers. The States "Impot" (Custom House), the "Hospital" or shipwrecked mariners depot, Flagstaff Hill and the carved figure of a Grenadier, recorded in 1928 on a rock on the south point of the Islet all date from this era of official interest in the reef. Another landmark on the reef is the south wall of a hut thought to date from the 1930-s. which is painted in black and white horizontal boards as a navigation aid to sailors.

**Current Use and Management:** The huts on La Maitresse Île are mainly privately owned and are much sought after as a leisure resource by people visiting by boat. There is, in addition, a helicopter landing pad on the east end of the islet, although this is infrequently used. The area continues to provide a rich fishing ground. Although the reef has been acknowledged as British, rights to fish certain areas are retained by the French. The dramatic location of Les Minquiers has been the inspiration for several books. Victor Hugo wrote about the reefs in *The Toilers of the Sea* and the Hammond Innes' thriller, *The Wreck of the Mary Deare*, is set on the reef.

#### **ESSENTIAL CHARACTER**

- an extensive rock plateau area off the south coast of Jersey, in the Parish of Grouville and forming the most southerly British European territory;
- the plateau extends for more than 100 km<sup>2</sup> at low tide, decreasing to a few emergent rocks at high tide. The largest isle is La Maitresse Île;
- formed of the distinctive foliated granodiorite which has yielded large quantities of stone for building on Jersey, most notably for the construction of Fort Regent;
- a sparse salt-tolerant vegetation, including tree mallow characterises La Maitresse Île;
- of Channel Island Importance for breeding seabirds and especially important for waders during passage;
- Le Plateau des Minquiers with the adjacent reef systems off the south-east coast of Jersey have great corporate importance, forming possibly the largest reef system in Europe;
- support a distinctive marine flora and fauna. The reef is considered to be vital for maintaining the diversity of the marine fauna of the Channel;
- likely to have formed part of a large prehistoric land mass, with evidence of a middle/late Bronze Age and late Iron age occupation site;
- distinctive settlement of huts and cottages which provide a rare example of early Jersey vernacular architecture;
- rich in legend and mythology and a source of literary inspiration.

## SUMMARY OF ENVIRONMENTAL FEATURES

CHARACTER TYPE	CHARACTER AREA
<b>H: Offshore Reefs and Islands</b>	<b>H2: Les Plateau des Minquiers</b>
<b>Igneous geology</b>	<p>The foliated granodiorite is characteristic. The rock of Les Minquiers is of good quality and could be quarried in large blocks and dressed to a fine finish.</p> <p>The rocks and reefs are important for breeding seabirds.</p>
<b>Soft materials and sediments</b>	<p>There is a minimal soil cover on La Maitresse Île.</p>
<b>Indigenous flora and fauna</b>	<p>The distinctive flora was altered by herbicide application. It is slowly recovering, dominated by salt tolerant species, adapted to the harsh conditions.</p>
<b>Extensive intertidal areas</b>	<p>The extensive rock plateau and reefs cover more than 100km<sup>2</sup> at low tide. It is suspected that the marine ecology is very rich and the intertidal areas are especially important for waders.</p> <p>The clean, temperate waters provide excellent fisheries and provide an important nursery area.</p>
<b>Archaeological remains</b>	<p>Important Bronze /Iron Age occupation site.</p>
<b>Vernacular building types</b>	<p>The stone huts and cottages forming a hamlet flanking a single street are a distinctive feature. They are an important early example of Jersey vernacular architecture.</p>
<b>Wilderness and Remoteness</b>	<p>The isolation, treacherous seas and vast expanses of rock uncovered at low tide creates a truly wild and remote area.</p>



## EVALUATION

**Integrity of Character:** Le Plateau des Minquiers comprises a vast area of more than 100km<sup>2</sup> at low tide. It is an extraordinary marine landscape and has played a prominent role in Jersey's history. The whole area is remarkable for the range of environmental features which are valued at the highest level. The Minquiers represent a unique resource which must have the highest level of protection.

### Key Environmental Capital

The entire area of Le Plateau des Minquiers represents an important part of Jersey's key environmental capital in terms of biodiversity, archaeology and environmental history. There is considerable scope for further research into all these aspects and the potential of the area remains, as yet, largely unknown.

The extensive area of Les Minquiers in association with the adjacent reef systems of Jersey's south-east coast together constitute a unique and extremely important ecological entity. Together they form one of the largest reef systems in Europe and in this respect are of regional importance on the Atlantic seaboard of Europe, particularly within the Gulf of St. Malo. They are considered to be worthy of designation as a Ramsar site, in recognition of their international importance as a wetland site.

### Threats

- A helicopter pad is located on the eastern end of La Maitresse Île and disturbance by humans is a major threat to the fragile environment and ecology of this small island.
- The relative inaccessibility and treacherous seas mean that human disturbance from trippers is less than that on Les Écréhous. Nevertheless there remains a serious threat of planned or accidental introductions of plant and animal species, damage from trampling, and disturbance to the seabird colonies etc.
- Further quarrying of the rock or excavation of sand and shingle banks would have a major effect on the integrity of the reef system.
- Watersports in the vicinity of the reef can not only cause physical damage to the reef system but also destroy the special qualities of wilderness and tranquillity.
- Modern facilities and inappropriate repairs/restoration of the vernacular buildings have altered the traditional character of the small hamlet on La Maitresse Île.
- The reef is virtually pollution-free. Any pollution, for example oil spills, would have a major effect on the marine ecology.

## MANAGEMENT PRIORITIES

The management priorities identified for all of Jersey's offshore reefs apply to Les Minquiers.

**There is an urgent need for special designation** to ensure protection and conservation of the ecological, archaeological and historic value of Le Plateau des Minquiers and to conserve its unique and special character. It is recommended that the reef is designated as a Ramsar site in accordance with the Convention of Wetlands of International Importance. The importance of the whole area (including the adjacent Grouville - St. Clement reef system) should be given greater recognition for example by possibly identifying the site as Jersey's **Marine National Park**.

## LEVELS OF PROTECTION AND CAPACITY TO ACCEPT CHANGE

The whole of the reefs and intertidal areas of Le Plateau des Minquiers are included within the Marine Protection Zone. It is recommended that they should have the highest level of protection with a presumption against all forms of development. Further protection and recognition of the importance of the area, for example by designation as a Marine Park is recommended.

**Capacity:** There is no capacity to accept any development, apart from sensitive repairs and restoration of the architectural resource. Capacity for change is limited to appropriate management to conserve and enhance environmental character. The priority is for research to build up data to provide a baseline for future monitoring.