

Sensitive species and associated habitat for management consideration

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### Background

There are numerous marine species in Jersey waters that are considered to be highly sensitive or of international importance. The well-known species of seagrass, maerl and kelp and their local importance is already detailed in the Ecosystem Services Assessment of marine habitats in Jerseys waters<sup>1</sup> and are therefore not included in this report. This document aims to highlight lesser documented species, the distribution of which are not well known, and highlight their local importance and identify their habitat associations to help target further research and management.

This report is structured in two halves, with the first section on sessile species (those that are immobile and typically attached to the seabed), and the second on mobile species (those that are free moving either on the seabed or in the water column). These two sections are further split into 'protected' and 'non-protected' species, which refers to whether each species is protected under the Jersey Wildlife Law (2021). Species of local importance or concern listed under the Jersey Wildlife Law (2021) identifies them as a conservation priority. This law aims to improve the conservation of biodiversity in relation to enhancing the population of any species listed under the law and enhancing their associated habitat. Species listed under the wildlife law should not be killed or removed, or in the case of nest areas, should not be disturbed. However, this is difficult to enforce or monitor in the marine environment, especially as the distribution of marine species is not fully understood.

### Protected Sessile species

### Corals

There are several coral species growing in Jersey waters. These include pink seafan (*Eunicella verrucosa*), dead man's finger (*Alcyclonium digitatum*), sunset cup coral (*Leptopsammia pruvoti*), devonshire cup coral (*Caryophyllia smithii*) and scarlet and gold star coral (*Balanophyllia regia*). Of these, the first three listed here are listed under the Jersey Wildlife Law (2021). Sea fans and dead man's fingers are what are referred to as 'soft corals', with a softer physiology than the cup corals which makes them more sensitive to abrasion. The cup corals are relatively small and form hard structures on the vertical rock faces or over hangs that mean they are unlikely to come into conflict with fishing gear. However, for the sunset cup coral in particular, as it only occurs densely in few known areas it should be considered in spatial management to protect the areas in which it is found. The scarlet and gold star coral is usually only found as solidary individuals and it is thought to be relatively rare in this region but not enough is known about this species for it to be included under the Wildlife Law (2021). The known locations and habitat associations of these four species is detailed below.

### Sea fan and dead man's fingers

During a black bream nest survey in May 2022, several species known to be of conservation importance or sensitive to abrasion pressure were identified on towed video footage. The below map shows the areas surveyed (yellow points) to the north of Jersey (Figure 1). The soft coral, dead man's fingers (*Alcyclonium digitatum*, Figure 3a), was observed in high abundance (1000's) along each 500 m transect. Pink sea fans (*Eunicella verrucosa*, Figure 3b), another species of soft coral, were also observed but only five were recorded across both 500 m tows in the North box (Figure 1). Four sea fans were recorded on the towed video in the Frouquie box to the south of Jersey (Figure 2).

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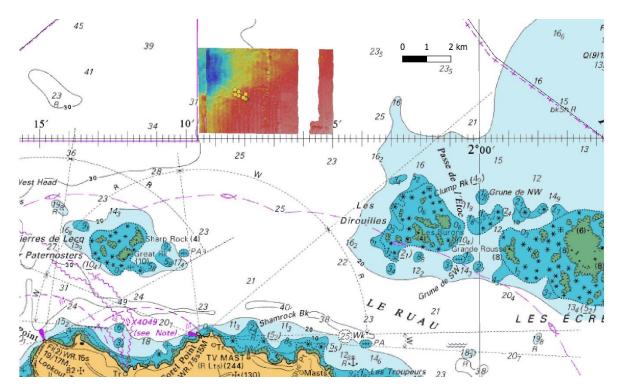


Figure 1. Benthic map of the north box generated from multibeam sonar surveys in relation to the north coast of Jersey with located bream nests overlain (yellow points).

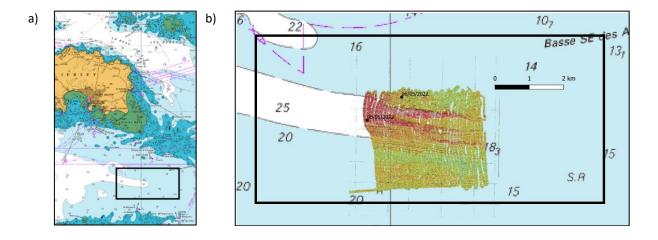


Figure 2. a) location of the Frouquie box to the southeast of Jersey and b) Benthic map within the Frouquie box (black outline) generated from multibeam sonar surveys. Yellow shows shallow areas, and red deep areas. Black points show the entry and exit points of the one towed video conducted in the Frouquie box.



Figure 3. Images of benthic sessile species, a) dead man's fingers (Alcyclonium digitatum, white structures, one in the foreground and multiple in the background) with horn wrack (Flustra foliacea, left foreground), finger sponge (Adreus fascicularis) and other sessile species present and b) pink seafan (Eunicella verrucosa).

Pink sea fans (*Eunicella verrucosa*) have been recorded from many other locations across Jersey's waters, primarily in association with reef features and wrecks below 15 m. This species is listed under the Wildlife Law (2021) in Jersey and is therefore a priority for conservation management. A Masters research project identified the location of many sea fans in addition to assessing their size and associated habitat<sup>2</sup>. Two areas of Jersey were surveyed, one to the south of Corbiere (SW of Jersey) and one at Les Sauvages reef (South of Jersey's territorial

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<sup>&</sup>lt;sup>2</sup> McIlwee, 2022. Identifying and predicting significant *Eunicella verrucosa* communities in Jersey through Citizen Science data gathering methodology. Masters Thesis. University of Exeter, Jersey International Centre of Advanced Studies. 80pp.

waters). Sea fans were found to be primarily associated with vertical walls, sloping rocks, wrecks and boulders. The sea fans recorded in the North box (Figure 1) site were on flat, cobble dominated seafloor which is not consistent with the habitat types sea fans have been recorded on in the south. Generally sea fans are associated with more stable substrates such as reefs and walls but the identification of sea fans on cobble substrate indicates they may be more wide spread than previously thought.

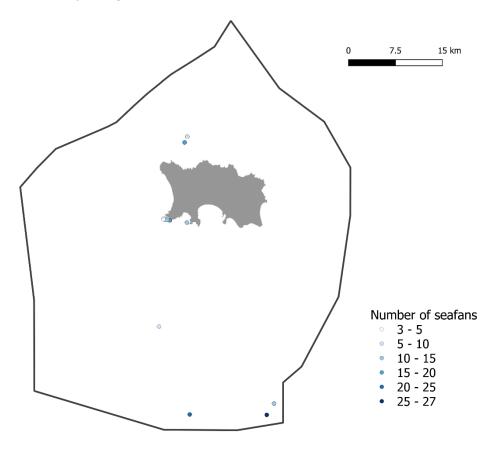


Figure 4. Survey points and number of sea fans recorded at each site (area and time surveyed are not standarised).

Further information on the location of sea fans is available through the NBN atlas, many records of which have been submitted through Seasearch surveys. These locations are primarily deeper water (>20 m) reef habitat with relatively strong current flow that is required by pink sea fans for suspension feeding.

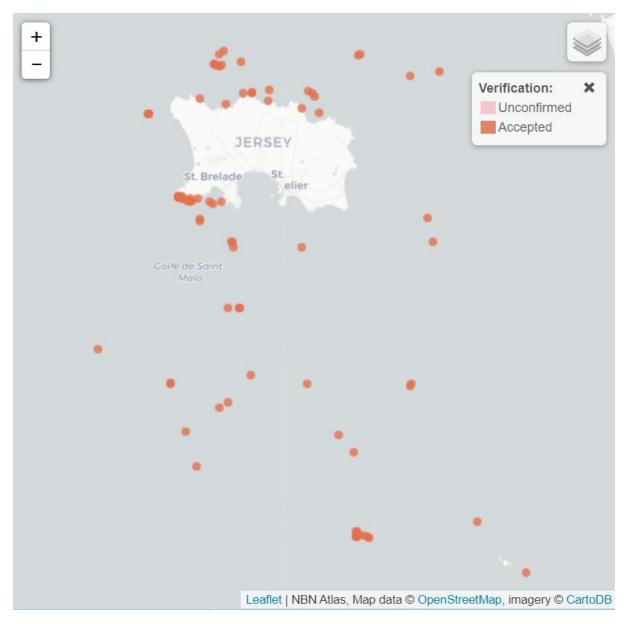


Figure 5. Pink seafan (Eunicella verrucosa) records submitted by Seasearch to the NBN atlas – data taken on the 03/08/2023. Number of records at each location and date of records are unknown.

Seafans are particularly vulnerable to damage from abrasion. On flat seafloor, they will be easily pulled off the floor by a passing dredge, and on wrecks and reef features, they can be knocked off by pots or stripped away by back line as the pots are pulled to the surface. Once dislodged from the substrate, it is not thought that seafans can reattach themselves. This is a concern for management in areas with dense seafan communities as they grow incredibly slowly and it may take decades for areas of seafans to recover following a disturbance event. With an adult size range of 25-50 cm in UK waters and a growth rate of 1 cm/year, it could take an individual up to 50 years to reach full size.

The only records on the distribution of dead man's fingers in Jersey come from dive surveys and the towed video footage mentioned above. Prior to the towed video survey in 2022 it was thought that dead man's fingers only occurred in low density colonies where it is present. The numbers seen on the towed video reached the 1000's per transect, but the habitat surveyed to the north (Figure 1) is typically outside the depth limits for recreational diving (>30 m) and is also

in an exposed area so it may be that the conditions needed for dead man's fingers to persist in high numbers is not usually observed by divers in Jersey.

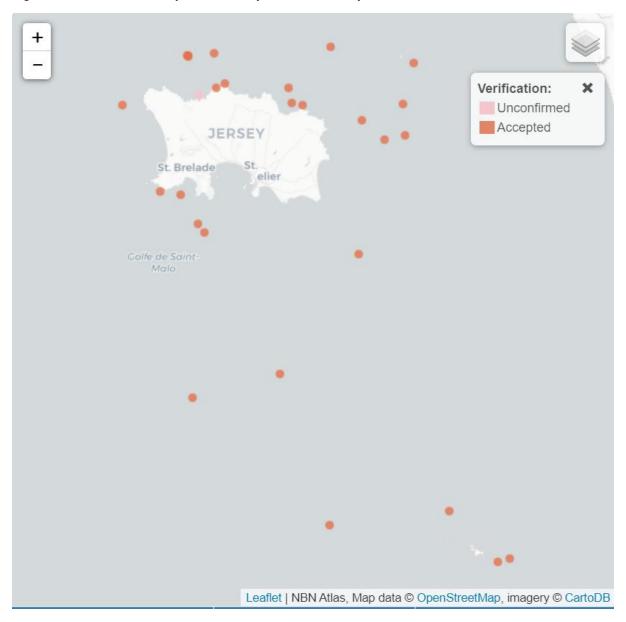


Figure 6. Dead man's finger (Alcyclonium digitatum) records submitted by Seasearch to the NBN atlas – data taken on the 03/08/2023. Number of records at each location and date of records are unknown.

Both sea fans and dead man's fingers create structure on the seafloor and contribute to marine biodiversity. Seafans in particular tend to be found in biodiversity hot spots, most likely due to the habitat type they associate with, such as rocky overhangs and boulder fields which are stable enough to allow communities of sessile species to establish. The sea fans recorded on less stable cobble habitat to the north of Jersey is unusual and needs further investigation to understand their distribution in this area.

#### Cupcorals

The sunset cup coral has only been found in a handful of locations in Jersey (Figure 7). This species is usually solitary but in Jersey, where it is present, it is normally found in large colonies (tens to hundreds of individuals), under rock overhangs in high current areas. The Devonshire cup coral is much more widespread (Figure 7) and is typically found as solitary individuals on

the faces of vertical rock or boulders in water deeper than 15 m, this species is of comparatively low conservation importance compared to the other corals mentioned in this section but is included for comparison of distribution compared to the sunset cup coral. The scarlet and gold star coral has even fewer records in Jersey waters than the sunset cup coral but is not listed under the Wildlife Law (2021) due to uncertainty around the occurrence of this species and also due to its more common occurrence in the other Channel Islands.



Figure 7. Left: Sunset cup coral (Leptopsammia pruvoti) and Middle: Devonshire cup coral (Caryophyllia smithii) and Right: Scarlet and gold star coral (Balanophyllia regia) records submitted by Seasearch to the NBN atlas – data taken on the 03/08/2023. Number of records at each location and date of records are unknown.

#### Protected bivalves

Two species of note that are protected under the Jersey Wildlife Law (2021) are the fan mussel (*Atrina fragilis*) and the five-shilling shell (*Mactra glauca*). Both are listed due to their local and regional scarcity. Fan mussel records are not available for Jersey on the NBN atlas but they were noted to have come up in scallop dredges up until the mid-1980s (Pers. Comm. Paul Chambers). Both are reported to live in fringe sediments, typically sandy or muddy gravel. The five-shilling shell lives in a very limited habitat range across the lower shore and subtidal in mobile coarse sediments and there are less than five known beds of five-shilling shell in Jersey.

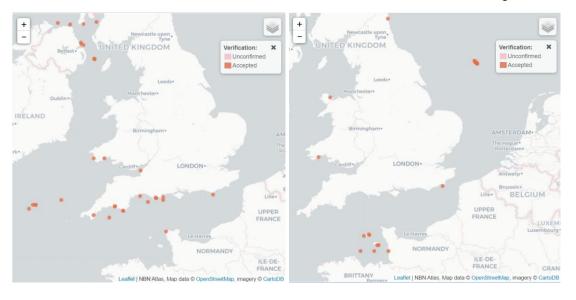


Figure 8. Left: Fan mussel (Atrina fragilis) and Right: five shilling shell (Mactra glauca) records submitted by Seasearch to the NBN atlas - data taken on the 03/08/2023. Number of records at each location and date of records are unknown.

### Non-Protected sessile species

The following species are not protected under the Jersey Wildlife Law (2021) but contribute to habitat-like communities that provide structure and shelter on the seafloor that promotes greater biodiversity.

### Potato crisp bryozoan

Potato crisp bryozoan (Pentapora foliacea), also known as ross coral, is commonly observed in deeper water (>15 m) reef habitat, boulders and stable cobbles. It is a colony of individuals that create a complex structure of wavy but inflexible 'sheets' that are brittle and orange in colour. It grows at a rate of 2 cm/year and is thought to have a maximum life span of 10 years. This bryozoan has been recorded as acting as a shelter for high densities of other fauna<sup>3</sup>. The distribution of this species is shown in (Figure 9) and was also recorded to the north of Jersey during the towed video surveys (Figure 1). This species association with reef habitat means it is unlikely to come into contact with mobile gear but may be subject to damage from pots.



Figure 9. Potato crisp bryozoan (Pentapora foliacea) records submitted by Seasearch to the NBN atlas - data taken on the 03/08/2023. Number of records at each location and date of records are unknown.

<sup>&</sup>lt;sup>3</sup> Hayward, P.J. & Ryland, J.S. 1979. British ascophoran bryozoans. London: Academic Press

#### Ross worm

Ross worm (*Sabellaria spinulosa*) is a tube building worm that creates densely aggregated tube structures on the seafloor (Figure 10a). The habitat that this species forms is an OSPAR priority habitat due to its role in supporting biodiversity and its sensitivity to physical disturbance. Ross worm was recorded as being prevalent to the north of the Dirouilles on the northeast coast of Jersey (Figure 10b) in the 1960's (Hommeril, 1967)<sup>4</sup> but have not been recorded since. Further exploration of the areas it was once present in is needed to confirm its existence in jersey waters.

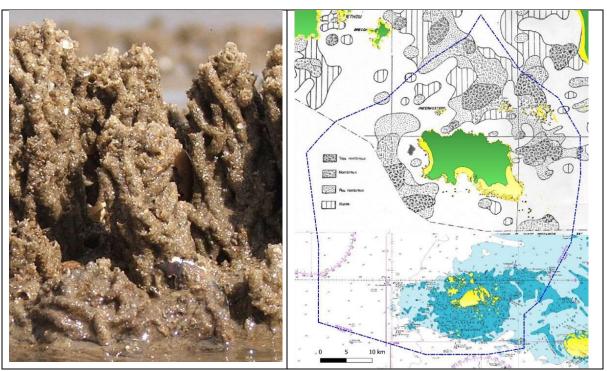


Figure 10. a) ross worm tubes on sediment in the intertidal - taken from OSPAR Threatened and/or Declining Species and Habitats Implementation Report, Habitat: Ross Worm Reefs, 2013. b) Distribution of ross worms taken from Hommeril, P., 1967, super imposed over a modern day admilarly chart. D ker shading indicates a greater number of ross worms.

#### Fan worm communities

During towed video surveys in 2018 an unusual community of fan worms were recorded (Figure 11). They are thought to be the peacock worm (*Sabella pavonina*) but samples are needed to confirm this. Peacock worms typically attach themselves to hard substrates but, as seen in the image, they are on a sandy substrate. It may be that the sediment is compact enough for this species to anchor itself, or, more likely, there may be a layer of hard substrate or stable cobbles underneath a thin layer of sand for the worms to attach themselves to. One other option is that this is a different species of fan worm to the peacock worm that is able to live in sediments rather than on hard substrates. It is unusual that they were observed to be growing in a 'bouquet' like fashion, with many individual tube worms protruding close together in the same spot. If there is hard substrate underneath the surface layer of sediment, it may be that the

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<sup>&</sup>lt;sup>4</sup> Hommeril, P., 1967. *Etude de géologie marine concernant le littoral bas-Normand et la zone prélittoral de l'archipel Anglo-Normand*. Unpublished PhD thesis. University of Caen.

sediment layer is thinner in some areas and this is where the fan worms are able to attach most easily. Alternatively, the presence of one of two worms may create stability in the sediment that enables others to settle there.

A study of Lyme Bay MPA assessed the recovery of sedimentary and cobble habitats in between reef features following the removal of bottom-towed fishing gear. They found that sessile species, such as pink sea fan and dead man's fingers, began growing on sediment, indicating the presence of hard substrate underneath and that the sediment was in fact only a veneer<sup>5</sup>. The reason for the lack of these species prior to the protection was due to the abrasion of mobile gear preventing the growth of these sensitive and slow growing species. The area in which the fan worm communities in Jersey is currently open to mobile gear, and their distribution at the time of surveying was patchy. It may be that this species is fast growing enough to establish a community in between dredging events. However, if this is the case there are likely to be other, slower growing, species that would be present in this area if the dredging pressure was removed. It is recommended that this habitat be further researched, preferably with precautionary protection measures in place, to assess the substrate type and for any other reef associated species.



Figure 11. 'Bouquets' of peacock worm protruding from the seabed.

#### Clam beds

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Locations of dog cockle (*Glycymeris glycymeris*) and praire (*Venus verrucosa*) recorded during various surveys can be used as indicators of clam bed areas (Figure 12). These two species are sought by French fishers, in particular praire, using box dredges which can penetrate up to 30

<sup>&</sup>lt;sup>5</sup> Sheehan EV, SL Cousens, SJ Nancollas, C Stauss, J Royle, MJ Attrill (2013) Drawing lines at the sand: Evidence for functional vs. visual reef boundaries in temperate Marine Protected Areas. Marine pollution bulletin 76: 194-202. doi:10.1016/j.marpolbul.2013.09.004

cm into the sediment in search of the burrowing bivalves. This is more damaging than trawling or scallop dredging. Dense areas of bivalves help to maintain water and sediment quality as the bivalves are filter feeders. They are also an important source of food for other marine species. Praire may also be an indicator species as it is associated with seagrass, maerl and sandmason worms. Dog cockles and surf clams often prefer mobile sand areas, but high abundance of dog cockles has also been noted in maerl areas.



Figure 12. Left: Dog cockle (Glycymeris glycymeris) and Right: Praire (Venus verrucosa) records taken from the NBN atlas – data taken on the 03/08/2023. Number of records at each location and date of records are unknown.

### Sponges

There are numerous sponge species in Jersey waters, with most species being found below 20 m where light penetration, and therefore algal cover, is low. Sponges tend to be associated with reef and boulder habitats as the majority attach to hard substrates, some forming massive structures on rock faces and in between fissures, some encrusting species cover large surfaces and many others form small colonies or branches on the seafloor that create structure, promoting biodiversity. Elephant hide sponge (*Pachymatisma johnstonia*) is one of the larger species of sponge, forming massive smooth grey mounds on rock faces and boulders. Staghorn sponge (*Axinella dissimilis*) is smaller branching sponge that is found on similar habitat to elephant hide sponge and adds to the structure on the seafloor. Recorded locations of these two species is shown in Figure 13. As most sponges are associated with reef habitat, they are not at risk from dredging or trawling pressure. However, sponges are not very robust and can be easily damaged by pots and pot lines. Golfball sponge (*Tethya citrina*) is one species of sponge that can be found in shallower habitats and on cobble habitat and was also observed in the northern bream box (see Figure 1).

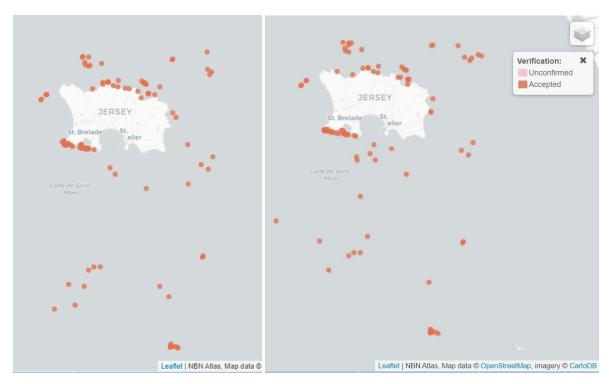


Figure 13. Left: Elephant hide sponge (Pachymatisma johnstonia) and Right: Staghorn sponge (Axinella dissimilis) records taken from the NBN atlas – data taken on the 03/08/2023. Number of records at each location and date of records are unknown.

### Mobile species

In addition to the various sessile benthic species included in the first section of this report, there are also mobile species that are important in the local marine ecosystem that may serve as an indicator of environmental health. Most of these species are not directly impacted by most human activities, but any changes to seabed health or their prey species may have an undesirable effect on their abundance and distribution.

### Protected mobile species

#### Marine mammals

Jersey has a large bottlenose dolphin (*Tursiops truncatus*) population that are resident all year round. This charismatic species is enjoyed by local residents and boat owners, with many rib tour companies and their passengers benefiting from the often playful individuals of bottlenose dolphin that can be seen during tours at sea. Other species include porpoise (*Phocoena phocoena*), common dolphin (*Delphinus delphis*), risso's dolphin (*Grampus griseus*), common seal (*Phoca vitulina*) and grey seal (*Halichoerus grypus*). Rarer visitors to Jersey waters include marine mammal species such as pilot, minke and humpback whale. All marine mammals are protected in Jersey waters under the Jersey Wildlife Law (2021).

Data is collected on bottlenose dolphin, common dolphin, risso's dolphin and porpoises using CPODs (cetacean hydrophones) that record the frequencies of the echolocation clicks made by these species (Figure 14). Each species echolocates at a different frequency, so it is possible to separate out some species during analysis. However, it is difficult to accurately separate bottlenose dolphin recordings from common dolphins and so these are usually grouped as 'dolphins' when investigating the data. The majority of frequencies recorded come from

'dolphins' and these are greatest at the Paternosters (NW Jersey) and the Coq Beacon (east of Minquiers).

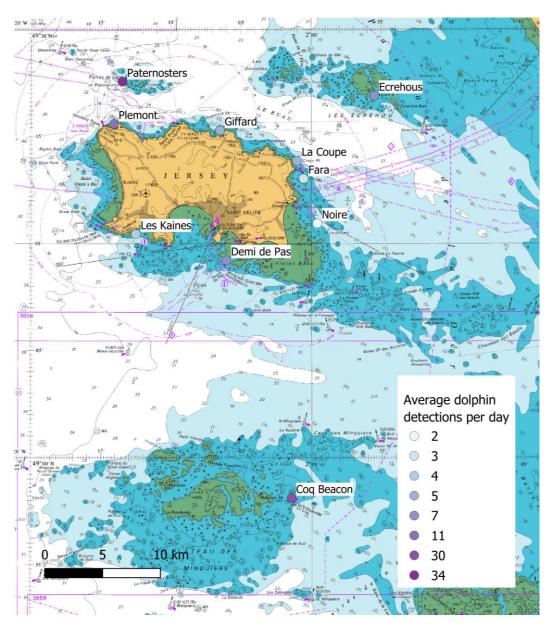


Figure 14. Location of CPODs in Jersey's territorial waters and the average detections of bottlenose and common dolphins per day over the deployment period of each CPOD (deployment periods vary per location). Darker purple indicates a greater number of average detections per day.

The CPOD data, in conjunction with other information such as the dolphin sighting app data and species behaviour, suggest that much of the dolphin activity to the NW of the island is from common dolphins whereas in most other areas it is bottlenoses that dominate (Figure 15). Common dolphins are less frequently sighted in Jersey waters as they are associated with deeper waters to the north of Jersey and into the English Channel. CPOD records show high levels of dolphin activity during the spring months at the Paternosters (probably common dolphins) reef and Les Minquiers (bottlenose dolphins). These may represent seasonal breeding aggregations suggesting that these reefs play an important role in the lifecycle of these species.

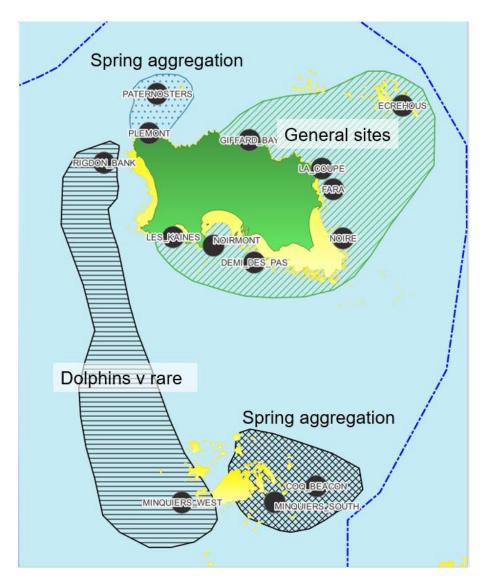


Figure 15. Common and bottlenose dolphin theorised distributions and spring aggregations based on CPOD data. The spring aggregations are believe to be common dolphins in the northwest (Paternosters and Plemont) and bottlenose dolphins in the southeast (Minquiers south and Coq Beacon).

Porpoises were thought to be uncommon in Jersey waters due to a paucity of sightings but data from CPODs has revealed that they are more prevalent than previously thought. CPOD data from the north and west coast of Jersey has shown porpoise activity to be greatest in the winter months (mid-December to early March) where encounters can last for days or even weeks (Figure 16). They were found to be more active at night and it is thought that they are coming into Jersey waters to feed. There are very few porpoise encounters for the rest of the year, with sporadic recordings across Jersey's waters for short periods of time (seconds).

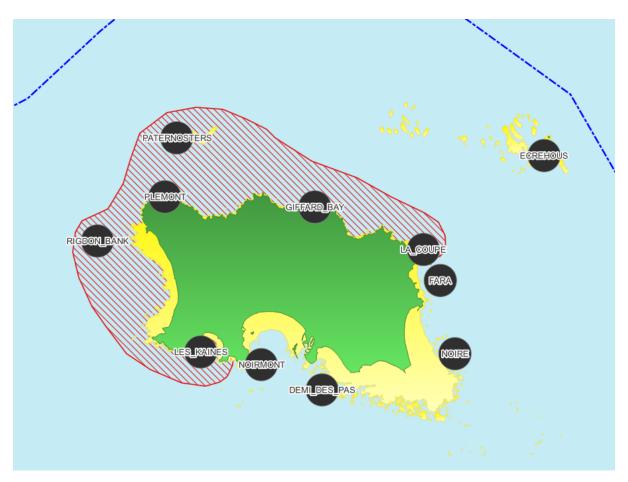


Figure 16. Winter (December-March) Porpoise encounters on CPODs in the west and North of Jersey from Les Kaines in the SW to La Coupe in the NE. The red hatched area shows the predicted distribution of Porpoise during this period.

Marine mammals such as those mentioned above tend to be at the top of the food chain in this region. They are therefore excellent indicators of marine health as, in order to support large populations of apex predators, there needs to be a sufficient abundance of prey species.

#### Sharks (protected and non-protected)

There are a range of shark species in Jersey waters, some of which may be considered as apex predators such as porbeagle and tope (both of which are pelagic and protected under the wildlife law in addition to being listed as critically endangered on the IUCN red list). There are also houndsharks and catsharks (starry smoothhound, lesser spotted catshark and bullhuss being the most common) that are typically benthic foraging or scavenging species that are not protected under the wildlife law. The reason for pelagic sharks being protected and not houndsharks and catsharks is to do with their age at maturity. The pelagic sharks, for the most part, are longer lived than the benthic species, meaning they are far more sensitive to fishing pressure and can take a long time to recover from mis-management. For example, catsharks mature between 6 and 8 years of age whereas tope mature between 13 and 15 years. However, both the starry smoothhound and bull huss are listed as near threatened on the IUCN red list and are therefore still a concern for management.

Pelagic species of shark are not associated with any one type of benthic habitat and are typically transitory, spending time outside of Jersey's waters, which makes it difficult to determine their distribution. However, they will be dependent on a healthy functioning ecosystem to provide them with sufficient prey, some of which will be benthic, such as crab and

flatfish, or have life cycle stages that rely on benthic habitats. The benthic species of shark will be heavily dependant on benthic habitats and the prey species associated with them but may also benefit from areas that are dredged due to the availability of food to scavenge. Additionally, both catshark and bull huss lay their eggs on benthic habitats and the young of all three species will need to find shelter on the seabed to avoid predation in their juvenile stages.

#### Tuna

Since 2016 Atlantic bluefin tuna (*Thunnus thynnus*) have started to reappear in Jersey waters during their annual migration and are listed under the Wildlife Law (2021). It is thought that they are exploiting an abundance of bait fish, the extent and species of which is currently unknown. They are typically in Jersey waters from August to November, peaking in September. Atlantic bluefin tuna are a top pelagic predator and highly sought after species for both commercial and recreational fisheries which have historically been overfished. A research programme is underway in Jersey to further understand their local movements and life history. Atlantic bluefin tuna are not directly reliant on any benthic habitat and therefore spatial management is not appropriate. However, understanding their prey and habitat associations of their prey is an important step in understanding how to manage this species.

#### Sunfish

Sunfish (*Mola mola*) are a yearly summer visitor to Jersey that appear in relatively low numbers in search of jellyfish. They typically only appear in the summer months when jellyfish numbers are highest. They are listed under the Wildlife Law (2021) and as vulnerable on the IUCN red list. Not much is known about their longevity or their ecological significance, but due to their declining numbers they should be considered in management. Sunfish are a pelagic species that eats pelagic prey and therefore is unlikely to benefit from management of benthic habitats. The main threat to this species would be entanglement in nets but as this species is nomadic and follows currents, spatial management is unlikely to benefit the sunfish. It has therefore been protected through the Wildlife Law (2021) to prevent the targeted catch and sale of this species.

### Seahorses

Seahorses are highly dependent on benthic habitats and require hard structures on the seafloor to use as shelter from predators and ocean currents. Two species have been recorded in Jersey, the long-snouted and short-snouted seahorses. Their distribution is not well known and their presence in Jersey waters is known due to juveniles occasionally appearing in select bays (e.g. Bouley Bay), potentially relating to recent spawning events and currents pushing young individuals into shallow water. No records have been submitted to the NBN for either species of seahorse. In the UK, species of seahorse are typically associated with seagrass habitat, but they have yet to be recorded on seagrass in Jersey. It may be that the high currents associated with Jersey's intertidal habitats, and therefore seagrasses, is too strong for seahorses to shelter within them. Adults of this species have occasionally been reported to come up in lobster pots and it is hypothesised that they favour hard structures on the seafloor that provide them with greater shelter from prevailing currents.

#### Seabirds

All seabirds in Jersey are protected under the Jersey Wildlife Law (2021) and must be managed in line with international agreements. It is also an offence to disturb seabirds while they are resting or rafting. Spatial management of seabirds typically focusses on their feeding grounds and nesting areas. While seabirds won't be associated with specific subtidal habitats, many will rely on sandeels which are strongly associated with subtidal gravels and mobile sands. The

intertidal will also be heavily used by wading and migratory birds, such as brent geese feeding on intertidal seagrass habitat.

### Non-protected mobile species

Most of the mobile species that are sensitive to disturbance or that serve as important indicators in the marine environment are already listed under the Wildlife Law. Also, there are many mobile species of importance that are already under management through fisheries regulations, such as the sandeel which is an important prey species for many others, and are therefore not included in this report. However, there is one further species of note worth mentioning here.

### Common stingray

The common stingray (*Dasyatis pastinaca*) is the only species of stingray found in Jersey waters and is listed as vulnerable on the IUCN red list. This species is subtidal but will move into the intertidal zone with the incoming tide to forage for species such as green shore crab. Common stingray is a carnivorous predator and will play an important role in local food webs. They are not a commercially targeted species locally but in other regions their wings are sold for meat and oil and it is thought that their population is decreasing globally.

#### Conclusion

This report has summarised some of the key marine species in Jersey waters that may need further consideration in marine management in order to support a thriving marine ecosystem. Improvements in benthic monitoring to identify the coverage of these habitat forming species and distribution of sensitive and/or internationally important species will allow for more targeted management in the future. However, this report is not a comprehensive list of all species living in Jersey's waters and there may be other species whose status or distribution is currently unknown, or changing due to climate change, that will need consideration in future revisions of this report.

### Appendix A

A list of the marine species designated under the Jersey Wildlife Law (2021).

Common name	Species name	Specific provisions conferring protection*
Allis shad	Alosa alosa	Articles 14, 15 and 20
Dolphins (all species)	Delphinidae	
Fan mussel	Atrina fragilis	
Five-shilling shell	Mactra glauca	Articles 14 and 15
Lumpsucker	Cyclopterus lumpus	
Pink sea fan	Eunicella verrucose	

Porpoises (all species)	Cetacea	
Seahorse, long-snouted	Hippocampus guttulatus	
Seahorse, short-snouted	Hippocampus hippocampus	
Seals (all species)	Pennipedia	
Sharks, pelagic (all species except houndsharks and catsharks)	Selachimorpha (except Triakidae and Scyliorhinidae)	
Sturgeon	Acipenser sturio	
Sunfish	Mola mola	Articles 7, 14, 15, 19 and 20
Sunset cup-coral	Leptopsammia pruvoti	
Twaite shad	Allosa fallax	Articles 7, 14, 15, 19 and 20
Tuna, Atlantic Bluefin	Thunnus thynnus	
Turtle, marine (all species)	Chelonidae and Dermochelyidae	
Whales (all species)	Cetacea	

# Appendix B

A list of seabird species designated under the Jersey Wildlife Law (2021).

Common name	Species name
Martin, sand	Riparia riparia
Puffin, Atlantic	Fratercula arctica
Razorbill	Alca torda
Shearwater, Manx	Puffinus puffinus
Storm petrel, European	Hydrobates pelagicus

# Appendix C

A list of the seabird species with protected breeding and nesting sites under the Jersey Wildlife Law (2021).

Common name	Species name
Cormorant, great	Phalacrocorax carbo
Egret, little	Egretta garzetta
Martin, sand	Riparia riparia
Puffin, Atlantic	Fratercula arctica
Razorbill	Alca sorda
Shag, European	Phalacrocorax aristotelis
Shearwater, Manx	Puffinus puffinus
Storm petrel, European	Hydrobates pelagicus
Tern, common	Sterna hirundo
Tern, little	Sternula albifrons
Tern, roseate	Sterna dougallii
Tern, Sandwich	Sterna Sandvicensis