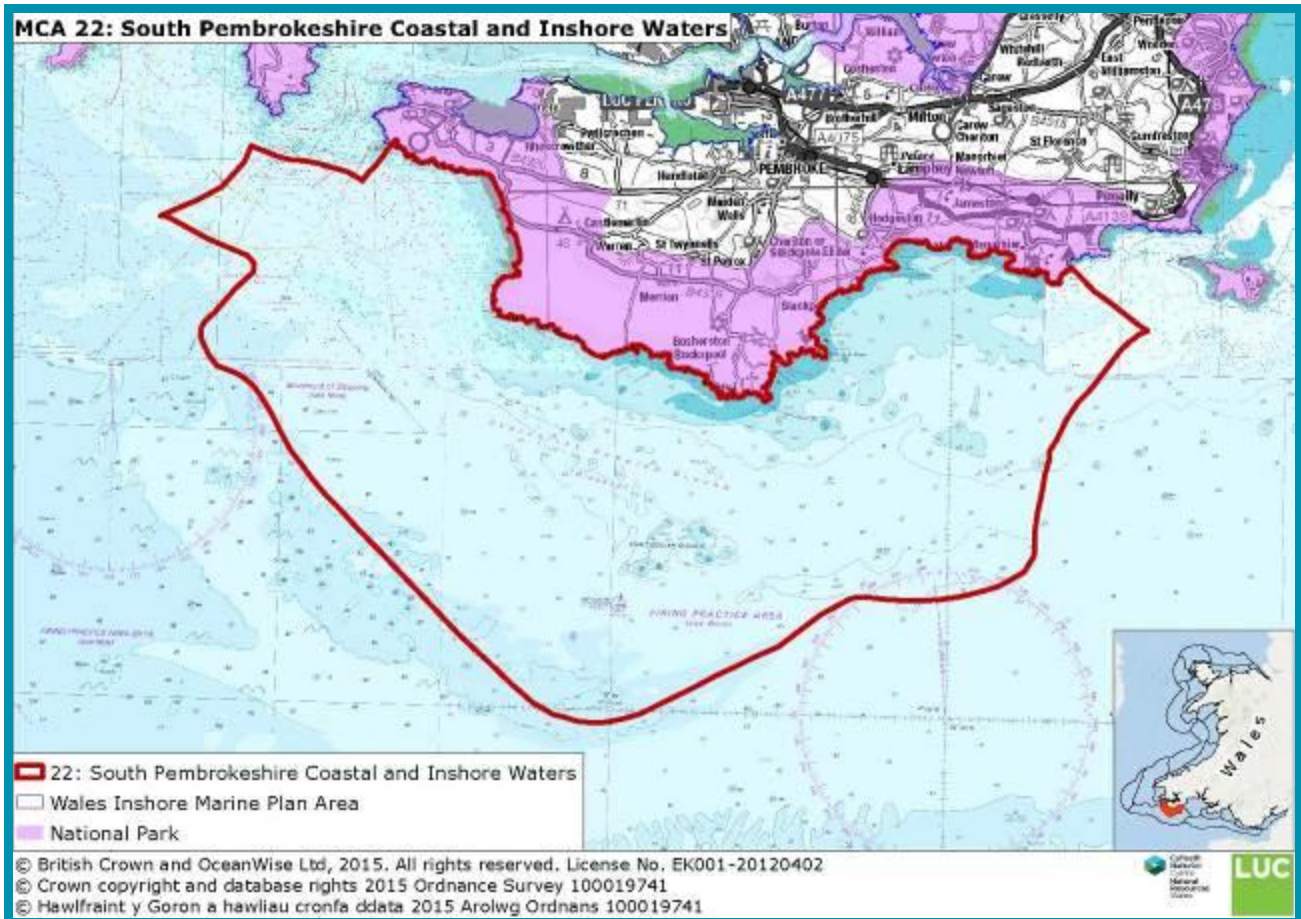




**SOUTH PEMBROKESHIRE COASTAL
& INSHORE WATERS**



Location and boundaries

This Marine Character Area (MCA) comprises the coastal and inshore waters hugging the south Pembrokeshire coast. It stretches from Old Castle Head in the east to the southern entrance to Milford Haven in the west.

- Outer MCA boundaries are informed by a combination of sediment geology and bathymetry.
- The waters includes areas of rocky reef, shoals and sand banks creating areas of varied depth and water patterns, including Saint Gowan Shoals and Turbot Bank.
- It includes a large proportion of the Castlemartin and Marnorbier Military Practice Areas.
- It includes the marine areas of Pembrokeshire local Seascape Character Areas 34: Freshwater West, 35: Castlemartin Coastal Waters, 36: Stackpole Coastal Waters, and 37: Freshwater East and Manorbier.
- It also includes the eastern part of local Seascape Character Area 29: Southern Inshore Waters

Key Characteristics

Key Characteristics
Diverse, rugged coast forming the southern edge of Pembrokeshire Coast National Park , with rocky sections, steep cliffs, arches and stacks interspersed with small coves, scalloped bays and sandy beaches.
Large area of sea, mainly 30-60m deep on gravelly sand bed with shallower waters over sand on St Gowan Shoals to east (10-30m depth)
Internationally important and diverse coastline with rocky outcrops, deep red sandstone, white limestone cliffs (designated SAC) and wave cut platforms as well as numerous sandy coves and large sand dune systems.
Includes areas within the Limestone Coast of South West Wales SAC , designated for rare and scarce maritime plants and Pembrokeshire Marine SAC , which recognises the area's varied marine habitats and rich marine life.
Generally low wave stress except off St Govan's Head which has the potential for steep seas, large waves and strong dangerous currents with a wild character . Shallow sometimes treacherous waters en-route to Millford Haven at Turbot Bank.
Manorbier Castle is a strong coastal landmark with associated traditional settlement dating from the 12 th century, designated as a Conservation Area.
Other rich archaeological evidence for a long history of human occupation, such as ancient relics preserved beneath Stackpool Warren and coastal promontory forts.
Several wrecks scattered across the shallow waters offshore from Linney Head and on the approach to Millford Haven.
Offshore waters are used by ferries, commercial shipping and fishing boats .
MOD practice ranges strongly influence the MCA with large areas restricted at Manorbier and Castlemartin, associated with several wartime aircraft losses.
Millford Haven Harbour limits extend out into the west of the MCA.
Popular with walkers using the Pembrokeshire Coast Path and network of footpaths with good access to beaches. The area is also popular with climbers and kayakers.
Wide, unspoilt views out to sea and along the coastline from headlands and cliff tops, as well as from sections of the Pembrokeshire Coast Path, including views to Caldey Island, as well as Lundy Island and the North Devon coast.
Very tranquil, remote and often wild coastline when the firing ranges are not operating. Long stretches of coastline have little or no settlement .
Offshore open sea area with simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure .

Natural Influences

This Marine Character Area (MCA) comprises the coastal and inshore waters hugging the southern coastline of Pembrokeshire Coast National Park. These coincide with the coastline between Whitedole Bay on the Angle peninsula to the western extent of Skrinkle Haven, just east of Manorbier. The coastline is defined by distinctive red sandstone cliffs and rocky inaccessible shores in the west, broken by sandy bays at Freshwater West and Frainslake Sands – both of which are backed by extensive dune systems. Low limestone cliffs continue round to the east taking in Linney Head, St Govan's Head, and Stackpole Head. The eastern-most section of the coastline then displays the same band of softer sloping red sandstone cliffs as is present in the west. Here the cliffs are broken frequently by small sandy bays, the largest being the wide arched bay of Freshwater East. The entire coastline backing the MCA is defined as Heritage Coast.



Limestone and red sandstone cliffs along the Stackpole coastline

Offshore bedrock geology is relatively simple, encompassing mainly mudstone and sandstone, apart from two thin bands of slate bedrock that extend offshore as a continuation of onshore geology in an east-west direction. Holocene marine sediments of sand and gravel help define the character of this MCA, also delineating its southern boundary. The sea floor retains traces of the palaeovalleys created by the rivers exiting to the sea at Broad Haven (now the enclosed water at Bosherton and Stackpole National Nature Reserve). A larger, former channel of the Severn is also along the southern boundary of the MCA. Intertidal peats and submerged forest deposits recorded at Lydstep, Manorbier and Freshwater West, also provide evidence for previous (now submerged) ancient landscapes.

The waters are consistently shallow along the coastline. This only varies at Old Castle Head where depth increases, and at Saddle Head where a sand bar extends areas of shallow water slightly further offshore. As the seabed shelves south the bathymetry gradually increases – reaching a maximum depth of approximately 50 metres along the MCA's outer edge. Shallow banks are present at Turbot Bank (marked by a carinal buoy),

St Gowan Shoals and to the east of the MCA. Sand banks combine with headlands to create patches of rough sea in fresh wind, especially when the tide is weather-going.

The south coast experiences moderate to high wave energy along the shoreline at headlands and between Sheep Island and Freshwater West. High tidal flows rush past the frequent headlands and over submerged banks creating rougher and turbulent waters. Races are experienced over Turbot Bank, St Gowan Shoals, Crow Sound, Bullslaughter Bay, and off Trewent Point. The area is subject to swell from the south-west, north-east, tidal streams with a tidal range of approximately seven metres.

The majority of this MCA is designated as part of the Pembrokeshire Marine SAC, European protected for its wide variety of marine habitats and wildlife communities. Of particular interest are the submerged and partially submerged sea caves along the Castlemartin coast, limestone reefs, and the intertidal mudflats and sandflats in the embayments along the coast. The Limestone Coast of South Wales SAC covers the area from Freshwater West to Stackpole Quay, designated for its vegetated sea cliffs and fixed coastal dunes with herbaceous vegetation. Broomhill, Browslade, Linney and Stackpole Burrows support a rich variety of 'lime-loving' grassland species. Freshwater East Local Nature Reserve and Stackpole National Nature Reserve cover these dune systems and the neighbouring freshwater lakes. There are also several SSSI designations along the coast including Castlemartin Range and Freshwater East Cliffs to Skrinkle Haven – collectively important for their specialised intertidal rock communities, large concentration of breeding seabirds, maritime cliff communities and rare plants. The Pembrokeshire cliffs are designated by the RSPB as an Important Bird Area, supporting valued populations of chough and peregrine falcon.

Cultural/social influences

This part of the South Pembrokeshire Coast is historically important as identified by the numerous designations. Of particular interest is Stackpole Warren and Manorbier, both of which are Landscapes of Special Historic Interest, containing evidence for ancient settlement. Stackpole Warren is covered by calcareous wind-blown sands, preserving a buried archaeological landscape beneath with evidence of diverse land use and ritual activities from the Mesolithic to the Iron Age/Romano-British periods. The historic Conservation Area of Manorbier, with its 12th century castle, has strong cultural associations as the home of Gerald of Wales - archdeacon of Brecon and a chronicler of his times. At Manorbier the area's extensive retained Medieval open strip field system and Mesolithic coastal sites are also of importance. Greenala Point promontory fort and the presence of other prehistoric monuments suggest the antiquity of The Ridgeway, north of Manorbier. St Govan's Chapel is a tiny single chambered building built in the 13th century, strongly associated with the region and a popular visitor destination located on St. Govan's Head.

Castlemartin and Manorbier military training areas and ranges strongly influence the character and sounds associated with the MCA's coast and waters. Castlemartin is the only UK Army range where armoured units practice direct-fire live gunnery exercises, with both on-land impact areas and a large offshore safety area – coastal and marine access is restricted during live firing. Manorbier Airfield, on top of Old Castle Head, played an important role as a RAF Airfield in the World War II. Today it is used by the military for helicopter flying practice.

Both Castlemartin and Manorbier played a vital role in the preparation and run up to D-Day, with several shore to sea and sea to shore practice operations taking place. The area also saw the use of several remotely controlled Tiger Moths or Queen Bees as gunnery target practice during WWII. Freshwater West witnessed a tragedy in 1943 when two landing craft full of troops and a small lifeboat sunk with a substantial loss of life.

Causalities of aircraft bombing also lie on the sea floor, several boats including *Gratie Gods* and *Meg Merrilies* downed by aircraft with others torpedoed by German submarines.

These waters contain the convergence of the shipping lanes heading for Milford Haven and those continuing westward. On the reef habitats there are several large upstanding and unidentified steel wrecks, likely to be war-time losses. Other general patterns in reported shipping losses define a traditional sailing route inside the St Govan's Shoal, hugging the coast to pass inside the Crow's rock, or passing to the south of St Govan's Shoal and the former location of a lightship. Freshwater Bay and Barafundle Bay traditionally provide sheltered anchorages for vessels passing through these waters.

A disused explosive dumping ground is located approximately four miles offshore in the centre of the MCA, and a former spoil dumping ground outside the Row's Rocks is located at entrance to Milford Haven.



One of the many popular sandy beaches found along this MCA's coastline.

The area provides rich waters for a wide range of fish species, in turn attracting commercial and recreational fishing activity. This comprises of set nets, light otter trawling and commercial rod and line fishing across the whole MCA, with the use of drift lines in the outer most section. The majority of the rocky coastal waters are also used for whelk, lobster and crab potting. Hand gathering of periwinkles and mussels takes place to the east at Barafundle Bay and along the shoreline at Manorbier.

The holiday settlement of Freshwater East became popular in the 19th century with the growth of the naval docks at Milford Haven and Pembroke Dock (MCA 21). Visitors were attracted to the area for its accessible beaches at Freshwater East and Manorbier. Today these areas are still popular with visitors including recreational sea users who kayak, surf and windsurf within the bays. Motor cruising and dive boats depart from Freshwater East to explore the varied coastline and rich marine environment. Recreational sailing is a further popular activity, although due to the MOD restrictions there are no anchorages along this part of the south coast. On land, the Ridgeway Route footpath and Pembrokeshire Coast Path are very popular with walkers who make the most of the Puffin

bus which operates in this area. Climbers are also attracted to the rocky and challenging sea cliffs.

The Port of Milford Haven's Harbour Limits extend into the north-west section of this MCA, where high volumes of traffic make use of the designated shipping channels.

Aesthetic and perceptual qualities



'Proud Giltar' from the beach at Lydstep looking towards Giltar Point with Caldey Island in the distance by John Brett, 1879 (© Crown Estate, 2013).

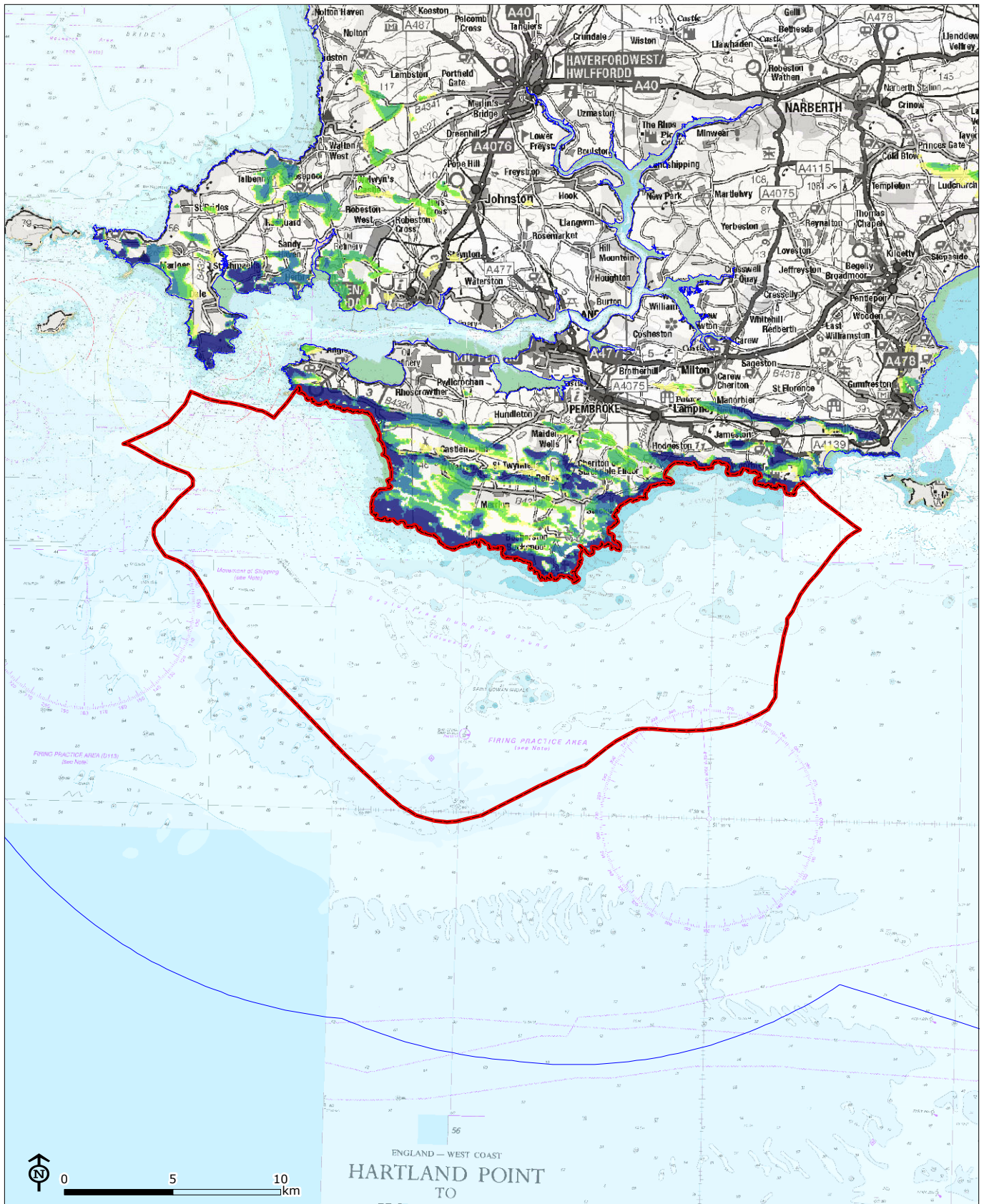
Views from the sea and from headlands along this predominately unsettled coastline are key to how this area is experienced, with red sandstone cliffs and white limestone cliffs creating areas of distinct character and a dramatic backdrop. The prominent local landmarks of Manorbier Castle and Well Chapel are located on these low cliffs, forming historical features when viewed from the sea. The headlands of St Govan's Head, Stackpole Head and Old Castle Head act as visual markers for sea users, usually as places to be avoided due to the difficult sea conditions they create. Wide uninterrupted views can be gained out to sea and along the coast with important views to and from Caldey Island (MCA 24), including views to Lundy Island and the North Devon coast via the Bristol Channel (MCA 28). These include distant glimpses of the hills of Exmoor National Park and the cliffs of the North Devon AONB.

Feelings of tranquillity and remoteness are strong away from the coastal car parks and beaches and when the firing ranges are not in use. The MCA can become very exposed on headlands, including at Castle Head where the full force of westerlies are felt. Rough seas are also experienced offshore at Turbot Bank and over St Gowan Shoals, creating a sense of danger, foreboding and being at the hands of nature. The open sea forming the transitional border with MCA 23 creates a simple, consistent and unified marine character at a vast scale, evoking a significant sense of openness, remoteness and exposure.

The Visual Resource Maps (VRM) that follow provide a more detailed spatial representation of the visibility of this MCA from the surrounding land in Wales. Please refer to the technical report for an explanation of how these maps were generated and how they should be interpreted.

The first map shows land with views to this MCA, the darker shading indicating land where from which more of this MCA is visible.

The second map shows sea visible from land, the warmer colours being areas of sea that are visible from more places on land. This comes from a national assessment of Wales so the results do not relate specifically to this MCA, whose boundary is overlaid for location only. The four individual versions show how the results vary depending on how far inland hypothetical viewers are located.

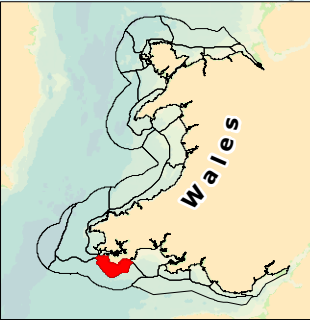


ENGLAND — WEST COAST
HARTLAND POINT
 TO

- 22: South Pembrokeshire Coastal and Inshore Waters
- Wales Inshore Marine Plan Area

Land with sea views (Percentile)

- < 20 (Lowest)
- 21 - 40
- 41 - 60
- 61 - 80
- 81 - 100 (Highest)



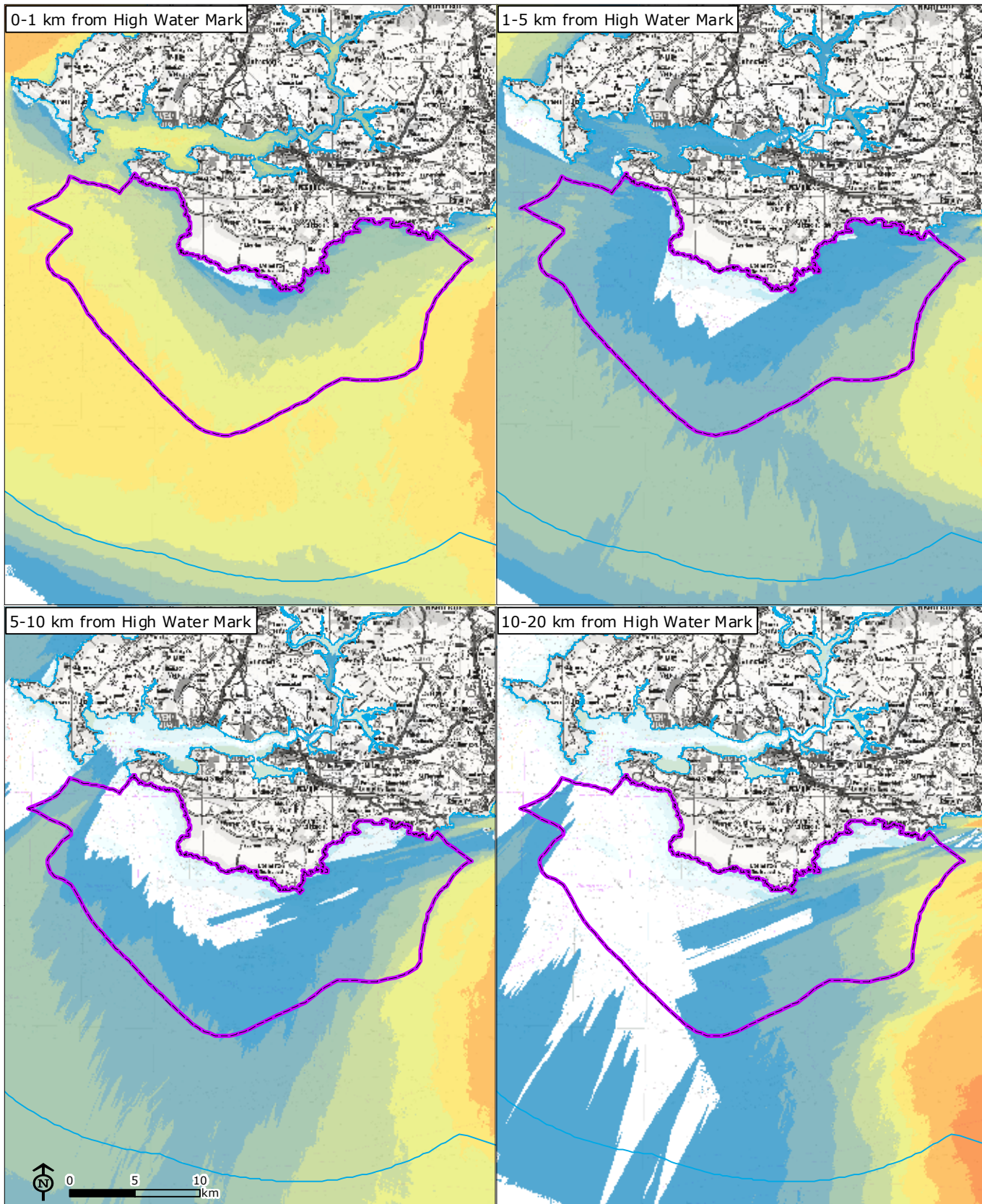
Wales National Seascape Assessment

**Land with Views of:
 MCA 22: South Pembrokeshire Coastal and Inshore Waters**

Source: LUC, NRW, OceanWise



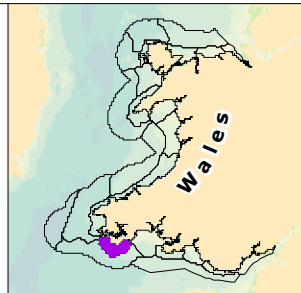
Map Scale @ A4: 1:250,000



22: South Pembrokeshire Coastal and Inshore Waters
 Wales Inshore Marine Plan Area

Visibility of sea from land (percentile)

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<div style="background-color: #4682B4; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></div> 11-20	<div style="background-color: #FF8C00; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></div> 61-70
<div style="background-color: #66CDAA; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></div> 21-30	<div style="background-color: #FF4500; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></div> 71-80
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<div style="background-color: #FFFF00; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></div> 41-50	<div style="background-color: #FF0000; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></div> 91-100 (Highest)



Wales National Seascape Assessment

Relative Visibility of the Sea Surface from Viewers on Land
MCA 22: South Pembrokeshire Coastal and Inshore Waters



Map Scale @ A4: 1:420,000