

## Location and boundaries

This Marine Character Area (MCA) covers the main channelled section of the Menai Strait, from Abermenai Point in the west to the fringes of Lavan Sands (Traeth Lafan) in the east.

- The MCA includes the full marine extent of local SCAs 4: Menai Strait and 17: Caernarfon.
- The boundaries of the above local SCAs were used to inform the outer extents of this MCA – concentrating on the Menai Strait’s main channel before it opens out into Conwy Bay to the east (MCA 3) and Caernarfon Bay to the west (MCA 11).

## Key Characteristics

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The Menai Strait occupies a <b>glacially-eroded bedrock trough</b> which has <b>subsequently flooded</b> , separating mainland Wales from Anglesey.
<b>Very complex tidal patterns</b> with <b>changing conditions</b> in the channel due to geological variation and sediment processes. It includes <b>strong, swirling tidal currents</b> and whirlpools as well as <b>small rocky islets</b> (including the famous Swellies).
The Strait has been the <b>scene of many shipwrecks</b> owing to its challenging navigational conditions, including the <i>Pwll Fanog</i> and the <i>HMS Conway</i> .
The tidal-swept bedrock is a mixture of mudstone, sandstone, limestone and slate. Boulders and coarse mobile sediments create a <b>rich and unique marine environment</b> .
Entire strait <b>designated as SAC</b> , representing one of Wales' jewels in terms of marine and coastal biodiversity. These include mudflats, intertidal rocky shores, rare rocky islands and sessile oak woodland.
Two <b>iconic bridges</b> cross the Menai Strait, providing the <b>first road and rail connections</b> to the Welsh mainland, designed respectively by Thomas Telford and Robert Stephenson.
Other <b>important historic and cultural features</b> include historic harbours for slate export, disused fish weirs, Bangor pier, and the internationally designated medieval Caernarfon Castle and town walls.
Further historic landscape influence is strongly associated with the <b>nationally important estate landscapes</b> found on both banks of the Strait.
Channel used for <b>commercial and recreational shipping</b> . Surrounding land used for estate parkland, farmland and settlement.
<b>Mussels and Pacific oysters are cultivated</b> in this MCA, and lobster/crab/whelk potting contributes to a thriving traditional seafood industry.
<b>Waters popular for a range of activities</b> including sailing, recreational angling (from shore and boat-based), kayaking and diving. Plas Dinorwic marina and the Plas Menai National Watersports Centre for Wales serve the area.
<b>The Llŷn and Isle of Anglesey Coast Paths</b> skirt around the coastline and the Lon Las Menai cycle route runs from Caernarfon to Y Felinheli
Views dominated by the <b>ever-changing channel</b> of the Menai Strait, and framed by the <b>surrounding wooded landform</b> . Perceptions of tranquillity are interrupted by nearby transport infrastructure and development.
<b>Spectacular views</b> afforded from elevated points to the <b>Anglesey AONB</b> , and southwards towards the <b>mountains of Snowdonia</b> National Park.

## Natural Influences

The Menai Strait occupies a glacially-eroded bedrock trough which has subsequently flooded, separating mainland Wales from the Isle of Anglesey. It is between 300 and 1,200 metres wide, creating a significant and renowned natural heritage feature. Outer, estuary-like characteristics contrast with river-like central sections with rapids flowing over scoured rock platforms and small cliffs, and muddy silts in sheltered areas. The Strait is backed by a sinuous and indented coastline with minor cliffs in places, but generally sloping down to a rocky shore. Behind the coastal plateau to the south-east lies the grandeur of the mountains of Snowdonia National Park, forming a dominant backdrop to the MCA. The northern shoreline falls entirely within the Anglesey AONB.

The Strait itself reaches a maximum depth of 20 metres, but with dynamic variations due to the strength, status and pattern of the tides and the mobile sediments found within and beneath the waters. Surviving buried sediments and palaeosols are found below modern deposits at the northern end of the Strait. The tidal-swept bedrock is a mixture of mudstone, sandstone, limestone and slate. Along with boulders and coarse sediment, the marine environment hosts a rich diversity of algae and epifauna, including sponges, anemones and sea squirts. Rich communities are found under boulders. Bivalves, worms and sponges bore into the limestone bedrock and the bridges crossing the Strait.



*Swellies and Ynys Gored Goch*

The Menai Strait is a treacherous stretch of water for navigation, with some of the strongest tidal races in the world. The area is peppered with rocks and islets which create obstacles in themselves as well as associated swirling currents and whirlpools. These include the Swellies; a notorious wrecking site with Church Island and Ynys Gored Goch forming famous local landmarks. A statue of Lord Nelson on the north bank commemorates his admiration of any successful pilotage, reportedly stating that '*anyone who can navigate the Menai Strait can join my navy*'. The Strait has a very strong lateral tidal flow, which reverses to produce unique physical characteristics – in turn giving rise to nationally and internationally important marine flora and fauna.



The whole of the Strait is a designated SAC, representing a wealth and complexity of habitats: one of Wales' jewels in terms of marine biodiversity. These include reefs and submerged sandbanks, tidal mud and sandflats, intertidal rocky shores, rare rocky islands and sessile oak woodland clocking the steep coastal slopes right down to the water's edge. Feeding into the south-west of the SAC is the estuary of the Afon Gwyrfai at Y Foryd (also designated as SSSI and LNR). This site is valued for its ornithological and marine biological features, including seagrass beds and a nationally important over-wintering population of wigeon. Large flocks of shelduck, oystercatcher, lapwing, curlew and redshank also occur in the bay.

Ecologically and physically linked to the Menai Strait are the extensive mudflats and sandbanks of Traeth Lafan (SSSI, SPA, SAC) within MCA 3, which are of particular importance for wading birds and wildfowl. Distinctive sand dune systems frame the Strait as it opens out into Caernarfon Bay (MCA 11); Morfa Dinlle to the south (SSSI, SAC) and Newborough Warren to the north (SAC, SSSI, NNR).

## Cultural/social influences

The Menai Strait is a culturally iconic seascape in Wales; a symbolic feature of national identity. A wealth of physical and documentary evidence tells the story of human interaction with the Strait over thousands of years, not least the battles as well as benefits derived from its challenging marine environment, role as a vital trade and military artery, rich natural resources and highly scenic setting. Sections of shoreline are within Landscapes of Outstanding Historic Interest (Dinorwig, Ogwen Valley and Penmon).



*Menai Suspension Bridge*

The two Menai Bridges are renowned landmarks and essential components of the road and rail networks linking Anglesey to mainland Wales. The famous northern suspension bridge (Telford Bridge) was built to design by Thomas Telford in 1826. This was added to by the southern tubular bridge (Britannia Bridge), the world's first box-girder bridge and an engineering marvel of the time. Much of the original bridge was destroyed by fire in 1970, although some original features remain, including limestone statues of lions. The bridges needed to be 100ft high in order to allow warships to pass underneath them. Prior to their

construction the Strait had a long history of traditional ferry crossings. Islands were used as resting points for livestock being driven (swum) across the Strait.

Also creating an imposing internationally important historical feature in views is Caernarfon Castle; a medieval stone fortress built on the site of a motte and bailey castle in 1283 by Edward I, but construction was never fully completed. Along with Harlech Castle, Conwy Castle and Beaumaris Castle, this monument forms part of the Castles and Town Walls of Edward I World Heritage Site. Further historic landscape influence is strongly associated with the nationally important estate landscapes of the Vaynol Estate on the south bank, the National Trust's Plas Newydd estate on the north bank, and Penrhyn Castle (also National Trust) with parkland and harbour framing the south-eastern entrance into the Strait. The islands also host a wealth of historical and cultural references. Church Island contains the 15th century church of St Tysilio. Many of the islands also contain former summer houses and boat houses.

Strong evidence for maritime trade is present along the Strait and its shoreline settlements, primarily the university city of Bangor with its Grade II\* Listed pier and the fortified medieval walled town of Caernarfon. In 1886, Caernarfon's shipping returns recorded 760 vessels outward carrying slate. The historic harbours of Port Dinorwic and Porth Penrhyn also developed specifically for the export of Snowdonian slate in the 18<sup>th</sup> and 19<sup>th</sup> centuries. A bank of ballast is still visible at Porth Penrhyn, discharged by vessels loading slate at the harbour. The sheer number of vessels travelling through the Strait's turbulent waters from the medieval period onwards is depicted by a number of historic casualties. These include *Pwll Fanog* protected wreck site – a 16<sup>th</sup> century wooden vessel lost with its 20 tonne cargo of 40,000 slates whilst waiting for the tide to race through the Swellies.

Nationally important historical fish traps and weirs are also found along the shoreline, including on the island of Gorad Goch. According to local tradition, the island supplied fresh and smoked herring to local monasteries from the 13<sup>th</sup> century. A large complex of historic salmon weirs can also be seen near Porth Penrhyn, further evidence for long exploitation of the area's rich marine food resources. Today mussels, clams, whelks and Pacific oysters are traditionally cultivated along the shoreline. Lobster and crab potting is also an important economic activity. Another nationally known local product is 'Halen Mon' (Anglesey Salt) – extracted from the clean waters opposite Caernarfon. The Menai Seafood Festival celebrates the area's coastal heritage and the abundance of seafood, fish and other naturally sourced products available, including the famous Menai Mussels.

Today the channel of the Menai Strait is an important commercial route for commercial and recreational traffic, favoured, despite its hazards, for cutting short a longer journey around the outer Anglesey Coast. Small piers and docks lie along the shores along with further tourism related development such as the residential marina and holiday village at Plas Dinorwic (Y Felinheli) and the Plas Menai National Watersports Centre for Wales. The waters are popular for a range of activities including sailing, recreational angling (from shore and boat-based), kayaking and diving. The Royal Welsh Yacht club was established in Caernarfon in 1847, and the famous annual Menai Regattas sees classic boats take part in numerous events along the Strait over a two-week period. The Llŷn and Isle of Anglesey Coast Paths (part of the Wales Coast Path) skirt around the coastline and the Lon Las Menai cycle route runs from Caernarfon to Y Felinheli along a section of dismantled railway.

## Aesthetic and perceptual qualities

The Menai Strait is a dramatic seascape forming a highly scenic and dynamic setting to both the Anglesey AONB to the north and the rising mountains of Snowdonia National Park to the south. Views within the MCA are dominated by the ever-changing channel of the strait itself, framed by the surrounding densely wooded landform which evokes a

strong sense of tranquillity. The serenity of valley-side estate landscapes contrasts with the roughness of water including the visibly quick currents and tidal rapids associated with the Swellies, while the relative shelter from wave action creates serene, calm, picturesque scenes in many places. Textures are dominated by woodland, water and (especially at low tide) by rocky shorelines and islands. At either end of the Strait, views open out into Conwy Bay (MCA 3) and Caernarfon Bay (MCA 11), both with a stronger estuarine and open sea influence.

Elevated viewpoints on the northern bank, including the popular car park with viewing area alongside the A5, afford expansive views across the Strait with its spectacular mountain backdrop. These higher locations evoke a contrasting sense of scale and openness to the experience gained from within the more constrained limits of the MCA itself. The central section of the Strait is visually dominated by elegant form of the Menai Suspension Bridge and the nearby Britannia Bridge – charismatic symbols of the Industrial Revolution and the Strait's key role in the wider area's economic prosperity in centuries past. The bridges add to the composition of views and emphasise the depth of the valley.

Busy transport infrastructure both alongside and above the MCA, along with light pollution associated with nearby development can detract from perceptions of tranquillity – although experiences at water level are dominated by the wild and untamed nature of the swirling tidal waters.



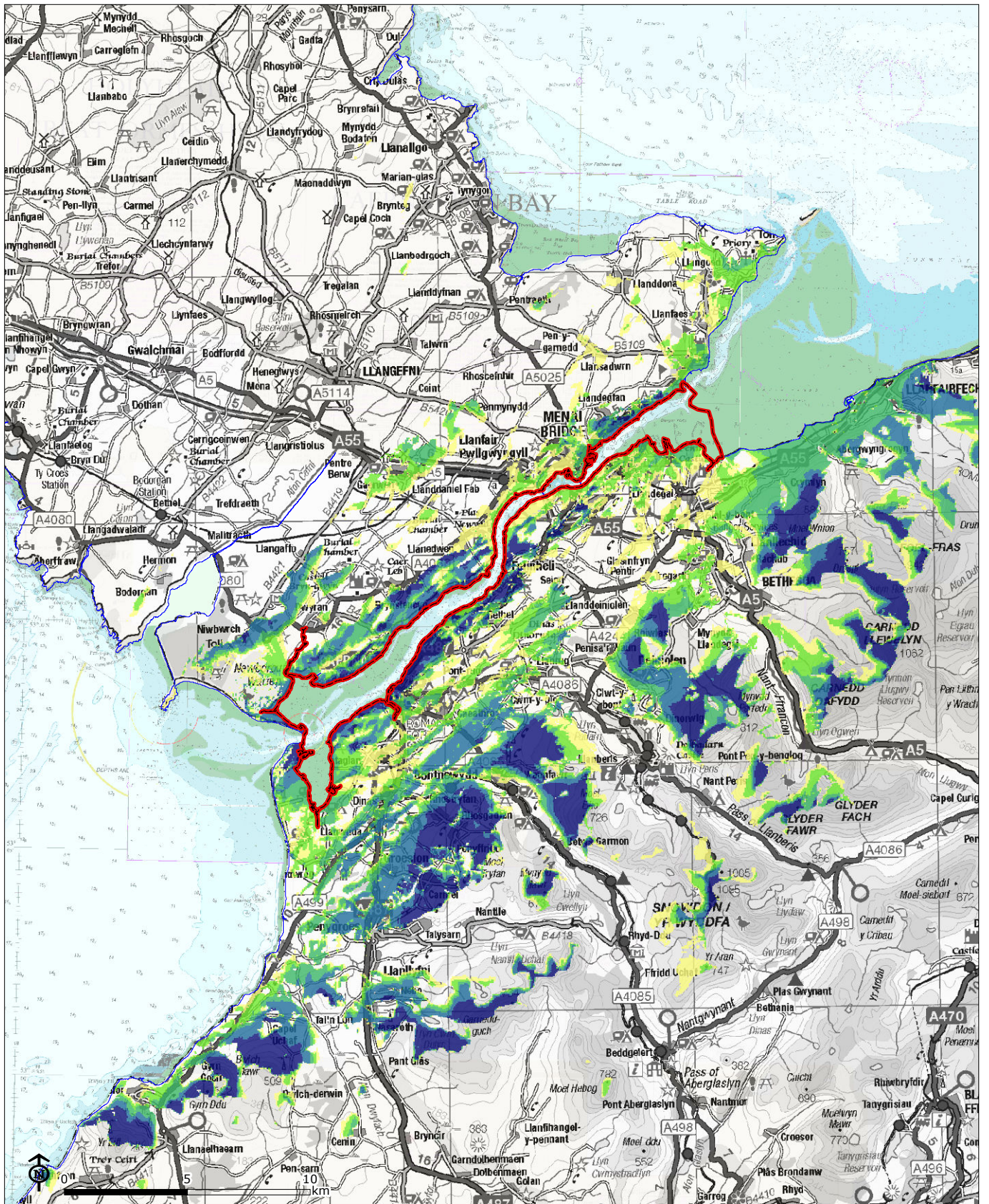
**'Menai Straits' by the mid-19<sup>th</sup> century oil painter John Wilson (© Crown Estate, 2013)**

*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.*



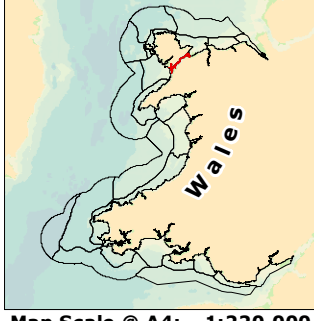


**10: Menai Strait**

**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**

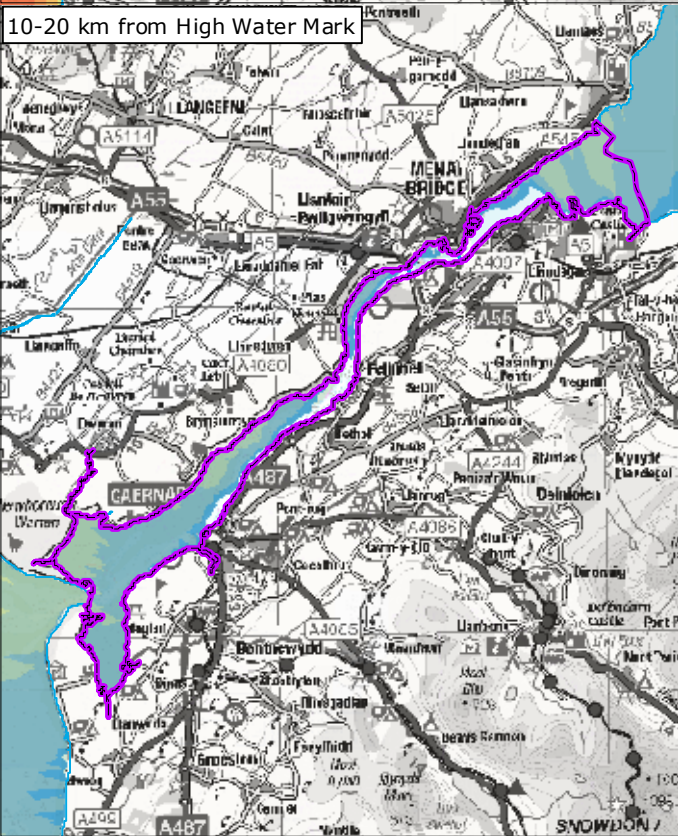
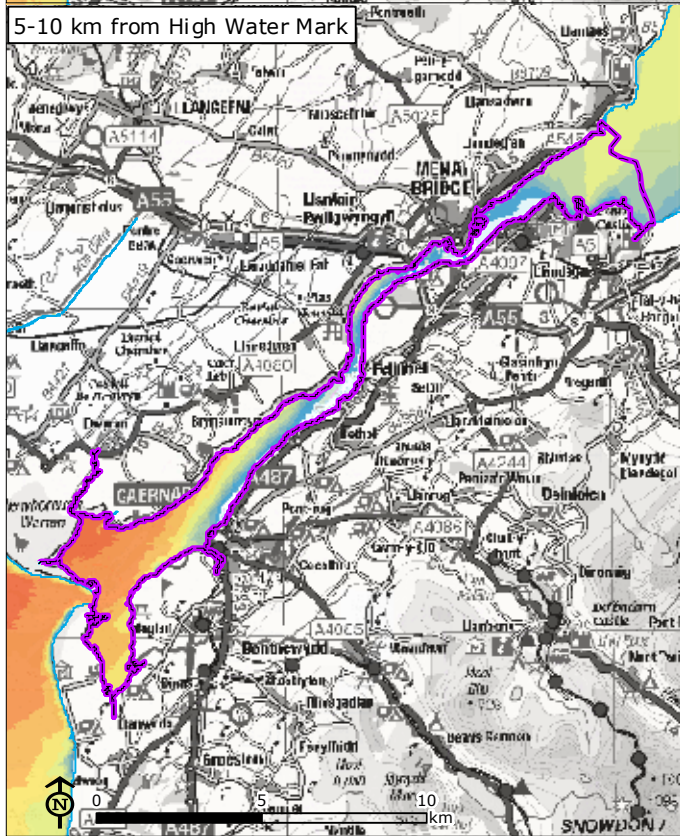
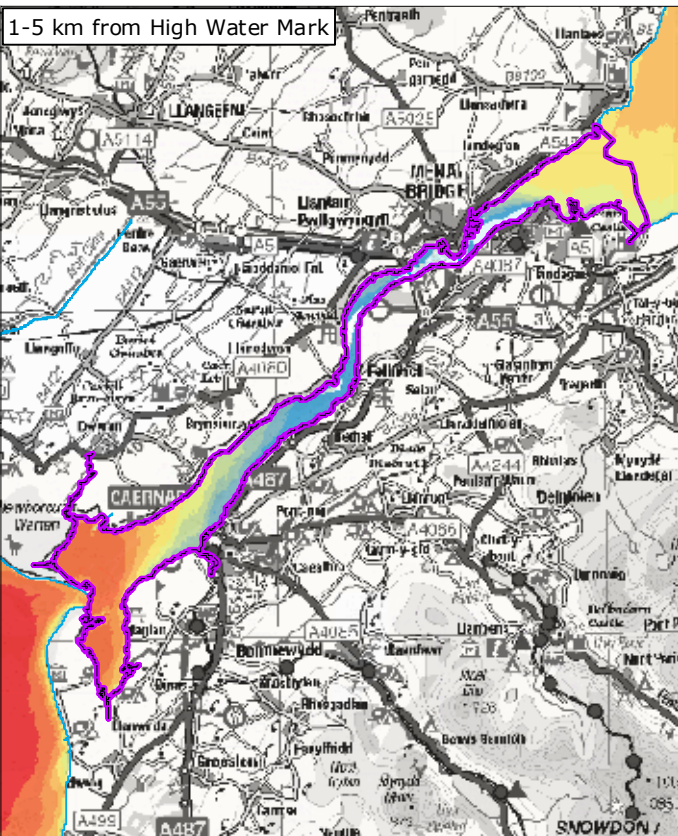
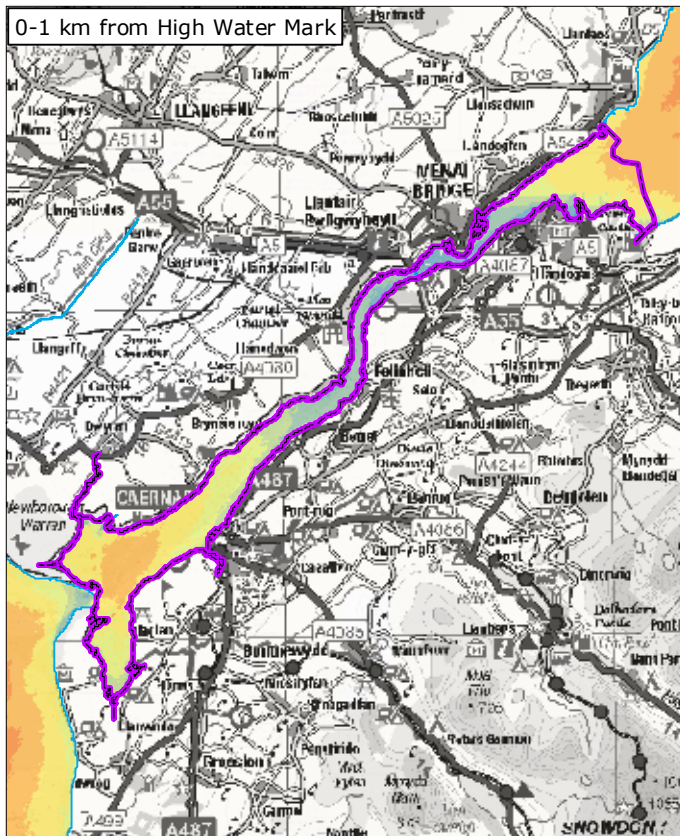
**Land with Views of: MCA 10: Menai Strait**

Source: LUC, NRW, OceanWise

**LUC**

Map Scale @ A4: 1:220,000

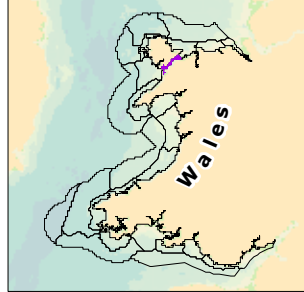




  10: Menai Strait  
  Wales Inshore Marine Plan Area

**Visibility of sea from land (percentile)**

	<10 (Lowest)		51-60
	11-20		61-70
	21-30		71-80
	31-40		81-90
	41-50		91-100 (Highest)



Wales National Seascape Assessment

Relative Visibility of the Sea Surface from Viewers on Land  
MCA 10: Menai Strait



Map Scale @ A4: 1:230,000