

Location and boundaries

This Marine Character Area (MCA) contains the coastal and inner waters of Caernarfon Bay, south-west Anglesey.

- The MCA includes the Inland Sea, which drains into the bay from the north. It also includes Malltraeth Bay and Malltraeth Sands.
- The boundaries are informed by information marked on the Marine Charts, responding to how Caernarfon Bay is viewed from a navigational perspective.
- The outer western boundary is guided by bathymetry, forming the transition to the deeper water (>50 metres) characterising MCA 12.
- It includes the sand and mudflats which spill out from the Menai Strait (MCA 10), located immediately adjacent to the east.
- The MCA includes the marine components of local Anglesey/Gwynedd Seascape Character Areas 15: Rhosneigr, 16: Malltraeth and 32: Caernarfon Bay.

Key Characteristics

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Low, wide, plateau-like headlands with smooth profiles dividing rocky bays and wide sandy beaches . Shallow nearshore bathymetry associated with beaches.
The tidal Inland Sea Strait is found between Holyhead and Anglesey. The Maltreath Estuary and Crigyll rivers also drain into this MCA from Anglesey.
Rocky islands just offshore are the remains of former headlands eroded by the sea.
Moderate tidal currents result in coarse sediment offshore with finer sand in the eastern portion of the MCA.
Large range in depth from less than 10m in the east to approximately 50m where this MCA meets MCA 12.
This is a sediment-dominated MCA with sand found close to the shore and coarser sediment further offshore. Wave action disturbs the sediment particularly in shallower inshore areas.
A layer of Quaternary sand and sandy gravel overlays a mosaic of Carboniferous, Precambrian and undivided lower Palaeozoic bedrock. Active bedforms such as sandwaves are found in the mobile sediment.
The area around Ynys Feurig is an SSSI and SPA designated for its importance for birdlife as the largest tern colony in Wales. Habitats that contribute to the special interest include maritime grassland and rockpools .
Other SSSIs at Lleyn Maelog (freshwater lagoon), Rhosneigr Reefs (designated for seaweed communities), Rhosneigr and Ty Croes (designated for heathland, grassland and rock habitats).
Atlantic waves combine with shallow bathymetry and wide beaches to create rolling breakers .
A dangerous stretch of coastline for shipping, often with treacherous conditions and hidden rocks, including the sandbanks of the Caernarfon Bar .
Crigyll Rocks are notorious for wrecks , and ruthless wreckers (known as the Crigyll Wreckers) robbing the cargoes of stricken vessels. Wrecks include the Caernarfon Bay lightship and the <i>Defiant</i> which sunk in 1995.
The 19 th century wreck of the <i>Norman Court</i> is a popular recreational diving site .
Another important historic and cultural feature is Cribinau Church , sited on a causewayed island .
Transatlantic communications cables make landfall at Porth Trecastell.
Fishing activity includes towed mobile gear as well as potting and set nets .
Commercial shipping seen in the western part of the MCA, with recreational boats often observed closer to shore.
Popular for offshore recreation including surfing, kite surfing and sailing .
The seascape is visually contained by headlands , but views are afforded to nearshore islands , the coastline of the Anglesey AONB and the Llŷn AONB on the southern horizon.

Natural Influences

This MCA is centred on the shallow expanse of Caernarfon Bay, located between Anglesey and the Llŷn Peninsula (two nationally protected landscapes), and includes the south-western facing coastline of Anglesey from Cymran Bay to the western opening of the Menai Strait (MCA 10).

Past glacial action has influenced much of the bay and the surrounding area; Malltraeth Marsh is glacially formed and filled with marine deposits and the Menai Strait, which feeds into the bay, was also formed due to glacial erosion of the channel. At Twr Bach on Llanddwyn Island, there are notable geological features in the form of a *mélange*; an occurrence of a variety of rocks from differing geological time periods and conditions that appear as a mosaic following tectonic movements.



Caernarfon Bay and the Llŷn Peninsula from Ynys Llanddwyn © John Briggs

Water depth deepens to around 50 metres in the far west of the MCA, gradually deepening from coastline. There are shallower waters with sand and mud banks near the entrance to the Menai Strait. Sediment is mostly gravelly and overlain with thicker sands than surrounding areas due to the more sheltered conditions. At the mouth of the Menai Strait, the sediment consists of finer sand which supports diverse faunal communities. There are shifting sandbanks as a result of mobile sediment, including the North and South Sands. The changing depths, shifting nature of the sand banks and the associated movements of the tides here create challenges to navigation – marked by a series of navigational buoys, including flashing lights.

There are numerous rocky islands dotted around the coast which are a result of erosion of headlands. Remains of the headlands are still evident on the seafloor with fingers of rock reaching into the sea. These submerged rocks can result in dangerous tidal races, as is the case around the Crigyll Rocks and Careg Goch.

The coastline is characterised by a mixture of rocky bays with exposed bedrock and boulders, as well as expansive sandy beaches and smooth headlands carved by waves.

The waves form rolling breakers sweeping in from the Atlantic as a result of the shallow water and the bay's wide beaches. Sand dunes are also located along the coastline, and many are designated, such as Newborough Warren which is designated an SAC, SSSI and NNR for its geological and biological interest. This includes its intact dune habitat and saltmarshes, as well as the presence of important wintering grounds for wading birds and wildfowl. The area around Ynys Feurig is also SPA and SSSI designated for its importance for birdlife, including the largest breeding tern colony in Wales. Further habitats that contribute to the site's special interest include maritime grassland and intertidal habitats (rockpools). Other SSSIs are present at Lleyn Maelog (freshwater lagoon), Rhosneigr Reefs (designated for seaweed communities), Rhosneigr and Ty Croes (designated for heathland, grassland and rock habitats).

The Inland Sea, located between Anglesey and Holy Island, is separated from Holyhead Bay to the north by the Stanley Embankment. The water is sheltered and has an estuarine character. A mosaic of wetland and intertidal habitats are associated with the area, recognised as SSSI due to their nationally important seagrass and saltmarsh which support a variety of birds including ringed plover and goldeneye. Similarly, Maltreath Marsh SSSI – a reclaimed wetland – contains a variety of important habitats for breeding birds, including reedbeds, marshes and wet grasslands.

The biologically rich waters of the bay and its shallow intertidal areas are valued feeding grounds for a variety of seabirds, and also form part of a key migratory route to Anglesey for bottlenose dolphins.

Cultural/social influences

The Bay forms a natural harbour which has been considered strategically important since Roman times. Historical defensive sites spanning centuries such as the nationally designated promontory forts at Dinas Dinlle and Tywyn-y-Parc are found on the coast. Other features of archaeological interest include the prehistoric Ynes Leurad Hut Circles adjacent to the Inland Sea. The tidal island of Cribinau houses the 13th Century church of St Cwyfan, which has been restored and is still occasionally used for weddings. Ynys Llanddwyn is associated with the Welsh saint of love and St Dwynwen Island contains the remains of a chapel, a lighthouse and related historic cottages.

The unique environment of the Inland Sea was created following the construction of the Stanley Embankment engineered by Thomas Telford in the early 1823, which impounded the tidal channel to create the all-weather and tide Holyhead Harbour (MCA 07). There are several tidal watermills on the Inland Sea, which are recognised as Scheduled Monuments. Similarly, Malltraeth Marsh was reclaimed following construction of the Malltraeth Cob completed in 1812. From Malltraeth Marsh there are old coal mines going out to sea which date from medieval times. There were numerous collieries and pits working on the coal measures but production ended in the 1880s.

Along the western coast of Anglesey, the dangers posed to shipping by the submerged rocks and reefs, as well as the complex of drying sandbanks at the western entrance to the Menai Strait, are well documented. Caernarvon Bar is particularly notorious; traditionally vessels would anchor to the south of Llandwynn Island and signal for a pilot to ensure safe passage to Caernarvon and beyond. *HMS Ann*, a 14-gun frigate, became embayed in Caernarvon Bay whilst on passage from Liverpool to West Indies in 1760. The captain, knowing that his ship would be unable to weather Bardsey Island or run for Holyhead, determined to run his ship ashore. Because another vessel (the *Pearl* of Liverpool) had already recently run aground the *Ann* ran ashore two miles to leeward of the Bar. Eighteen of the frigate's crew of 37 subsequently drowned. Fourteen bodies from both wrecks were washed ashore and buried in a common grave at Llandwrog.

The Crigyll wreckers were a gang of robbers active in the 18th century who robbed the cargoes of stricken ships. The clipper of the *Norman Court* ran aground on shoals in Cymyran Bay in 1883 during a south westerly gale, and is now a popular dive site.

Due to the shallow bathymetry, commercial shipping today is generally limited to the deeper waters of the MCA in the west, adjacent to MCAs 19 and 23. The hidden and submerged rocks close to the shore remain treacherous to shipping. Despite this, there was a successful historic ship building industry at Llyn Maelog. Today the Bay is an important commercial fishing ground, with many species of ray exploited including some less common species such as the electric ray, starry ray and sting ray.

Evidence of military usage of this area, both past and present, can be found within the bay and its adjacent coastline – such as at Bodorgan (a WW2 decoy airfield established at Newborough Warren) and Llandwrog, where a Mountain Rescue Service was established by RAF staff also in the war. The RAF Valley airfield is close to the MCA, and Caernarfon Airport sits on a prominent bar forming the southern entrance to the Menai Strait. Frequent airborne activity therefore influences the character of the MCA, including helicopter-based search and rescue vehicles. Past military usage is evidenced through aircraft losses on the seabed.

This area is very popular for a range of recreational activities. There are high quality bathing waters at Rhosneigr, Aberffraw and Silver Bay and kite surfing, wind surfing, surfing and paddleboarding are common water-based activities. The wildlife interest in the area attracts bird watchers and other wildlife watchers. Rhosneigr has seen an expansion in leisure development in recent times. Recreation is also popular on the sheltered waters of the Inland Sea, and the Isle of Anglesey Coast Path runs close by.

Aesthetic and perceptual qualities



Caernarfon Bay from Holyhead Mountain © John Briggs

Perceptions of the bay are very much influenced by sea and weather conditions – being open and exposed to the Irish Sea directly to the west. A strong sense of wildness and exposure can take over during stormy conditions, whilst periods of calm weather and high tide produce a sense of stillness. The naturalistic qualities of the area are emphasised by the presence and sounds of the large numbers of sea birds and waterfowl, but can be suddenly interrupted by the sound of aircraft flying overhead or sounds from the car race

track at Ty Croes. Within the Inland Sea a strong sense of enclosure and tranquillity prevails, with the main modern detractors being views to the former Anglesey Aluminium factory chimney and traffic passing along the A55 in the north.

Looking east, the Bay is mostly visually contained by the surrounding headlands, with the mountains of Snowdonia National Park and the Llŷn AONB forming a dramatic backdrop to views, with Holyhead Mountain prominent in views north. Views of the open sea of MCA 10 to the west are more expansive, with distant glimpses to the Irish mainland in clear conditions. The MCA itself is also key to the coastal setting of both AONBs, as well as the surrounding Heritage Coast-designated coastline.



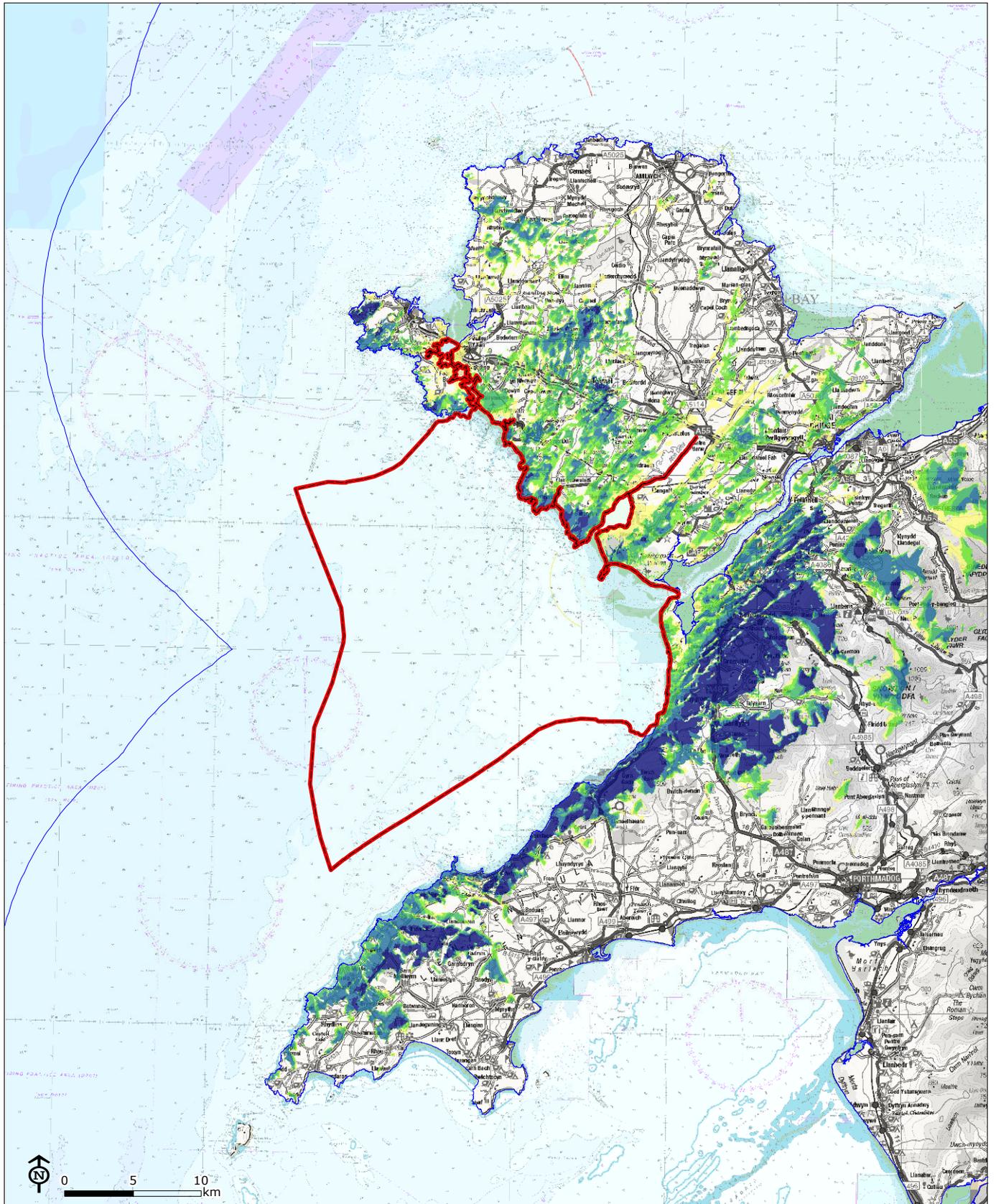
Former aluminium works chimney and the Inland Sea © John Briggs

The Bay has a connection with and was an inspiration to Charles Tunnicliffe, a renowned 20th century painter of wildlife, especially birds. His illustrations were frequently included in popular Ladybird book series for children.

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.



- 11: Caernarfon Bay
- Wales Inshore Marine Plan Area

Land with sea views (Percentile)

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



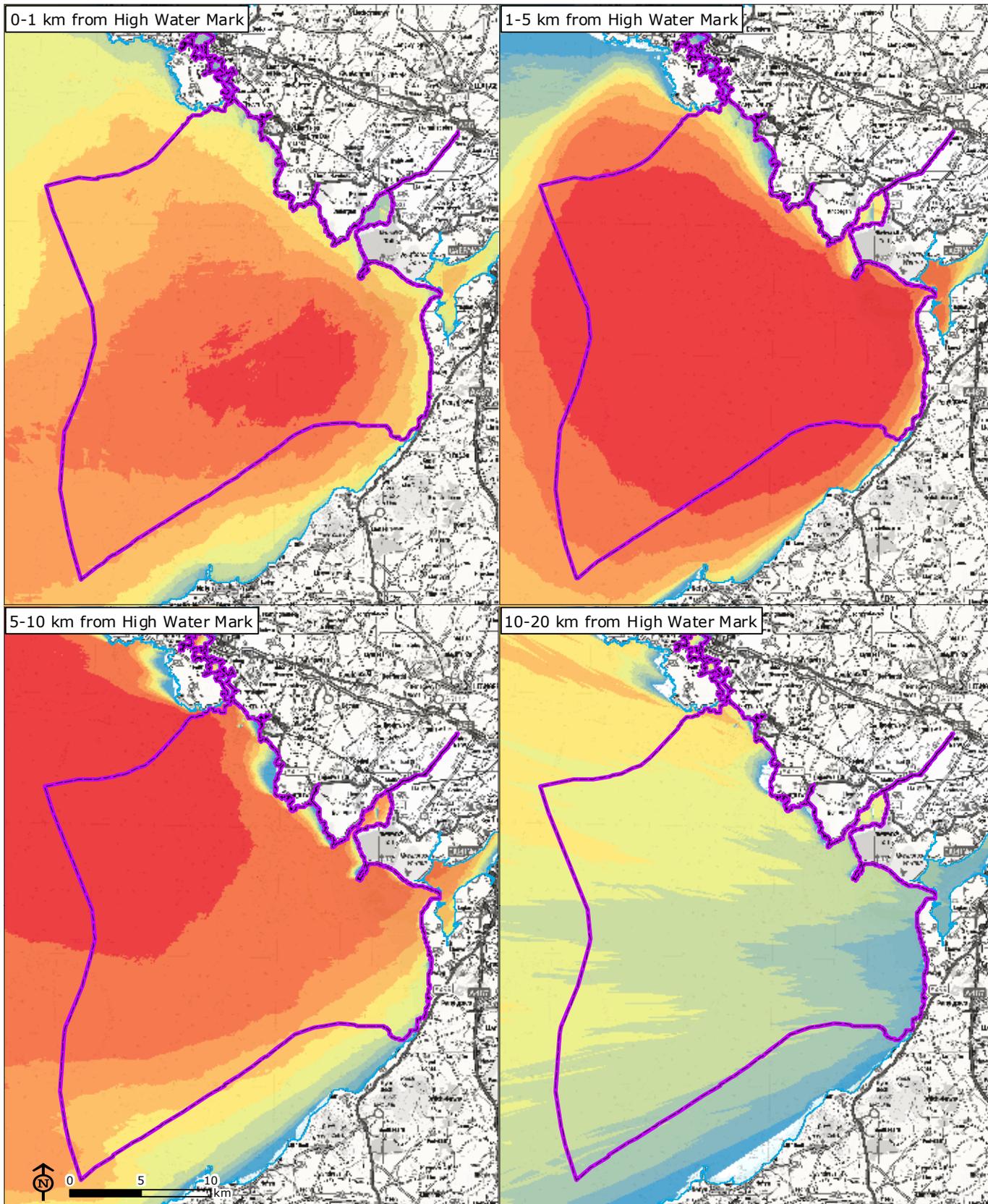
Wales National Seascape Assessment

**Land with Views of:
MCA 11: Caernarfon Bay**

Source: LUC, NRW, OceanWise



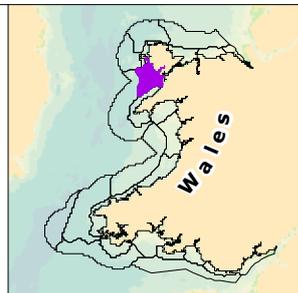
Map Scale @ A4: 1:400,000



- 11: Caernarfon Bay
- 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 11: Caernarfon Bay



Map Scale @ A4: 1:390,000