

Location and boundaries

This Marine Character Area (MCA) covers the coastal waters directly to the south of the Vale of Glamorgan, adjacent to the sparsely settled south-facing coastline from Merthyr Mawr in the west to the outer fringes of Barry in the east.

- The landward area encompasses all of the Glamorgan Heritage Coast (the western landward boundary follows the line of the designation).
- Apart from Merthyr Mawr in the west (within the Heritage Coast designation), the landward extent complements the adjoining regional Landscape Character Area 36: Vale of Glamorgan.
- Offshore – in the west, the MCA takes in the full extent of Nash Sands to West Nash. It also includes Tusker Rock – a feature within the bay of Merthyr Mawr. The outer boundary with the Bristol Channel (MCA 28) is informed by the change to deeper water and large linear sand and gravel sediments associated with the Channel.

Key Characteristics

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Dramatic ever-changing coastline of Jurassic and Triassic mudstones and limestone; with near vertical cliffs, shingle or rock pavement beaches, and occasional sandy bays.
South and south-westerly aspect with gently shelving waters reaching a maximum of 18m bathymetry.
Jurassic mudstone seabed overlain by bands of sand and gravel in the west, forming the distinctive linear Nash Sands with associated shoals, shallows and overfalls.
Tusker Rock, an extensive reef, forms a key seascape feature in the west. It is exposed at low tide and surrounded by shallow waters.
Strong tidal streams, high wave climate and exposure to winds funnelling up the Bristol Channel form further hazards to navigation.
Sections of SSSI designated coastline nationally valued for species rich neutral, calcareous and maritime grassland. Dunraven Bay SAC is home to the rare shore dock.
Internationally important habitats on Methyr Mawr Warren including sand dunes and slacks, saltmarsh, limestone grasslands and swamp habitats.
Commercial trawling and rod and line fishing, the sand banks in the west being rich grounds for plaice, turbot, whiting and rays.
Long history of human occupation, with Neolithic evidence beneath Merthyr Mawr, clifftop Iron Age hillforts and the remains of medieval castles, ports and ecclesiastical sites.
The iconic 19th century Nash Point Lighthouse constructed of limestone from the beach below, guides ships past Nash Sands and is a symbol of the area's maritime heritage (the last manned lighthouse in Wales).
Historic wrecks associated with the notorious Nash Point and Nash Sands, including 19 th century sailing pilot cutters waiting to guide ships to Cardiff or Newport.
Popular Heritage Coast-designated coastline, with the Heritage Coast Centre and Seawatch Centre drawing visitors to learn about the area's natural, cultural and maritime heritage.
Often wild qualities of the area interrupted in the east by air traffic associated with Cardiff International Airport, and the dominating form of Aberthaw Power Station.
Strong intervisibility with the Somerset coastline including Exmoor National Park and the Quantocks Area of Outstanding Natural Beauty (AONB).
Views west along the coastline from Nash Point, including to the Gower AONB.
The area's expansive vistas are appreciated by users of the clifftop Wales Coast Path.

Natural Influences

This Marine Character Area (MCA) comprises the coastal waters of the Glamorgan coastline, stretching from the expansive sand dune system of Merthyr Mawr in the west to the fringes of development at Barry in the east. The gently shelving waters extend to a maximum depth of around 18 metres bathymetry, meeting the edge of the deeper Bristol Channel approximately five kilometres from the shoreline.

The south and south-west facing coastline is a renowned Heritage Coast-designated section of ancient lias limestone, shale and mudstone cliffs, interspersed with shingle or rock pavement beaches and occasional sandy bays (e.g. Limpert Bay, St Monat's Bay and Dunraven Bay). The coastline is home to varied birdlife, including choughs, fulmars, bar-tailed godwits and peregrine falcons. The cliffs are near-vertical, creating an abrupt and dramatic end to the gentle vale landscape behind. The geology and geomorphology of the Monknash Coast is of national significance, with the section west of Nash Point exposed to the prevailing winds and swells sweeping up the Bristol Channel. It is therefore a quickly eroding, ever-changing section of coast; cliff falls are common. Conversely, from Nash Point to Welsh St Donats, the cliffs are more sheltered, with lower levels of erosion and therefore a noticeably different profile. Cwm Nash displays a 12,000 year old sequence of tufa, scree and slope deposits containing abundant fossil snails – allowing for the reconstruction of climate change from the last glacial period until the present day.



Vertical limestone cliffs showing distinct layers of geology

The coastline and intertidal area supports varied maritime habitats including species-rich neutral, calcareous and maritime grassland with some rare species, as well as woodland and scrub. Dunraven Bay SAC is home to the rare shore dock, whilst the East Aberthaw Coast is nationally important for areas of intertidal sediment and pools interspersed with under-boulder invertebrate communities and cobble-beds with sparse bladder wrack seaweed, limpets, barnacles and periwinkles. Species of burrowing polychaete worms (including honeycomb worm, lug worm and sea mouse) are associated with the area's intertidal sands, and attract bait diggers.

Merthyr Mawr Warren is internationally designated (as SAC, SSSI and NNR) for its extensive sand dunes and slacks, saltmarsh, limestone grasslands and swamp habitats. Formed from glacial sand deposited in the Irish Sea when the ice sheets melted, the dunes are continually fed by more sand and modified by the strong tidal and weather systems associated with the Bristol Channel. Merthyr Mawr is part of a much wider ecological system of sand dunes and associated habitats which underlie this coastline, including Kenfig Burrows to the north-west (MCA 3).

Offshore, the seabed is formed from Jurassic mudstones overlain by bands of sand and gravel in the west, forming the distinctive linear Nash Bank with associated shoals, shallows and changing depths. Tusker Rock, an extensive reef, forms a key seascape feature in the west. It is exposed at low tide and surrounded by shallow waters. These submerged features attract a range of marine life, including commercially and recreationally fished species such as plaice, turbot, whiting and rays – as well as lobsters and crabs associated with the rocky reefs.

Alongside the submerged Nash Bank and rocky reef of Tusker Rock with their associated overfalls, the MCA is subject to strong tidal streams, a high wave climate and exposure to winds funnelling up the Bristol Channel. Navigation marks and the prominent Nash Point Lighthouse guide vessels through the dangerous seas via the Nash Channel.

Cultural/social influences

This is a rich cultural landscape with rich layers of historic evidence for human occupation and interactions with land and sea over thousands of years. Merthyr Mawr Warren is registered as a Landscape of Outstanding Historic Interest in Wales, with evidence buried beneath the dunes of Neolithic occupation. The wider system of dunes provide indications of past climate change and man's struggle against nature –the area being inundated with sand blown in on fierce gales during the 'Mini Ice Age' of the 15th century. The ruins of the Scheduled 14th century fortified manor house of Candleston Castle remain – its elevated position meaning it escaped complete inundation by the dunes, unlike its counterpart, Kenfig Castle, sited along the coast to the north-west.

The clifftops are topped by a series of nationally important, strategically sited Iron Age promontory forts, including Dunraven Castle, affording uninterrupted views across the Bristol Channel for early siting of enemy approaches. Llantwit Major, Ewenny and Merthyr Mawr were important pre-Norman ecclesiastical centres, still housing collections of carved crosses and other monuments. The remains of a medieval monastic site and gatehouse at Llantwit Major are testament to these associations (a Scheduled Monument). The Grade I Listed St Donat's Castle (now Atlantic College), with 12th century origins, occupies a precipitous position on a rocky outcrop, with hanging and terraced gardens extending down to the sea. The estate and its cluster of historic buildings form strong historical features viewed from the coastal waters.

The MCA includes the preserved infrastructure remains of small ports serving cross-channel trade from at least the medieval period to the 19th century. A key feature of the area's maritime heritage is the iconic 19th century Nash Point Lighthouse, constructed of blue lias limestone winched up from the beach below. Grade II Listed, it was the last manned lighthouse in Wales, automated in 1998. Built to provide a clear navigational aid to ships travelling east up the Bristol Channel, the beam from the tower and accompanying red sector light are aligned to guide vessels safely past the Nash Sands – a notorious wrecking site prior to the construction of the lighthouse. This included the loss of a number

of sailing pilot cutters waiting to guide ships to Newport or Cardiff¹, and, just before the lighthouse's construction in 1831, *The Frolic*; which wrecked on the Sands with the loss of 78 lives, including a high-ranking military officer. The lighthouse today includes a visitor centre, and is a popular venue for weddings, school visits and other events. In the west, Tusker Rock is another hazard associated with more recent wrecks including *Maleny* (1929) and *Steepholm* (1968). The wider area's wartime military use is associated with the remains of downed aircraft on the seabed, including Spitfires and Bristol Blenheims.

The Heritage Coast is a popular recreational and tourism destination, particularly given its proximity to the South Wales conurbations. The seaside settlements of Southerndown, Ogmores-on-Sea and St Bride's Major nestle behind the cliffs, with the Heritage Coast Centre at Southerndown providing information on the area's natural and cultural assets. The Seawatch Centre at Hafod allows visitors to watch the ships in the Bristol Channel from a ship's bridge in a converted coastguard radio station. Visitors to this facility can also listen in to ships' radio messages and plot their course on radar equipment, therefore raising awareness and understanding of marine navigation in the 21st century. The entire coastline is crossed by the Wales Coast Path, allowing visitors to walk between points of interest and take in the expansive views across the Bristol Channel. The western coastline is a popular surf spot, and sport angling takes place both from the beaches and offshore via fishing charter trips.

The western part of Nash Sands is licenced for aggregates dredging, with navigational access restricted during operations.

Aesthetic and perceptual qualities

A particular feature of the MCA's character is its expansive, uninterrupted views, particularly across the Bristol Channel, evoking a strong maritime influence. Views across the channel are framed by the dramatic silhouetted uplands of the Quantock Hills AONB and Exmoor National Park, whilst views from Nash Point and the west coast can stretch to as far as the Gower AONB in clear conditions. The eastern part of the MCA also includes strong intervisibility with Bridgwater Bay, allowing glimpses of development at Western-super-Mare, Burnham-on-Sea and the distinctive box-like form of Hinkley Nuclear Power Station.

The orientation of the MCA and its full exposure to the open Bristol Channel makes it susceptible to the powerful tidal and weather conditions sweeping in from the west, with heavy overfalls and strong tidal streams associated with submerged features such as Nash Sands, and the prominent headland of Nash Point with its charismatic lighthouse. The lightly settled coastline, with significant stretches free from development, contributes to an overall remote, highly tranquil and often 'wild' seascape – interrupted in the east by air traffic from Cardiff Airport, and the large-scale Aberthaw Power Station – its chimney and large bulk dominating the scene (also serving as a prominent navigational feature to passing vessels). Views to large-scale container and cargo ships travelling through the Bristol Channel reinforce the area's strong maritime heritage and sense of place.

The cliff and rock formations of the Heritage Coast have long attracted admiring visitors and scientific observations, including the 1814 observations of artist William Daniell and writer Richard Ayton in their *Voyage around Great Britain*. Ayton wonders at the coastal cliffs in the west, stating that they are “...*remarkable for some curious excavations formed by the action of the sea, in some of which the rocks are fretted into a most perplexing variety of fantastic configurations, and in others disposed into such formal combinations,*

¹ Sailing pilot cutters are one of the iconic vernacular craft of the UK – only 18 survive today and are highly prized as 'classic boats'.

with such a singular correspondence of parts, that they look more like the work of art than a thing of nature”.



Beach backed by limestone pavements and steep cliffs at Dunraven Bay

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.

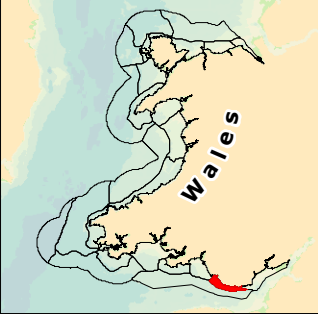
The second map shows sea visible from land, the warmer colours being areas of sea that are visible from more places on land. This comes from a national assessment of Wales so the results do not relate specifically to this MCA, whose boundary is overlaid for location only. The four individual versions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



 27: Glamorgan Coastal Waters and Nash Sands
 Wales Inshore Marine Plan Area

Land with sea views (Percentile)

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



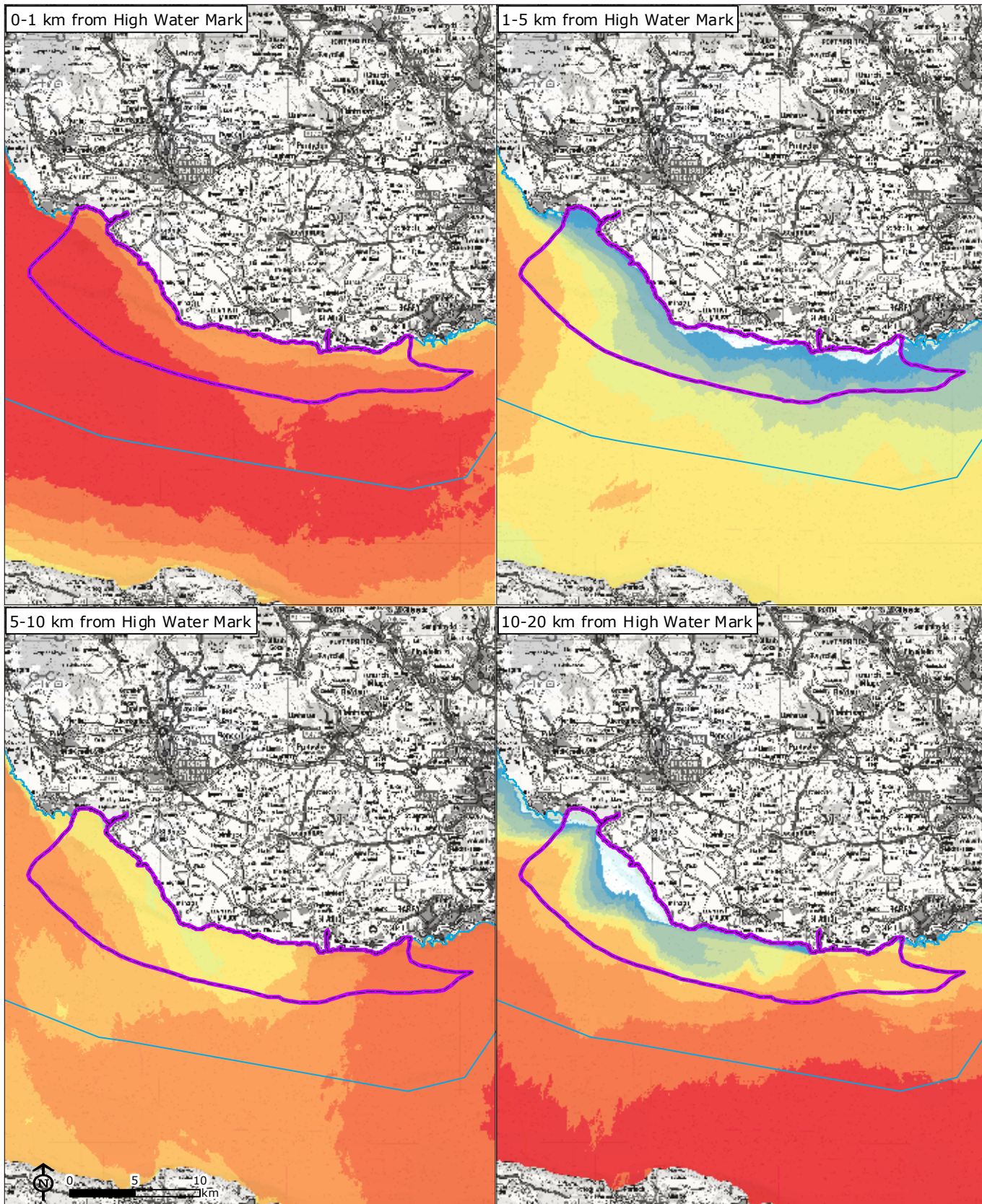
Wales National Seascape Assessment

**Land with Views of:
MCA 27: Glamorgan Coastal Waters and Nash Sands**

Source: LUC, NRW, OceanWise



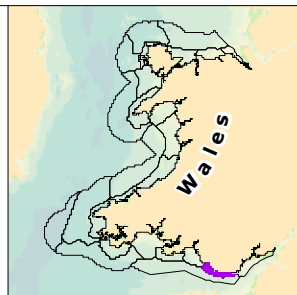
Map Scale @ A4: 1:250,000



- 27: Glamorgan Coastal Waters and Nash Sands
- 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 27: Glamorgan Coastal Waters and Nash Sands



Map Scale @ A4: 1:420,000

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Source: LUC, NRW, OceanWise