



Seascape Assessment for the South Marine Plan Areas

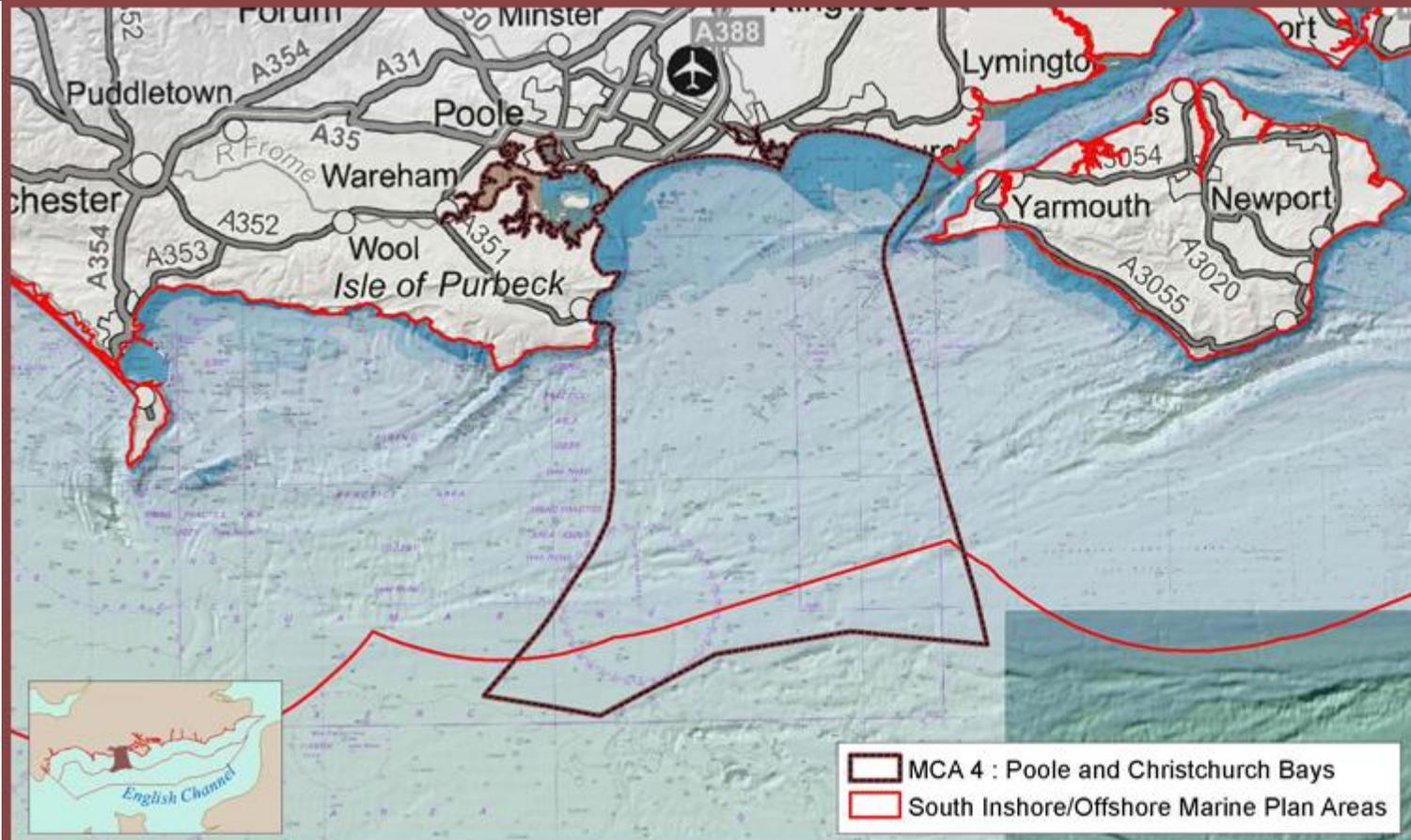
MCA 4: Poole and Christchurch Bays

Snapshot

Key Characteristics

Description

Visual Resource Mapping



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Location and boundaries

This Marine Character Area (MCA) covers the coastline from Peveril Point in the west to the eastern fringes of Milford on Sea in the east, covering the whole of Poole and Christchurch Bays. Its seaward boundary with The Solent (MCA 5) is formed by the change in sea and tidal conditions upon entry into the Needles Channel. In the west, the coastal/seaward boundary with MCA 3 follows the outer edge of the Purbeck Heritage Coast. The Character Area extends to a maximum distance of approximately 40 kilometres (22 nautical miles) offshore, ending at the northern extent of the Wight-Barfleur Reef candidate offshore SAC (within MCA 14).

Please note that the MCA boundaries represent broad zones of transition (not immediate breaks in character). Natural, visual, cultural and socio-economic relationships between adjacent MCAs play a key role in shaping overall character. Therefore individual MCAs should not be considered in isolation.

Overall character

This MCA is dominated in the west by the busy port of Poole Harbour, which is a hive of marine-based activity as well as an internationally important wildlife refuge. The more tranquil Christchurch Harbour sits beyond the protruding Hengistbury Head, which separates the two bays. Both harbour entrances present a navigational challenge to vessels due to the location of sand banks and shoals, as well as strong tidal streams – with concentrations of ship wrecks testament to these difficult conditions. Offshore, beyond the shelter provided by the mainland, the sea opens out into the English Channel – exposed to the high winds and breaking waves that frequently funnel up the channel. Thousands of years of international trade are associated with the area, supplemented today by tourism and recreational activities. Open sea views and landmark ‘gateways’ provided by the chalk stacks of Old Harry Rocks and the Needles contribute to an area with a strong sense of place.



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Adjacent National Character Areas (NCAs)

The adjacent coastline includes the following NCAs as defined by Natural England¹:

- 136: Dorset Heaths
- 135: South Purbeck
- 131: New Forest

Adjacent nationally protected landscapes

The south-western coastline, from Peveril Point and including most of Poole Harbour, is within the Dorset AONB and Purbeck Heritage Coast. The Dorset and East Devon World Heritage Site also covers the coastline from Swanage to Studland Bay.

¹ <http://www.naturalengland.org.uk/publications/nca/default.aspx>

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- MCA framed by the landmark white chalk stacks of Old Harry Rocks and The Pinnacles in the west and the Needles in the east (MCA 5), providing a strong sense of cohesion between the two character areas.
- Coastline defined by low clay, sandstone and siltstone cliffs (including nationally important fossil-rich sediments) and sandy beaches, with Hengistbury Head separating the two bays.
- Sea conditions influenced by 'double high waters', resulting in a long stand of tide at or very close to the high water mark, and the smallest tidal range in the UK within the two bays.
- Tidal streams particularly strong at the narrow entrances to Poole and Christchurch Harbours (the Swash Channel and The Run respectively), with an ebb rate of four knots or more during spring tides.
- Offshore, beyond the shelter provided by the coastline, waters are exposed to the prevailing south-westerlies which sweep up the Channel, often resulting in rough seas with steep breaking waves.
- Shallow underwater sand banks, shoals and ledges providing hazards for navigation, including Tarnville Ledges, Hook Sand, Christchurch Ledge and Beerpan Rocks.
- Rich variety of coastal and maritime habitats, including saltmarsh, saline lagoons, mudflats, sand dunes and dune heath – a large proportion in the west internationally designated.
- Variety of marine life including nursery areas for fish and extensive colonies of internationally important waders, wildfowl and seabirds. Bottlenose dolphins are frequently spotted in the coastal waters.
- Long history of maritime trade associated with the historic port of Poole and Christchurch Harbour (the latter linking to the Avon and Stour rivers); their strategic location exploited by the Romans and earlier settlers.
- Historic wrecks from international vessels often with cargos of exotic goods, such as the Studland Bay and the Swash Channel (Protected Wreck Sites).
- Christchurch Priory, with origins from the 11th century, forming a prominent navigational feature in views from across Christchurch Bay.
- Thriving fishing port of Poole, landing and exporting a range of shellfish and other fish species from the surrounding waters and adjacent MCAs. The harbour itself includes native oyster beds as well as mussel and cockle fisheries.
- Bulk cargo imports arriving into Poole including steel, rye (for the *Ryvita* brand) and palletised traffic. Export cargos include clay and malting barley. Dredgers regularly visit to discharge sand and gravel.
- Cross channel ferries from Poole to Cherbourg and the Channel Islands contributing to a busy seascape. A chain ferry links Sandbanks and South Haven Point across the harbour entrance. Ferries also serve Brownsea Island.
- One of Europe's largest on-shore oil fields beneath Poole Harbour and Bay at Wych Farm. The wells are largely screened by dense forestry plantations.
- A very popular area for recreation and tourism, with attractions including the resort town of Bournemouth, Studland Bay and the exclusive Sandbanks area of Poole.
- Sheltered waters of the bays providing favourable conditions for sailing and other watersports, with marina facilities at Poole and Christchurch.
- Important social, economic and visual relationships with the Solent (MCA 5) to the east, with many vessels passing through this MCA en-route to Southampton and Portsmouth.
- A hive of activity associated with Poole, Bournemouth, Barton- and Milford-on-Sea, with contrasting pockets of tranquillity in-between. Levels of remoteness increase significantly offshore.
- Strong visual connections between the coastline, inshore waters and the open sea – long, uninterrupted views over the Channel are key to character.



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For ease of reference, the following description text is arranged under three headings, considering the 'Natural', 'Cultural / social' and 'Aesthetic / perceptual' characteristics of the Marine Character Area. It should be noted, however, that all of these aspects combine and interact with each other to varying degrees to shape character.

Natural influences

This MCA has been shaped by a range of physical and natural processes interacting with each other over millennia. The famous white chalk stacks of Old Harry Rocks provide a 'gateway' into Poole Bay from the west, also marking the eastern extent of the Dorset and East Devon World Heritage Site. This chalk geology continues as a ridge along the seabed to outcrop at the iconic Needles on the opposite side of the MCA (within MCA 5), providing strong visual and cultural unity between the two character areas.



Old Harry Rocks

The western part of the coastline is dominated by Poole Harbour – a bar-built estuary occupying a shallow depression towards the south-western extremity of the Hampshire Basin, which has flooded over the last 5,000 years as a result of rising sea levels. The unusual micro-tidal regime means that a significant body of water is retained throughout the tidal cycle, with the Harbour therefore exhibiting many of the characteristics of a lagoon. The harbour is also the convergence point for several river valleys, notably the Frome and the Piddle, and includes eight pine- and woodland-clad islands which contribute to a distinctive sense of place. These include the National Trust-owned Brownsea Island, famous for its population of red squirrels and associations with the Scouting movement. Studland is a long coastal sandy beach backed by lowland heath (NT).

Similarly, Christchurch Harbour comprises the drowned estuary of the Stour and Avon rivers and the peninsula of Hengistbury Head. Both Poole and Christchurch Harbours are nationally and internationally valued for their nature conservation and ornithological interest, with extensive intertidal mud-flats, saltmarsh, grazing marsh and reedbeds backed by heathland, valley mire, woodland and scrub forming the transition to the wider Dorset Heathlands SPA and SAC. Sand dunes and dune heath at Studland Bay SSSI combine to support a large, varied mosaic of coastal and wetland habitats fringing the two bays that attract internationally important populations of overwintering wildfowl and wetland birds. Given the close proximity of the Poole-Bournemouth conurbation, these are particularly valued havens for wildlife.

The remainder of the coastline comprises soft clay, sandstone and siltstone cliffs from the Palaeogene period, which are subject to erosion. These rise gently up from golden sandy beaches, reaching a maximum of 36 m AOD at Hengistbury Head. Many sediments displayed in the

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cliffs are derived from ancient river and estuarine systems, yielding diverse fossil tropical flora of national importance to sedimentology (e.g. Poole Harbour Cliffs SSSI). The cliff faces along the developed coastline from Bournemouth to Miford on Sea are frequently cloaked in woodland and scrub, with glimpses of the golden and bronze rocks enabled through gaps in vegetation.

Offshore, a number of sand banks, shoals and rocky ledges provide hazards for navigation, reflected in the concentration of ship wrecks in these locations (see under the 'Cultural / social' section). The tight entrances to the natural harbours of Poole and Christchurch, coupled with shifting sand banks, strong tidal streams, and the unique 'double high waters' of the area provide a particular challenge to sea users. Lit beacons and cardinal buoys provide guidance through the harbour channels, whose depth can also vary (and be very shallow in places) due to the shifting sand banks, particularly following winter storms. Moving south beyond the shelter provided by the coastline, the waters of the MCA become increasingly exposed to winds being funnelled up the Channel, resulting in high wave energy and rougher sea conditions – emphasising the important longstanding role of the local harbours in providing safe, sheltered anchorages to seafarers.

The complex underwater conditions also give rise to rich marine habitats, including areas within the candidate Studland to Portland inshore SAC which is valued for its reefs, supporting species such as pink sea fans, cup corals, sponges, algae, crabs and lobsters. Bottlenose dolphins are annual visitors to the coastal waters.

Cultural / social influences

Before sea levels rose after the end of the last Ice Age, the current coastline was many miles from the open sea, inhabited by Mesolithic

hunter-gatherers – supported by the discovery of 250,000 year old flints in the Bournemouth area. Some theories also suggest that the Bluestones used to build Stonehenge may have been transported via Christchurch Harbour and the River Avon.

The natural shelter and strategic location of the harbours, created after sea levels rose 7,000 years ago, have long proved attractive for trade and defence. The fortified remains of a 2,000 year old Iron Age longboat were discovered preserved in the mud off Brownsea Island in the 1960s – the earliest known artefact to be found in Poole Harbour. It is thought that it would have been based at Green Island in the harbour, carried up to 18 people, and used for international trade. Christchurch Harbour became a major trading port around 100 BC, with exports including copper, gold, silver and iron and imports including wine and glass. It is likely that slaves were also exported through the harbour. Trade continued until the Roman Invasion of Britain in AD43. The remains of a Roman ship were found in the harbour in 1910.

The Romans used Poole as an invasion port for the conquest of southern England, establishing a settlement at Hamworthy (now the western half of Poole), connected by road to Badbury Rings, a Roman transport hub. Despite its popularity with the Romans, Poole was only a small fishing village at the time of the Norman Invasion in the 11th century. Conversely, Christchurch Harbour became one of the most important ports in Britain during the Saxon period, capitalising on its location within easy reach of the continent and links via the River Avon to Salisbury; and along the Stour to Wimborne and Blandford Forum. The harbour has famous associations with smuggling, including the 1784 *Battle of Mudeford*, which resulted in the murder of a customs officer and subsequent trial and execution of a local smuggler. Today, the port is largely silted up, used primarily by recreational yachtsmen or



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small local fishing boats.

In the later medieval period, Poole grew into a major port (Dorset's *Port of Staple*) for the export of wool, with trading links across Europe – and by the 18th century became the principal British port trading with America, including strong links to the Newfoundland cod trade. Customs records from the beginning of the 16th century record the arrival of ships from northern Spain, for example, bringing iron and figs in return for wheat and cloth. Shipwrecks from this wealthy period illustrate the range of goods that were traded – including the Protected Wreck Site of the *Swash Channel* from the early 17th century. This unusually large armed merchant ship is adorned by a number of well-preserved wooden carvings, thought to be amongst the oldest of their kind in the world. Another nationally important wreck – the 16th century *Studland Bay* – originated from the Basque region of Spain, with a cargo of rare pottery made in Seville for export in the West Indies. It is likely that she hit Hook Sands on her way into port, and would have been heavily salvaged.

Poole remained prosperous until the arrival of the railways in 1847, and the movement of deep-hulled boats up the coast to Southampton – with its deeper harbour and closer links to London. In addition, the essential maintenance of the harbour channels by dredging, to maintain access, fell into decline. Today the channels are maintained by the Poole Harbour Commissioners, established by Act of Parliament in 1895, and the harbour is once again a thriving port and location of several marinas, moorings and anchorages to serve the area's popularity for yachting and other watersports. Approximately 500,000 cross-channel passengers are carried from Poole to the Channel Islands and Cherbourg annually, with a further 80,000 freight units transported to and from Cherbourg². The Port also handles

² http://www.phc.co.uk/about_history_1990.html

approximately 600,000 tonnes of conventional cargo, including the import of steel and rye (for the *Ryvita* brand) and the export of clay, malting barley and shellfish.



Local fishing boat

The rich seas within and surrounding the MCA provide a varied resource of shellfish and fish species serving both commercial (including export markets) and recreational fishing activity. These include mussels dredged off Portland Bill (MCA 3) and re-layed in Poole Harbour for fattening, as well as native oysters dredged from Poole Bay – also placed in the shallow warm waters of the harbour for fattening. Small cockle fisheries and pink prawn potting operatives are also based in Poole Harbour, and crab and lobster potting is popular throughout the MCA (particularly associated with the rocky reefs). Salmon and sea trout netting takes place in Poole Harbour and the Avon/Stour Estuaries which feed into Christchurch Bay.

Further offshore and beyond the MCA, netting for bass, bream, sole, cuttlefish, whiting and cod takes place (species dependent on the

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season). Locations used by local fishermen include the waters surrounding the Isle of Wight (MCA 6), off Portland Bill (MCA 3) and wreck sites further into the Channel and as far as the north coast of France, around Cherbourg. Approximately 100 boats from Poole land some 2,800 tonnes of fish and shellfish each year³. In addition to sea fishing, year-round recreational angling takes place within the bays, as well as boat, beach and quay-based angling in Poole Harbour.



Dredging in Poole Harbour

Other natural resources exploited in the area include offshore marine sand and gravel sediments – the South West Needles site is under licence from the Crown Estate to Hanson Aggregates and Tarmac Marine Dredging Ltd – and natural oil reserves beneath Poole Harbour. Wytch Farm is the largest oil field in Western Europe, discovered in 1973 and now operated by Perenco, after taking over from BP in 2011. The site includes a gathering site and oil well hidden within the woodland of Furzey Island, although a rig is visible rising through the trees. Oil is piped about 91 kilometres via Fawley to a terminal on the

far side of Southampton Water at Hamble, for export by tanker. Natural Gas (methane) is also piped to Sopley, north of Christchurch, for use in the national domestic gas supply network.

The wider coastline is a popular tourism destination, owing to attractions such as the resort town of Bournemouth with its famous pier (completed in 1880), which developed rapidly after the arrival of the railway in 1870. This spurred massive growth in seaside and summer visitors to the town, especially from the Midlands and London, with its population increasing from 17,000 in 1880 to 60,000 in 1900. Further growth of the town continued in the 20th century, and in 2011, domestic and overseas visitors made more than 5.6 million trips to the town, spending over £460 million. Bournemouth seafront, with its wide sandy beach and charismatic colourful beach huts is one of the UK's biggest attractions, receiving 4.5 million visitors in 2011.

Other popular destinations along the coast include Studland Bay, the smaller seaside resort of Swanage, and the coastal towns of Barton and Milford on Sea – both popular retirement destinations with open sea views framed by The Needles and the Isle of Wight. National Trust land and sections of the South West Coast Path allow clifftop access above Old Harry Rocks, Swanage and Studland Bays, with outstanding views across the MCA.

Aesthetic and perceptual qualities

The Poole and Bournemouth conurbation dominates the western half of the coastline, with tower block and large individual houses extending eastwards along the cliffline, frequently painted white and therefore visible from a long distance offshore. The scale of these developments is often exaggerated by the beach huts and trees on the cliffs below – thereby forming an imposing developed backdrop to many views from

³ <http://www.ports.org.uk/port.asp?id=131>

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the sea.

Pockets of undeveloped and naturalistic coastline provide strong contrasting areas of relative tranquillity, particularly Ballard Down (above Old Harry Rocks), the wooded islands within and forested heathland surrounding Poole Harbour, Hengistbury Head and Hordle Cliff. Christchurch Harbour is noted in the Shell Channel Pilot⁴ as being '*surprisingly unspoilt*', with the tower, ruins and gardens of Christchurch Priory providing a historic setting for this part of the coastline, in stark contrast to the modern landmarks characterising the coastline to the west. The Priory's tower forms a recognised local landmark and navigational feature rising up prominently from the coastal plain.



Christchurch Priory forming a prominent navigation mark

Open views across the bays, out to sea and towards the Channel are particular features of this MCA, particularly when compared to the short vistas characterising the neighbouring Solent (MCA 5), due to the

position of the Isle of Wight. Like other parts of the Dorset coast, this area has drawn artists and writers attracted to its spectacular scenery and changing light conditions over the centuries. Famous associations include members of the Bloomsbury Group in the early 20th Century, such as Roger Fry, Clive and Vanessa Bell and Virginia Woolf.

The marine area is also a sea of contrasts; from the bustling commercial and recreational traffic associated with Poole Harbour, the sheltered waters of the bays (much favoured for sailing and angling) to the exposed, often 'wild' conditions found further offshore, where protection by the land ceases and the sense of maritime danger becomes very real when a storm is in full force.



Studland, by Roger Fry (1911)⁵

⁴ Cuncliffe, T (2010) *The Shell Channel Pilot: 6th Edition*. Imray: Cambridgeshire.

⁵ Taken from Johnson, C (2011) *Drawing Inspiration: The cultural legacy of artists working in Dorset and its evidence of landscape change: 1800-1860*. Commissioned by the Dorset AONB.

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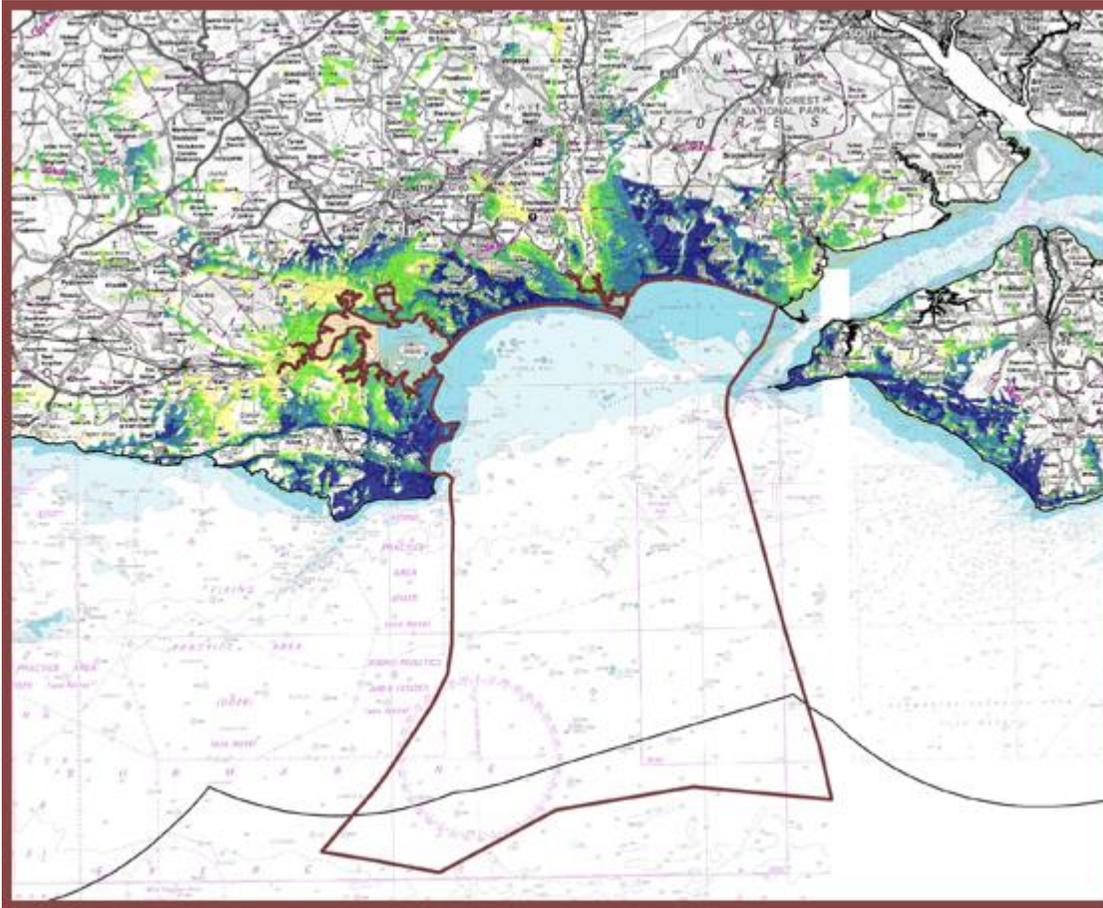
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Land with views of MCA 4



South Inshore/South Offshore marine plan areas

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Land with sea views (percentile)



- Views of the MCA can be gained from the Isle of Portland, within the Dorset & East Devon Coast World Heritage Site to Exbury within the New Forest National Park and Ventnor within the Isle of Wight AONB.
- Extensive views are generally restricted to within 10km of the coastline. These include areas around Christchurch, Bournemouth and Swanage (including parts of the Purbeck Heritage Coast and South West Coast Path, the western side of the Isle of Wight and the Tennyson Heritage Coast).
- Very small areas of land with extensive sea views are present over 10km inland at Burly and the eastern edge of Ringwood.
- Views from inland locations include Ashey Down on the Isle of Wight, Clearbury Down within the Cranborne Chase and West Wiltshire Downs AONB, and Blandford Forest and Cerne Abbas within the Dorset AONB.
- The eastern side of the Isle of Portland, elevated land between 10-20km away at Milton Abbas and 20-30km away at Whitsbury have some views of the MCA, as do locations around Lymington and Cowes (including parts of the Hamstead Heritage Coast).

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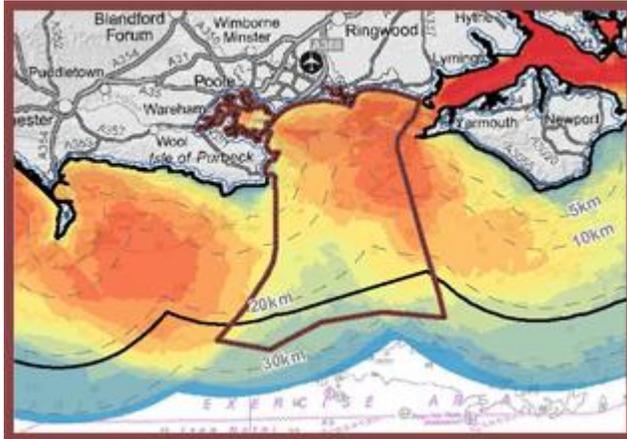
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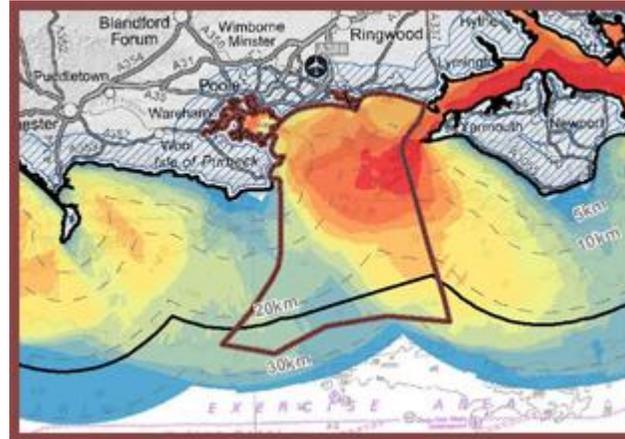
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Visibility of sea from land

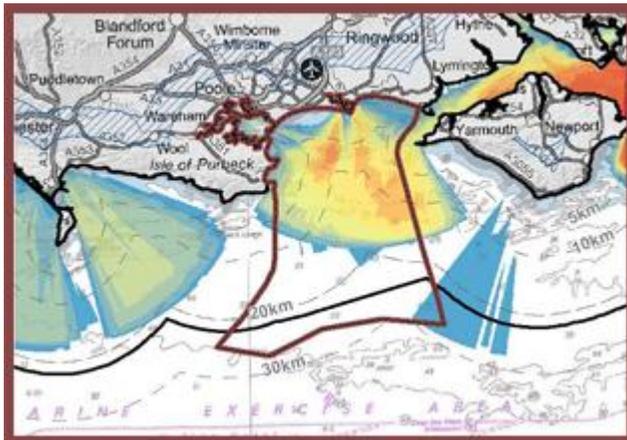
Relative visibility of the sea surface from viewers on land



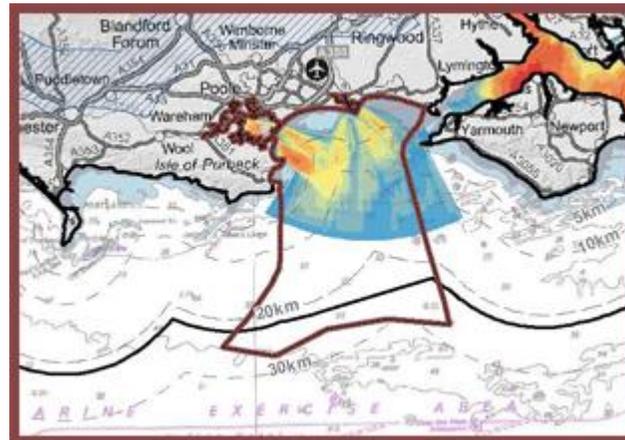
0-1km from the High Water Mark



1-5km from the High Water Mark



5-10km from the High Water Mark



10-20km from the High Water Mark

South Inshore/South Offshore marine plan areas

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Location of viewers

Visibility of sea from land (percentile)

1 to 10	11 to 20	21 to 30	31 to 40	41 to 50
51 to 60	61 to 70	71 to 80	81 to 90	91 to 100

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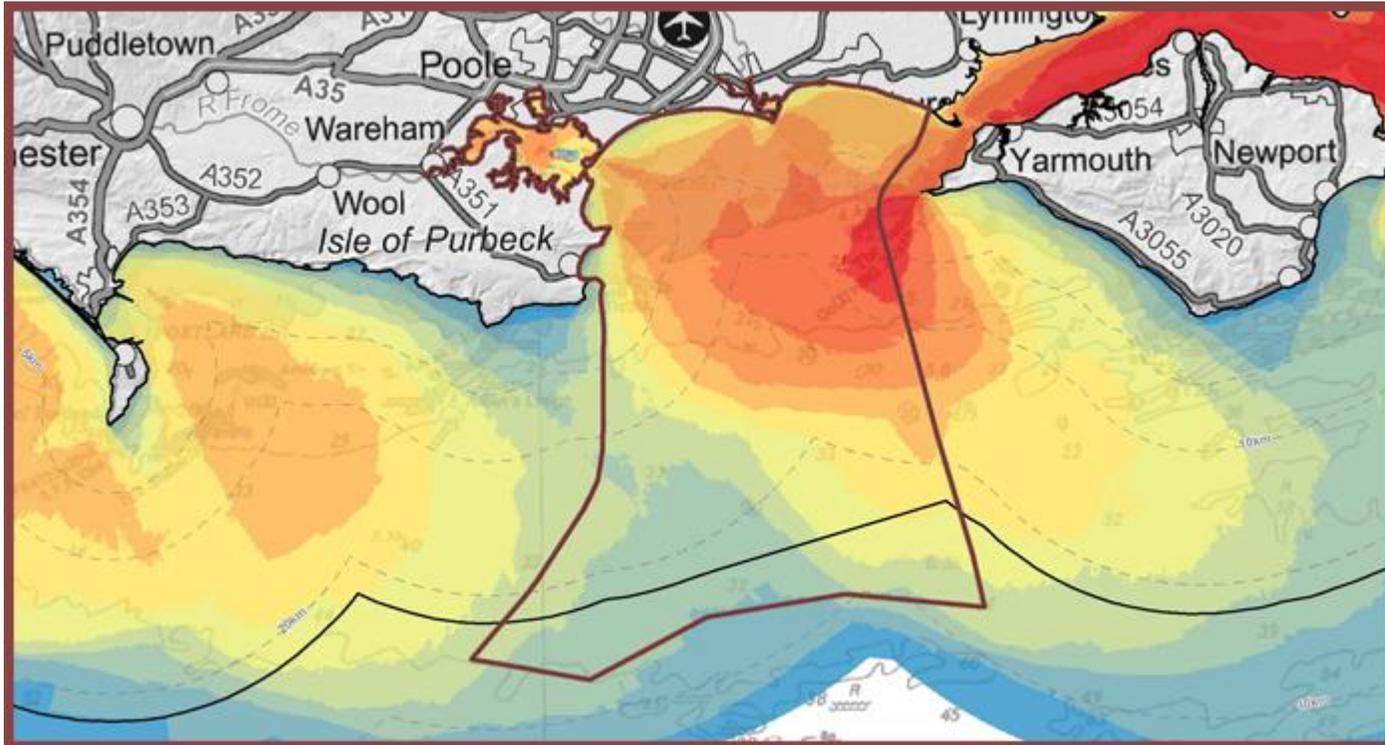
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Visibility of sea from land

Relative visibility of the sea surface from viewers on land

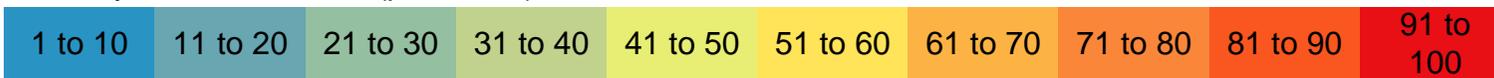


Up to 20km from the High Water Mark

South Inshore/South Offshore marine plan areas

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Visibility of sea from land (percentile)



- Much of the MCA is visible from numerous locations on land, including on its eastern boundary along the Needles Channel (approx. 10km (5 nautical miles) from the Christchurch Bay shoreline). Other highly visible areas include parts of Poole Harbour and the western edges of the Isle of Wight.
- Visibility is lowest along the western boundary of the MCA and gradually increases when moving towards the eastern boundary where it is highest.
- Dramatic increases in visibility are experienced offshore from the mouth of Poole Harbour, Hengistbury Head and Handfast Point.
- Christchurch Bay is the bay that can be seen from the most locations on land.
- Visibility is lowest in the south of the MCA.

