



Seascape Assessment for the South Marine Plan Areas

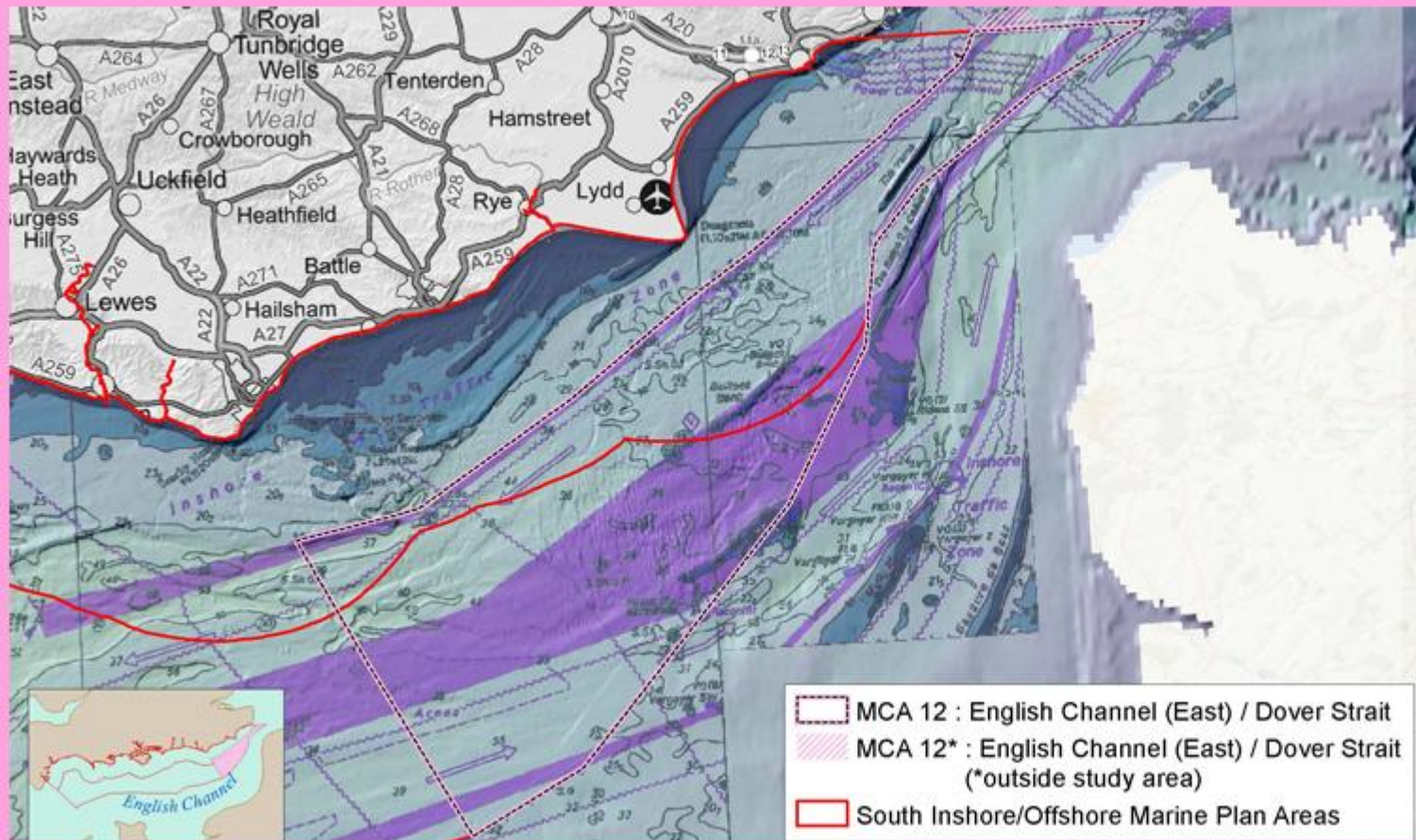
MCA 12: English Channel (East) / Dover Strait

Snapshot

Key Characteristics

Description

Visual Resource Mapping



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Location and boundaries

The Marine Character Area (MCA) covers the Dover Strait, as depicted on the international Vessel Traffic Services (VTS) guide. The inshore boundaries largely follow the Traffic Separation Zone of the shipping channel (approximately 20 kilometres or 11 nautical miles offshore), whilst the outer boundaries are formed by the edge of the offshore marine plan area and territorial limits, approximately 55 kilometres (30 nautical miles) from the coast. The functional extent of the Dover Strait stretches beyond English territorial waters into France, where the second shipping lane is located. The shipping lane in English waters contains south moving traffic, and the two one-way lanes are separated by a Traffic Separation Zone. The functional extent of the Channel extends eastwards into adjoining MCAs 13 and 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 has a rich physical and cultural heritage that is reflected in its character today. It is one of the busiest shipping channels in the world; the organised movement of the many ships, cargo vessels and tankers through the channel evoking a strong sense of place. The Character Area is strongly associated with the defence of Britain over the centuries, including its role in the early stages of the *Battle of Britain*. The seabed is littered with both sea and air-borne casualties from both World Wars as a legacy of the most recent conflicts. Intervisibility with both the French and English coasts, with their corresponding white cliffs and prominent headlands, provides a unique setting for the Dover Strait.

Adjacent National Character Areas (NCAs)

N/A – this NCA does not include an adjacent coastline.

Adjacent nationally protected landscapes

Although not immediately adjacent to the MCA, the High Weald and Kent Downs Areas of Outstanding Natural Beauty (AONB) include land with views out towards this part of the English Channel.



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- Broad north-east to south-west channel forming part of the wider Dover Strait (which stretches into French territorial waters). It reaches a maximum depth of approximately 50 metres.
- Seafloor contains a large part of the English Channel Outburst Flood Feature -providing evidence of the flood which created the channel separating England from mainland Europe.
- Mixed solid geology of the sea floor largely concealed by seabed and palaeovalley sediments, including sand, gravels, flints and chalk pebbles - rich habitats for benthic species.
- Narrow, linear sandbanks including The Varne, Bullock Bank and Bassurelle providing important nursery and spawning grounds for fish.
- Complex tidal currents meeting from the western English Channel/ Atlantic and the North Sea.
- Weather conditions in the Strait subject to rapid change. Strong tides and the narrow topography can give rise to rough seas with steep breaking waves.
- Visibility is often poor, changing quickly to dense fog, even in strong or gale-force winds which can last for several days.
- Iconic role of the Strait in Britain's identity as an island nation and its critical function in national defence; the location of many successful and attempted invasions – from the Romans, Norman Conquest, Napoleonic France and the two World Wars.
- Strait's turbulent past reflected in the remains of numerous British and enemy shipping, aircraft and other associated debris from the two World Wars.
- Scattered wrecks on the seabed testament to the channel's importance as a trade route, including cargo vessels from as far afield as Panama and Japan.
- The Dover Strait forms part of the first IMO-approved traffic separation scheme in the world - maritime traffic follows a one way system, separated by a central traffic separation zone.
- Internationally important telecommunications cables passing through the seabed, including the Atlantic Crossing, which transports speech and data traffic between the USA and Europe.
- One of the busiest shipping channels in the world, with high volumes of large commercial freight/cargo vessels, tankers, fishing vessels and cross-channel passenger ferries.
- Aggregates dredging occurs in the far west of the MCA.
- A busy, dynamic area whose seascape character is visually dominated by transport movement in views from both land and sea.
- Narrow strait, particularly in the east, with intervisibility with both the English and French coasts, but often periods of low visibility due to climatic conditions.
- The Channel Tunnel route to France passes through the east of the MCA, forming a significant contributor to the perceptual character of this seascape.



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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.

Please note that this MCA description has close similarities to MCAs 13 and 14, which collectively cover the English Channel within the South marine plan area.

Natural influences

The defined feature of the Dover Strait forms part of the ancient geomorphological English Channel Outburst Flood Feature. Deeply gouged channels on the seabed provide evidence of a megaflood which occurred some 200,000 years ago, when a huge glacial lake in the North Sea burst through the Dover Strait isthmus which contained it. This episode caused England to separate from mainland Europe.

The solid rocks of the sea bed include broad belts of Upper Cretaceous chalk with flint bands (famously outcropping as white cliffs at Dover and Beachy Head), underlain by Lower Cretaceous sandstones, clays and limestones – the boundary between the two marked by a small submarine escarpment. Bands of Jurassic mudstones and sandstones also occur in the central part of the Strait, exposed in the cores of small eroded anticlines and faulted blocks. Much of the underlying bedrock is masked by seabed and palaeovalley sediments, including sand, gravels, flints and chalk pebbles.

The seabed and associated sediments provide rich habitats for benthic species, including shellfish (as recognised in the presence of recommended Marine Conservation Zones (rMCZs) within the MCA).

Tidal sand ridges are also a feature, including the internationally designated Bassurelle Sandbank Site of Community Importance, which is elevated above the seabed by 15 metres and includes deposits up to 25 metres thick. The wider area is an important nursery area for lemon sole, mackerel and sand eel and a spawning area for cod, lemon sole, sole, plaice, sand eel and sprat.



Trawler returning after fishing in the waters

The topography of the Dover Strait and its position between the North Sea and Atlantic Ocean gives rise to dynamic sea and weather conditions. The form of the coastline diverts winds to blow from either the south-west or north-east, producing rough sea conditions when they are particularly strong, especially as the Strait narrows in the east. Tidal streams also increase as the channel narrows and owing to the presence of the linear sand banks (which are aligned with the direction of flow), reaching a maximum speed of 1.75 metres per second around Dover. The sandbanks are marked by large lit buoys as a warning for passing ships due to their proximity to the sea surface. On a national level, wave exposure is deemed to be comparatively low for open

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water, due to the shelter provided by the adjacent land masses.

The uniform and relatively shallow nature of the seabed means that sightings of whales, dolphins and porpoises are limited; long-finned pilot whales and common dolphins are the most frequently recorded species – but these do not have any favoured locations within the MCA.

Cultural / social influences

The Dover Strait is recognised nationally (and internationally) for its role in British maritime history – both as a trade route and as the location of multiple battles and invasion attempts from the continent over the millennia. Evidence from maritime trade and boat building from the Mid Bronze Age is illustrated by the discovery of a 3,300 year old oak boat near Dover in the 1990s (known as the 'Dover Boat'), which included a cargo of scrap metal being transported from France to Britain. Wrecks littered across the seabed beneath the Strait provide further demonstration of historic international trade, with sunken cargo ships from origins as distant as Panama and Japan. Luxury goods such as wine have been imported from the continent via the Dover Strait and wider English Channel to ports along the coast and to London since the Iron Age. Equally, goods produced in the region have been exported by sea via the channel for the same period of time, such as corn, salt, wool, seafood and even slaves (in the 1st century BC).

The strategic position of the Dover Strait as the closest entry point to England from the continent has meant it has long been at the frontline in the defence of our island nation. The first major invasion via the Dover Strait sea was by the Roman army (first by Julius Caesar in 55 BC, then in AD 43 under Emperor Claudius), with military relicts still found along the coastline, including the 18 metre lighthouse at Dover (where the latter fleet was based). Another example is the Norman

invasion of the 11th century, which encouraged further cross-channel trade –such as the importing of French stone to build their famous castles and fortifications (and more wine). Perhaps the most famous events in recent memory are from the two World Wars, including the Battle of Dover Strait (1916), which involved two and a half flotillas of German torpedo boats against an unprepared Dover Barrage - and the early stages of the Battle of Britain (1940) involving both the RAF and the Navy against airborne German attacks. The RAF lost 19 fighters and shot down 31 German aircraft during this part of the conflict. The remains of German submarines and aircraft bombers from both wars survive as wrecks on the seabed as a legacy from these conflicts.

Today, the Dover Strait's role as a key trade route via its international shipping channel continues. It contains a very high volume (400–500 a day) of large commercial freight/cargo vessels, tankers, fishing vessels plus cross channel passenger ferries. The strict system of traffic separation zones manages the high density of sea-based traffic navigating through the narrow Strait.

The Channel has traffic on both the UK-Europe and North Sea-Atlantic routes, and is the world's busiest seaway, with over 500 ships per day. Following an accident in January 1971 and subsequent series of collisions with wreckage in the following February, the Dover Traffic Separation System (TSS), the world's first radar controlled TSS, was set up by the International Maritime Organization. The scheme mandates that vessels travelling north must use the French side, travelling south along the English side. There is a separation zone between the two lanes. The English shipping lane passes through the southern part of this MCA.

As well as the Strait's importance for marine transport and trade, the

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seabed provides a rich resource for scallop and oyster dredging, and the waters are valued commercial fishing grounds for species such as cod, whiting, bream, Dover sole, plaice and rays. Fleets from harbours along the south coast as well as from France and Belgium use the waters of the Dover Strait for fishing.

The thick marine sediments associated with the seafloor in the west of the MCA (West Bassurelle) are also dredged, providing aggregates for the construction industry.

Aesthetic and perceptual qualities

This is a busy, dynamic area defined by transport movement, regularly used by over 500 commercial vessels per day, and a steady stream of cross channel traffic between Dover and Calais. In views from the coast, maritime traffic is key to the character of the Strait, with white ships and coloured tankers frequently featuring on the horizon.



Cross-Channel ferry

Perceptions of the area are also strongly influenced by sea and weather conditions – with visibility often poor and fog lasting for consecutive days, evoking a strong sense of remoteness despite the presence of dense marine traffic. Strong tides and the constraints of the landform, combined with strong south-westerly gales can result in rough seas with high breaking waves, bringing an unforgiving element to the seascape. Conversely, in clear, calm conditions, characterful views to the unifying white cliffs of England and France provide the sea traveller with a scenic journey through the Channel, and memorable entry point into England that is steeped in history.



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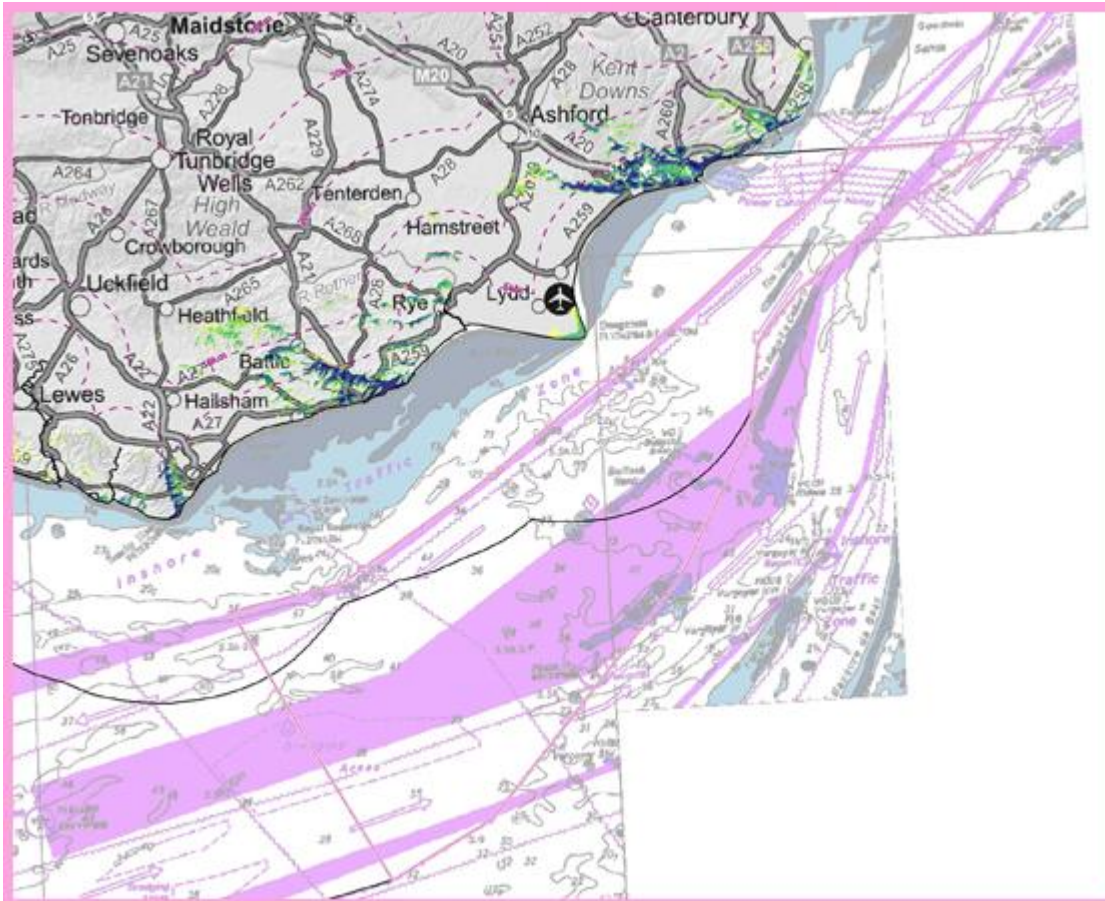
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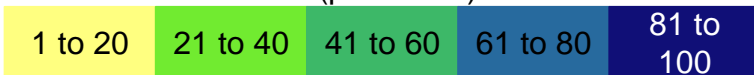
Land with views of MCA 12



South Inshore/South Offshore marine plan areas

MCA 12: English Channel (East) / Dover Strait

Land with sea views (percentile)



- The most extensive views of the MCA can be obtained from the Heritage Coast-designated coastline from St Margaret's at Cliffe to Folkestone, including sections of the North Downs Way.
- Areas with high sea views also include parts of the Kent Downs AONB between Folkestone and Aldington, Fairlight to Hastings and to Telham, as well as the eastern edge of Eastbourne (within the South Downs National Park).
- Other locations with good views of the MCA include Ninfield Ashburnham Place, Henley Down, Broad Oak (High Weald AONB), Rye and Postling.
- Sea views into this MCA can be gained from numerous locations, including Seaford Head, Eastbourne, Bexhill, Winchelsea, Rye Foreign, Dungeness, Folkestone, Dover and Kingsdown, although these are less extensive than those named above.
- Views of the sea are more limited between Saltdean to Manston.

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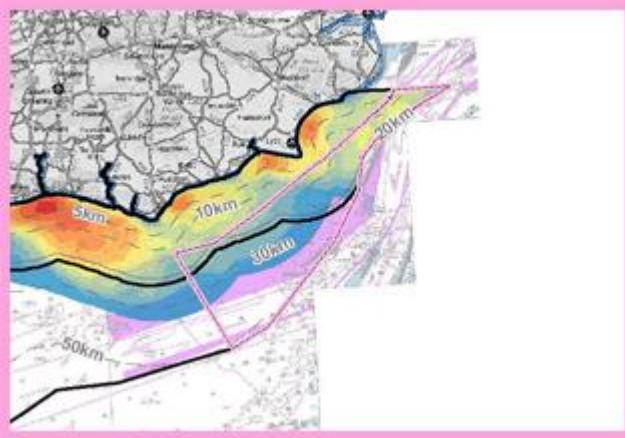
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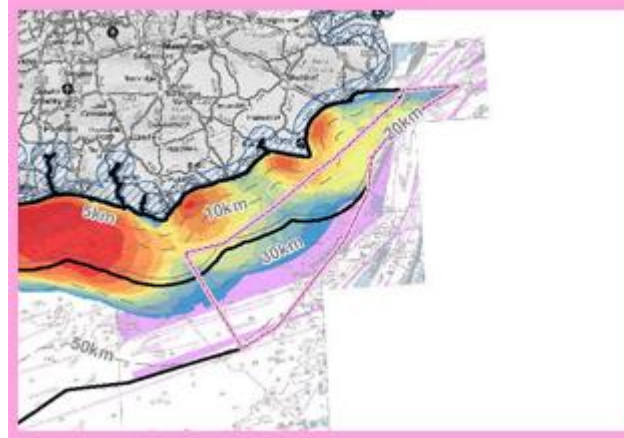
Visual Resource Mapping

Visibility of sea from land

Relative visibility of the sea surface from viewers on land



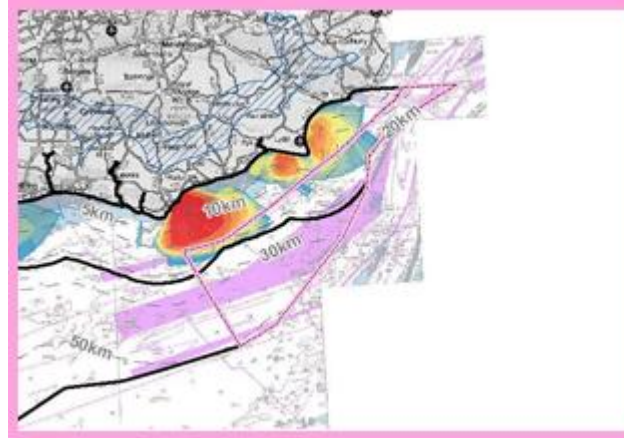
0-1km from the High Water Mark



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

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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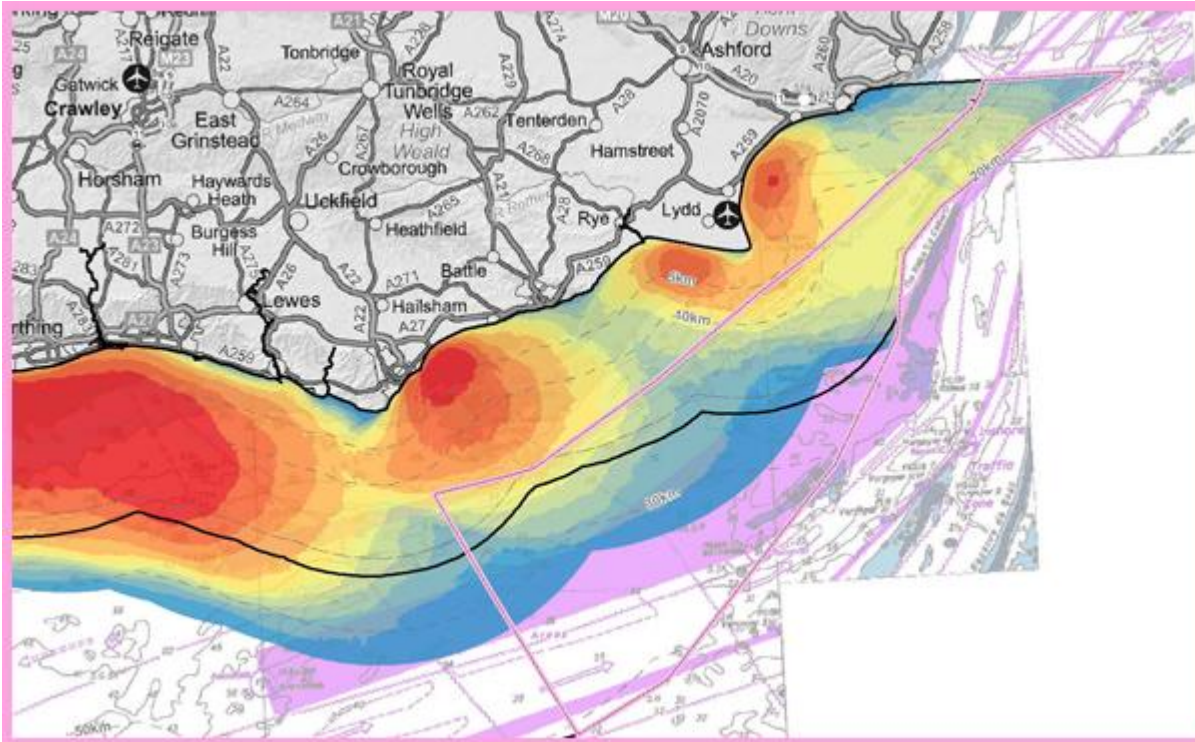
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Visibility of sea from land

Relative visibility of the sea surface from viewers on land



- This offshore MCA is not as visible from land as the inshore MCAs.
- The northern section of the MCA is the most visible section due to its closer proximity to land.
- There is a large area along the southern and western boundaries, extending up to the southern edge of Bullock Bank that cannot be seen from the land.
- Visibility of the MCA is likely to be influenced by atmospheric conditions for much of the year given its distance offshore.

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)

