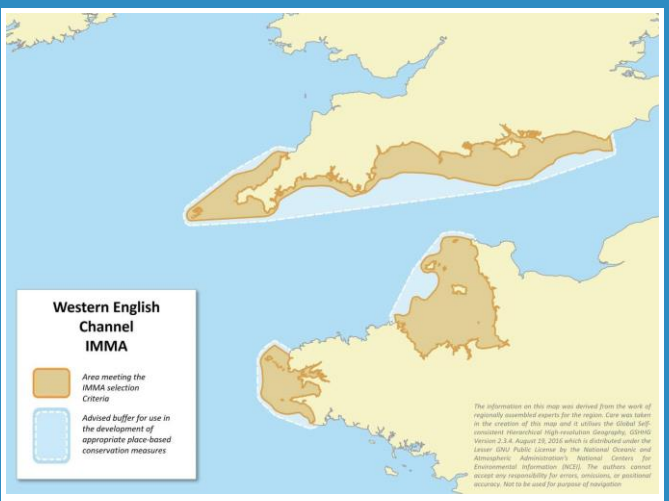

Area Size

26 139 km²

Qualifying Species and Criteria

Common bottlenose dolphin – *Tursiops truncatus*

Criterion B (1)

Marine Mammal Diversity

Criterion D (2)

Balaenoptera acutorostrata, Balaenoptera physalus, Delphinus delphis, Grampus griseus, Halichoerus grypus, Lagenorhyncus albirostris, Phoca vitulina, Phocoena phocoena, Tursiops truncatus

Summary

Coastal ecotype bottlenose dolphins (*Tursiops truncatus*) tend to live in small communities and populations and are clearly distinct from the more abundant pelagic populations. They range along coastlines typically remaining close to shore in water less than 50m deep and tend to have strikingly limited ranges. The English Channel is habitat for four separate coastal ecotype populations. There is no evidence of social mixing between these populations of animals despite the proximity of their core ranges and they can be segregated by genetic, stable isotope and social factors. The Gulf of St Malo is

Western English Channel IMMA

Summary, continued.

habitat for the largest coastal ecotype population in northeast Atlantic waters with three other distinct communities found within the Channel: two close together around the northwest tip of Brittany and a third ranging along the south coast of England. This area is also used by at least six other cetacean species and the two native pinniped species.

Description:

The areas delineated by this IMMA are restricted to shallow coastal waters of the northern and southwestern coastlines of the Western English Channel defined by the known range extents of four resident populations of coastal ecotype common bottlenose dolphins. The shoreline is predominantly rocky with sandy beaches and estuaries. The area extends on both coasts to the western margin of the entrance to the western channel. The western extent of the boundaries of this IMMA are located at areas of oceanographic mixing at the entrance of the western English Channel with upwellings and tidal mixing with waters from the wider shelf seas supporting enhanced regional productivity (Araújo et al., 2006; Cox et al., 2018).

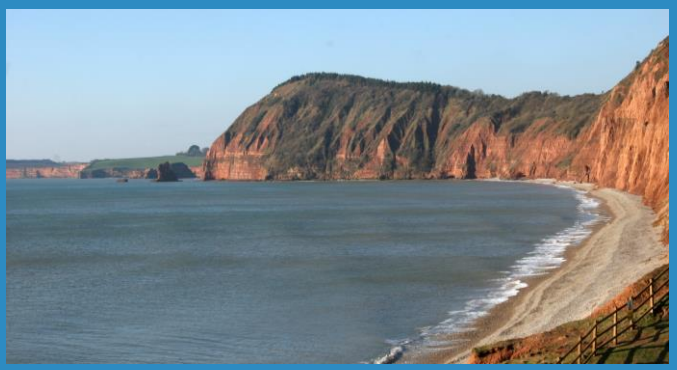

Figure 1: Sidmouth, South Devon. Photo credit: PGH Evans

Criterion B: Distribution and Abundance Sub-criterion B1: Small and Resident Populations

The Western English Channel provides the entire known range for four separate populations of the coastal ecotype of common bottlenose dolphins (*Tursiops truncatus*) defined as 'coastal-south' and 'coastal-north' by Louis et al. (2014). Unlike the pelagic ecotype which occurs in large numbers in shelf waters (Rogan et al., 2018; Hammond et al., 2021) the coastal ecotype tends to range within shallow coastal waters and form small, discrete and separate coastal populations/sub-populations with distinct social, habitat and genetic identities (Mirimin et al., 2011; Louis et al., 2014; Oudejans et al., 2015; Nykanen et al., 2019).

Figure 2: Common bottlenose dolphins (*Tursiops truncatus*). Photo credit: M. Buanic / OFB

Normano-Breton population

This is the largest population of the coastal ecotype in the Atlantic coastal waters of mainland Europe. The abundance estimate from surveys conducted in 2019 was 608 (95%CI= 540-685) (Couet & Mauger, 2022). This population is resident year-round in the Gulf of St Malo in the area between St Malo, Jersey and Cherbourg, and genetic studies have identified this as a discrete reproductive population (Louis, 2014). Currently no protected area has been designated for this population.

Figure 3: Common bottlenose dolphins (*Tursiops truncatus*) off the Brittany coast. Photo credit: OCEANOPOLIS

Molène Archipelago population

A population of coastal bottlenose dolphins is resident around the Molène archipelago and is one of two discrete populations found within the Parc Naturel Marin d'Iroise (PNMI), northwest France. A survey in 2022 estimated approximately 103 (95% CI 78-117) dolphins in this population (P. le Niliot, OFB, *pers. comm.*).

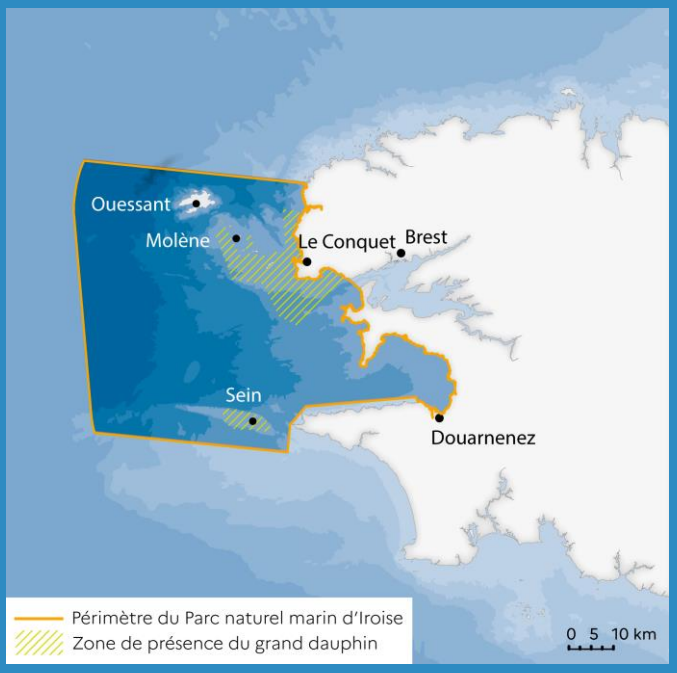

Figure 4: Map showing the home range of common bottlenose dolphins (*Tursiops truncatus*) in the perimeter of Parc Naturel Marin d'Iroise (PNMI). Excerpt from OFB https://serolane.parcnational.fr/.

Ile de Sein population

A second small population of coastal bottlenose dolphins resides within the PNMI and ranges within a small area around the Ile de Sein (Liret, 1994). Surveys have resulted in estimates of 31 animals in 2017 and 43 animals in 2022 (Buanic, 2018; P. Le Niliot, *pers. comm.*). This long-term resident population has no observed mixing and/or known reproductive exchange with the Molène population. The 95% kernel density home range area was calculated as 33.5 km² with a core area (kernel density 50%) of just 5.6 km² (Louis et al., 2017).

Figure 5: Bottlenose dolphins (*Tursiops truncatus*). Photo credit: Maïlys Baudoint / GECC

Figure 6: Bottlenose dolphins (*Tursiops truncatus*). Photo credit: C. Gicquel / OFB

English Channel coastal population (England)

Estimated at just 40 individuals (CV= 0.18, 95% HPDI= 30-59), this group of bottlenose dolphins is resident along the entire Channel coast of England (Corr et al., 2023). They are not protected by a designated MPA and range from East Sussex to St Ives in North Cornwall. They are an OSPAR-recognised assessment unit (AU) as indicators of Good Environmental Status (GES) for the Marine Strategy Framework Directive (MSFD). Photo-id studies (Dudley, 2018; Corr, 2020) show multi-annual sightings of individuals dating back to 2007 with these animals resident but mobile in shallow (<50 m) coastal waters throughout their known range. Photo-identification studies have shown these animals to be distinct from animals photographed in pelagic Channel waters and from those belonging to populations resident along the northern coast of France.

Figure 7: Bottlenose dolphins (*Tursiops truncatus*) in south coast of England. Photo credit: Dan Murphy

Figure 8: St Ives, North Cornwall. Photo credit: PGH Evans

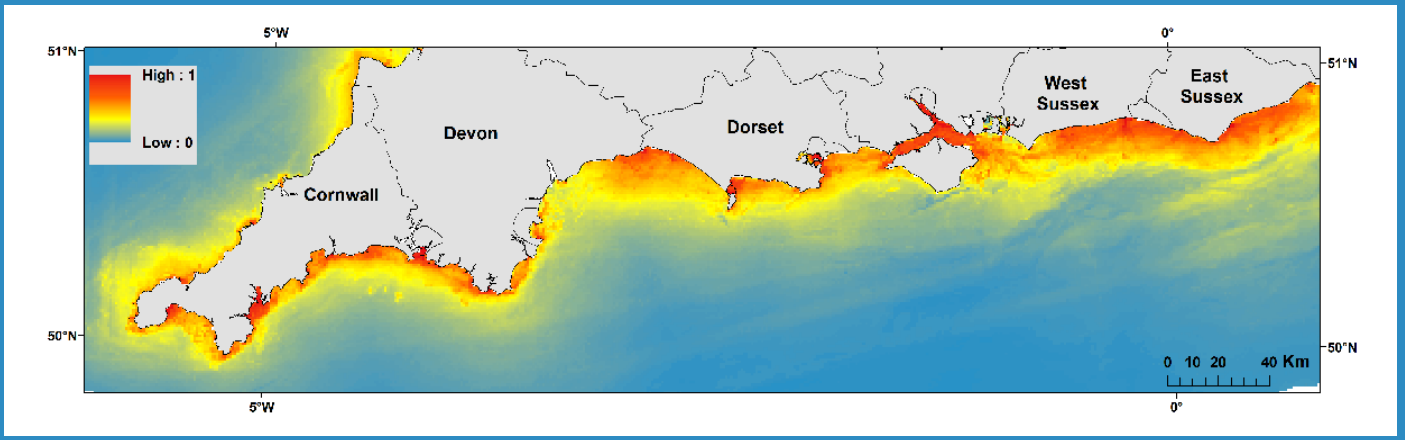

Figure 9: Cumulative utilisation impact distributions (cumulative impact scores combined with relative habitat suitability) of coastal bottlenose dolphins (*Tursiops truncatus*) in the region, scaled between 1 (highest) and 0 (lowest). Excerpt from Corr et al. (2023).

Criterion D: Special Attributes
Sub-criterion D2: Diversity

In addition to common bottlenose dolphins, seven marine mammal species are regularly seen within the coastal waters defined in this IMMA (McClellan et al., 2014; Leeney et al., 2012; Pikesley et al., 2012). Regular coastal visual-acoustic surveys conducted in the western extent of the English Channel coast (termed sub-area 1) by the University of Plymouth (Edwards, 2018; McClements, 2023), have regular detections and sightings of minke whales (*Balaenoptera acutorostrata*), harbour porpoises (*Phocoena phocoena*), common dolphins (*Delphinus delphis*), Risso's dolphins (*Grampus griseus*) and white-beaked dolphins (*Lagenorhynchus albirostris*), the only population of which seen in the waters of southern England (Brereton, 2014). Wildlife ecotours also report regular sightings of common dolphins, harbour porpoises and Risso's dolphins at the western extent of the English Channel coast (de Boer et al., 2018). Grey seals (*Halichoerus grypus*) are found at various haul out sites throughout the IMMA and telemetry tracks show seals travelling between the tip of northwest Brittany and the Isles of Scilly (Vincent et al., 2017). Small, isolated colonies of harbour seals (*Phoca vitulina*) use haul-out sites on sandbanks in Poole Harbour and on the Normandy coast. The ferry route between Penzance and the Isles of Scilly in the west of sub-area 1 has the second highest cetacean species diversity of all northwest European ferry routes surveyed by ORCA (ORCA, 2016). The cetacean species listed above are regularly recorded on ORCA surveys from ferries and cruise ships in the area. In addition, fin whales (*Balaenoptera physalus*) humpback whales (*Megaptera novaeangliae*) and long-finned pilot whales (*Globicephala melas*) are also occasionally seen. Fin whale sightings around Cornwall peak in winter months (Pikesley et al., 2012; Sea Watch Foundation, unpublished data).

Figure 10: Minke whale (*Balaenoptera acutorostrata*).
Photo credit: PGH Evans

Figure 11: Common dolphins (*Delphinus delphis*) bow rides *Take the Helm* sailing vessel. Photo credit: Simon Ingram

Figure 12: Risso's dolphins (*Grampus griseus*) mother and calf off Falmouth, West Cornwall. Photo credit: AK Wildlife

Figure 13: Risso's dolphin (*Grampus griseus*) in Parc Naturel Marin d'Iroise (PNMI). Photo credit: S. Dixneuf / OFB

Figure 14: Grey seals (*Halichoerus grypus*).
Photo credit: C. Gicquel / OFB

Figure 15: Grey seals (*Halichoerus grypus*) pup.
Photo credit: Maïlys Baudoint / GECC

Supporting Information

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