



# Review and update of Management Units for cetaceans in UK waters

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## What are Management Units?

Management Units (MUs) refer to a geographical area in which the animals of a particular species are found. They can be used to inform the spatial scales at which impacts of human activities alone, cumulatively and incombination, should be assessed for their potential impacts on key cetacean species in the surrounding areas.

Boundaries of the MUs are based on our best understanding of the presence of known populations, with divisions informed by ecological evidence and/or divisions already used for the management of other human activities. MUs for the seven most common cetacean species found in UK waters were defined by the Inter-Agency Marine Mammal Working Group (IAMMWG) in 2015;

- ✓ Harbour porpoise (Phocoena phocoena),
- ✓ Bottlenose dolphin (*Tursiops truncatus*),
- ✓ Short-beaked common dolphin (Delphinus delphis),
- ✓ White-beaked dolphin (Lagenorhynchus albirostris),
- ✓ Atlantic white-sided dolphin (Lagenorhynchus acutus),
- ✓ Risso's dolphin (Grampus griseus) and;
- ✓ Minke whale (Balaenoptera acutorostrata)

## **Emerging evidence**

The MU boundaries defined in 2015 for all other species remain unchanged for now. We are aware of emerging evidence for a number of species which may be considered if necessary in future revisions of the MUs.

#### Coastal bottlenose dolphins

Photo-ID studies along the north-east coast of Scotland and England suggest potential southerly range shift, or expansion of the inshore bottlenose dolphin that were originally associated predominantly with the Moray Firth. As studies continue in the region and confidence inn the temporal and spatial extent of these movements improves, the observed shift be considered in a future review of the units.

#### Risso's dolphins

Initial analysis of Scottish photo-identification catalogues evidence of potential population substructuring. With further research and analysis it is possible that multiple sub-populations may exist around the UK.

#### **Atlantic white-sided dolphins**

Preliminary results from high-resolution analysis of tissue samples collected from across the North East Atlantic indicate that there is strong evidence to suggest at least two distinct geographical structures, one of which encompasses the UK and continental European waters. It is possible that further clusters within the southern group may be identified as research continues.

### Are you involved in relevant research?

Evidence from research on photo-ID, satellite tagging, stable isotopes, genetic analysis is all used to improve our evidence base to better define biologically relevant units. If you are involved in studies investigating the population dynamics of UK cetacean species, we would love to hear from you!



님 To let us know about your research that could contribute to our evidence base, scan this 回译: R. QR code.



To download the complete IAMMWG, 2023 report and updated associated shapefiles, **Late The Second Second** 

## What has changed?

Repeated sightings of known population-individuals in both Sussex and North Cornwall, England using photo-ID data suggests that the core range of this population extends further in both directions than was previously understood. In response to the evidence, the Coastal West Channel MU has been extended in both directions from Padstow on the northern coast of Cornwall, to east of the Isle of Wight, in line with Eastbourne (Figure 1).

Abundance estimates for this MU and the surrounding Offshore Channel and South West England MU (OCSW) have been updated in line with the described boundary change. Abundance estimates for all other MUs remain unchanged from the last update in 2022.

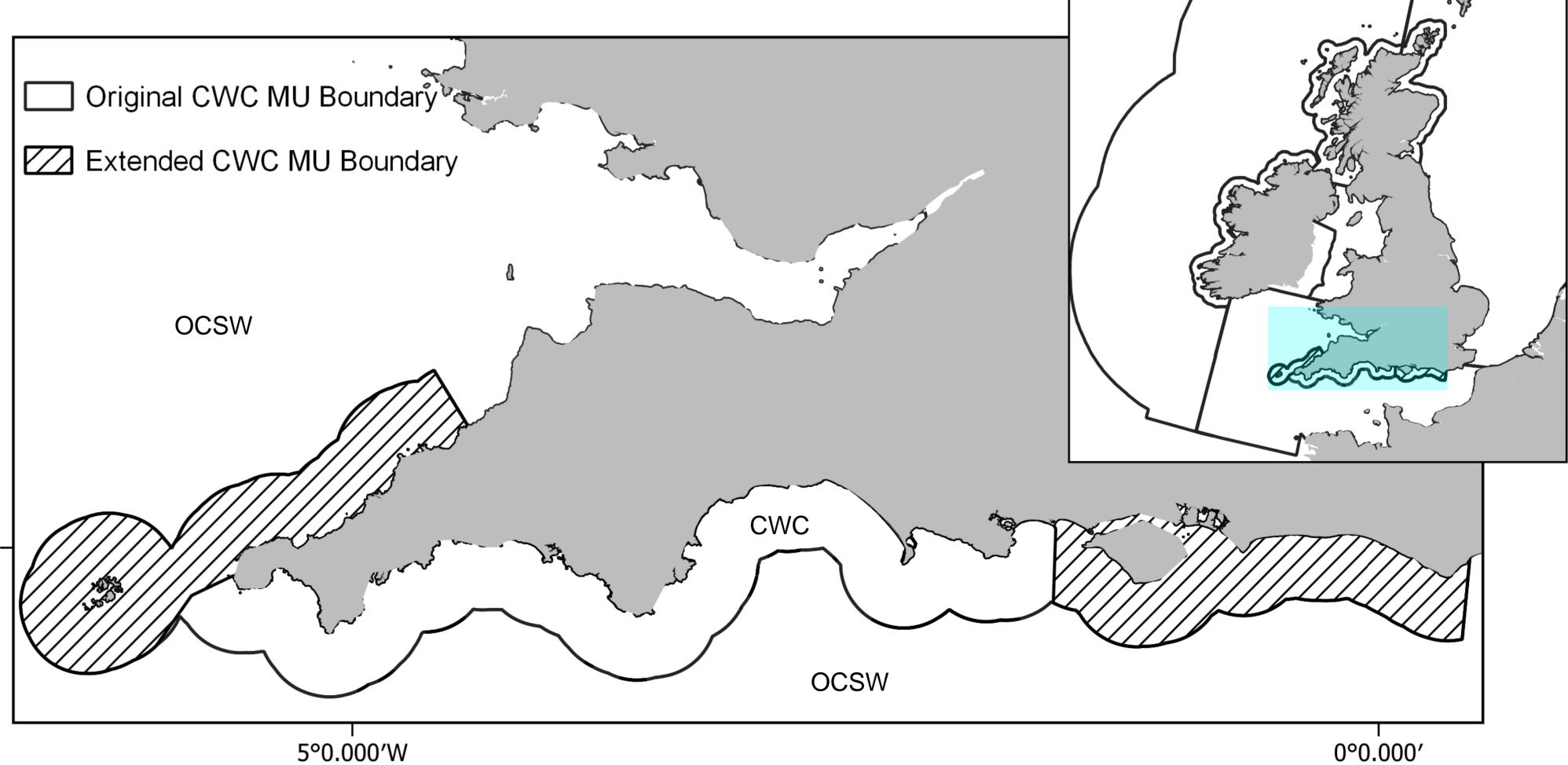


Figure 1. Map displaying the 2023 east and west extensions to the Coastal Western Channel Management Unit for bottlenose dolphins.

#### References

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Arso Civil, M., Quick, N.J., Cheney, B., Pirotta, E., Thompson, P.M. & Hammond, P.S. 2019. Changing distribution of the east coast of Scotland bottlenose dolphin population and the challenges of area-based management. Aquatic Conservation: Marine and Freshwater Ecosystems, 29, 178—196.; Aynsley, C.L. 2017. Bottlenose dolphins (Tursiops truncatus) in north-east England: A preliminary investigation into a population beyond the southern extreme of its range. Master's Thesis. Newcastle University.; Citizen Fins, 2022. https://citizenfins.wp.st-andrews.ac.uk/2022/03/11/from-tayside-to-scarborough/; Corr, S. 2020. Using citizen science data to assess the vulnerability of bottlenose dolphins (Tursiops truncatus) along England's south coast. Master's Thesis. University of Plymouth.; Dudley, R.H. 2017. Using citizen science data to assess the social structure, residency and distribution of bottlenose dolphins (Tursiops truncatus) in southwest England. Master's Thesis. University of Plymouth.; Duncan, S. 2021. Is conservation management fit for purpose: a case study using a small coastal resident bottlenose dolphin (Tursiops truncatus) population. Master's Thesis. University of Plymouth.; Gose, M.A., Humble, E., Brownlow, A., Doeschate, M.t., Davison, N., Ogden, R. 2021. Population genomic assessment of whitebeaked dolphins (Lagenorhynchus albirostris) and Atlantic white-sided dolphins (Lagenorhynchus acutus) for delineating management units for conservation. IWC Paper SC/68C/SM/15; Gutiérrez-Muñoz, P., Walters, A.E., Dolman, S.J. & Pierce, G.J. 2021. Patterns and Trends in Cetacean Occurrence Revealed by Shorewatch, a Land-Based Citizen Science Program in Scotland (United Kingdom). Frontiers in Marine Science, 8.; Hodgins et al. in press; IAMMWG. 2015. Management Units for cetaceans in UK waters (January 2015). JNCC Report No. 547, JNCC Peterborough, ISSN 0963-8091. https://hub.jncc.gov.uk/assets/f07fe770-e9a3-418d-af2c-44002a3f2872; IAMMWG. 2022. Updated abundance estimates for cetacean Management Units in UK waters. JNCC Report No. 680 (Revised March 2022), JNCC Peterborough, ISSN 0963- 8091. Available from: incc.gov.uk/data/3a401204-aa46-43c8-85b8-5ae42cdd7ff3/jncc-report-680-revised-202203.pdf; Paxton, C.G.M., Scott-Hayward, L.A.S. & Rexstad, E. 2014. Statistical approaches to aid the identification of Marine Protected Areas for minke whale, Risso's dolphin, white-beaked dolphin and basking shark. Scottish Natural Heritage Commissioned Report No. 594.; Weir, C.R., Hodgins, N.K., Dolman, S.J. & Walters, A.E. 2019. Risso's dolphins (Grampus griseus) in a proposed Marine Protected Area off east Lewis (Scotland, UK), 2010–2017. Journal of the Marine Biological Association of the United Kingdom, 99(3), 703—714.