Sperm whale disentanglement in Scotland: a case study off the Isle of Skye

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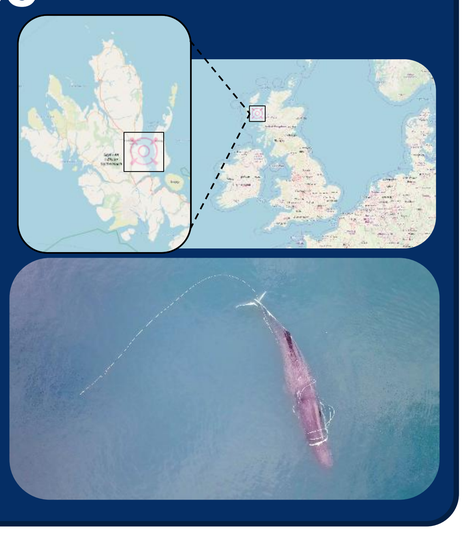
Report & Reconnaissance

An entangled sperm whale (*Physeter macrocephalus*) was sighted in the Sound of Raasay, Scotland 27th February 2025 and promptly reported to the UK's Large Whale Disentanglement Team (LWDT), a section of British Divers Marine Life Rescue (BDMLR). Within hours an LWDT drone pilot was collecting aerial video of the whale, locals were interviewed, BDMLR spotters were recording data, and five Level 3+ disentanglers plus a logistics lead were en route.



The Italian Connection

Sperm whales rarely require disentanglement in the UK, so LWDT immediately sought advice from North American colleagues while a team research analyst checked the peer-reviewed literature for updated behavioural observations. Thanks to prompt publication from Blasi et al. (2021) on two entangled sperm whales near Italy, a more species-specific approach plan was incorporated into the cutting plan formulated from video analysis. As per Blasi et al., a "collaborative" whale was the hope, but preparations were made to mitigate possible side fluking and rolling behaviours with a retreat line or alternative propulsion strategies.

Starved and Bound, then Blind

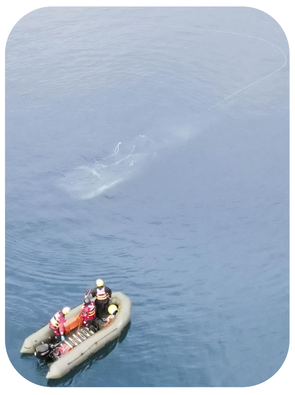
The morning of the 28th offered a short operational weather window, with spotters out before dawn and the new observations matching the previous day's aerial video: in not much more than 50 m of water, an emaciated ≈15 m long male sperm whale with rope wrapped multiple times tightly around its head and body, with at least 15 m of unbuoyed line trailing behind it, and anything trailing directly beneath still unknown. It was sighted several times from 0720 to 0850, at which point LWDT's 4.5 m soft inflatable approach boat (CRRC) began gradually approaching the whale to gently accustom it to the CRRC and observe behaviour with a view towards disentanglement. Throughout this period the whale dove at short intervals for about ten minutes at a time, and at 1010 a squall reduced visibility forcing a pause in operations until 1054 when the weather deteriorated as expected, precluding further operations that day and turning both the CRRC and locally-provided support boat back to harbour.

New Hope

By 0747 1st March, spotters had sighted the whale, with BDMLR rescue hotline callers adding it was nearing Braes Beach by 0810 and concern soon arose about possible stranding. Diving intermittently, by 0943 it was on the surface again for about five minutes during which it was blowing roughly every 25 seconds.

By noon it was heading further into the sound again. Throughout the later morning and into the afternoon, the approach boat re-established its gradual accustomisation tactics. With the entanglement well-understood thanks to excellent drone video and prolonged observation, it was allowable to take the unusual step of keeping an outboard propeller in the water to reduce the need for grappling and hauling when approaching within 10 m of the whale.

This allowed for an exceptionally gentle controlled approach near the whale when it surfaced, and resulted in multiple successful cuts of the tightly-wound wraps on the head, using specialised Center for Coastal Studies (CCS) equipment provided to LWDT as part of a global network. With the weather window closing, the final cut of the day gave hope as it seemed to free a significant weight from beneath the whale and the whale's behaviour took a turn for the better, with it demonstrating apparently improved mobility, speed, and power in its diving.



Live photo credits K.I. Macdonald, stranding photo: N. Gillies.

Round 2 … Cancelled

Planning for a second episode of disentanglement using additional techniques developed by colleagues in Hawaii (Lam 2021) was underway in preparation for the next operational weather window when reports of the whale's stranding and subsequent death came too soon on 3rd March. The necropsy suggested that the whale was primarily suffering from malnourishment due to prolonged entanglement of 3-4 weeks, with the entanglement material reported as being typic of local creeling equipment and with an additional 15 kg of rope in the whale's stomach (SMASS 2025).

An Opportunity Missed?

A remarkably similar entanglement on a sperm whale passing beneath the Skye Bridge was reported to BDMLR 31st January, just as LWDT was finishing a successful humpback whale disentanglement 20 miles away. The one difference is that this January sperm whale was reported as having a buoy attached to its trailing line. Subsequent spotting was unsuccessful, so disentanglement operations could not ensue at the time. The timing, however, fits remarkably closely to the rough 3-4 week estimate of entanglement time resulting from this later sperm whale's necropsy.

Left and above: accustomisation and cutting, respectively. Below and far below: Head and mouth wraps visible after stranding and during disentanglement.

Buoys Are Better Attached

Buoys which form part of an entanglement are incredibly valuable, both for providing higher visibility of a whale (additionally, a buoy moving speedily against the current often indicates a diving entangled whale), and for allowing more effective disentanglement, as the buoyed trailing lines are easier to grapple, easier to attach additional flotation to, and safer for disentanglers as they may demarcate the end of a line and thus the limits of possible propellor entanglement, once the entanglement is thoroughly known through the usual combination of aerial and underwater reconnaissance video.

Please Report – No Blame!

In this case, locals interviewed reported that they knew the fisher whose gear was entangling the whale, suggesting that the splicing was uniquely indicative of the owner, and suggested that a marked buoy was cut off sometime earlier. We did not record details or pursue this, aside from asking that they mention that the only thing BDMLR asks is early reporting via our hotline. We do not seek to punish anyone who has been unfortunate enough to have their fishing gear involved in an entanglement. We take additional care of fishers and other water users by ensuring that any marked buoys or other recognisable equipment are not photographed or videoed for use in any media.

Conclusions

This entangled whale may have simply run out of time -- perhaps unnecessarily. Post-stranding photos of the whale and its remaining entanglement, data often not available so soon after disentanglement operations, suggest that many more disentanglement hours would have been required to free the whale's mouth from the remaining 10+ wraps of rope. Earlier operational weather windows would have been available throughout February, if the whale's situation and location had been reliably reported. Aerial video was especially useful for expanding the range of known-safe operational options in this case, and the availability of timely, high-quality peer-reviewed publication further enhanced human safety and increased the chances of success.

A Specialist International Undertaking: Call the Experts

Large whale disentanglement in the UK follows international best practice in requiring an established team in frequent training, heavily-protocolised procedures informed by NOAA (2022) and BDMLR manuals (Jack and Smith 2022), IWC guidance (2026), and CCS- and IWC-hosted Disentanglement Workshops (IWC 2010, 2013, 2015, 2018), use of 4-5 m soft inflatable boats with manual tilting outboards, use of specialist tools which reduce harm to the whale, prohibition of attachment to the entanglement by mechanical means, no people in the water, and an absolute focus on human safety as the first priority. Human safety comes above all else for an additional reason. When disentanglement leads to human harm (St-Onge 2018, NZPA 2003), it has been known for many countries to pause or restrict disentanglement for months or years at a time. The whales which should have been successfully disentangled and lived during these pauses are not disentangled and die slowly instead. In terms of orders of magnitude, when a disentangler approaches a whale, they take not only their life into their hands, but also the lives of ten future whales. LWDT operates internationally, most notably having succeeded in a very complex free-swimming humpback whale disentanglement in Iceland in 2015 (Elding Research 2015). We respond and advise throughout the UK, Europe, and beyond, but results are improved if we are telephoned without delay on our **24/7/365 rescue hotline**: **+44 1825 765546** with good, durable location information and photographs or video to confirm that it is likely to be a viable disentanglement.

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