



Cornwall
Wildlife Trust



2024 Annual Report

Marine Strandings in Cornwall and the Isles of Scilly

Report by
Cornwall Wildlife Trust
Marine Strandings Network

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Recording
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2024 Annual Report: Marine Strandings in Cornwall and the Isles of Scilly



Photo 1: Atlantic grey seal, Fistral Beach 01/01/24. Photo by Emma Louise Gallagher

Executive Summary

Data on marine organisms that stranded on the shores of Cornwall in 2024 were collected by the Cornwall Wildlife Trust Marine Strandings Network (CWT MSN). All species were recorded in the strandings database held at the Environmental Records Centre for Cornwall and Isles of Scilly (ERCCIS). When possible, most cetaceans, seals, basking sharks and turtles were examined *in situ* and recorded in detail by trained volunteers of the Network.

A total of 733 records were submitted to the network in 2024, this included 245 cetaceans, 245 seals, 90 birds, 59 teleost fish, 21 elasmobranchs and 5 turtles with an additional 69 records for other marine species

The third highest number of cetacean strandings on record (n = 245) were recorded in 2024.. Cetacean strandings continue to be approximately double the annual amount than the preceding decade. An unusually high peak in dolphin strandings occurred in March which accounted for nearly a third of the year's total.

2024 saw the highest number of common dolphin strandings on record and this species made up 71% of all cetacean records (n = 175).

Necropsies of 33 (13% of all cetaceans stranded in 2024) cetaceans were conducted by James Barnett, the veterinary pathologist for the Marine Strandings Network working within the Cornwall Marine Pathology Team on behalf of Cetacean Strandings Investigation Programme (CSIP). *Post-mortem* examinations (PME) concluded that accidental entanglement in fishing gear, known as bycatch, was the cause of death for eight (24%) of the cetaceans examined, whilst nine animals died from infectious disease (27%).

Of those not retrieved for PME 178 (60%) cetacean strandings were examined and recorded *in situ* by MSN volunteers using the Bycatch Evidence Evaluation Protocol (BEEP). It was found that 27% of the 147 (n=38) showed features consistent with definite or probable bycatch or entanglement in fishing gear and a further 13% (n = 20) cases showed possible signs of bycatch.

A quarter of cetaceans (n = 46) which were assessed by PM or BEEP showed definitive or probably evidence of having been bycaught. This is very likely to be an underestimate of the actual proportion of mortality caused by fishing as many may not show external evidence or have damage and decomposition which masks it, and in addition there is the hidden mortality of separation of maternally dependent young.

245 dead seals were reported to the network in 2024, although a decrease from last year's peak this is still the fourth highest number on record. Of those which could be accurately assessed 60% were either whitecoat (n = 38) or recently moulted pups (n = 80). Most whitecoats were reported in August and September reflecting research reported by the Seal Research Trust (SRT) that the pupping season is shifting earlier in the year.

This year saw the first record for a ringed seal in Cornwall.

Of 39 seals found and examined in 2024 at *post-mortem* 25 (64%) died from infectious disease, four (10%) were assessed as bycatch and eight (21%) seals died from other forms of trauma. Of 100 seals assessed by SEEP (seal evidence evaluation protocol) 81% had no conclusive diagnostic external features, nine (17%) showed evidence of entanglement or bycatch and 2% trauma.

There were four turtle strandings in 2024, one loggerhead, one Kemp's ridley and two leatherbacks.

Eleven species of birds were reported to the network with 90 reports comprising 139 individuals (more than double the previous year). A ringed whoopers swan was the first record for this species in Cornwall. Puffins were the third most reported species which is of note given the small population around the immediate coast.

There were 21 reports of stranded sharks or rays and 59 records for of bony fish in 2024. In March there were near synchronous strandings of thousands of bait fish reported all around the coast. The reasons for this remain unclear.

There were 68 records of other species

In 2024, CWT MSN continued to carry out a variety of outreach and engagement work including active social media, and our annual Callout Volunteer training and marine strandings forum.

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Introduction

The CWT MSN operates under the CSIP licence (granted by the Marine Management Organisation) for the possession and transportation of cetacean carcasses. For over 30 years in response to the increasing number of stranded cetaceans, detailed data has been collected by the team in Cornwall.

The Marine Strandings Network consists of a team of approximately 200 trained volunteers throughout Cornwall and the Isles of Scilly who record all reported strandings of organic organisms from over 360 miles of coastline. All MSN volunteers are given detailed training to ensure accurate and consistent data collection and are continually supported by CWT staff. Detailed reports and photographs are obtained where possible, as well as some tissue samples on occasion for analysis by various partner organisations. The data and photographs collected by MSN volunteers are then verified and assessed by experienced staff and volunteers following the Bycatch Evidence Evaluation Protocol (BEEP) methods developed by CWT MSN. Analysis of the data collected by the CWT MSN and partners is ongoing.

The CWT MSN has a dedicated Strandings Hotline telephone number (0345 2012626), for the reporting of dead stranded marine animals. The Hotline number operates year-round and is staffed by a rota of dedicated volunteer Hotline Coordinators. Carcasses reported to CWT MSN are either examined *in-situ* by trained volunteers, or via *post-mortem* examination by a veterinary pathologist under the *aegis* of the Defra-funded Cetacean Strandings Investigation Programme (CSIP).

Records of stranded marine organisms have been collected in Cornwall and the Isles of Scilly for many years, the earliest record being from 1354. To date (2024), the Cornwall Wildlife Trust Marine Strandings Network (CWT MSN) database holds over 12,500 records, comprising of data relating to stranded cetaceans (whales, dolphins, and porpoises), seals, turtles, birds, cephalopods, fish (including sharks), seeds, hydrozoan, molluscs, echinoderms, and crustaceans.

The records are shared with several other partner organisations including the Natural History Museum (NHM) which has collated records of all stranded cetaceans in the UK since 1913. In 1990, the NHM began working in collaboration with the Institute of Zoology (IoZ) to research the mortality, biology, and ecology of cetacean populations around the British Isles, under contract to Defra (Department for Environment Food and Rural Affairs). This project, now known as the Cetacean Strandings Investigation Programme (CSIP), is currently under the management of the IoZ, funded by Defra, and is responsible for recording strandings in England and Wales. It contributes to the UK's programme of research on cetaceans and its response to ASCOBANS (the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas).

For more information about the protocols and methods which are used for the Marine Strandings Network please contact strandings@cornwallwildlifetrust.org.uk.

Strandings in 2024

All strandings

A total of 733 records were submitted to the network in 2024, this included 245 cetaceans, 245 seals, 90 birds, 59 teleost fish, 21 elasmobranchs and 5 turtles with an additional 69 records for other marine species (see figure 1). This total represents a much greater number of individual animals as particularly for birds, fish and invertebrates a single stranding event can sometimes encompass many individuals.

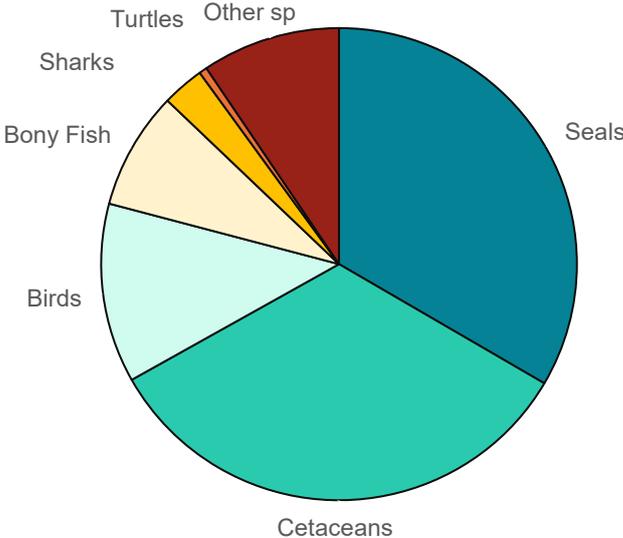


Figure 1: Records submitted to the marine strandings network in 2024 by taxa

Cetaceans

Cetacean strandings in 2024

A total of 245 cetacean strandings were recorded in Cornwall during 2024 (see figure 2). Of these 175 were short-beaked common dolphins (*Delphinus delphis*) which is the highest amount yet recorded by the MSN, comprising 71% of all cetacean strandings for the year. The second most commonly recorded species were harbour porpoises (*Phocoena phocoena*) (8%, n=20). Due to decomposition, 39 stranded cetaceans could not be identified to species level.

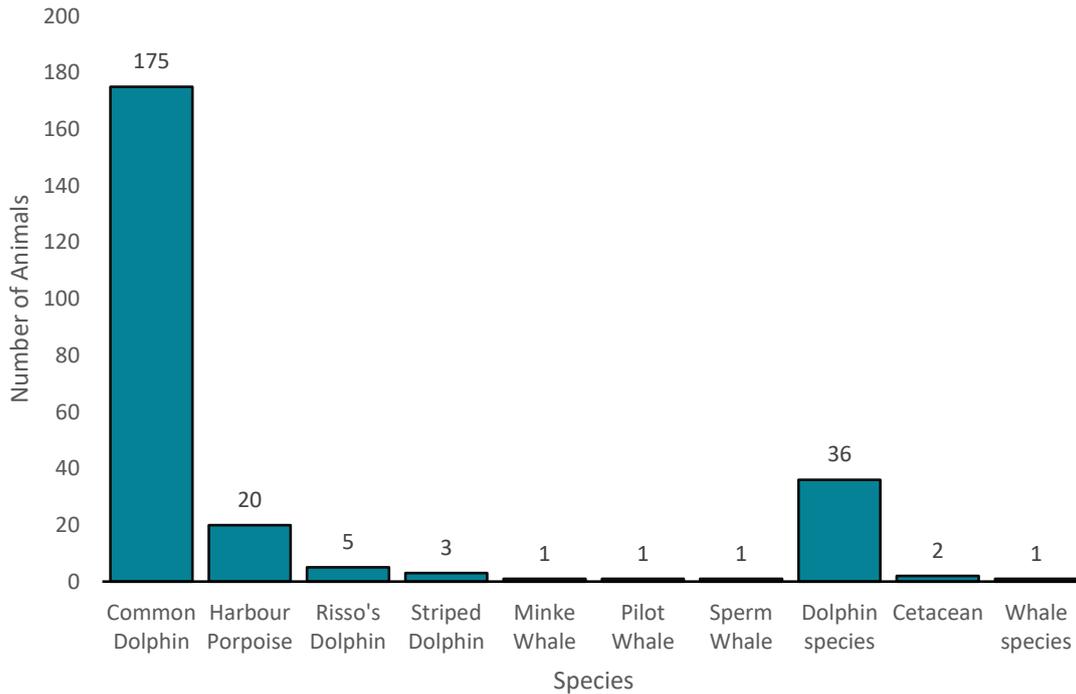


Figure 2: Number of cetacean strandings by species during 2024



Photo 2: Risso's dolphin, Porthkerris 01/11/24. Photo by Toby & Nancy Nenning

In 2024 there was the usual seasonal pattern of increased cetacean strandings through the winter months. However March saw an unusually extreme peak with 72 individuals which accounted for 30% of the year's cetacean strandings (see figure 2). Figures 4, 5 & 6 show the locations of all cetacean strandings in 2024 and highlight the geographical spread of cetacean strandings during this year.

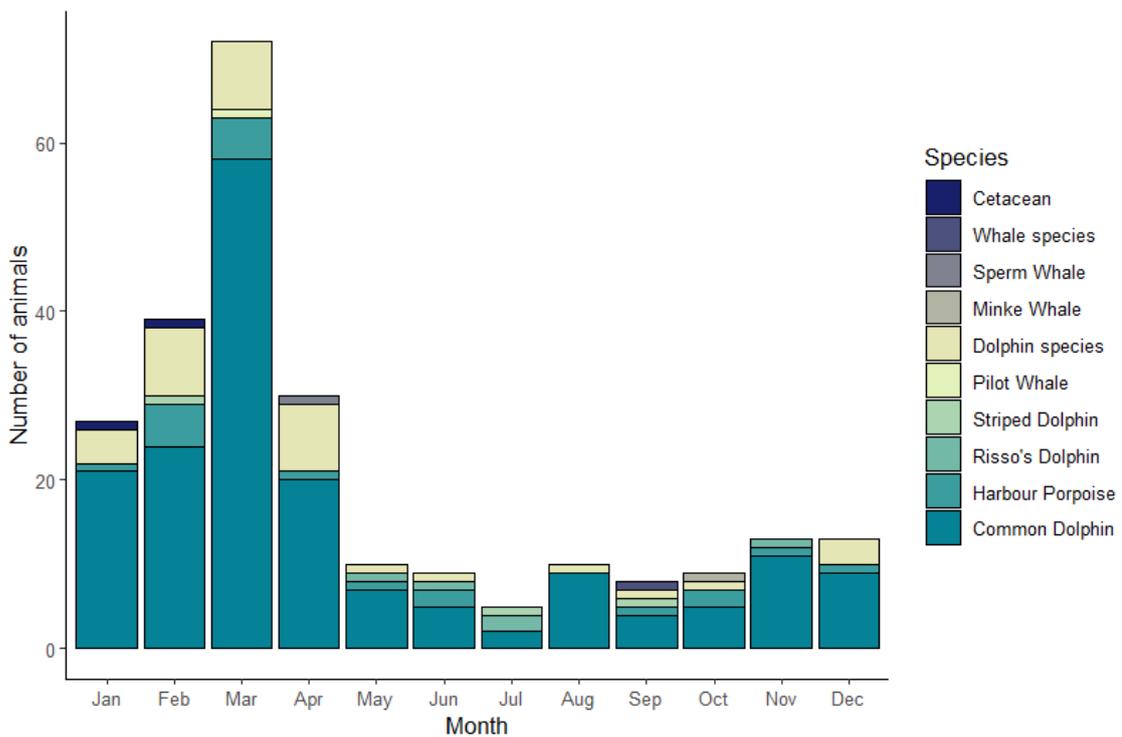


Figure 3: Cetacean strandings by species/month during 2024



Photo 3: Harbour porpoise, Watergate Bay 28/10/24. Photo by Dan Jarvis

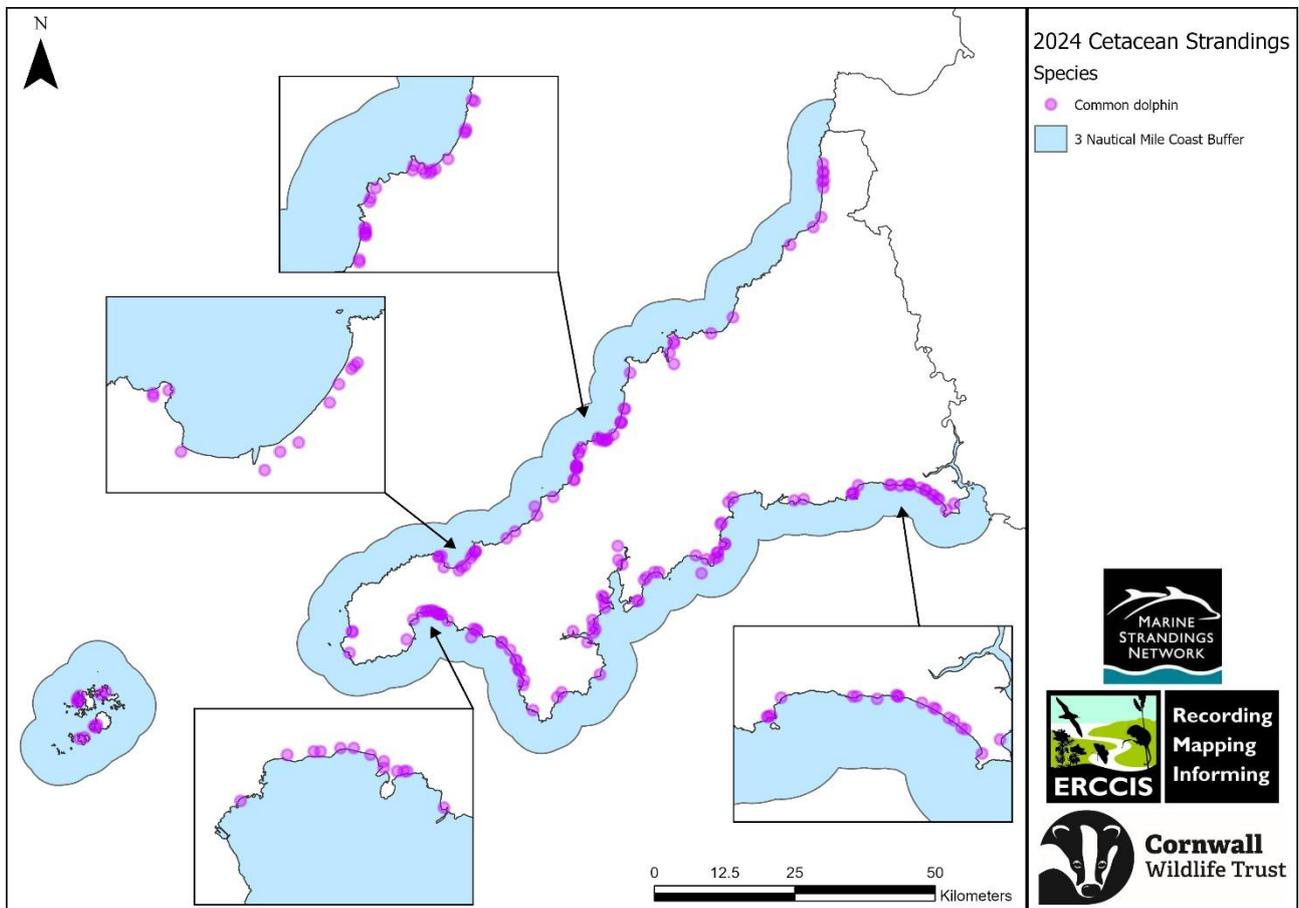


Figure 4: Locations of common dolphin strandings in 2024 (n=175)

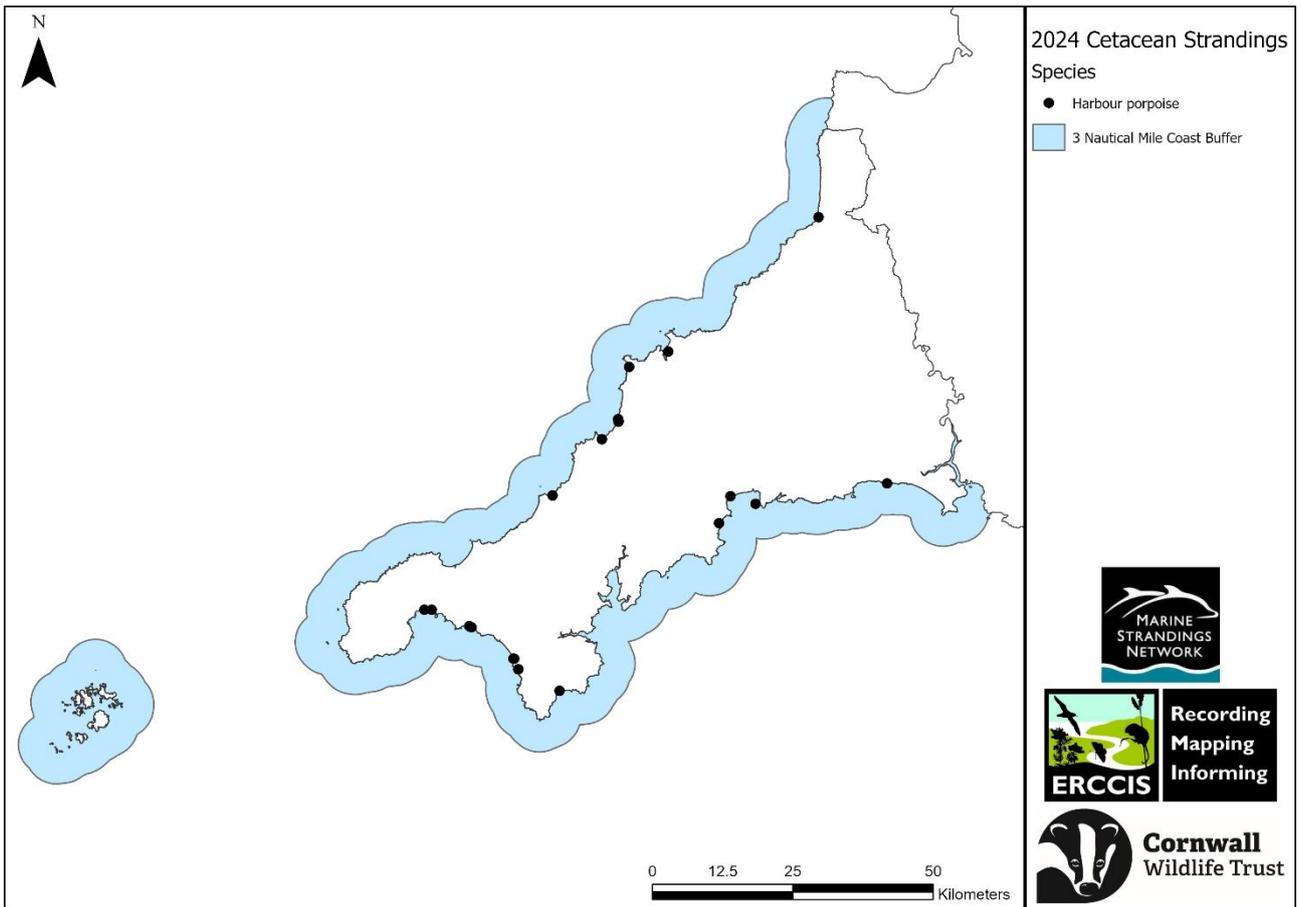


Figure 5: Locations of harbour porpoise strandings in 2024 (n=20)

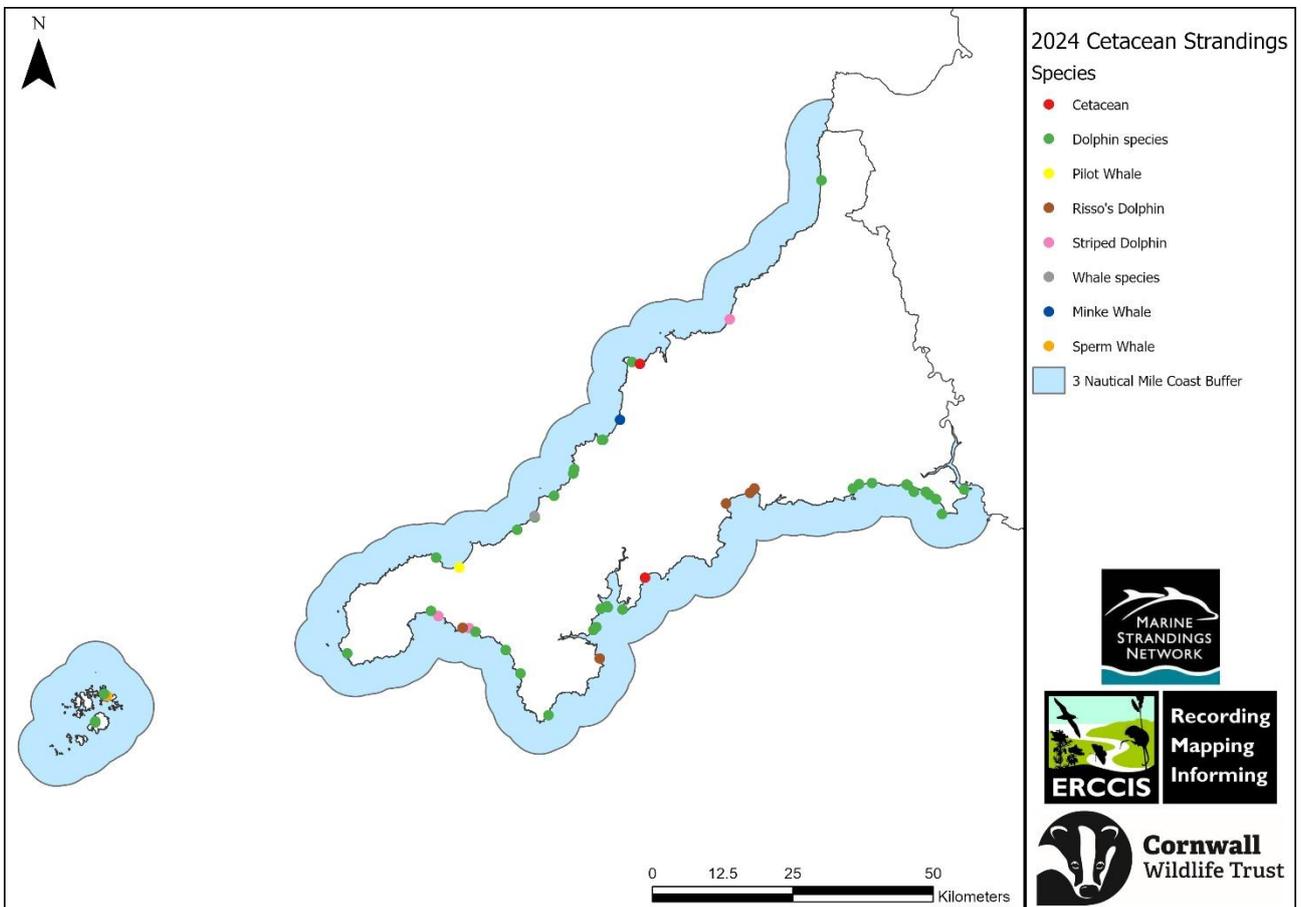


Figure 6: Cetacean strandings (all other species) in 2024 (n=50)



Photo 4: Striped dolphin recovery for PME, Marazion 19/09/24. Photo by Sam Andrews

Comparison with previous years

In total, 245 cetaceans were recorded by CWT MSN in 2024, which is an increase from the numbers seen in 2023 (n=238) and the joint third highest year since 1995 (see figure 7). For the last ten years annual strandings have doubled on average (\bar{x} =201), compared to the preceding decade (\bar{x} =102). 1). The seven highest annual totals of recorded cetacean strandings have happened in the last decade with an increase in strandings apparent in all months compared to pre 2015 (see figure 8).

There was an unusually high number of cetacean strandings in March 2024 (n=72) (see figure 9) which accounted for nearly a third of the year's total. Of these 58 were common dolphins and 34 (49%) were common dolphin juveniles or calves, an unusually high proportion compared to other months or years. The number of animals showing evidence of being bycaught for this month was also unusually high (n=14, see appendix B for more detail). It is possible that bycatch has a hidden mortality with prematurely separated, maternally dependant young dying due to the loss of their mother.

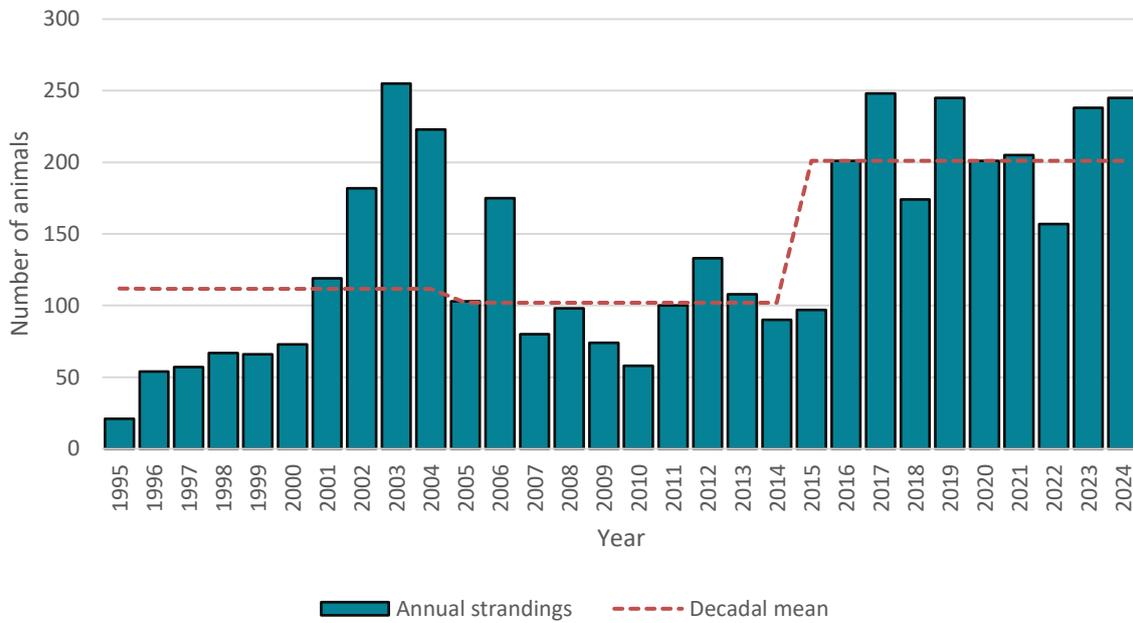


Figure 7: Total cetacean strandings by year (1995 to 2024)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Jan	2	22	26	5	10	2	21	35	82	64	19	50	8	11	15	9	13	13	13	9	7	19	71	23	46	32	24	17	36	27	
Feb	1	7	8	12	9	14	8	20	38	42	3	25	26	15	7	5	25	10	8	7	7	17	55	24	29	36	28	18	44	39	
Mar	5	12	6	12	14	23	28	40	51	38	23	37	10	7	6	7	5	18	18	10	12	29	35	16	15	17	40	22	23	72	
Apr	0	5	5	14	13	8	10	32	20	22	15	20	4	1	10	6	3	14	7	11	5	17	22	14	38	5	26	17	13	30	
May	0	1	1	2	1	2	5	4	8	8	3	8	0	6	6	1	3	6	5	5	11	8	3	11	14	8	14	3	14	10	
Jun	1	0	0	2	4	3	1	3	4	5	4	4	1	33	4	3	5	8	3	0	7	1	2	3	7	3	1	10	9	9	
Jul	0	2	0	2	5	1	7	4	3	2	1	3	5	4	1	3	9	5	7	7	8	6	6	11	8	9	2	10	11	5	
Aug	4	1	0	5	0	1	5	2	5	2	4	4	4	6	3	5	5	10	8	11	9	42	14	10	11	17	8	14	35	10	
Sep	0	2	1	0	3	0	7	3	2	1	5	3	3	0	3	5	5	8	3	8	10	18	11	15	15	21	24	7	11	8	
Oct	0	1	3	2	3	6	7	3	2	7	7	4	6	4	7	7	8	9	15	7	5	12	9	12	9	10	14	5	11	9	
Nov	3	1	2	5	0	5	7	3	14	1	8	6	8	6	8	3	11	17	5	9	7	9	5	17	16	11	6	8	8	13	
Dec	5	0	5	6	4	8	13	33	26	31	11	11	5	5	4	4	8	15	16	6	6	9	23	15	18	37	32	18	26	23	13

Figure 8: Cetacean strandings by year and month

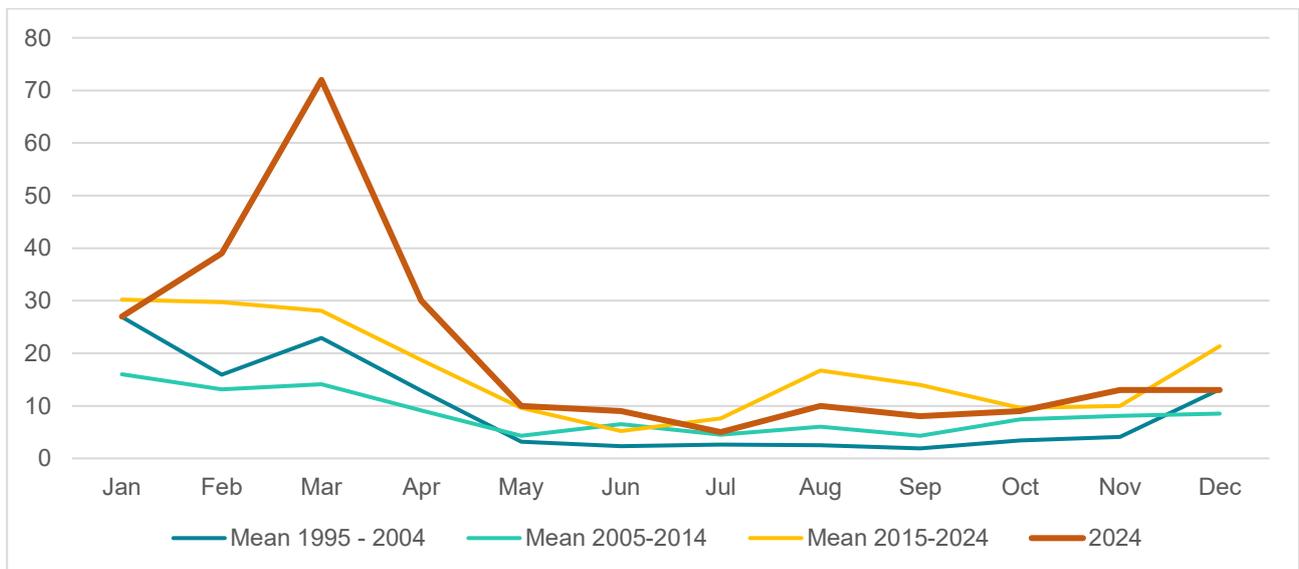


Figure 9: Seasonality of cetacean strandings for 2024, in comparison to average seasonality in the preceding three decades

Common dolphins and harbour porpoise are the most reported cetacean species to MSN. Since 2016 there has been a marked increase of common dolphin strandings (see figure 6) and 2024 was the highest year on record for the number of common dolphin strandings in Cornwall and the Isles of Scilly (n=175).

Harbour porpoise strandings whilst still the second most reported cetacean species, comprise a much smaller proportion compared to pre 2016 although actual numbers have remained fairly constant. Until 2016 the pattern and amount of strandings for the two species were very similar (see figure 10).

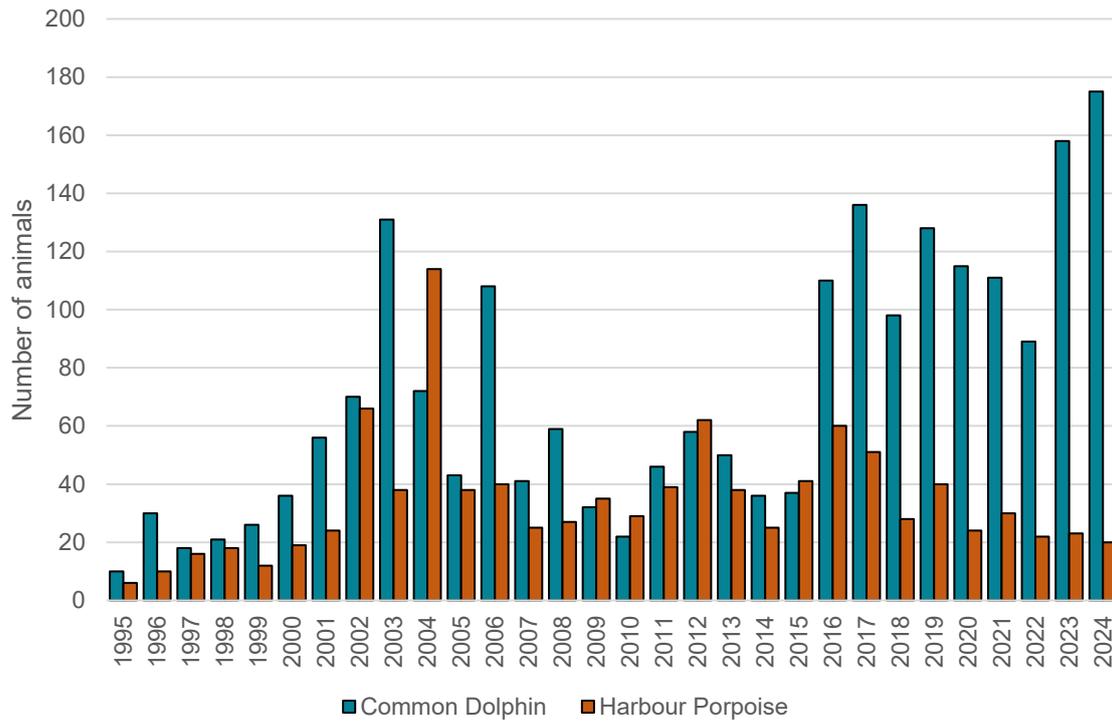


Figure 10: Numbers of common dolphin and harbour porpoise strandings from 1995 to 2024

Cetacean *post-mortem* examinations

Of the 245 cetacean carcasses that stranded during 2024, 13% (n=33) were suitable and accessible for retrieval by the CWT MSN team for *post-mortem* examination, under licence and on behalf of the Defra-funded Cetacean Strandings Investigation Programme (CSIP) (see figure 11). Necropsies were performed by James Barnett, the veterinary pathologist for the Marine Strandings Network working within the Cornwall Marine Pathology Team on behalf of CSIP.

Post-mortem examinations (PME) concluded that accidental entanglement in fishing gear, known as bycatch, was the cause of death for 8 (24%) of the cetaceans examined (6 short-beaked common dolphins and two harbour porpoise see Table 1) whilst nine animals (27%) died as a result of infectious disease.

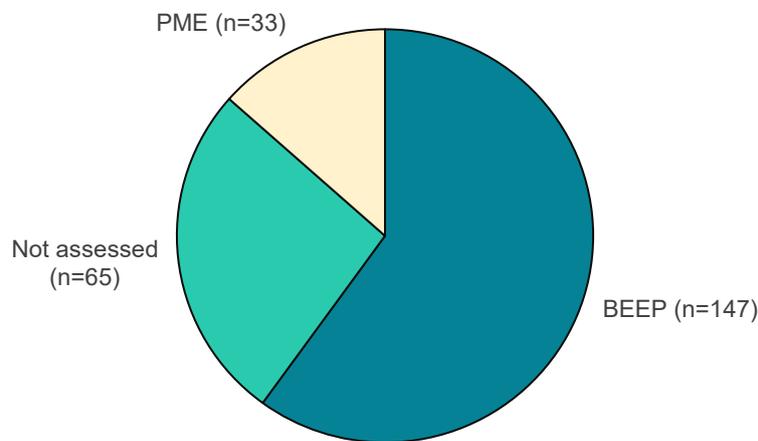


Figure 11: Stranded cetaceans retrieved for *post-mortem* examination (n=33) and BEEP assessment using *in-situ* data (n=147) in 2023. The remaining 65 were reported but had insufficient data for more detailed assessment.

A summary of *post-mortem* findings can be seen in table 1. The findings of these examinations are published with kind permission of CSIP

Table 1: Summary of cetacean *post-mortem* reports (2024) – gross *post-mortem* and bacteriology findings (source: CSIP)

	Infectious	Bycatch	Non-bycatch trauma	Other	Total
Short-beaked common dolphin	6	6	1	8	21
Harbour porpoise	3	2	2	1	8
Risso's dolphin				2	2
Striped dolphin				2	2
Total	9	8	3	13	33

Bycatch Evidence Evaluation Protocol (BEEP)

The MSN Bycatch Evidence Evaluation Protocol (BEEP) is an invaluable tool to assess bycatch on cetacean species, which has been developed by CWT MSN. BEEP assessments can be done *in situ* on the beach and provide data on external injuries to help identify possible causes of death from bycatch for all animals, not just those that undergo *post-mortem* examination. The process involves cetacean strandings reported to CWT MSN undergoing rigorous external examination by trained volunteers on the beach. Detailed photographs of the carcasses are taken, and these are then assessed to identify, and record, signature injuries and features identified as being associated with bycatch and entanglement in fishing gear. This protocol has been developed from 30 years of experience and is continuously tested and developed to improve the accuracy of bycatch detection.



Photo 5: Bycaught common dolphin, Mexico Towans, Hayle 24/05/24. Photo by Mick Dawton

Of the remaining 212 cetaceans which were not retrieved for *post-mortem* examination, 66 cases were reported to MSN but either a volunteer was not able to attend for a wide range of reasons or we had insufficient data to assess the animal through BEEP. Therefore, these cases have not been included in the BEEP and bycatch analysis for this report.

145 (60% of the 245 total) cetacean strandings were examined and recorded *in situ* by MSN volunteers using the BEEP protocol, and photos examined in detail by experienced BEEP assessors within the Environmental Records Centre for Cornwall and Isles of Scilly (ERCCIS). It was found that 27% of the 145 (n=38) showed features consistent with definite or probable bycatch or entanglement in fishing gear (see table 2). These features are based on recognised net entanglement marks such as fin edge cuts/slices, encircling net marks and severed appendages. A further 13% (n=20) cases showed possible signs of bycatch.

For a further 87 (60% of BEEP assessed animals) no conclusion could be drawn from external features.

Table 2: A summary of BEEP conclusions from cetacean cases assessed in situ in 2024

BEEP Conclusion	Total Assessed	% BEEP Assessed Records
Bycatch	17	11.7
Probable bycatch	17	11.7
Possible bycatch	20	13.8
Entanglement	4	2.8
No features	43	29.7
Inconclusive	44	30.3
Grand Total	145	100%

Examples of BEEP assessed cetacean strandings are below in *Notable Cetacean Strandings*. For the full Bycatch analysis and report, please see *Appendix B*.



Photo 6: Live stranded striped dolphin, Marazion 19/09/24. Photo by Mick Dawton

Cetacean bycatch overview 2024

Of the 245 cetacean carcasses that stranded during 2024, 178 (71%) were assessed either by PME or BEEP. Of these animals 25% (n=46) showed definitive signs of having been bycaught. Most of these stranded in winter months and along the south coast of Cornwall (figure 12). (For the full bycatch report for 2024 see Appendix B).

It is important to note that the actual proportion of mortality associated with bycatch is very probably higher as some animals are unable to be assessed or do not show diagnostic features for example due to decomposition or skin damage from scavengers, in addition as previously mentioned there is the hidden bycatch mortality associated with the premature separation of maternally dependent young from their mothers.

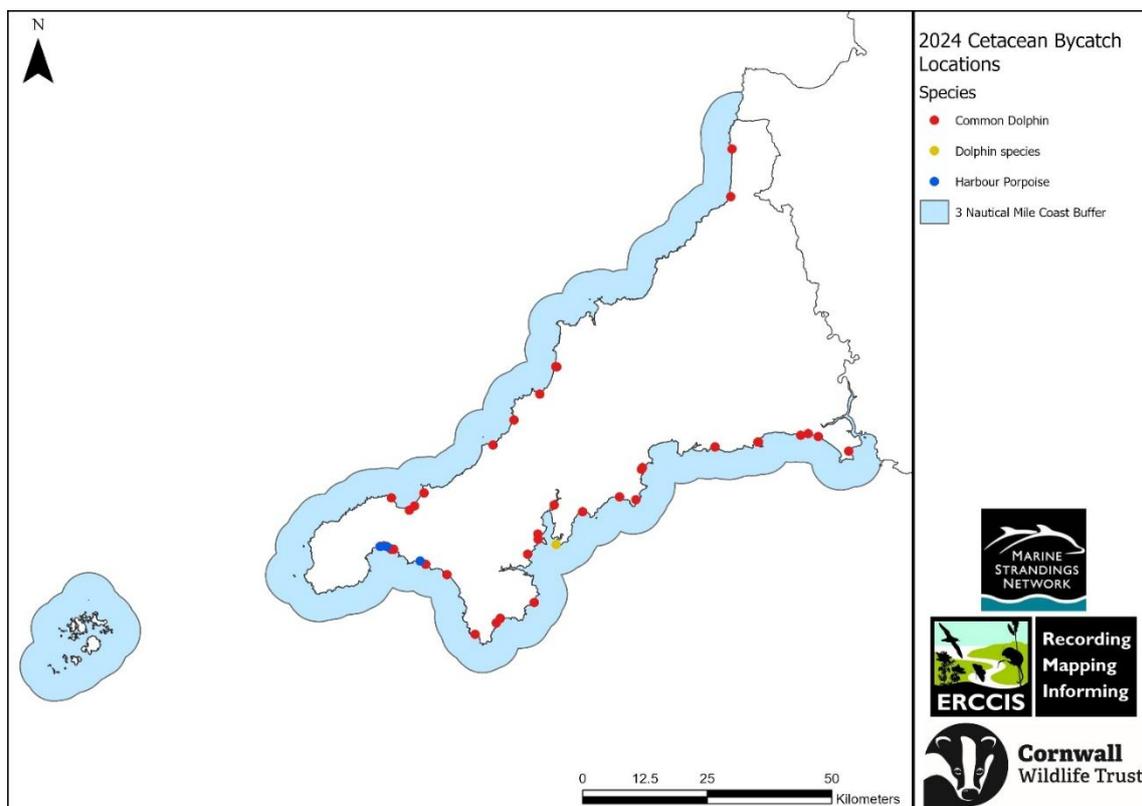


Figure 12: The location of cetaceans stranded in 2024 with evidence of bycatch.

Notable Cetacean Stranding Cases

There were many notable cetacean stranding cases in 2024 – details of some of these can be found in table 3. Amongst others these included a sperm whale bone found on the Isles of Scilly and identified by Dane Dendanto (of 'Whales and nails'), a harbour porpoise showing signs of bottlenose dolphin attack and a young common dolphin with extreme scoliosis. In March two disturbing cases were found at Perranporth within three weeks of each other; both common dolphins which had been slashed multiple times with a sharp blade. A striped dolphin was euthanised after it re-stranded following an attempted rescue.

The marine strandings network often benefits from the generosity and support of other organisations as highlighted in the case of a common dolphin found floating in Fal harbour. The team of volunteers benefited from help from staff from Fal harbour and also assistance from the coastguard.

Table 3 notable cetacean strandings cases

<p>Common Dolphin C/2024/004 SW2024/2 CW/C01/24</p>	<p>Caerhays Beach, Porthluney SW974411</p>	<p>07/01/2024</p>	<p><i>This adult female common dolphin was in moderate body condition but had not fed recently. In my opinion, the extensive linear marks on the rostrum and head, and encircling notches and linear marks on some of the appendages were consistent with bycatch. It is also likely that the broken and loose teeth, haemorrhages in the pleura, mediastinum and around the larynx, and the intense pulmonary congestion and watery fluid in the airways were also a consequence of bycatch.</i></p> <p>Cause of Death - Bycatch</p>
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Common dolphin
C/2024/007
SW2024/4
CW/C03/24

Falmouth Harbour
SW811325

13/01/2024

This adult male common dolphin was found floating in the harbour at Falmouth. The fresh linear wounds running through the lower cranial teeth and mandible are, in my opinion consistent with bycatch and the large quantity of recent ingesta in the stomach and oesophagus, plus the haematoma over the larynx would also be consistent with this.

Amazing volunteer and multi-agency effort to retrieve this animal for PME.

Cause of Death - Bycatch



<p>Common Dolphin C/2024/011 SW2024/5 CW/C04/24</p>	<p>Maenporth Beach, Falmouth SW790295</p>	<p>17/01/2024</p>	<p><i>This female common dolphin calf was in reasonable nutritive state and there was evidence of recent feeding. The encircling net marks particularly on the rostrum were, in my opinion, consistent with bycatch. Other lesions seen, including the haemorrhages on the soft palate, pharynx and muscles at the thoracic inlet, were also likely to be due to this. Other lesions were likely to be incidental in nature.</i></p> <p><i>Cause of Death - Bycatch</i></p>
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Common Dolphin
C/2024/013
SW2024/7
CW/C05/24

Porthleven
SW628254

20/01/2024

This juvenile male common dolphin was in good body condition and had fed recently. The linear marks and wounds over the maxilla, melon, fins and flukes are, in my opinion, consistent with bycatch. The traumatic damage to the rostrum and haemorrhages around the thoracic inlet are also likely to be due to bycatch. Other findings, including the presence of parasitic bronchopneumonia, are considered to be incidental in nature.

Cause of Death - Bycatch



<p>Common dolphin, male calf CW/C06/24</p>	<p>Longrock, Marazion SW505312</p>	<p>21/01/24</p>	<p><i>This young common dolphin was in suboptimal nutritive state and had not fed recently. There was also evidence of fundic ulceration and enteritis, which may have been contributory factors to its poor nutritional state. The length of the animal suggested it was a calf born last year and it was around the point of weaning, although it was still likely to have been socially dependent. The presence of shingle as far distally in the gastrointestinal tract as the cardiac and fundic stomachs, coupled with the hypostatic congestion of the lungs, was consistent with the animal having live stranded. Despite extensive scavenger damage, there was some evidence of soft tissue haemorrhage around the mandibular fractures and also haemorrhages in the soft tissues on the back of the head and over the cerebellum, consistent with trauma. It is possible that this occurred when the calf originally live stranded. The degree of scavenger damage suggested the calf may not have live stranded in the same location as it was found, as it is unlikely that it would not have been found soon after stranding in the location it was found in.</i></p> <p><i>The case was complicated by a large, linear, clean wound in one fluke, which originally raised the suspicion of bycatch. Even if this was not caused by bycatch, it does look to be anthropogenic in origin; histopathology was consistent with this being inflicted post-mortem. There was also a distinct, regular, circular impression on one side of the thorax which would also have been made by a man made object</i></p> <p><i>Cause of death - Malnutrition post weaning, live stranding</i></p>
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<p>Common dolphin, female adult x 2 CW/C08/24 & CW/C09/24</p> <p>Mass stranding event – one common dolphin successfully refloated by BDMLR medics</p>	<p>1 at Roundwood Quay and 1 at Malpas, Truro</p>	<p>02/02/24 & 03/02/24</p>	<p><i>This adult female common dolphin was found dead near a live stranded juvenile common dolphin in a creek off the River Fal. The juvenile was refloated at Swanpool beach near Falmouth..</i></p> <p><i>The adult was in reasonable nutritive state and had recently fed. The dolphin was also lactating and it is possible that this may have been the mother of the refloated juvenile. The fresh abrasions and wounds on the rostrum, fins and flukes, and the hypostatic congestion of the lungs were consistent with live stranding and the presence of silt in the bronchi and bronchioles was probably consistent with the animal stranding and drowning on an incoming tide. In addition, there was evidence of pulmonary, gastric and soft tissue parasitism.</i></p> <hr/> <p><i>This adult female common dolphin was found dead a little under three miles upriver from CW/C08/24 and a day later. The silt in the caudal nasal cavity and atelectasis and slight asymmetry of the lungs suggested the animal may have live stranded, potentially as part of the same stranding event as CW/C08/24.</i></p> <p><i>The animal was in suboptimal nutritional state although there was some evidence of relatively recent feeding. There appeared to be the early stages of impaction of fish bones in the cardiac stomach which has been seen in other dolphins and suspected to be due to failure of regurgitation associated with pathology of the autonomic nervous system. There was also a heavy ascarid burden causing ulceration in all three stomachs. These factors plus a number of missing teeth may have contributed to this animal's suboptimal condition.</i></p>
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<p>Harbour porpoise, male adult CWC11/24</p>	<p>Praa Sands</p>	<p>17/02/24</p>	<p><i>This adult male harbour porpoise was in good body condition although there was no evidence of recent feeding. The extensive rake marks with 10 – 16mm spacing, soft tissue trauma, fractured ribs, lung, pleural and liver tears, haemothorax and haemoabdomen were, in my opinion, consistent with a fatal bottlenose dolphin attack.</i></p> <p><i>Incidental findings of interest included fluke associated lesions in the oesophagus and a bacterial infection in the rectum.</i></p> <p><i>Cause of death – bottlenose dolphin attack</i></p>
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<p>Striped dolphin, male juvenile CW/C12/24</p>	<p>Praa Sands, Helston SW574281</p>	<p>17/02/24</p>	<p>This subadult male striped dolphin was refloated at Carbis Bay after being found stranded alive at Praa sands. The animal live stranded the following day at Mexico Towans, east of the refloating site, and was euthanised.</p> <p>The dolphin was in suboptimal nutritional state and there was little evidence of recent feeding. There was a heavy gastric ascarid burden which may have contributed to its poor condition. Histopathology detected Wallerian degeneration in the proximal cord and brain stem. A specific cause for this condition has not been established however this is most commonly associated with compressive lesions such as congenital malformation, spinal osteomyelitis and neoplasia. No evidence of these conditions was found in this case so the cause remains unclear. Nephroliths were found in the kidney but did not appear to be associated with pathology of affected reniculus. Their composition, ammonium urate, is the same as that reported in nephroliths in bottlenose dolphins where they have been reported to have a potential effect on renal function and haematocrit (Venn-Watson et al, 2010).</p> <p>Reference: Venn-Watson, S. et al (2010). Clinical relevance of urate nephrolithiasis in bottlenose dolphins, <i>Tursiops truncatus</i>. <i>Diseases of Aquatic Organisms</i>, 89, 167 – 177.</p>
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<p>Common dolphin x 2 C/2025/063 & C/2025/105</p>	<p>Perran Sands, Perranporth SW762567</p>	<p>01/03/24 & 23/03/2024</p>	<p>These two carcasses were both found on the same stretch of beach 3 weeks apart. Very similar <i>post-mortem</i> wounds were inflicted.</p> <p>C/2025/063 - The entire right side had a series of multiple horizontal and vertical deep incisions to the flesh through the blubber/tissue and exposing the chest cavity, resulting in rectangular shape blocks of cut tissue. There were further cuts to the right side, back of head and tail stock. The dorsal was truncated with a flat top together with an angular cut to the rear, from the top. There was also a truncated tip on one of the tail flukes. All these truncations were too square to be from scavenging in my opinion. It is likely that the carcass had had some disturbance from scavenging whilst resting on the beach. The left side was undamaged and only had skin loss from decomposition. Clearly this mutilation was done with a knife of surgical sharpness. Linear impression to leading edge dorsal fin RHS.</p> <p>C/2024/105 - Broken & misaligned teeth left lower arcade. Multiple linear cuts to throat area. 104 cm long cut to chest exposing body cavity. Multiple vertical and horizontal cuts to right side forming rectangles in blubber layer. Indentation to L tailstock @ fluke base with some abrasion to dorsal line. Linear impression across LHS pectoral fin.</p>
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Sperm whale
C/2024/147

Wine Cove, St Martin's,
Isles of Scilly
SV929160

18/04/24

This was a large, very decomposed blob of blubber that stranded in April. We were unable to identify it to species level at that point but later as the bones started to appear Robert Hurrell from the Isles of Scilly took detailed photos and shared them with a whale anatomy specialist – Dan DenDanto of Whales and Nails, a company that specialises in taking entire dead whale carcasses through the complex cleaning process, to full-sized reconstruction of all the bones via a metal framework in a museum or other setting. Dan has worked on Fin, Sperm, Humpback, Right whales and no doubt many others over the past 35 years. Dan did note that because the two breast plate bones were separate (photo of one of these bones in my report) and not fused together it is possible that whilst this was clearly a large Sperm whale it may not as yet have been a full adult specimen.



Common dolphin C/2024/198	Trevaunance Cove, St Agnes SW720516	12/09/24	Extensive suspected shark scavenging on tail stock, throat, rock scrapes across entire body
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<p>Common dolphin Juvenile female C/2024/242</p>	<p>Sandymouth Beach, Bude SS201101</p>	<p>12/09/24</p>	<p><i>This juvenile female common dolphin was in poor nutritional state, although it had some evidence of recent feeding. The fresh nature of the carcass, asymmetry of the lungs and presence of beach material in the stomachs suggested it is likely to have live stranded.</i></p> <p><i>The animal had pronounced scoliosis affecting the caudal thoracic and lumbar spine.. No clear evidence of traumatic damage to the spine was found on initial examination (although this may become evident when the skeleton has been de-fleshed) but there was some evidence of infection associated with lumbar transverse processes, caudal (coccygeal vertebrae) and surrounding muscles. The isolation of Pseudomonas fluorescens from two sites of infection may be of significance in this respect as it is a known opportunist pathogen. Therefore, the possibility that scoliosis has occurred secondary to infection, or trauma with secondary infection cannot be ruled out. However, it is also possible that this is a case of congenital scoliosis following embryonic developmental abnormality.</i></p> <p><i>The length of the dolphin suggested that this was not a calf born in 2024 but it was potentially born the year before. Common dolphin calves are weaned at around 1.5m in length and 18 months of age, so this animal may not have been fully independent, nutritionally and particularly socially. Therefore, it may not have been able to make the transition to feeding itself due to the significant impact the scoliosis would have had on its ability to swim, dive and forage. Rather unusually, there appeared to be foetal folds on this animal suggesting that these may persist longer than a few months in young common dolphins.</i></p> <p><i>This case will be investigated further through histopathology and examination of the de-fleshed skeleton and further reports will follow.</i></p> <p><i>Histopathology report - As can be seen from the histopathology report, it appears that a traumatic cause for the scoliosis seen in this dolphin is less likely and the histopathologist has raised the possibility of vertebral osteomyelitis as a cause. No vertebrae were retained for histopathology as I wished to have the skeleton de-fleshed and preserved. However, it is hoped that gross examination of the vertebrae in the region of the scoliosis may reveal any evidence of bone pathology. A further report will follow.</i></p> <p><i>Bone report - The extensive bone remodelling and proliferative changes in the transverse and spinous processes would be consistent with the histopathologist's suggestion of vertebral osteomyelitis. This causes progressive destruction and weakening of the bone and it is interesting to note that Connie stated that the cleaned bones of this animal were particularly brittle compared to other dolphin skeletons that she has prepared.</i></p> <p><i>Most cases of vertebral osteomyelitis arise from haematogenous (blood borne) spread of infection to the vertebrae during the neonatal period in animals that have received inadequate passive immunity via colostrum from the mother. Bacteria can enter via the umbilicus, respiratory tract, digestive tract, or possibly the placenta immediately before birth (Jubb, Kennedy and Palmer's Pathology of Domestic Animals, 6th Edition).</i></p>
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Seals



Photo 7: Adult male grey seal, Sennen Beach, 23rd September 2024 photo by Constance Morris

Seal strandings in 2024 overview

Dead grey seal strandings have been recorded in detail on the CWT MSN database since 2000. Numbers of seal strandings have been increasing year on year since MSN started recording. In 2024 245 dead seals were reported to the network (see figure 13). The decrease from the previous year's total (n=309) is mostly accounted for by a decrease in the number of moulted pups (see table 4). CWT MSN continues to work closely with the Seal Research Trust (SRT) to monitor this trend more effectively. There appears to be a new biannual peak in the number of seal strandings. This closely mirrors the trend of the number of pups recorded born by SRT with the exception of 2022 when pup numbers appeared to peak. This could suggest that factors such as storm frequency and wave height play a role in seal mortality.

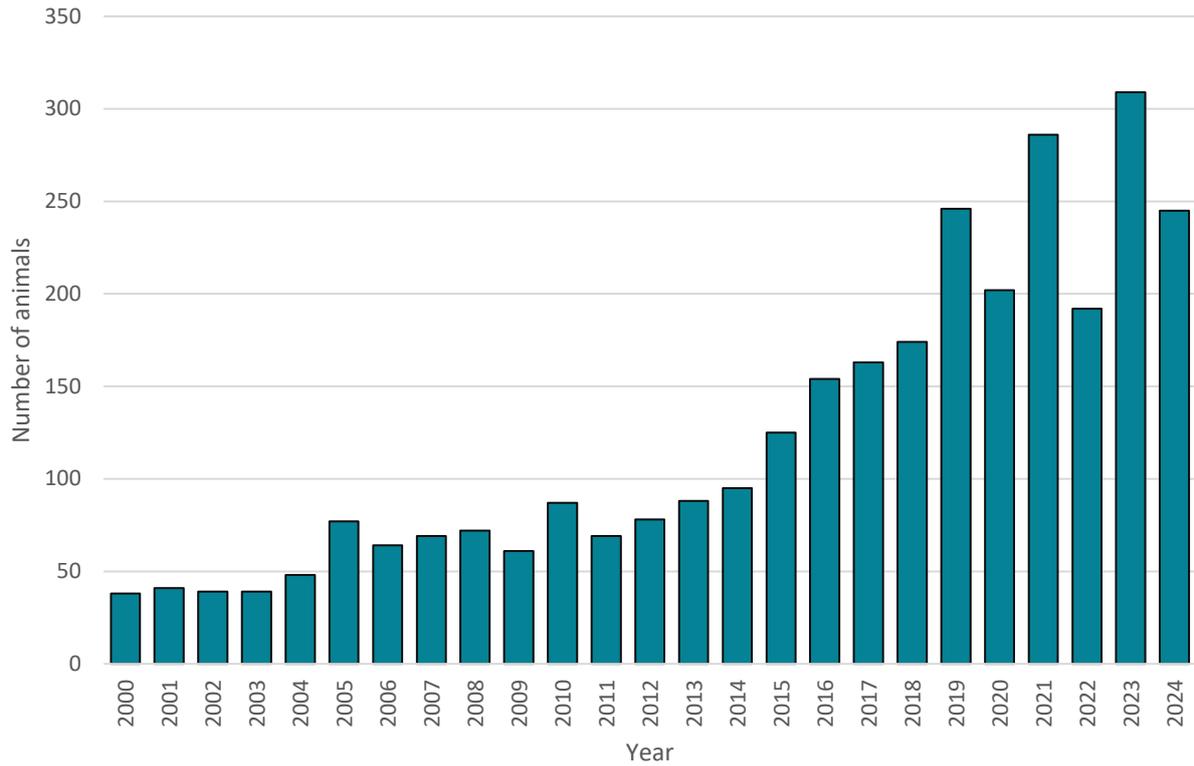


Figure 13: Comparison of grey seal strandings by year (2000 – 2024)

Of the 245 seal strandings, 38 were categorised as whitecoat/maternally dependent pups under three weeks old, 80 were categorised as moulted pups measuring less than 120cm nose to tail, 19 were juvenile (measuring between 120cm and 160cm), 59 were adult, and 49 were unknown due to lack of data (see table 4).

Table 4: Seal Age Class for 2024

Age Category	2023	2024
Adult	56	59
Juvenile	22	19
Moulted Pup	124	80
Whitecoat	34	38
Unknown	72	49
Total	308	245

The gender breakdown (see figure 9) of the 2024 seal strandings is 28% (n=70) males, 21% (n=51) females and 51% (n=124) unknown (due to either limited or no supporting photos, or because the animal was too decomposed and/or had genital scavenging).

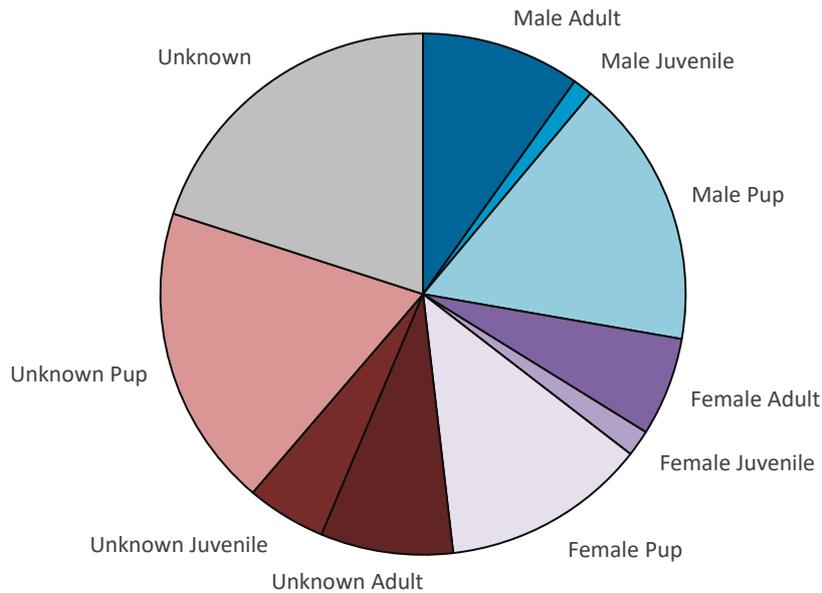


Figure 14: Grey seal strandings age and gender classes (2024)

Figure 11 shows the age category proportions each month to identify seasonal patterns. June was the quietest month for seal strandings in 2024, with only three stranded seals recorded. Unusually there were two whitecoat pups reported in April well outside of the usual breeding season. SRT recorded two pup births in April and it seems neither of these survived. There were also two dead pups in July, however the majority pups were reported Aug-Oct. Data by SRT shows that peak pupping has moved from October followed by November (2010 to 2016) to September followed by August (2022 and 2024). SRT volunteers recorded 48 more pups in August 2024 than in October 2024 with just five pups born in November 2024 (four of these were on the south coast). 69% of the pups recorded born in 2024 appear to have died. Seal deaths in 2024 were substantially greater than recorded pup births for the ninth year in a row.

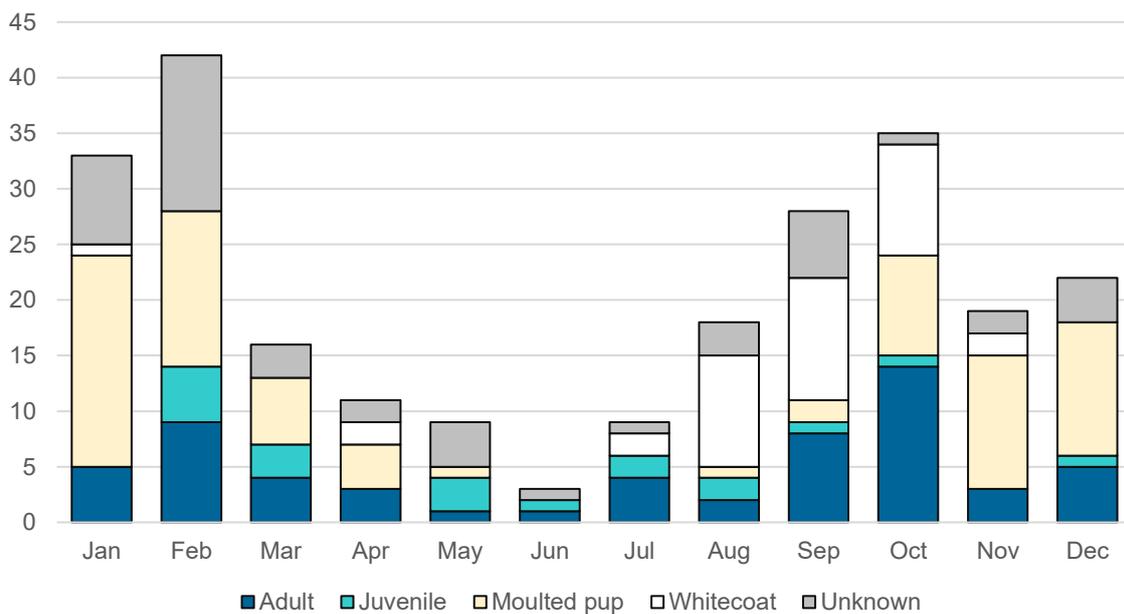


Figure 15: Age and sex of Atlantic grey seal strandings per calendar month in 2024 (n=245)

The seasonal pattern of strandings is very similar to those seen in previous years (see figure 16). As usual the lowest strandings were recorded in the summer suggesting that the increased number of seal deaths was unlikely to be an artefact of increased awareness and reporting as more people access the Cornish coast during the summer months.

It is interesting that the seasonal and annual pattern of mortality of grey seals is very similar to that seen in cetaceans (figures 8 and 17). Reported numbers of both common dolphins and grey seals have increased notably since 2015 and both have increased numbers of strandings in the winter months.

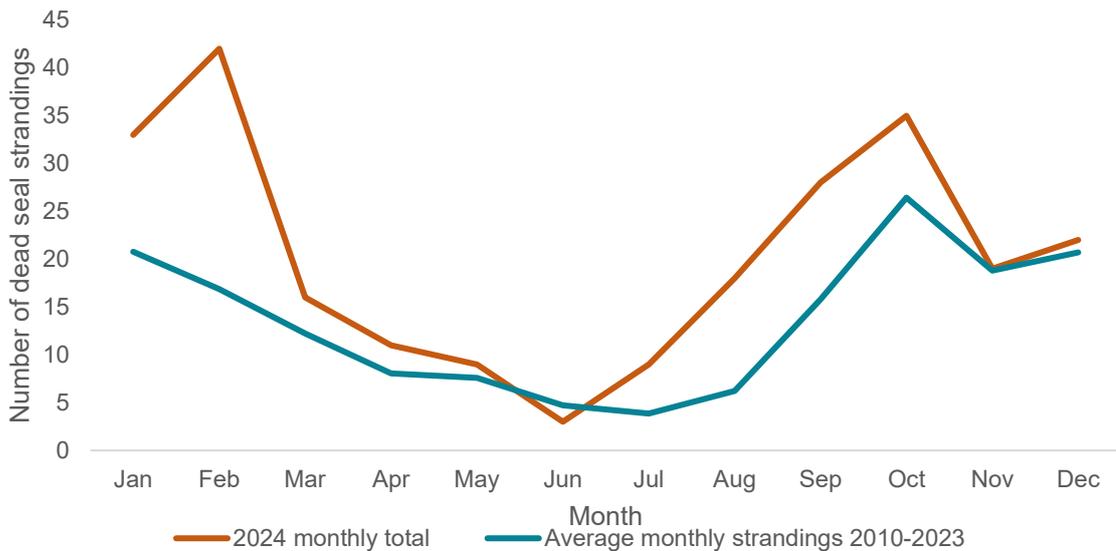


Figure 16: Atlantic grey seal strandings per calendar month in 2024 (n=245) compared to average monthly totals for 2010 – 2023

Jan	0	7	1	1	5	11	8	17	7	7	5	7	9	6	14	24	24	13	36	41	23	36	21	32	33
Feb	2	4	6	2	4	9	5	9	5	2	4	7	3	4	14	9	22	15	20	21	24	35	22	36	42
Mar	3	3	2	4	0	3	3	6	4	4	4	3	6	4	5	12	6	7	15	6	9	46	13	35	16
Apr	2	3	1	1	3	3	3	2	2	6	2	3	3	4	1	8	8	8	4	15	2	26	11	17	11
May	3	2	4	3	6	2	3	1	2	4	3	6	1	5	4	10	4	8	8	12	4	23	11	7	9
Jun	2	5	4	3	1	2	3	1	3	4	0	5	3	3	2	5	6	2	4	7	4	8	4	13	3
Jul	2	0	2	5	0	6	4	2	2	2	4	1	0	4	2	3	2	7	2	6	7	6	6	4	8
Aug	2	3	5	1	1	10	5	4	3	2	3	2	3	6	5	2	8	11	3	5	13	1	10	14	18
Sep	3	2	1	1	5	9	3	2	6	3	21	8	4	3	3	7	16	17	18	29	11	23	27	34	28
Oct	7	4	5	6	11	4	5	6	22	7	20	15	12	10	18	10	25	34	29	50	46	34	21	46	35
Nov	4	6	5	10	7	9	9	10	9	15	11	5	15	18	13	22	18	19	9	29	31	26	17	30	19
Dec	8	2	3	2	5	9	13	9	7	5	10	7	19	21	13	13	15	21	26	25	28	22	29	41	22
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024

Figure 17; Grey seal strandings by month and year for 2000 - 2024

Due to the number of strandings the maps showing geographical location of strandings have been split into age classes for clarity (see figures 18 and 19). The majority of seal strandings occur on the North coast reflecting the historical distribution of this species, although SRT sightings data suggest this may be changing.

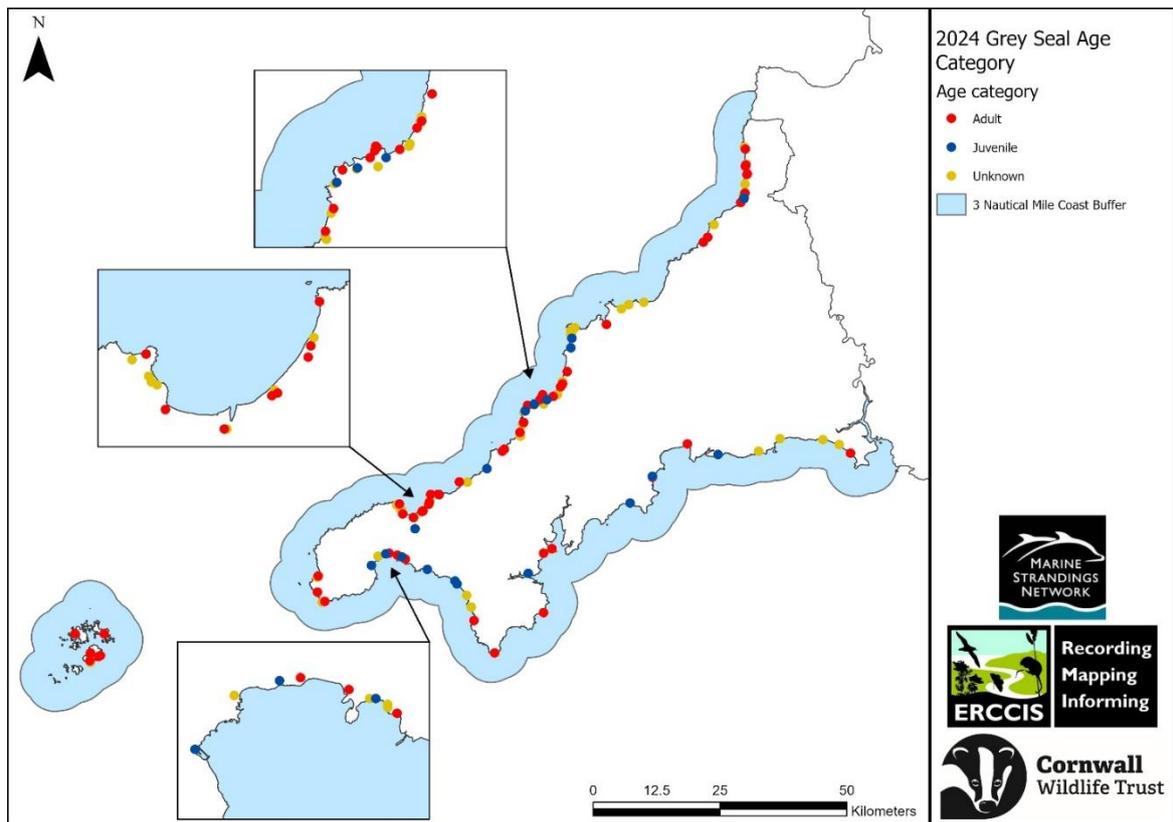


Figure 18: Locations of adult (n=59), juvenile (n=19) and 'age unknown' (n=49) Atlantic grey seal strandings in 2024

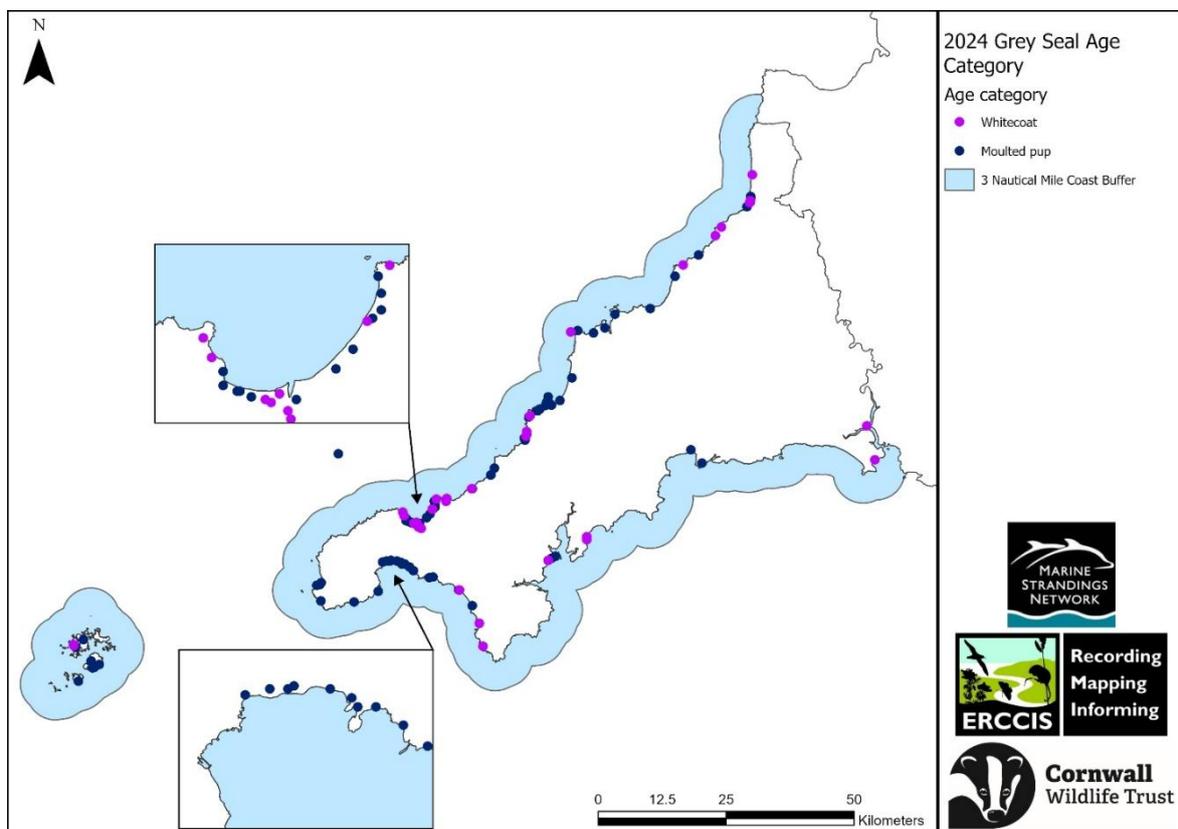


Figure 19: Locations of moulded pup (n=80) and whitecoat pup (n=38) Atlantic grey seal strandings in 2024



Photo 8: Grey seal pup, Crantock beach, Newquay 04.02.2024. Photo by Josh Symes

Known grey seals

Thanks to collaborative work with SRT, seal strandings, where time permitted, were checked against individual photo identification catalogues of seals in Cornwall with a total of six IDs. Two dead adult males, one adult female, one juvenile male, one juvenile female and one moulted pup were identified from fur pattern markings, the latter two were dead tagged ex-rescue, rehab and released seals.

S1048 Praying Snoopy (figure 19) was an adult female grey seal found on the 8th January 2024 in Newquay bay, she had been identified in 2014. She had been identified 30 times over 10 years at three different sites from Trevose to West Cornwall. She was known to have successfully weaned pups in 2019 and 2020. She was noticeably smaller than other adult female grey seals monitored by SRT and the nose to flipper length, when compared with the data in (Hewer, 1964), also suggests that she was undersized. *Post-mortem* results showed she was suffering from an extensive infection with visceral abscessation, pyothorax and peritonitis.

DP1244 Hanging Eyes (figure 20) was an adult male. He was first seen by SRT in March 2015 and had been identified 44 times at two locations on the north coast before being recorded dead in Carbis Bay on the 28th April 2024.

An adult male seal showing neck scars from entanglement was first ID'd by SRT in 2019 and known as GF247 'Shoulder mitten'. He was found dead on the 17th November at Porthgwarra (figure 21). He had been identified just six times in life and all at a site close to where he died. He was thought to be around 10 years old at death. Postmortem results showed he had died from bronchopneumonia due to an alphacoronavirus infection.

DP2782 Paris key was a very well patterned juvenile male (figure 22). He was first identified on the Roseland in April 2022. He had been identified 41 times since at five different sites spanning Cornwall's north and south coasts. He was known to have made at least two return journeys around Land's End before being found dead on the north coast.

The two ex-rescue and release seals were a juvenile female SL280, Honshu/Daisy Ridley (figure 23) and SL266 Morgan Freeman (figure 24). Honshu was released from Cornish Seal Sanctuary 27th February 2024 and found dead 11 days later on the 9th March 2024 at Newlyn Harbour. Morgan Freeman was released at Kennack Sands on the 4th January 2024 after being rescued on the 11th November 2023, he was found dead 25 days later at Gyllyngvase Beach Falmouth. Both rehab and released seals showed signs of entanglement or bycatch.

MSN continues to work in partnership with SRT for seal identification work in 2025. For more information about grey seal photo identification work in Cornwall, please contact SRT www.sealresearchtrust.com. Please email live seal records and photos to sightings@sealresearchtrust.com.

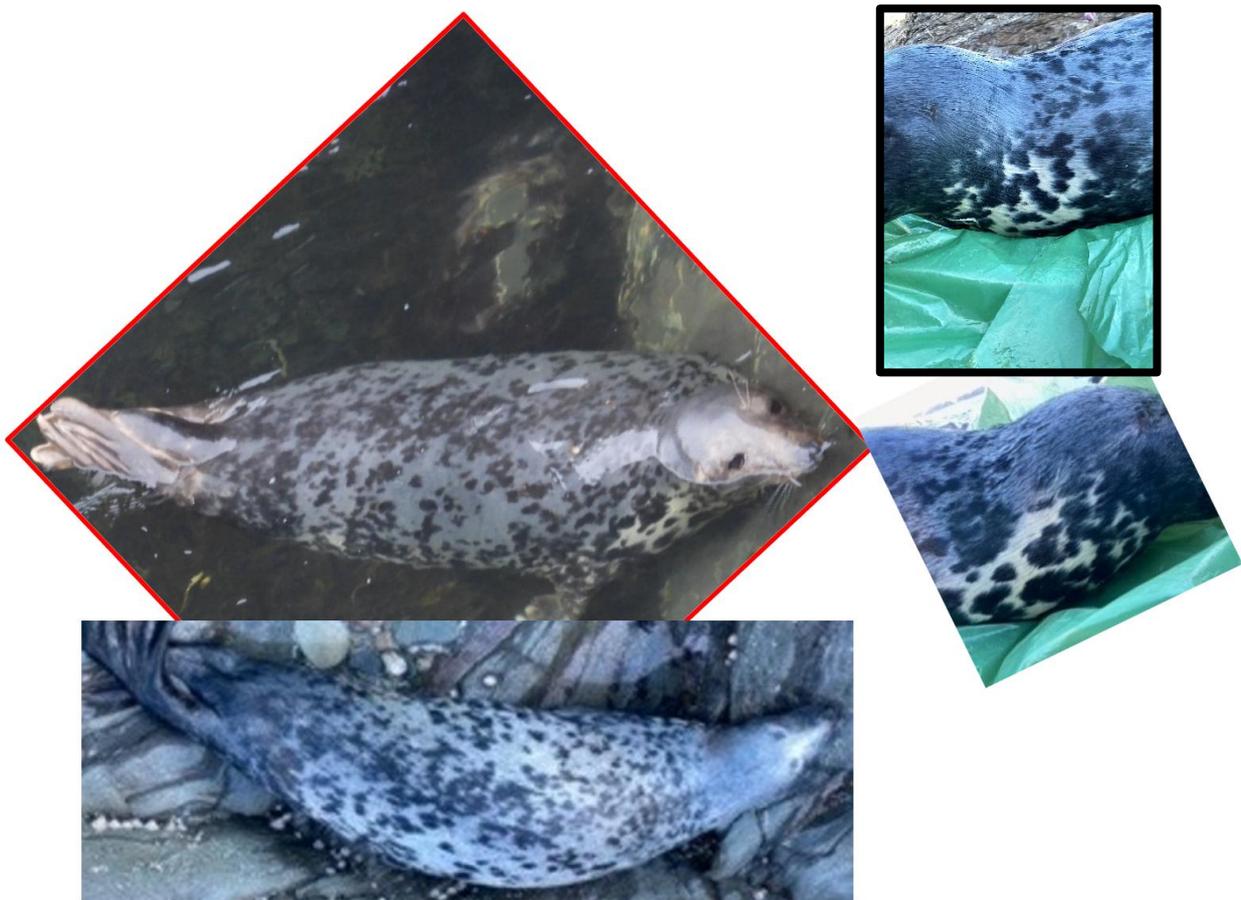


Figure 19: Praying Snoopy S1048, female Atlantic grey seal, 08/01/24. Identified by Seal Research Trust (SRT). Photo by Emma Gallagher and SRT (red border)



Figure 20: Hanging Eyes DP1244 male adult Atlantic grey seal, 28/04/24 . Identified by Seal Research Trust (SRT).
Photo by Mick Dawton



Figure 21 EX Nettie male adult Atlantic grey seal 17/11/24, Porthgwarra. Known by (SRT) since 2019 Photos by Andy
Cowie and from SRT ID catalogue

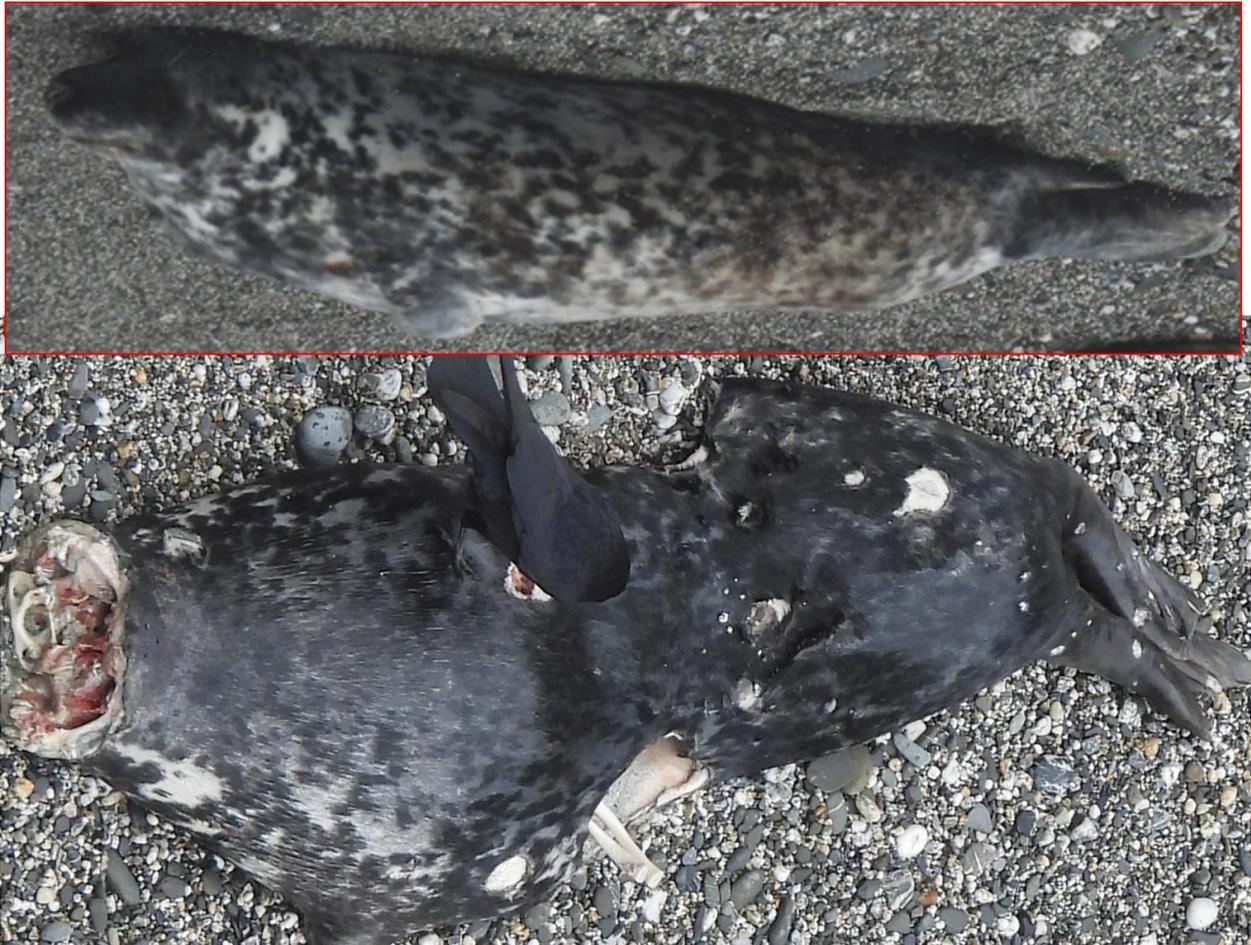


Figure 22: Paris key male juvenile Atlantic grey seal, 25/03/24. Photos by Sue Sayer and SRT (red border)



Figure 23: Honshu/Daisy Ridle SL280 Released from CSS 27/02/24, female juvenile Atlantic grey seal, 09/03/24. Photos by Mick Dawton

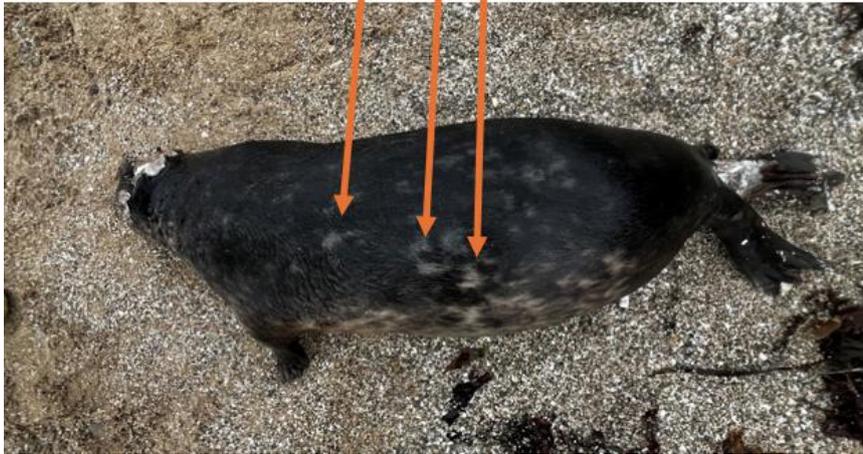


Figure 24 Morgan Freeman SL266 Atlantic Grey Seal Pup rescued on the 11/11/23 by BDMLR. Sent for rehabilitation at CSS 22/11/23. Released at Kennack Sands on the 04/01/24. Dead stranded 29/01/24 at Gyllyngvase Beach Falmouth. Photos by George Deacon and Jen Evans

Seal *post-mortem* examinations

Seals that were found dead on the coast, as well as those which were euthanised or died in the wild or within a short window after being rescued, were considered for *post-mortem* examination and inclusion in this report. In 2024 31 Seals which died within a 2-day window are included in the strandings database to ensure standardisation across UK strandings data collections. However, a further eight which died or had been euthanised within their first week of rehab and deemed most likely to have died from conditions they picked up in the wild are included in the summary of *post-mortem* data below (table 5).

Table 5 Summary of PME results (totals in parenthesis includes seals which died outside the 2 day window.)

Cause of death:	Adult	Juvenile	Moulted pup	Whitecoat pup	Total
Infectious	4	1	8		17(25)
Trauma	1		5	2	8
Bycatch		2	2		4
Other		1	1		2
Total	5	4	16	2	31(39)

Of the 245 dead seals reported 39 died in the wild (or within one week of rescue) and were subjected to *post-mortem* examination in 2024. *Post-mortem* examination was carried by veterinary pathologist James Barnett on behalf of the Cornwall Marine Pathology Team (CMPT) or pathologists at the Animal and Plant Health Agency (APHA) Starcross.

Of those examined at *post-mortem*, infection or infectious disease was the leading cause of death in 25 (64%) of the seals. Trauma was the second highest cause of death especially for young seals, impacting 8 (21%) whilst four animals (10%) were concluded to have died after being bycaught (see table 5). Full summaries of *post-mortem* cases can be found in Appendix A.

Seal Evidence Evaluation Protocol (SEEP)

Cornwall Wildlife Trust produced a new Seal Evidence Evaluation Protocol (SEEP) in 2016 to further the development of seal strandings photo collection and analysis, following similar protocols already established with the Bycatch Evidence Evaluation Protocol used for cetaceans. There are difficulties with this assessment due to the pelt and skin structure of seals, which means external marks aren't as clear as they are in cetacean species. During 2024, 110 seals were assessed by an experienced person using SEEP methods. Whilst most (81%) showed none or no clear diagnostic features 19 had external evidence of having been bycaught or entangled (17%) see table 6.

Table 6: a summary of SEEP conclusions from seal cases assessed in 2024.

SEEP Conclusion	Number of animals	% of SEEP assessed cases
Entanglement - ring neck	6	5.5%
Entanglement	5	4.5%
Bycatch	5	4.5%
Possible bycatch	4	3.6%
Probable bycatch	3	2.7%
Trauma	2	1.8%
Inconclusive	32	29.2%
No features	53	48.2%
Total	110	23%



Photo 9: Entangled female pup, Atlantic grey seal 26/11/24, Mother Ivy's Bay. Photo by British Divers Marine Life Rescue.

Notable seal strandings cases

In November 2024 a ringed seal *Pusa hispida* (the first record of this Arctic species in Cornwall) was seen alive on the Hayle estuary. Volunteers monitored it but sadly a few days after it was first spotted it was seen flapping near the waters edge and sadly died. *Post-mortem* examination and histopathology detected necrosis of neurones in the cerebellum and acute haemorrhage in the lungs. The underlying cause was unclear but acute heat stress/hyperthermia could not be ruled out..

One grey seal pup case highlights the challenges these animals face learning to navigate their marine world. It was found entangled and in poor nutritional state. Its stomach was full of whelk shells and it had extremely worn teeth for its age presumably the result of this unsuitable diet.

Table 7: Notable seal strandings cases

<p>Grey Seal Adult - female S/2024/034 SS2024/6 CW/S06/24</p>	<p>Rockbears Wadebridge SW926767</p>	<p>04/02/2024</p>	<p><i>This adult female grey seal was emaciated and there was no evidence of recent feeding. Likely contributory factors to her poor nutritive state included markedly worn teeth and extensive ulceration and thickening of the distal oesophagus caused by ascarid colonisation, a location for ascarid ulceration that I do not recall observing previously.</i></p> <p><i>The marked adrenal cortical hyperplasia was consistent with an animal that had undergone prolonged, chronic stress.</i></p>
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<p>Ringed Seal Female juvenile S/2024/122 SS2024/349 CW/S15/24</p>	<p>Lelant Saltings, Hayle SW549361</p>	<p>24/07/2024</p>	<p><i>This juvenile ringed seal was first seen alive in the Hayle estuary on 24th July and again on 27th and 28th July. On 28th July, the animal was observed flapping at the water's edge, dying shortly afterwards. This is the first record of this species in Cornwall.</i></p> <p><i>The young seal's nose to tail length of 85cm would suggest the animal was around one year of age, extrapolating from the models for standard (nose to tail) lengths versus age in male and female ringed seals provided by Ferguson et al (2018). The animal was in good nutritional state and there was some evidence of relatively recent feeding.</i></p> <p><i>The most notable finding on gross examination was a hepatopathy, the liver being abnormal in colour and texture. Hepatic lipidosis was determined to be the cause on histopathology. There was also evidence of significant gastric ulceration which, in this case, was not associated with an ascarid worm burden.</i></p> <p>Reference:</p> <p><i>Ferguson S. et al (2018) Geographic variation in ringed seal growth rate and body size. Canadian Journal of Zoology, 96: 649–659.</i></p> <p><i>Histopathology comments – Gail Leeming, (the histopathologist) and I have discussed this case and it remains unclear as to exactly what precipitated the seizures and death of this ringed seal. There are lesions in the cerebellum of the brain that could have precipitated the seizures but is also possible that the lesions could have been caused by the seizures. The cause of the acute pulmonary haemorrhage (found on histopathology) is not clear, particularly in the absence of any intense activity preceding the animal's sudden deterioration. Hyperthermia as a possible cause has been discussed and cannot be ruled out, although not all of the lesions typically seen with hyperthermia were found in this seal.</i></p>
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Grey Seal pup
S/2024/234
SS2024/598
CW/S24/24

Trebarwith Strand
SX050872

17/11/2024

The pup was in suboptimal nutritional state. As suspected, there was significant tissue damage and infection associated particularly with the left fore flipper hook wound. The pattern of rostral upper arcade tooth wear and hard palate, gingival and mucocutaneous ulceration was similar to that seen in some other pups at post-mortem examination and is consistent with oral trauma. The contents of the stomach are interesting, consistent with the pup feeding on a species of marine snail.



Marine Turtles

There were four marine turtles reported to the Marine Strandings Network in 2024, one loggerhead, a Kemp’s ridley and two leatherbacks (see figure 25).

Leatherbacks are the most commonly recorded species with 39 being reported to the network since 2000.

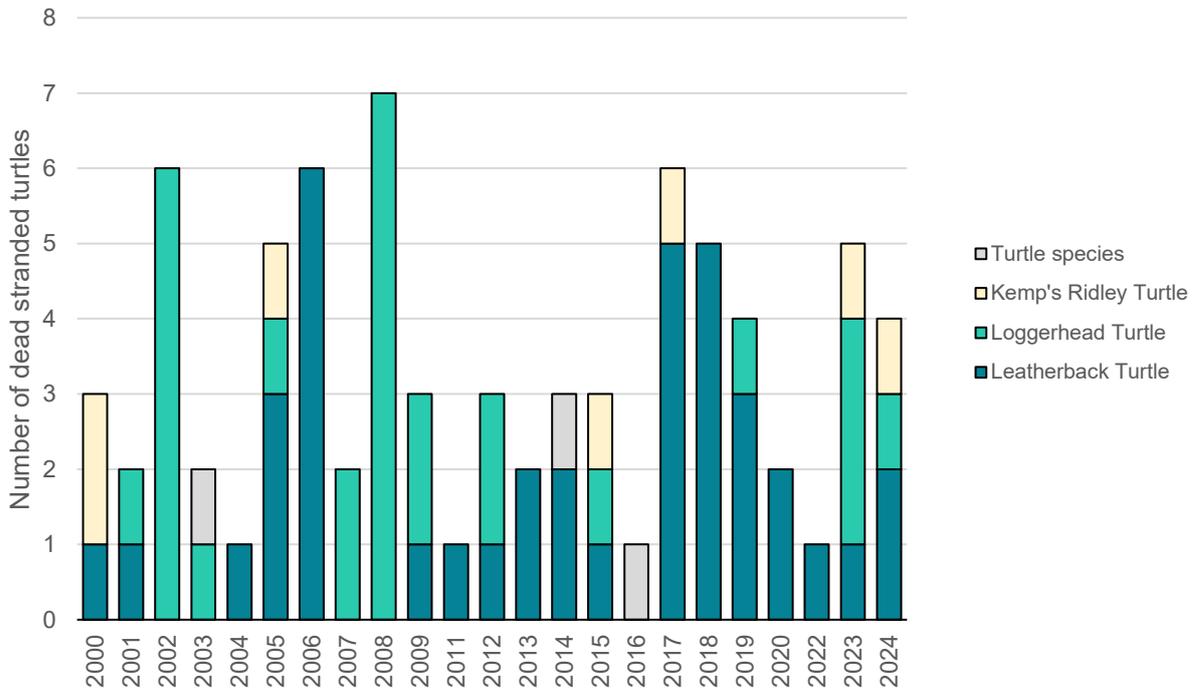


Figure 25: Marine turtle strandings 2000 – 2024

Table 8: PME reports for turtles

<p>Juvenile loggerhead turtle (female) CW/T01/24</p>	<p>Millendreath, Loe SX267540</p>	<p>09/04/24</p>	<p>This juvenile female loggerhead turtle was found alive but died shortly afterwards. From the curved carapace length, it was estimated to be around one year old (Casale et al, 2009). It was in poor body condition and is likely to have succumbed to cold stunning, although there was some evidence of recent feeding. The isolation of <i>Citrobacter</i> species including <i>C. freundii</i> is of potential interest as members of this genus have been isolated from lesioned and healthy sea turtles (Ebani, 2023). However, further investigation through histopathology is not possible as the carcass was frozen.</p> <p>Casale, P, d’Astore, P and Argano, R. (2009) Age at size and growth rates of early juvenile loggerhead sea turtles (<i>Caretta caretta</i>) in the Mediterranean based on length frequency analysis. <i>Herpetological Journal</i> 19: 29–33.</p> <p>Ebani, V (2023) Bacterial Infections in Sea Turtles. <i>Veterinary Sciences</i> 10, 333. https://doi.org/10.3390/vetsci10050333</p>
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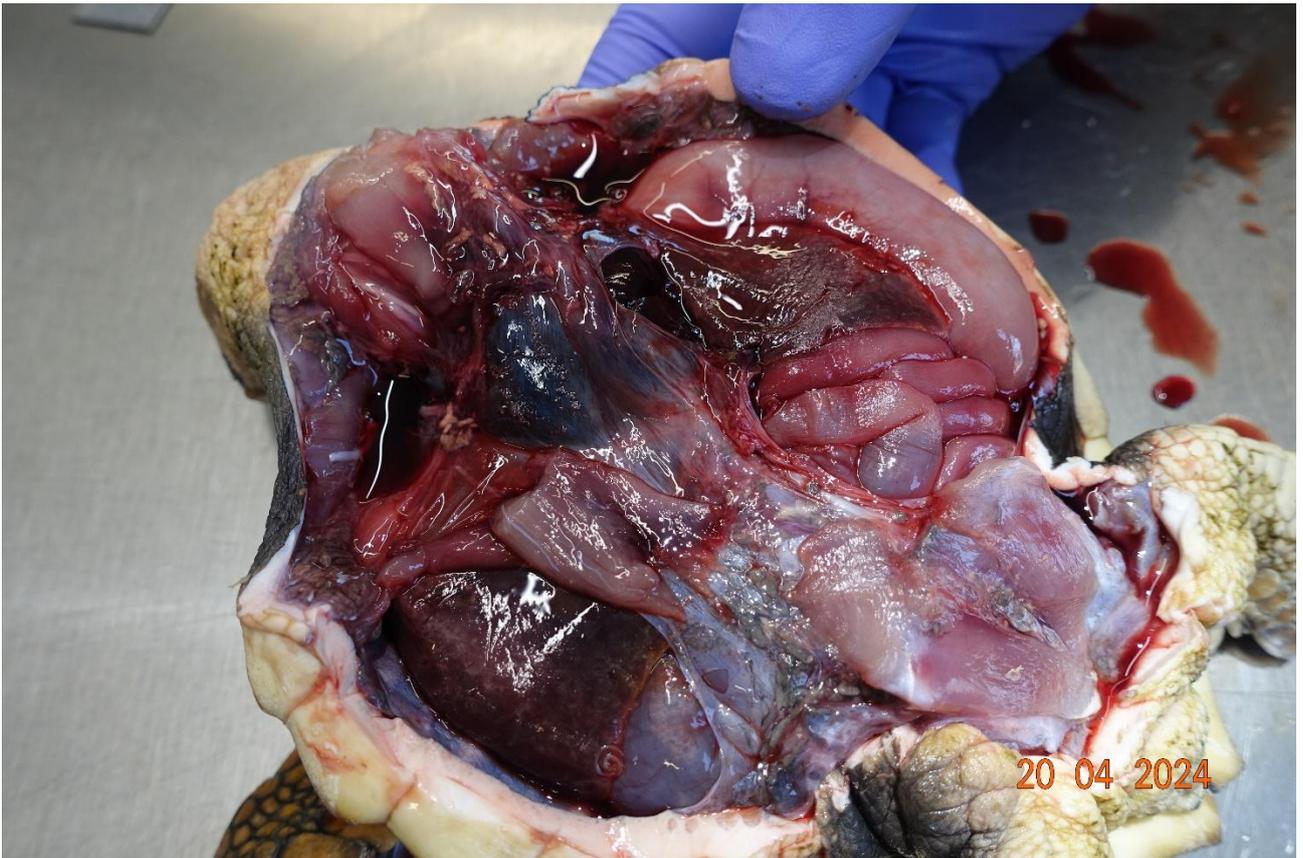


Photo 10 & 11: Loggerhead turtle, Millendreath 09/04/24. Photos by CMPT

Birds

CWT MSN continue to monitor bird strandings reported to us, and to work in collaboration with partner organisations such as the RSPB and BDMLR (British Divers Marine Life Rescue) to ensure quick reactions in response to any major incidents, such as wrecks after storms or as a result of pollution.

Avian influenza continues to be reported in wild birds. This year saw an increase in birds reported to the network from last year with a total of 90 reports representing an estimated 139 birds (see figure 26). Eleven different species were reported (see table 9).

Gannets continue to be reported as a smaller proportion compared to previous years possibly due to the fact that the population was heavily impacted by avian flu in 2022. Auk species represented 57% of records (52 reports totalling 70 birds). Puffins were the third most reported species which is of note given the small size of the southwest population.

Notable cases included the first recorded ringed whooper swan in Cornwall and also two cases of entangled birds, one puffin found at Port Quin and three gannets entangled together in fishing line found at Gwithian (see table 10).

Table 9: Total numbers of each sea bird species reported to CWT MSN in 2024

Species of Bird	Number of reports	Estimated number of animals
Guillemot	27	37
Gannet	15	29
Puffin	13	15
Razorbill	12	18
Herring Gull	5	7
Manx Shearwater	4	10
Shag	4	4
Cormorant	2	2
Great Northern Diver	1	1
Oystercatcher	1	1
Whooper Swan	1	1
Gull species agg.	3	12
Bird species	2	2
Total	90	139

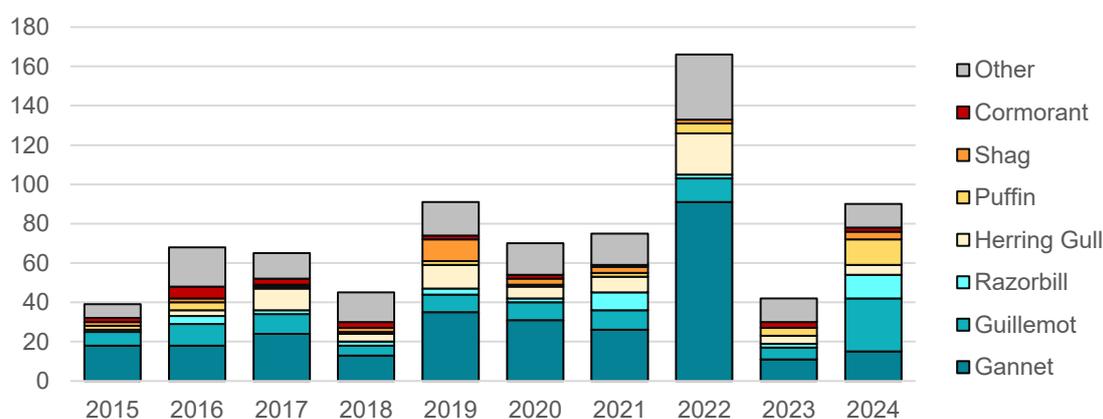


Figure 26: Birds reported to MSN from 2015 - 2024

Table 10 Notable bird strandings cases

Gannets x 3 DBID17956	Gwithian, St Ives SW581417	04/01/24	3 gannets entangled in fishing line and hooks
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<p>Whooper swan DBID17956</p>	<p>Praa Sands, Helston SW577279</p>	<p>14/10/24</p>	<p>Ringed Whooper swan - ringed in Iceland. 1st record of a ringed whooper swan seen in Cornwall. Appeared thin and had been dead a while - losing feathers.</p> <p>Tags on both legs Plastic white with black letter/number:- 46H Stainless steel :- A10758 MUS.RER.NAT Box 5320 REYKJAVIK ICELAND</p>
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Photo 11: Entangled puffin, Port Quin, 25/07/24. Photo by Barnaby Kay

Sharks



Photo 12: Nursehound, Towan Beach, 17/08/24. Photo by Nikki Cowland

There were 21 reports (representing 63 individual animals) of stranded sharks or rays reported to the CWT MSN in Cornwall in 2024, consisting of 8 different known species (Table 11). There has been an increase in sharks reported especially in the smaller species probably due to a greater awareness in reporting (figure 27).

Table 11: Total numbers of shark and ray (elasmobranch) species reported to CWT MSN in 2024

Species of Shark	Number of Reports	Estimated number of animals
Nursehound	5	5
Shark species	1	1
Smalleyed Ray	1	8
Small-spotted catshark	9	42
Spurdog	2	2
Starry Smooth Hound	1	3
Thresher Shark	1	1
Tope	1	1
Total	21	63



Photo 13: Thresher shark, Watergate Bay Newquay, 15/12/24. Photo by Josh Symes

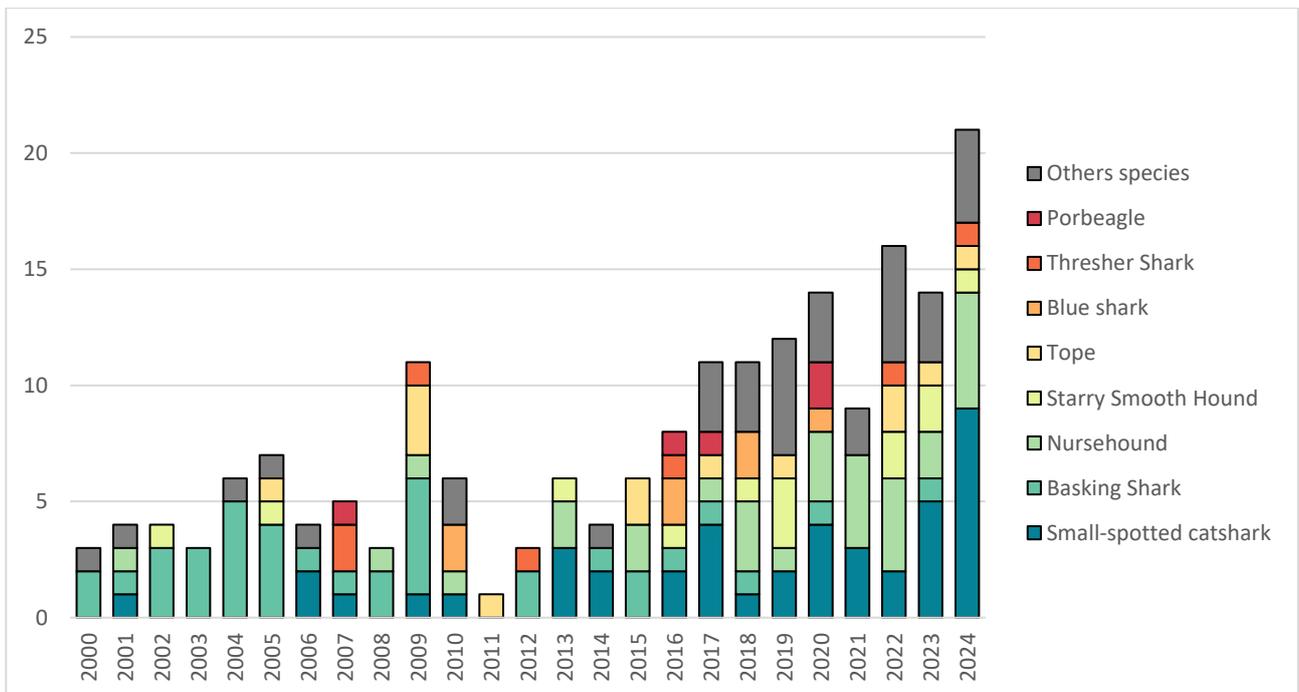


Figure 27: Elasmobranch (shark and ray) strandings 2000 – 2024

Bony fish



Photo 14: Grey triggerfish, Wherrytown, Penzance, 29/01/24. Photo by Lucy Luck

Fifteen species making up 59 records of bony fish species were reported to the network (see table 12). From the 21st of February through to March 28th (with the majority reported late March) mass strandings of baitfish, primarily Cornish pilchards were reported all around the Cornish coast (see figure 28).

Table 12 Fish strandings reported to the MSN in 2024

Species	Reports	Individuals
Cornish pilchard / sardine	24	5735
Atlantic Herring	4	1300
Lesser Sand Eel	4	1300
Horse Mackerel/Scad	1	100
unidentified	1	50
Seabass	3	12
Grey Triggerfish	9	10
Blue-Fin Tuna	5	5
Conger Eel	2	2
Ocean Sunfish	2	2
Ballan Wrasse	1	1
Garfish	1	1
Goldsinny Wrasse	1	1
Monkfish	1	1
Total	59	8520

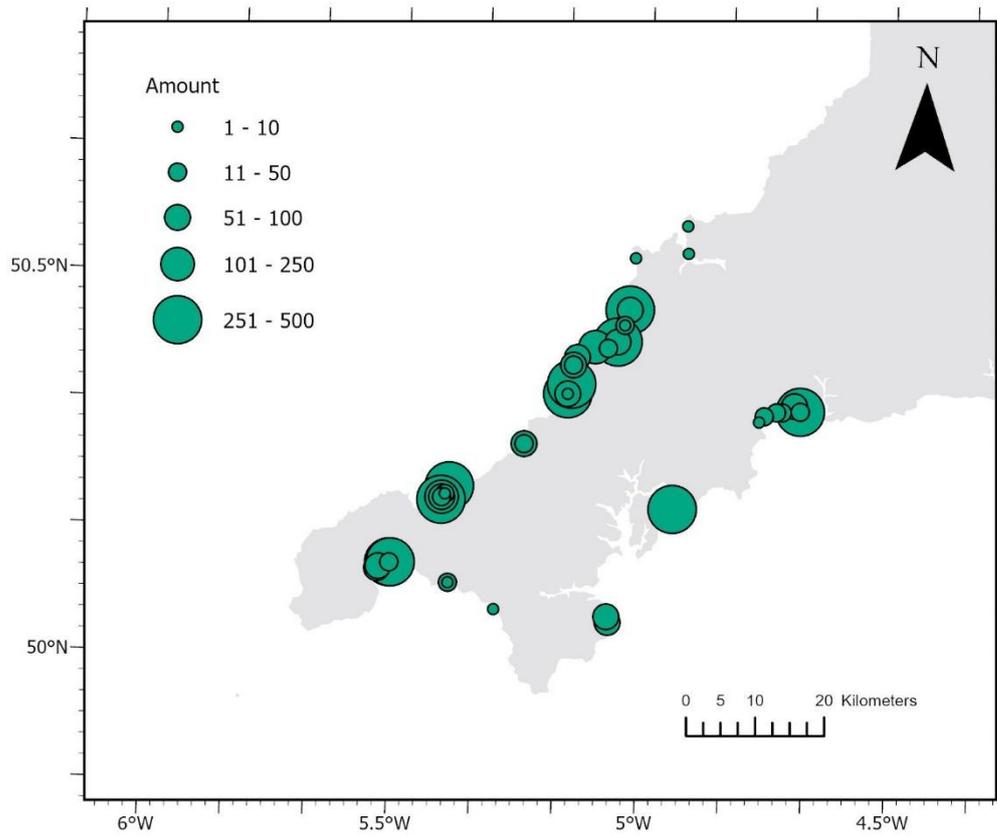


Figure 28 Mass stranding event of baitfish species between 21/02/2024 – 28/03/2024

Other species

Fifteen taxa comprising 68 records of invertebrates and plants were reported to the network in 2024 (see table 13)

Table 13 Other species reported to the MSN in 2024

Group	Species	Number of records	Estimated number of individuals
Cephalopods	Common Cuttlefish	7	250
	Common Octopus	2	2
	Octopus species	1	1
Crustaceans	Columbus Crab	1	1
	Goose-neck Barnacle	4	5235
	Spiny Spider Crab	1	1
Hydrozoa	By-the-Wind Sailor	20	43000
	Portuguese Man-of-War	3	5
Jellyfish	Barrel Jellyfish	3	3
	Crystal Jellyfish	1	5
	Mauve Stinger	13	21210
	Moon Jellyfish	3	200
Mollusca	Violet Sea-snail	7	365
Tunicate	Salp	1	1000
Seeds	Sea Heart	1	1
Other	unidentified	1	1
Total	15 different taxa	68	71279

Ghost gear case study

In November volunteers with Three Bays wildlife group recovered a large net which had become entangled on a reef near Hemmick beach. A number of species (1 cormorant, 5 small spotted catsharks and four spider crabs) were recovered mostly deceased. These were reported to the network.

- 02/11/24 reported to Three Bays wildlife
- Attended by Three Bays Reactive Beach Clean Team including Sharon Trew
- Large 'ghost gear' net wrapped around a small reef on Hemmick Beach, Gorran Haven with - Dead 1 cormorant, 5 small spotted catsharks and 4 spider crabs. 4 live crabs released, 2 spider and 2 velvet swimming crabs.
- 2 seals swimming within 10 meters of the net
- Gear cleared off rocks – huge effort by everyone involved.



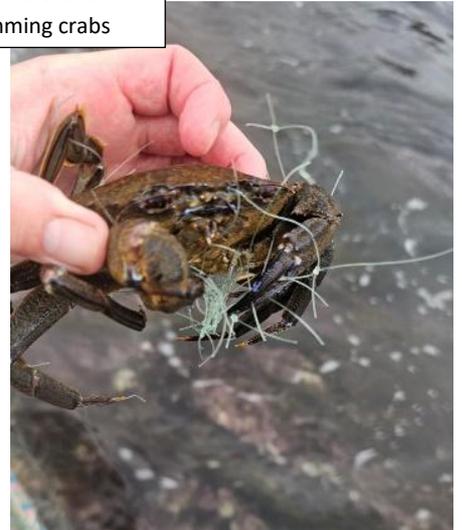
Casualties of the net



Rescued and released Spider crabs



Rescued and released Velvet swimming crabs



Photos by Toni Dowrick 02/11/24



Ghost net recovered and removed from the beach

Engagement and Events



Photo 15: Attendees at the MSN Forum 2024.

The Marine Strandings Network (MSN) facilitates a selection of outreach and engagement activities throughout the year, ranging from our annual conference to active social media. The events are designed to allow the Trust to train and support our volunteers and engage the wider public in the work of the Network.

Social media

The Trust supports active social media platforms, including Facebook, Instagram, WhatsApp and Mailchimp. In 2024, MSN had it's own Facebook page with 5800 followers.

- MSN Facebook: 5800 followers

WhatsApp: MSN Hotline Coordinators use WhatsApp to manage and communicate with the MSN Callout Volunteers. Alerts about a stranding are sent out to the relevant regional MSN WhatsApp group to enable an available volunteer to respond. Regional groups include;

- North East Cornwall - Heartland Point to the Camel Estuary (Polzeath/Rock side)
- North Cornwall - Camel (Padstow side) to Godrevy
- West Cornwall - Godrevy to Porthleven
- South West Cornwall - Porthleven to Fal River (Falmouth side)
- South Cornwall - Fal river (Roseland side) to Fowey (Fowey side)
- South East Cornwall - Fowey (Polruan side) to the Tamar
- Isles of Scilly

This method of communication has been hugely beneficial to the Network, reducing time and effort from our Hotline Coordinators and increasing response opportunities for our Callout Volunteers. All trained MSN Callout Volunteers are within at least one (some are on multiple) regional WhatsApp Group.

MSN Callout Volunteer Training Day

The MSN has nearly 200 volunteers countywide. Volunteers living in close proximity to each stranding are used wherever possible, as their knowledge of local terrain increases speed of response and enhances safety.

All MSN volunteers complete a full training session before they can be called out to record a stranding. In addition to the theory sessions, life-sized inflatable models of a whale, dolphin and seal are used during training which includes the methods for recording morphometrics and bycatch evidence.

On the 12th October 2024, CWT coordinated the annual MSN Callout volunteer training day. It was attended by 45 members of the public.

MSN Forum 2024

An annual Forum is organised each spring by the MSN. Its purpose is to celebrate the success of MSN and the work of the volunteer network, share research and information, and provide an opportunity for dedicated volunteers to network. There is also the opportunity to train new volunteers, distribute equipment, ensure quality and consistency of reporting, and introduce new protocols. Presentations on strandings-related subjects are also given by guest speakers, for example from the Institute of Zoology and Natural History Museum.

The 2024 forum was hosted by the University of Exeter, Penryn campus (see table 14 for a list of presentations).

Table 14: MSN Forum programme March 2024



Marine Strandings Network Forum 2024

Programme	Presenters	Start	Mins
REGISTRATION			
Welcome	Ruth Williams , Cornwall Wildlife Trust (CWT)	10:00	10
What's been happening within the UK strandings network over the last year	Rob Deaville , Cetacean Strandings Investigation Programme (CSIP) and Institute of Zoology	10:10	30
Notable Strandings in Cornwall and the Isles of Scilly 2023	Anthea Hawtrey-Collier , CWT MSN Strandings Data Officer	10:40	30
Marine animal postmortem findings in 2023 from the Cornwall Marine Pathology Team	James Barnett , Cornwall Marine Pathology Team, Veterinary Consultant to MSN	11:10	25
BREAK			
Research and Development in Clean Catch: Passive Acoustic Reflectors	Ben Tutt-Leppard , Arribada - Senior Fisher Liaison & Research Officer	12:05	20
Why did a large whale strand on the most popular surfing beach in Cornwall?	James Barnett , Cornwall Marine Pathology Team, Veterinary Consultant to MSN, CSIP Pathologist, Honorary Lecturer University of Exeter Affiliate	12:25	10
Stranded Turtle Rehabilitation	Abby Wheston , Blue Reef Aquarium	12:35	20
A Day in the Life of an MSN Volunteer	Sharon Trew , MSN data, hotline and call out volunteer extraordinaire!	12:55	10
LUNCH			
Live cetacean strandings in Cornwall 2023	Dan Jarvis , British Divers Marine Life Rescue (BDMLR)	14:00	20
Marine mammal bycatch in southwest England: Taking a holistic approach to assess the causes, impacts and evidence-based solutions	Helen Chadwick , PhD University of Exeter	14:20	10
Satellites to Stable Isotopes – Marine Mammals as Sentinels of Ecosystem Change	Kate Chadwick , PhD University of Exeter	14:30	10
Plastic pollution and ocean giants: Investigating the extent and impacts of plastic ingestion by marine megafauna	Emma Hunter , PhD University of Exeter	14:40	10
The squidgy side of strandings - jellies, crystals, hydroids and salps	Matt Slater , Cornwall Wildlife Trust	14:50	10
Close	Ruth Williams	15:00	5
Please join the team for informal, post-conference drinks at the University bar.			

Acknowledgements

We would like to acknowledge the help of the general public in sending in their reports, and the following partners for their support;

- Rebecca Allen, Anthea Hawtrey-Collier and Gemma Newman for overseeing and organising the MSN within the CWT.
- CWT Marine Strandings Network volunteers, who continue to enthusiastically collect vital data and retrieve carcasses, often under difficult and challenging conditions.
- Dedicated hotline coordinators (2024): Sharon Trew, Joyce Edmonds, Tess Milton, Alyson Devonshire, Connie Morris, and Debbie De Ste Croix.
- Anthea Hawtrey-Collier, Sharon Trew, and Jon Pearson, from the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS) for all their hard work on collating, assessing, and entering records into the database.
- James Barnett, veterinary pathologist, Cornwall Marine Pathology Team (CMPT) and CSIP, and advisor to the CWT MSN, plus the entire team of volunteers who support CMPT and James with this work.
- APHA Starcross.
- Rob Deaville, Institute of Zoology, and the team of CSIP partners including the Natural History Museum, Marine Environmental Monitoring Wales, and the Scottish Marine Animal Scheme (SMASS).
- Sue Sayer MBE for seal ID report input, and the support of Seal Research Trust team and volunteers.
- Dan Jarvis and all Marine Mammal Medics, BDMLR, Cornwall.
- Dr Nick Tregenza, cetacean expert and advisor to Cornwall Wildlife Trust and the MSN.
- Isles of Scilly Wildlife Trust and the island strandings volunteers.
- Cornwall Council and Biffa officers and beach management teams for their assistance.
- All Cornwall's private landowners who assist in reporting and removing carcasses.
- Chelonia Limited.
- The National Trust Rangers.



**Cornwall
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Mapping
Informing**



Cornwall



Seal
Research
Trust



References

- Hewer, H. R. (1964). The determination of age, in the grey seal (*Halichoerus grypus*) sexual maturity, longevity and a life-table. *Proceedings of the Zoological Society of London*, 142(4), 593–623.
<https://doi.org/10.1111/J.1469-7998.1964.TB04631.X>;WEBSITE:WEBSITE:ZSLPUBLICATIONS;JOURNAL:JOURNAL:14697998A;REQUESTEDJOURNAL:JOURNAL:14697998B;WGROU:STRING:PUBLICATION

Appendix A: Post-mortem case summaries

Table A1 Cetaceans

Species (common)	Date Found	Location	Stranding Type	PM Number	Age Group	Cause of Death	CoD Category
Short-beaked common dolphin	07/01/2024	Porthluney	dead stranded	CW/C01/24	adult	Physical trauma, bycatch	Bycatch
Short-beaked common dolphin	11/01/2024	Mexico Towans	dead stranded	CW/C02/24	adult	Gastric ascarid parasitism, severe	Infectious
Short-beaked common dolphin	13/01/2024	Falmouth harbour	at sea	CW/C03/24	adult	Physical trauma, bycatch	Bycatch
Short-beaked common dolphin	17/01/2024	Maenporth	dead stranded	CW/C04/24	juvenile	Physical trauma, bycatch	Bycatch
Short-beaked common dolphin	20/01/2024	Porthleven	dead stranded	CW/C05/24	juvenile	Physical trauma, bycatch	Bycatch
Short-beaked common dolphin	21/01/2024	Long Rock	dead stranded	CW/C06/24	juvenile	Malnutrition post weaning, live stranding	Other
Short-beaked common dolphin	25/01/2024	Praa Sands	dead stranded	CW/C07/24	juvenile	Perforation, small intestine, severe necrotising focal enteritis and peritonitis	Infectious
Short-beaked common dolphin	02/02/2024	Lamouth Creek	dead stranded	CW/C08/24	adult	Live stranding, out of habitat, part of mass stranding	Other
Short-beaked common dolphin	03/02/2024	Truro River	dead stranded	CW/C09/24	adult	Parasitism, gastric and early gastric impaction	Infectious
Harbour porpoise	08/02/2024	Praa Sands	dead stranded	CW/C10/24	juvenile	Earlier bycatch, live stranding	Bycatch
Striped dolphin	17/02/2024	Praa Sands	live stranded	CW/C12/24	juvenile	Obex and proximal spinal cord, Wallerian degeneration	Other
Harbour porpoise	17/02/2024	Praa Sands	dead stranded	CW/C11/24	adult	Bottlenose dolphin attack	Trauma
Harbour porpoise	18/02/2024	Watergate Bay	dead stranded	CW/C13/24	juvenile	Bronchopneumonia, parasitic and bacterial, and gastric parasitism	Infectious
Short-beaked common dolphin	19/02/2024	Watergate Bay	dead stranded	CW/C16/24	juvenile	Malnutrition post weaning, live stranding	Other
Harbour porpoise	23/02/2024	Daymer Bay	dead stranded	CW/C14/24	adult	Head trauma, acute	Trauma
Short-beaked common dolphin	01/03/2024	Godrevy, St Ives	dead stranded	CW/C15/24	juvenile	Physical trauma, bycatch	Bycatch
Short-beaked common dolphin	08/03/2024	Towan beach	dead stranded	CW/C17/24	adult	Gas embolism, liver, kidney	Other
Short-beaked common dolphin	15/03/2024	Pendower beach	dead stranded	CW/C18/24	juvenile	Parasitism, gastric, and early gastric impaction	Infectious
Short-beaked common dolphin	17/03/2024	Porth Saxon beach	dead stranded	CW/C19/24	juvenile	Malnutrition post weaning, live stranding	Other
Harbour porpoise	20/03/2024	Marazion	dead stranded	CW/C20/24	subadult	Physical trauma, bycatch	Bycatch
Short-beaked common dolphin	25/03/2024	Baby Bay, Polzeath	dead stranded	CW/C30/24	juvenile	Gastric impaction, severe	Other

Species (common)	Date Found	Location	Stranding Type	PM Number	Age Group	Cause of Death	CoD Category
Harbour porpoise	01/05/2024	Charlestown, St Austell	dead stranded	CW/C21/24	neonate	Starvation (neonate)	Other
Short-beaked common dolphin	24/05/2024	Mexico Towans	dead stranded	CW/C22/24	subadult	Physical trauma, bycatch	Bycatch
Short-beaked common dolphin	26/05/2024	Long Rock	live stranded	CW/C23/24	adult	Meningoencephalitis, mycotic	Infectious
Short-beaked common dolphin	09/06/2024	Great Western beach, Newquay	live stranded	CW/C31/24	juvenile	Gastric ascarid parasitism, severe	Infectious
Short-beaked common dolphin	17/06/2024	Fistral beach, Newquay	dead stranded	CW/C24/24	juvenile	Gastric impaction (fish bones)	Other
Risso's dolphin	04/07/2024	Par beach	dead stranded	CW/C25/24	juvenile	Malnutrition suspected due to premature maternal separation	Other
Short-beaked common dolphin	04/08/2024	Perran Sands	dead stranded	CW/C26/24	adult	Pulmonary tear, haemothorax, pneumothorax, haemabdomen	Trauma
Striped dolphin	19/09/2024	Marazion	live stranded	CW/C27/24	adult	malnutrition, gastric ascarid parasitism, fractured teeth, age related changes	Other
Harbour porpoise	09/10/2024	Church Cove, Gunwalloe	dead stranded	CW/C28/24	adult	heavily parasitised, with significant infestations noted in the upper respiratory tract, left ventricle, pulmonary arteries, fundic stomach, liver and peribullar sinuses.	Infectious
Harbour porpoise	28/10/2024	Watergate Bay	live stranded	CW/C29/24	adult	severe parasitic bronchopneumonia with suspected secondary bacterial infection	Infectious
Risso's dolphin	02/11/2024	Porthkerris	dead stranded	CW/C32/24	adult	malnutrition, cystitis, gas bubble lesion	Other
Short-beaked common dolphin	30/12/2024	Sandymouth, Bude	dead stranded	CW/C33/24	juvenile	scoliosis	Other

Table A2 Seals

Seals examined by CMPT

Species	Date Found	PM Number	Location	Age	Sex	CoD	Cause of Death
Grey seal	06/01/2024	CW/S01/24	Carbis Bay	moulter	M	Infectious	Bronchopneumonia, parasitic and bacterial, and gastritis, parasitic
Grey seal	08/01/2024	CW/S02/24	Deadman's Cove	adult	F	Infectious	Abscessation, extensive, visceral, and pyothorax, peritonitis
Grey seal	14/01/2024	CW/S03/24	St Loy	moulter	M	Infectious	Gastric ascarid ulceration and haemorrhage, bronchopneumonia, parasitic
Grey seal	25/01/2024	CW/S04/24	Fishing Cove	moulter	F	Infectious	Bronchopneumonia, parasitic, and gastritis, parasitic
Grey seal	27/01/2024	CW/S05/24	Holywell Bay	moulter	M	Infectious	Bronchopneumonia, parasitic and bacterial, and submandibular abscess
Grey seal	04/02/2024	CW/S06/24	Rock	adult	F	Infectious	Oesophagitis, ulcerative, associated with ascarids
Grey seal	19/02/2024	CW/S07/24	Black Rock, Bude	adult	F	Trauma	Abscessation, extensive, cervical
Grey seal	27/02/2024	CW/S08/24	Porthkidney	moulter	M	Trauma	Abscessation, extensive, cervical and thoracic
Grey seal	22/03/2024	CW/S11/24	Godrevy	moulter	F	Trauma	Dental fractures, tooth root abscessation, osteomyelitis (mandible)
Grey seal	28/04/2024	CW/S12/24	Carbis Bay, Beach, St Ives	adult	M	Infectious	Bacterial septicaemia (Strep. phocae)
Grey seal	20/05/2024	CW/S13/24	Towan Beach, Newquay	juvenile	M	Bycatch	Physical trauma, bycatch
Grey seal	26/05/2024	CW/S14/24	Pentewan	juvenile	F	Bycatch	Physical trauma, bycatch
Ringed seal	28/07/2024	CW/S15/24	Lelant, Hayle	juvenile	F	Other	Seizures of unknown aetiology
Grey seal	28/08/2024	CW/S16/24	Praa Sands	juvenile	M	Infectious	Encephalitis of suspected viral origin
Grey seal	03/09/2024	CW/S17/24	Godrevy	premoult	F	Trauma	Haemorrhage, acute in multiple tissues
Grey seal	04/09/2024	CW/S21/24	Godrevy	premoult	F	Trauma	Hepatic tear, haemabdomen
Grey seal	28/09/2024	CW/S18/24	Boscastle	moulter	M	Trauma	hind flipper wound, tracking soft tissue abscessation, suppurative arthritis
Grey seal	07/10/2024	CW/S19/24	Long Rock	moulter	F	Infectious	Bacterial bronchopneumonia, blunt trauma perimortem
Grey seal	12/11/2024	CW/S22/24	Perranporth	moulter	F	Infectious	Middle ear infection (M. phocicerebrale), AO joint infection
Grey seal	17/11/2024	CW/S23/24	Porthgwarra	adult	M	Infectious	Bronchopneumonia (due to alphacoronavirus)
Grey seal	17/11/2024	CW/S24/24	Trebarwith Strand	moulter	M	Bycatch	Fishing line entanglement and infection, oral trauma

Grey seal	25/11/2024	CW/S25/24	Tresco	moulter	M	Infectious	Pyogranulomatous bronchopneumonia lymphadenitis (<i>M. phocimorsus</i>), meningitis, hepatic portal vein hypoplasia, terminal blunt trauma
Grey seal	26/11/2024	CW/S26/24	Mother Ivy's Bay	moulter	F	Bycatch	Net entanglement, malnutrition
Grey seal	08/12/2024	CW/S27/24	Perran Sands	moulter	M	Other	Congenital ocular/skull abnormality
Grey seal	10/12/2024	CW/S28/24	Crantock	moulter	M	Infectious	Stomach abscess associated with ascarid ulcer, bite wounds, malnutrition, septicaemia
Grey seal	16/12/2024	CW/S29/24	Carbis Bay	moulter	F	Trauma	Flipper abscess and cellulitis, oral trauma
Grey seal	22/12/2024	CW/S30/24	Baby Bay	moulter	M	Trauma	tongue abscess, neck wounds
Grey seal	26/03/2024	JB-03-24	Fishing Cove, Gunwalloe	Moulter	NR	Intestinal fluke infestation	Infectious disease

Seals examined by APHA Starcross:

Species	Date Found	PM Number	Location	Age	Sex	Cause of Death	CoD
Grey seal	01/01/2024	21-M0004-01-24	Harlyn Bay	Moulter	NR	Infectious disease	Severe pneumonia and pyothorax, <i>Pseudomonas aeruginosa</i> septicaemia
Grey seal	18/01/2024	21-M0328-01-24	Gunwalloe	Moulter	NR	Infectious disease	Perforated stomach, parasitic bronchopneumonia, <i>E. coli</i> septicaemia
Grey seal	05/02/2024	21-M0261-02-24	Perranporth	Moulter	NR	Infectious disease	Parasitic bronchopneumonia
Grey seal	31/01/2024	21-M0343-02-24	Porthmeor, St Ives	Moulter	NR	Infectious disease	Parasitic bronchopneumonia
Grey seal	19/02/2024	21-M0365-02-24	Porthmeor, St Ives	Moulter	NR	Infectious disease	Mandibular fracture, sternal abscess, <i>Streptococcus phocae</i> isolated.
Grey seal	16/10/2024	21-M0288-10-24	Sennen	Pre-moult	NR	Infectious disease	Right hind flipper abscess and osteomyelitis, thoracolumbar abscess, <i>Streptococcus phocae</i> isolated
Grey seal	28/10/2024	21-M0464-10-24	Mevagissey	Moulter	NR	Infectious disease	Septic arthritis left shoulder, <i>Streptococcus phocae</i> isolated
Grey seal	31/10/2024	21-M0171-11-24	Trevaunance Cove, St Agnes	Moulter	NR	Infectious disease	Right tarsal joint arthritis, <i>Pseudomonas aeruginosa</i> isolated
Grey seal	03/11/2024	21-M0224-11-24	Penberth	Moulter	NR	Infectious disease	Parapoxvirus and secondary bacterial dermatitis
Grey seal	21/11/2024	21-M0344-11-24	Hayle	Moulter	NR	Infectious disease	Diagnosis not reached
Grey seal	10/12/2024	21-M0275-12-24	Lamorna Cove	Moulter	NR	Infectious disease	Left hind flipper osteomyelitis

Appendix B: Cetacean Bycatch Report 2024



Photo B : Common dolphin, Caerhays Beach, 07/01/24. Photo by Chris Trew

Introduction

The Cornwall Wildlife Trust Marine Strandings Network (CWT MSN) has been collecting valuable data on stranded marine life around Cornwall for over 20 years and holds over 12,000 records. The Network is an invaluable tool to monitor the impact of bycatch on cetacean species within the region. To that end, cetacean species reported to CWT MSN undergo rigorous examinations to identify and record signature features identified as being caused during a bycatch event.

Bycatch in 2024

Of the 245 cetacean carcasses that stranded during 2024, 178 (71%) were assessed either by *Post-mortem* examination (PME) or by the bycatch evidence evaluation protocol (BEEP). Of the 178 animals which could be assessed 24% (n=42) showed definitive signs of having been bycaught. Most of these stranded in winter months (see figure B1 and along the south coast of Cornwall (figure

B2). There was an unusual peak in the number of animals assessed as bycaught in March (n=14) which reflected the unusually high number of cetacean strandings in that month (n=72).

It is important to note that the actual proportion of mortality associated with bycatch is very probably higher as some animals are unable to be assessed (difficult location or no volunteer available) or do not show diagnostic features (due to scouring damage or decomposition) and in addition there is the hidden bycatch associated mortality of young animals separated from their mothers too early to survive independently.

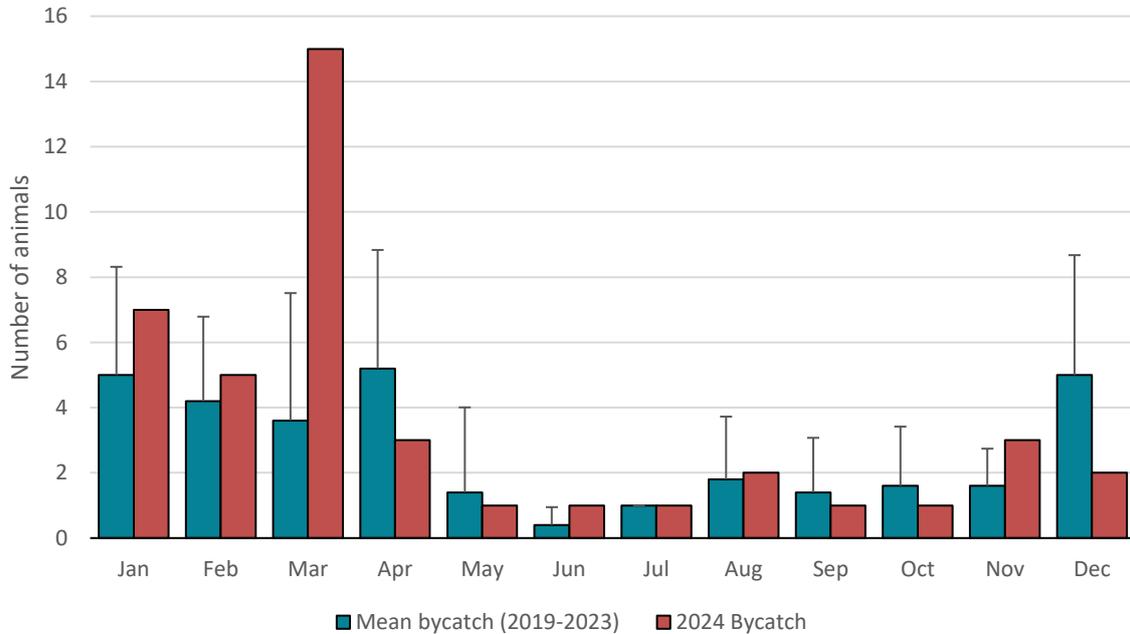


Figure B1 Cetaceans assessed as bycaught by month for 2024 compared to the mean for the preceding five years (error bars represent standard deviation)

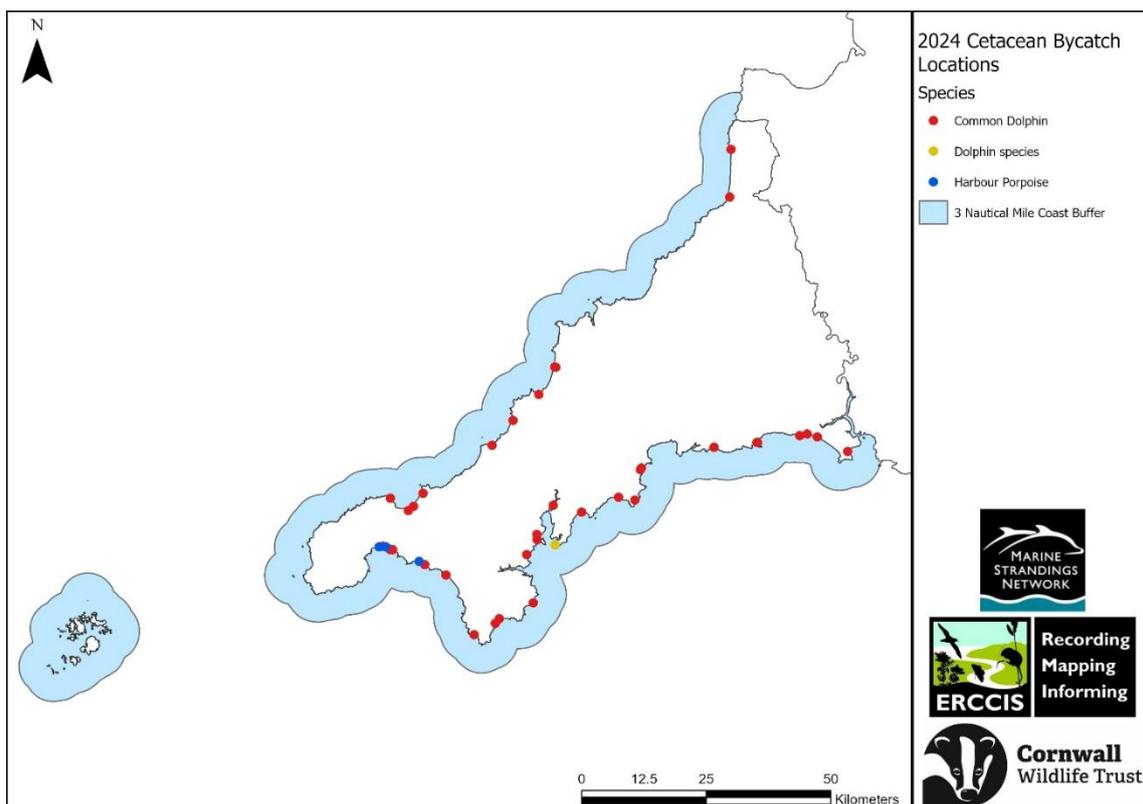


Figure B2: The location of cetaceans stranded in 2024 with evidence of bycatch.

Bycatch analysis, 2024 - *Post-mortem* Examinations

Of the cetaceans stranded, 13% (n=33) were suitable and accessible for retrieval by the CWT MSN team for *post-mortem* examination, under licence and on behalf of the Defra-funded Cetacean Strandings Investigation Programme (CSIP). Necropsies were performed by James Barnett, the veterinary pathologist for the Marine Strandings Network working within the Cornwall Marine Pathology Team on behalf of CSIP.

Post-mortem examinations (PME) concluded that accidental entanglement in fishing gear, known as bycatch, was the cause of death for 8 (24%) of the cetaceans examined (6 short-beaked common dolphins and two harbour porpoise).

Detailed case studies of bycaught animals are presented in table B1.

Bycatch analysis, 2024 - Bycatch Evidence Evaluation

Protocol (BEEP) Assessments

The MSN Bycatch Evidence Evaluation Protocol (BEEP) is an invaluable tool to assess bycatch on cetacean species, which has been developed by CWT MSN. BEEP assessments can be done *in situ* on the beach and provide data on external injuries to help identify possible causes of death from bycatch for all animals, not just those that undergo *post-mortem* examination. The process involves cetacean strandings reported to CWT MSN undergoing rigorous external examination by trained volunteers on the beach. Detailed photographs of the carcasses are taken, and these are then assessed to identify, and record, signature injuries and features identified as being associated with bycatch and entanglement in fishing gear. This protocol has been developed from 30 years of experience and is continuously tested and developed to improve the accuracy of bycatch detection.

For some of the animals reported to CWTMSN volunteers were either not able to attend or there was insufficient data to assess the animal through BEEP, therefore these animals were not included in the BEEP and bycatch analysis for this report.

Of the 245 total, 145 (60%) cetacean strandings were examined and recorded *in situ* by MSN volunteers using the BEEP protocol, and photos examined in detail by experienced BEEP assessors within the Environmental Records Centre for Cornwall and Isles of Scilly (ERCCIS). It was found that 27% of the 147 (n=38) showed features consistent with definite or probable bycatch or entanglement in fishing gear. These features are based on recognised net entanglement marks such as fin edge cuts/slices, encircling net marks and severed appendages. A further 13% (n=20) cases showed possible signs of bycatch.

Bycatch Analysis, temporal trends

For a bycatch comparison over years, we limit the analysis to common dolphin and harbour porpoise as these are the two most recorded cetacean species in Cornwall. We have only included cases which have been assessed through *post-mortem* examination and/or BEEP. The number of bycaught common dolphins has increase with eight of the highest totals occurring in the last 10 years whilst the number of harbour porpoise has decreased slightly in the last decade reflecting the numbers of overall strandings for these species (see figure B3). In the last decade the proportion of all assessed animals showing evidence of bycatch averages 20%, a worryingly high statistic.

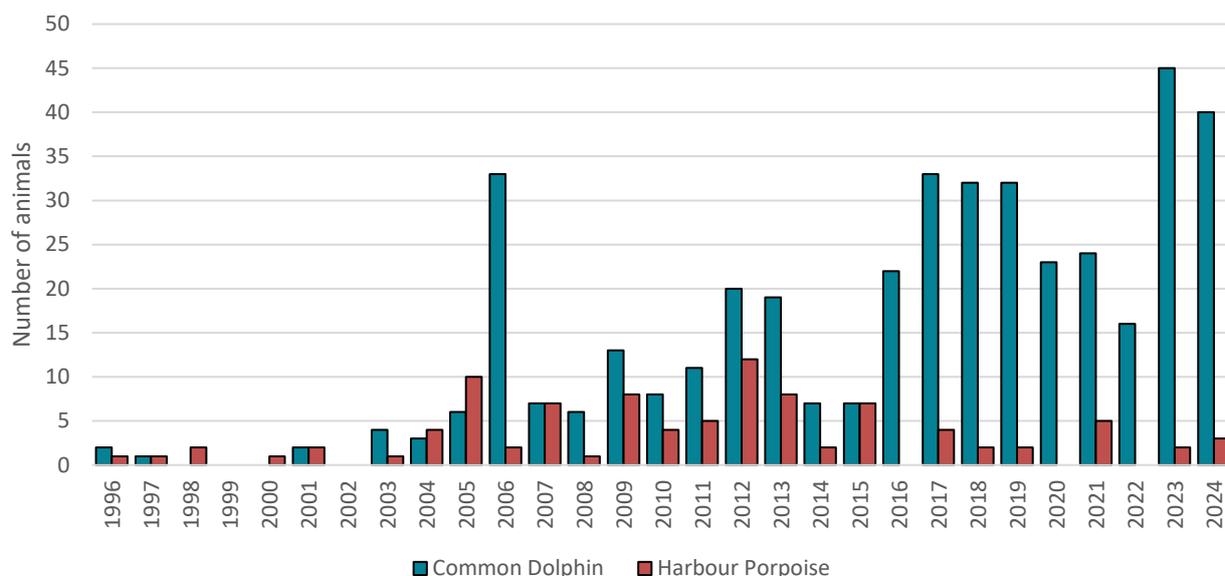


Figure B3 Number of harbour porpoise and common dolphin assessed as bycaught by PME or BEEP.

Spatial analysis of bycaught cetacean records 2016-2024

For the period 2016-2024, 1312 cetacean records which had been examined either by an experienced BEEP (Bycatch Evidence Examination Protocol) assessor or had a full postmortem examination were included in this spatial analysis. These were animals which stranded on or near the Cornish coast (excluding the Isles of Scilly and offshore records.)

A greater total of cetaceans stranded on the East coast (n = 610) than on the North (n = 433) and South (n=252) coasts. The proportion of bycatch is significantly higher on the South and East coasts compared to the North coast χ^2 (df = 2, N=1086)=76.2, $p < 0.001$. The spatial bias in strandings was similar in 2024 to the previous eight years (see table B1, figures B4 and B5).

Table 1: Total assessed cetaceans by Cornish coastal area

	Not showing evidence of being bycaught		Showing evidence of being bycaught		Total assessed stranding cetaceans	
	2016-2023	2024	2016-2023	2024	2016-2023	2024
South coast (Mount's bay)	166	33	41 (20%)	11 (25%)	208	44
North coast	314	74	34 (10%)	10 (12 %)	349	84
East coast	346	61	182 (34%)	20 (25%)	529	81

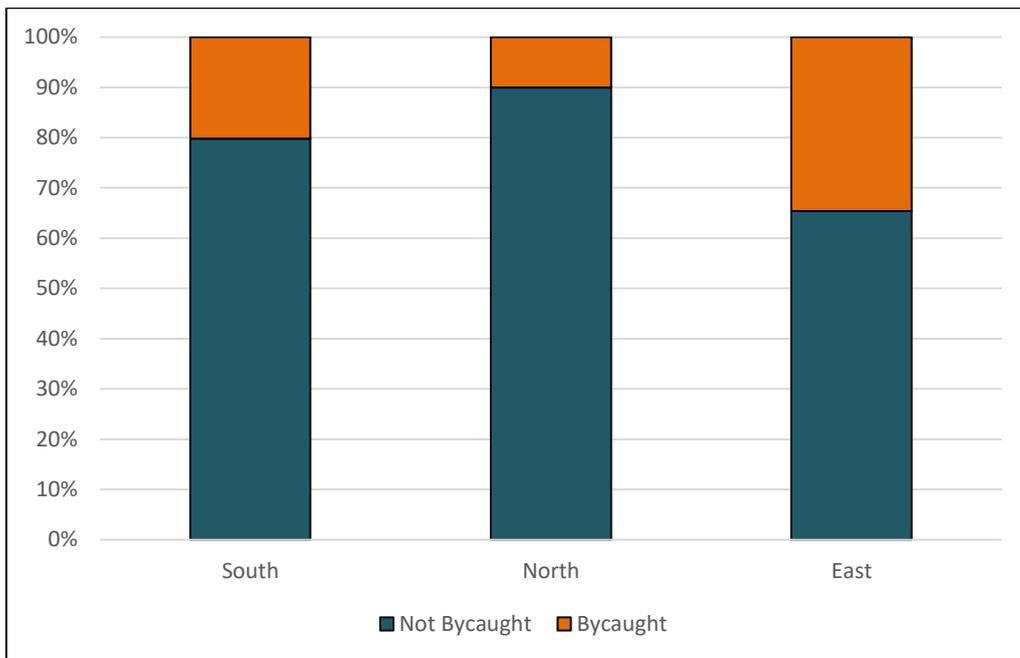


Figure B4 Proportions of assessed cetaceans showing evidence of being bycaught, by coastal area from 2016-2024

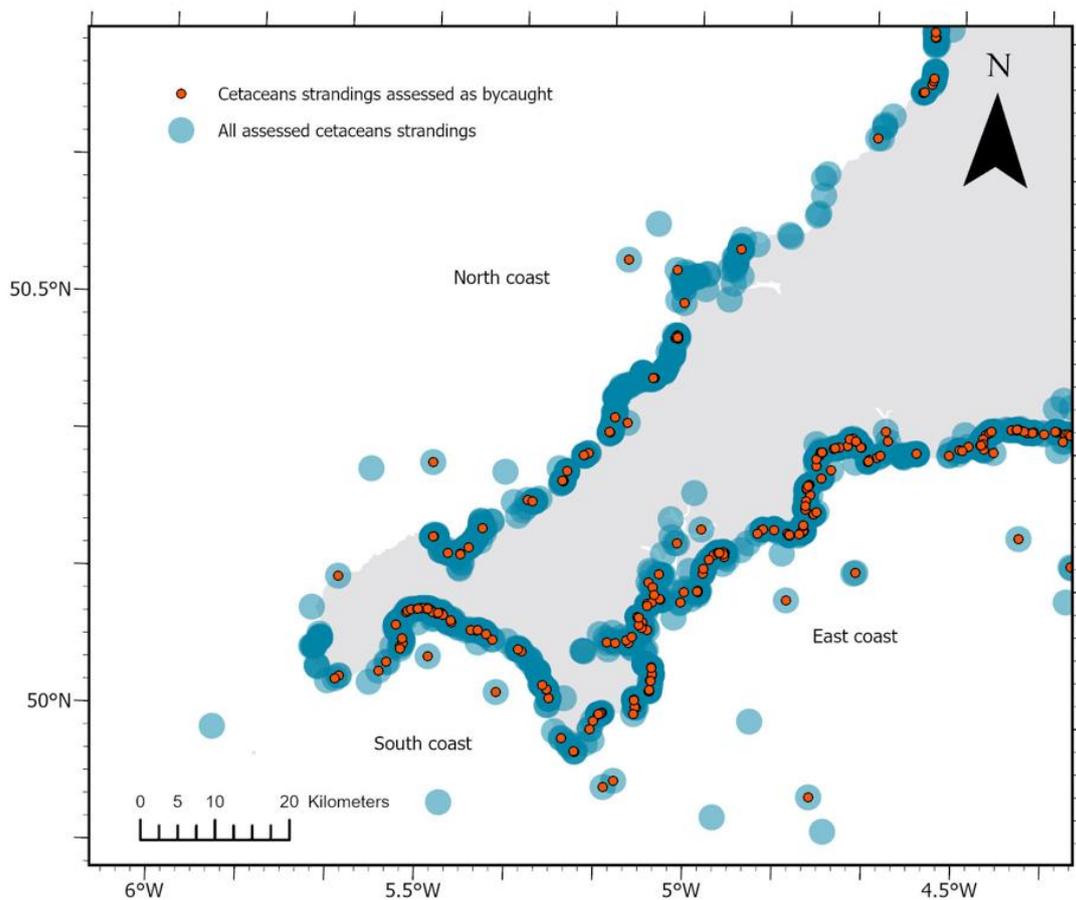


Figure B5: Spatial distribution of 'all assessed' and 'assessed as bycaught' cetaceans (2016-2024, N = 1312) The proportion of animals assessed as bycaught is significantly higher on the South and East coasts compared to the North coast χ^2 (df = 2, N=1086)=76.2, $p<0.001$)

Appendix B Table 1 Summary of all cetaceans which exhibited features of bycatch in 2024

Blue highlights the cases which went for post-mortem examination. Photos included are a small selection that show some of the features identified during analysis, if you would like further information, please contact the MSN Strandings Data Officer.

Reference	Location	Date	Gross post-mortem examination findings / observations
Common Dolphin C/2024/004 SW2024/2 CW/C01/24	Caerhays Beach, Porthluney SW974411	07/01/2024	<i>This adult female common dolphin was in moderate body condition but had not fed recently. In my opinion, the extensive linear marks on the rostrum and head, and encircling notches and linear marks on some of the appendages were consistent with bycatch. It is also likely that the broken and loose teeth, haemorrhages in the pleura, mediastinum and around the larynx, the intense pulmonary congestion and watery fluid in the airways were also a consequence of bycatch.</i>



Common dolphin
C/2024/007
SW2024/4
CW/C03/24

Falmouth Harbour
SW811325

13/01/2024

This adult male common dolphin was found floating in the harbour at Falmouth. The fresh linear wounds running through the lower cranial teeth and mandible are, in my opinion consistent with bycatch and the large quantity of recent ingesta in the stomach and oesophagus, plus the haematoma over the larynx would also be consistent with this.



Common Dolphin
C/2024/011
SW2024/5
CW/C04/24

Maenporth Beach,
Falmouth
SW790295

17/01/2024

This female common dolphin calf was in reasonable nutritive state and there was evidence of recent feeding. The encircling net marks particularly on the rostrum were, in my opinion, consistent with bycatch. Other lesions seen, including the haemorrhages on the soft palate, pharynx and muscles at the thoracic inlet, were also likely to be due to this. Other lesions were likely to be incidental in nature.



Common Dolphin
C/2024/013
SW2024/7
CW/C05/24

Porthleven
SW628254

20/01/2024

This juvenile male common dolphin was in good body condition and had fed recently. The linear marks and wounds over the maxilla, melon, fins and flukes are, in my opinion, consistent with bycatch. The traumatic damage to the rostrum and haemorrhages around the thoracic inlet are also likely to be due to bycatch. Other findings, including the presence of parasitic bronchopneumonia, are considered to be incidental in nature.



Harbour Porpoise C/2024/015 SW2024/211	Longrock, Marazion SW494311	21/01/2024	RHS fluke amputated. Broken lower jaw - missing. Clean edged slice along ventral side tailstock.
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<p>Common Dolphin C/2024/023 SW2024/217</p>	<p>Hannafore, Looe SX252522</p>	<p>25/01/2024</p>	<p>Linear impression on the tail stock. Linear impression and skin loss on the leading edge of the left fluke. Encircling marks around the tail stock just before flukes. Linear marks on the leading edge and right hand side of the dorsal fin. Linear impression across RHS top of beak with associated notch to lip. Linear impression across melon. 2 linear monofilament impressions to leading edge RHS pectoral fin with more linear impressions along the length.</p>
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<p>Common Dolphin C/2024/031 SW2024/223</p>	<p>Trethill Cliff, Portwrinkle SS373533</p>	<p>04/02/2024</p>	<p>Multiple encircling linear impressions around melon and beak. Linear impressions to leading edge RHS pectoral fin.</p>
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Dolphin Species C/2024/032 SW2024/224	At Sea, off St Anthony's Head SW847315	07/02/2024	Missing flukes.
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Harbour Porpoise
C/2024/033
SW2024/17
CW/C10/24

Praa Sands,
Helston
SW574281

08/02/2024

The extensive linear encircling wounds on fins and flukes in this juvenile harbour porpoise appeared to be consistent with bycatch as the cause of death. The carcass was very fresh, with live ascarids found in the cardiac stomach, suggesting the porpoise had been caught and died close to shore.



Common Dolphin
C/2024/054
SW2024/242

King Harry's Ferry Slip,
The Roseland
SW843395

24/02/2024

Flukes missing



Common Dolphin C/2024/060 SW2024/247	Widemouth Bay, Bude SS197019	28/02/2024	Straight cut amputation to flukes. Right hand side pectoral tip missing straight cut Lower jaw broken and missing. LHS pectoral missing.
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Common Dolphin
C/2024/062
SW2024/249
CW/C15/24

Godrevy,
Hayle
SW582419

01/03/2024

This juvenile male common dolphin was in suboptimal nutritional state. The length of the animal suggested it may have been around the point of weaning and there was evidence of recent feeding on fish. However, it is likely to have still been socially dependent. There was a moderate gastric ascarid burden present and this may have contributed to its poor nutritional state. The carcass was very fresh and the asymmetry of the lungs suggested the dolphin live stranded or washed up very shortly after death. Histopathology has not given any further insight into the cause of death of this juvenile common dolphin. I have viewed again the photographs from this post-mortem examination. I am now of the opinion that the linear wounds and impressions seen on the rostrum of this animal were of greater significance than I originally thought and that this is actually a case of bycatch.



<p>Common Dolphin C/2024/071 SW2024/263</p>	<p>Pentewan Sands, St Austell SX018467</p>	<p>08/03/2024</p>	<p>Partial encircling mark around maxilla and mandible. Loss of teeth left upper near linear indentation. Impression to leading edge LHS fluke. Thick linear impressions x 2 to LHS dorsal side torso running across the body L-R with one visible across RHS. Thick linear impression across RHS and LHS tailstock at joint with flukes.</p>
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Common Dolphin
C/2024/072
SW2024/264

Pentewan Sands,
St Austell
SX020470

08/03/2024

Thick encircling mark around maxilla and mandible.
Slice on trailing edge of right pectoral fin.
2 x vertical linear impression across base of trailing edge dorsal fin.
Linear impression to leading edge RHS fluke.
X shaped linear impression to LHS melon.



Common Dolphin
C/2024/075
SW2024/266.1

Poltesco,
Helston
SW727156

10/03/2024

Tip of right hand side pectoral truncated.
Maxilla and mandible missing.
Linear impression under throat.
Fin edge slice to both RHS and LHS fluke.
Linear impressions to leading edge dorsal fin.
All 3 dolphins have broken or missing beaks.



<p>Common Dolphin C/2024/076 SW2024/266.2</p>	<p>Poltesco, Helston SW727156</p>	<p>10/03/2024</p>	<p>Mandible broken, linear marks across the melon through a deep wound to the right hand side of the head. Skin deep flap of skin with straight edge from melon to the end of the maxilla. Encircling linear impression around the beak in line with break of the mandible, teeth broken right hand side. Linear mark on left hand side pectoral fin from leading edge to the trailing edge crease. Large slice on the trailing edge of the left hand side pectoral fin. Large slice to the trailing edge of the dorsal fin with linear encircling marks from wound. Skin loss to the leading edge of the dorsal. Encircling impressions across the lower back to abdomen behind the dorsal fin. All 3 dolphins have broken or missing beaks.</p>
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<p>Common Dolphin C/2024/080 SW2024/269</p>	<p>Longrock, Marazion SW493311</p>	<p>14/03/2024</p>	<p>Linear impression under the chin. Linear impression and notches to leading edge left pectoral fin with associated linear impression to trailing edge. . Skin loss to the front of the melon crease. Partial encircling marks on the right hand side across melon down past right hand side pectoral fins, linear marks also show rope impressions like a zip. Notches and skin loss to the trailing edge of the flukes.</p>
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Common Dolphin
C/2024/082
SW2024/270

Mawgan Porth,
Newquay
SW846675

6/03/2024

Deep linear impression across left hand side side crossing the leading edge of the left hand side pectoral fin.
Left hand side side of the mandible broken.
Linear marks across the melon and across the right hand side side eye.
Linear impression coming out of LHS mouth at corner of lips heading over melon.
Linear impressions to ventral side of tailstock towards flukes and closer to genitals.
Small notch to base of trailing edge dorsal fin.
Multiple small lip cuts to upper lip both sides. Linear impression to tongue



Common Dolphin
C/2024/085
SW2024/272

Kennack Sands,
The Lizard
SW735165

17/03/2024

Tip of left hand side pectoral missing with associated scavenging.
RHS fluke missing with associated scavenging.



Harbour Porpoise
C/2024/089
SW2024/161
CW/C20/24

Marazion Beach,
Mount's Bay
SW507311

20/03/2024

This subadult male harbour porpoise was in very good nutritional state and had fed recently. In my opinion, the encircling marks on the head and encircling wounds on both pectoral fins and one fluke are consistent with bycatch. The bilateral hyphaema and persistent froth in the airways are also likely to be due to this. The slight asymmetry of the lungs seen here has been observed before in bycaught animals and may be consistent with an animal dying shortly before being hauled on deck. Incidental findings included fluke associated lesions in the fundic stomach and papillomas on the penis.



Common Dolphin C/2024/101 SW2024/288.1	Hannafore Beach, Looe SX253522	20/03/2024	Straight edge cut to the tail, Left hand side fluke removed. Mandible missing, maxilla still attached but broken. Notch with associated linear impression to LHS pectoral fin at the joint.
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Common Dolphin
C/2024/103
SW2024/290

Downderry,
Whitsand Bay
SX338536

23/03/2024

Tail amputated.
Mandible broken.



Common Dolphin
C/2024/107
SW2024/291

Porthmeor Beach,
St Ives
SW516409

24/03/2024

Fully encircling wide linear mark around back of head to belly at pectoral insertions. Large wound to front of R & L pectoral at joints corresponding to encircling wounds. Lip cut to RHS.



Common Dolphin C/2024/119 SW2024/308	Hoodny Beach, Portwrinkle SX353539	30/03/2024	Tail amputated. Slice to the trailing edge of dorsal fin. Beak broken / gone. X shaped linear impression to LHS torso.
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Common Dolphin C/2024/132 SW2024/311	Girt Beach, Kingsand, Rame SX434504	31/03/2024	Tail amputated. Beak broken.
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<p>Common Dolphin C/2024/134 SW2024/316</p>	<p>Marazion SW501312</p>	<p>06/04/2024</p>	<p>Series of linear marks to upper and lower left hand side of side of beak and lip. Multiple linear impressions to leading edge LHS pectoral fin. Notch to leading edge RHS pectoral fin. Linear series of "Dots" very small puncture wounds 10-11mm spacing from melon going forward for approx 7cm .</p>
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Common Dolphin C/2024/153 SW2024/336	Hayle Towans, St Ives Bay, SW552384	23/04/2024	Left hand side fluke missing, right hand side fluke straight edge cut with tip missing, also large notch with linear mark from it across fluke next to missing tip.
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<p>Common Dolphin C/2024/159 SW2024/341</p>	<p>Top Town, Marazion SW521305</p>	<p>30/04/2024</p>	<p>Broken maxilla tip. Top of dorsal missing with straight edge to wound. Linear mark running across both maxilla and mandible with probable associated wound to tongue. Notch to melon crease. Linear impression to leading edge LHS pectoral fin. Multiple linear impressions to leading edge RHS pectoral fin. Square shaped scavenged wound below RHS eye - possible gaff hook wound?</p>
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<p>Common Dolphin C/2024/170 SW2024/397 CW/C22/24</p>	<p>Mexico Towans, Hayle SW563393</p>	<p>24/05/2024</p>	<p>Judging from the lack of wear on the teeth and the relatively small size of the testes, this was a young adult/subadult male common dolphin. The animal was in reasonable nutritive state and there was evidence of recent feeding.</p> <p>The amputation of the tail stock is a known action taken by fishermen to free an animal from their nets and this, coupled with the linear impressions and wounds on the rostrum, melon and right hand side pectoral are consistent with a diagnosis of bycatch in a set net. The haemorrhages over the pleura and both sides of the thorax are also likely to be secondary to this. I suspect the serosanguineous effusions in the pleural and peritoneal cavities are secondary to cardiac failure as the animal asphyxiated in the net.</p> <p>This is a rare case of bycatch on the north coast – the vast majority of bycaught animals we examine are from the south coast.</p>
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Common Dolphin
C/2024/172
SW2024/544

Great Western Beach,
Newquay
SW814619

06/06/2024

Notches to leading edge LHS pectoral fins.
Curved, bone deep wound to LHS jaw.
Lip cut to LHS upper lip.
Large scavenged wound to base of trailing edge dorsal fin.



<p>Common Dolphin C/2024/183 SW2024/584</p>	<p>Hendra Beach, Praa Sands SW585275</p>	<p>27/07/2024</p>	<p>Encircling linear mark across chest at pectoral insertions with some skin loss. Linear marks continue up on right hand side and across top of body to left hand side and rearward. 2 x linear impressions to leading edge LHS pectoral at shoulder joint with associated notch to trailing edge. Linear impression to leading edge LHS fluke also thick impression to leading edge LHS fluke with associated notch to trailing edge. Multiple faint lip cuts to LHS with faint linear impressions.</p>
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<p>Common Dolphin C/2024/186 SW2024/649</p>	<p>Duckpool, Bude SS200115</p>	<p>03/08/2024</p>	<p>RHS fluke missing. Half RHS pectoral missing with clean edge wound and large notch. Notch with linear impression across melon crease. Tip of beak and lower jaw broken. Linear impression across ventral side.</p>
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Common Dolphin
C/2024/189
SW2024/650

At sea out of St Ives Bay
SW848674

04/08/2024

Yellow rope around tail. Wound to R axilla
'v' shaped notch to leading edge RHS pectoral fin. Fin edge slice to
trailing edge RHS & LHS pectoral fin.



Common Dolphin
C/2024/198
SW2024/684

Trevaunance Cove,
St Agnes
SW720516

12/09/2024

Large 'v' shaped notch on the trailing edge of right hand side fluke.
Thick partial encircling indentation around maxilla with associated teeth broken below.
Multiple linear impressions to leading edge right hand side pectoral fin.
Linear bruising across melon and blow hole.



Common Dolphin
C/2024/210
SW2024/809

Lansallos Beach,
Fowey
SX166512

26/10/2024

Partial encircling rope marks to the dorsal surface in front of dorsal fin.
Fine linear marks over the melon left hand side.



Common Dolphin
C/2024/217
SW2024/813

Marazion Beach,
Mount's Bay
SW514306

06/11/2024

Thick multifilament linear impressions across top of head.
Deep impression to LHS pectoral fin insertion.
Linear impressions and notches to leading edge RHS pectoral fin.
Notches to pectoral fins and notch to trailing edge LHS fluke. Linear impression across RHS base of dorsal fin.



Common Dolphin
C/2024/226
SW2024/820

Flushing Beach,
Falmouth
SW810336

29/11/2024

Multiple thick linear mark around rostrum with associated abrasion to melon crease.
Notch to lip LHS tip of mandible with associated linear impression.
Large fin edge slice to trailing edge RHS fluke.



Common Dolphin C/2024/225 SW2024/821	Vault Beach SX007405	29/11/2024	Tail amputated. Dorsal fin missing with associated scavenging. Both pectoral fins half missing with associated scavenging. Body cavity completely open with all internal organs gone - possibly due to a belly slice.
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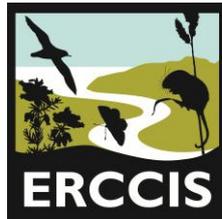


<p>Common Dolphin C/2024/239 SW2024/828</p>	<p>Carne Beach, The Roseland SW900381</p>	<p>28/12/2024</p>	<p>Haemorrhage to RHS eye. Cross shaped linear impression over RHS melon. Multiple faint linear impressions under chin. Tip of dorsal fin missing with straight edge wound. Deep slice under the missing tip trailing edge of the dorsal fin. Left hand side fluke missing tip straight edge wound. Left and right hand side pectorals truncated with straight edges. Partial encircling rope mark around back and chest in front of dorsal fin, skin loss on the leading edge of the dorsal insertion.</p>
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<p>Common Dolphin C/2024/245 SW2024/833</p>	<p>Kynance Cove, The Lizard SW684133</p>	<p>31/12/2024</p>	<p>Small notch to leading edge right hand side pectoral fin. Tip of left hand side pectoral fin missing, straight edge. Tip of beak broken. Multiple notches to right hand side maxilla. Multiple broken teeth to right hand side upper and lower jaw. Abrasion to leading edge dorsal fin with associated linear impressions. Cross shaped linear impressions x 2 along left hand side torso. Broken LHS mandible.</p>
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Marine Strandings Network

Cornwall Wildlife Trust
Five Acres
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The MSN is funded by the



Cetacean Strandings
Investigation Project (CSIP)

Publication Policy

This report should be accredited to Cornwall Wildlife Trust Marine Strandings Network in all publicity and wherever referred to. Use of these data, by prior agreement with Cornwall Wildlife Trust and the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS), is welcomed. We would be pleased to receive copies of any publications that have used these data.