



Calls: overall

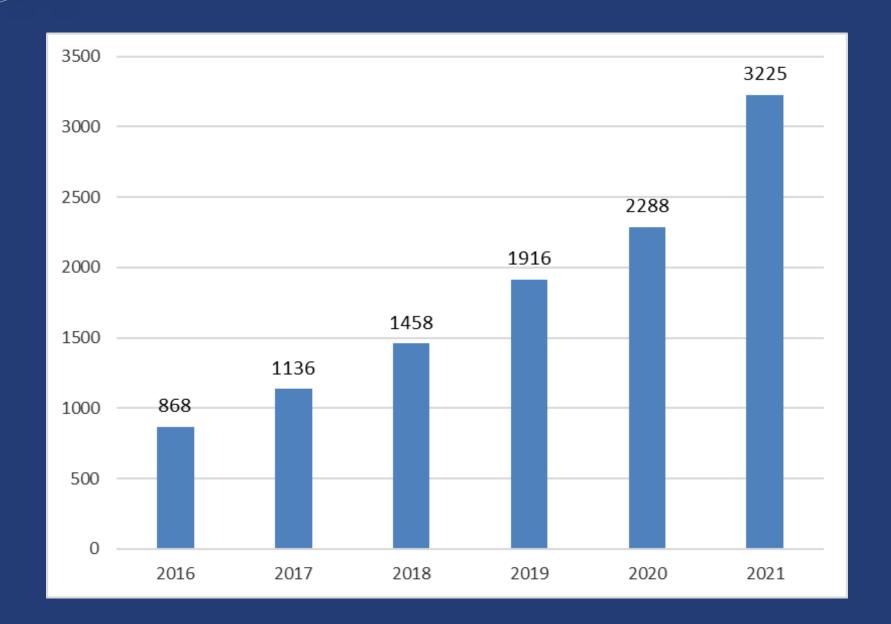
Total callouts for 2021 = 3225 - highest on record again

- In 2016 we had 874 calls
- In 2017 we had 1136 calls (30% higher than 2016)
- In 2018 we had 1458 calls (28% higher than 2017)
- In 2019 we had 1916 calls (24% higher than 2018)
- In 2020 we had 2287 calls (19% higher than 2019)
- which makes 2021 41% higher than 2020...

In the last few years it has been evident that the rate of increase in calls has been slowing down. However, in 2021 the trend was completely reversed and the rate of increase was more than double the previous year.

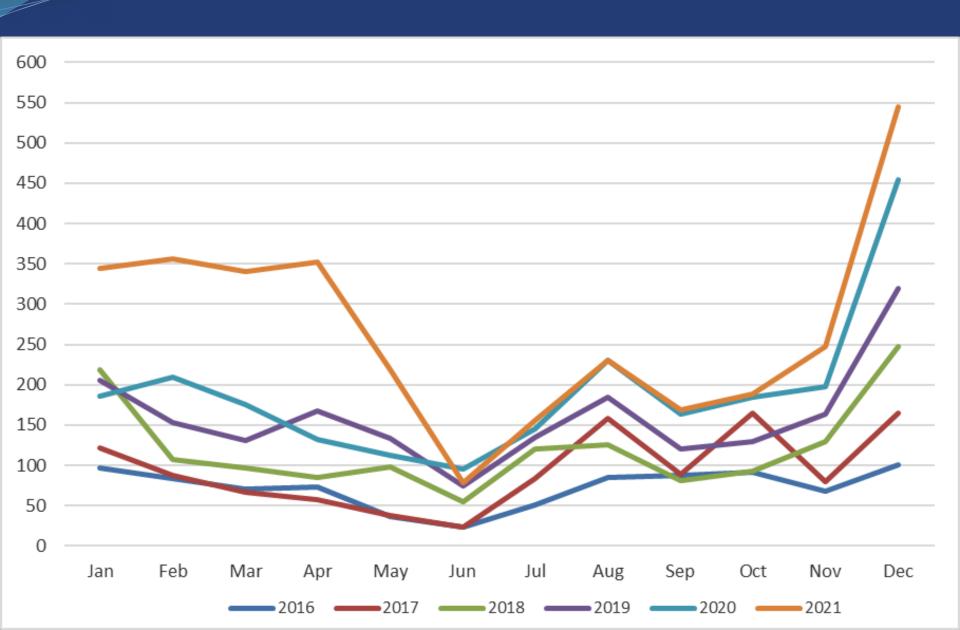


Calls: annual





Calls: monthly





National call trends

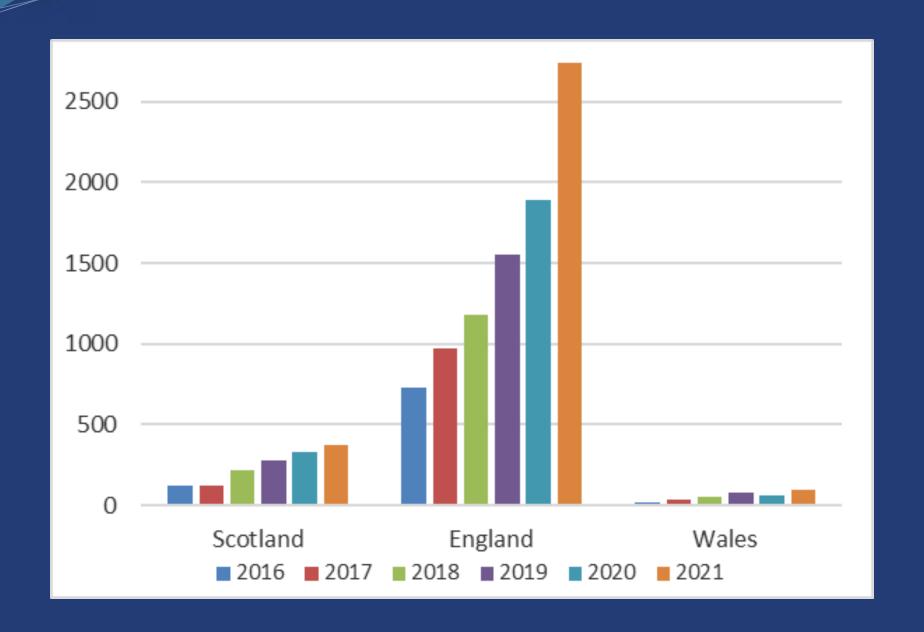
All months except June and August were new monthly records for the highest number of calls. June remains the only month to have never reached triple figures. January to May were significantly busier than normal while December was ridiculously busy, beating all previous monthly records, mainly due to the impact of Storm Arwen in SE Scotland/NE England.

The rise in callouts can largely be attributed to:

- Increasing awareness of BDMLR
 - Greater social media visibility and access
 - Increased media interest (especially climate change and pollution)
 - Local awareness-raising efforts of BDMLR volunteers
- Changing human population and activity
 - Increasing human population
 - Noticeable increase in year-round tourism
 - Greater uptake of outdoor activities e.g.: SUPs, kayaks, coasteering, walking
- Climate change
 - More frequent and severe Autumn and Winter storms
 - Growing evidence for increased grey seal pup mortality, lower reproductive success and pupping season timing shift
- Poor health in the East coast common seal population
 - Severe 'mouth rot' infection ongoing in pups through Summer



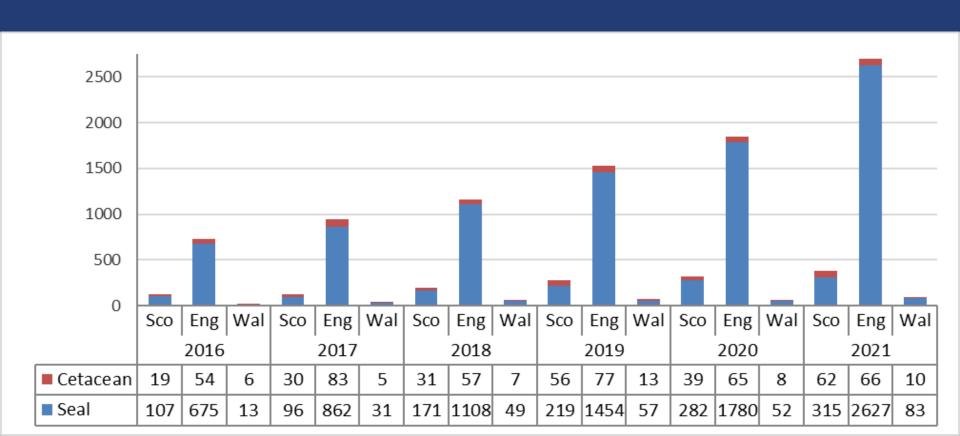
Calls: countries by year





Calls: countries by species group

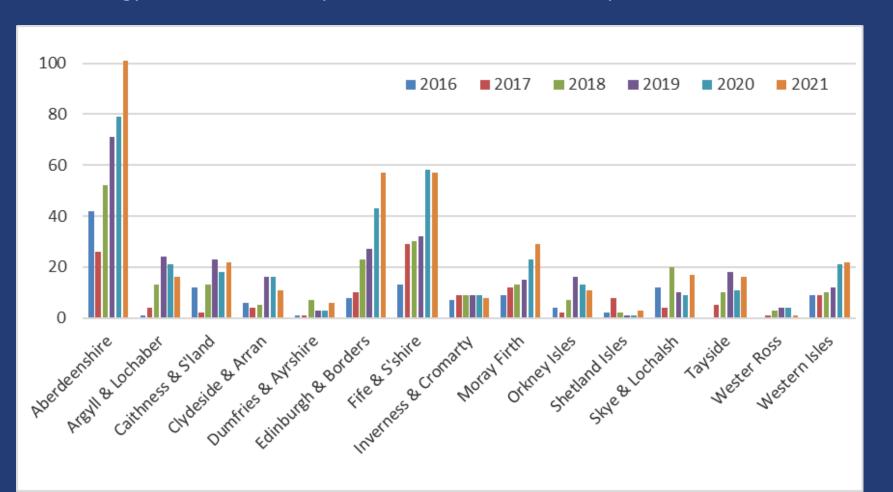
England remains the busiest country, with the largest number of both seal and cetacean calls, followed by Scotland then Wales. The rate of increase is still highest in England, and as with previous years likely ties into a number of factors including general public awareness, storm activity and common seal mouth rot. The chart below breaks down the difference between seal and cetacean callouts, this year with England only slightly above Scotland for cetacean calls.





Calls: Scotland

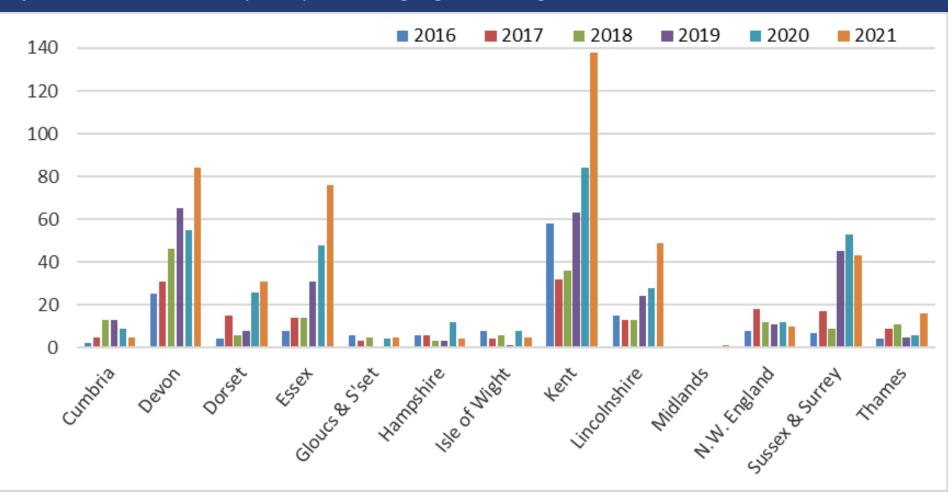
Aberdeenshire remains the busiest region in Scotland, becoming the first to reach triple figures and received significantly more calls than the previous year. Notable increases were also recorded in the Edinburgh and Lothians, Moray Firth and Skye and Lochalsh regions. Calls decreased in Argyll and Lochaber, Clydeside and Arran, the Orkney Isles and Wester Ross.





Calls: England

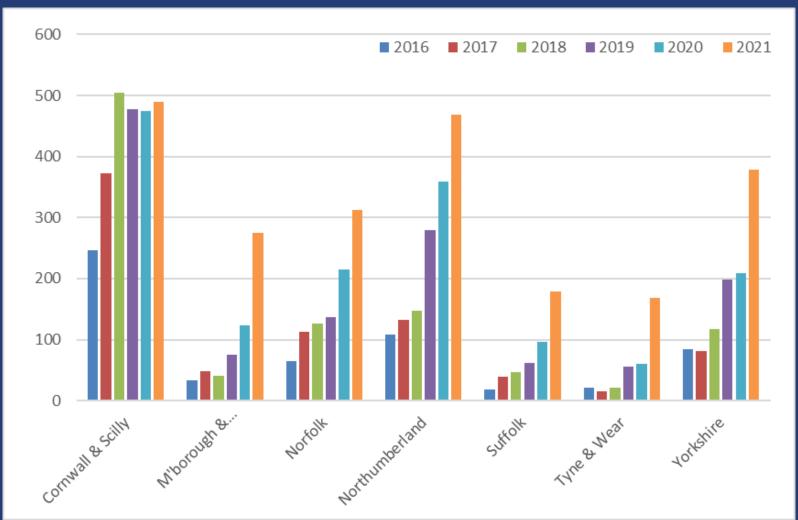
Kent was significantly busier compared with previous years, while Devon, Essex, Lincolnshire and Thames showed notable increases. Cumbria and North West England, plus Hampshire, Sussex and Surrey all decreased slightly. It is notable these latter two region groups are adjacent to one another, perhaps showing a general larger scale decrease in callouts in these





Calls: England

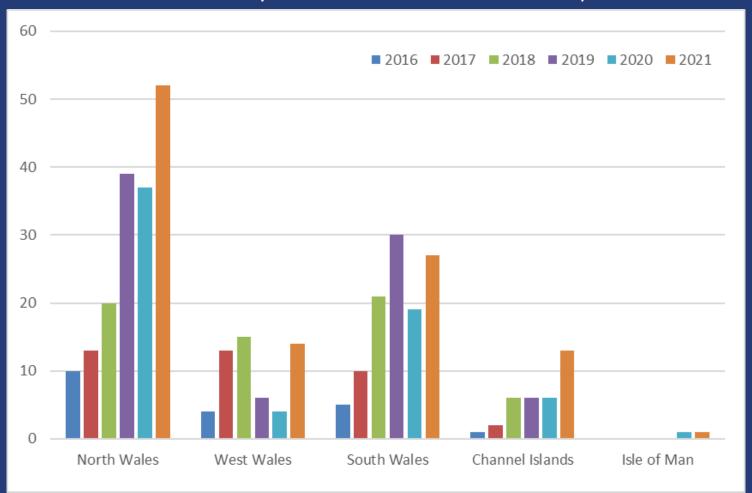
Following the division of North East England into three regions (Middlesborough and Durham; Northumberland; Tyne and Wear), the data for previous years has been reanalysed to present them accurately. All regions except Cornwall & Scilly experienced notable increases in calls.





Calls: Wales and Islands

North Wales is beginning to separate itself from the other regions as the busiest in the country, though West and South Wales both had increases in 2021 over the previous year as well. The Channel Islands saw their busiest year on record, whilst the Isle of Man remains stable at low levels. Northern Ireland will officially be added in the 2022 annual report.





Calls: species annual total

Pinnipeds: 3036

Grey seal: 2317

Common seal: 381

Walrus: 5

Unid. seals: 333

Cetaceans: 140

Harbour porpoise: 29 Common dolphin: 27

Striped dolphin: 3

Atlantic white-sided dolphin: 2

White-beaked dolphin: 3

Risso's dolphin: 1

Bottlenose dolphin: 8

Pilot whale: 3

Orca: 2

Sowerby's beaked whale: 3

Minke whale: 8

Humpback whale: 7

Sei whale: 3 Fin whale: 3

Unid cetacean: 38

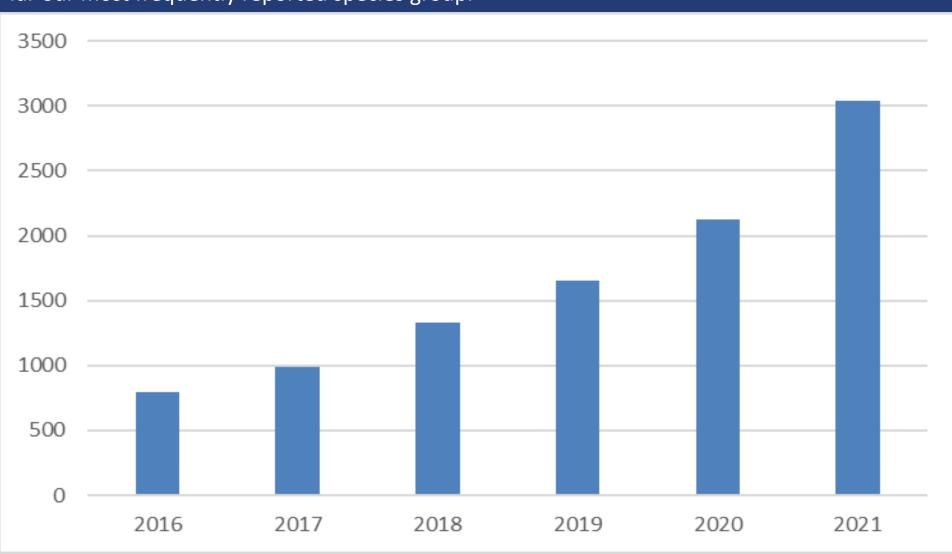
Seals of course drove up the call figures this year with an big increase for grey seals partly influenced by storms (especially Storm Arwen) and other factors including lockdowns, however common seal callouts were slightly lower compared to last year. Two walruses visited the UK in 2021, both of which required management.

Calls regarding cetaceans also reached a record high, with July being busiest and June quietest. Harbour porpoises were the most frequently reported species followed closely by common dolphins. There was a higher diversity of dolphin and baleen whale species than usual this year, while there was a decrease in deep diving whales (sperm whale and beaked whale species). There is a trend developing in the deep diving whale group to show that calls regarding them tend to take place from late Summer into Winter.



Calls: pinnipeds by year

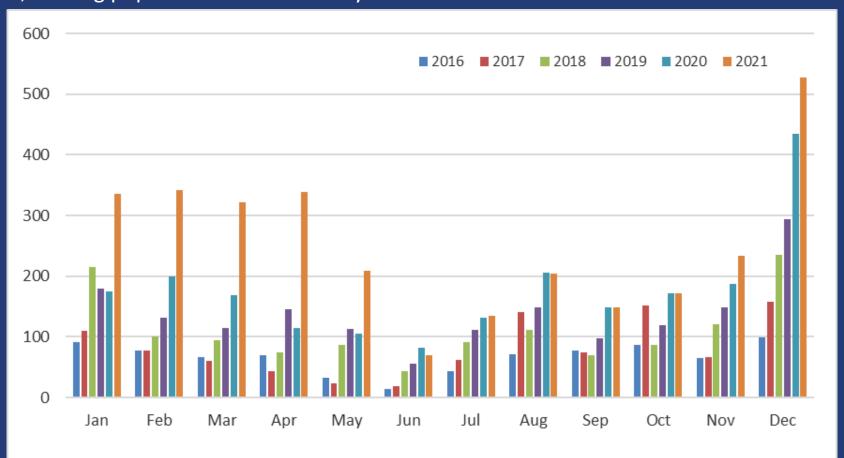
Annual seal data shows an increasing trend that largely influences the overall annual data as by far our most frequently reported species group.





Calls: pinnipeds by month

Calls regarding seals were significantly higher in the first five months of 2021. Storm activity and lockdowns may have had an influence on call rates during this period. The rest of the year remained mostly comparable to 2020 until late November and December when Storm Arwen devastated South East Scotland and North East England at the peak of their grey seal pupping season, causing population-level mortality.





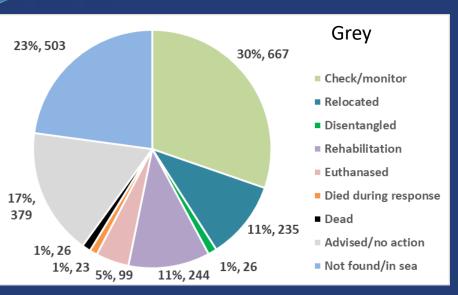
Calls: pinnipeds by species

The higher call rate in the first half of the year related mainly to grey seals. In addition to the aforementioned explanations for this rise, between late January to April in Cornwall there was also an unprecedented number of severe lungworm cases in grey seals. This may be linked to a spike in prey abundance and predators such as fin and humpback whales, common dolphins and blue fin tuna that may have allowed the parasites to quickly infest localised food webs.



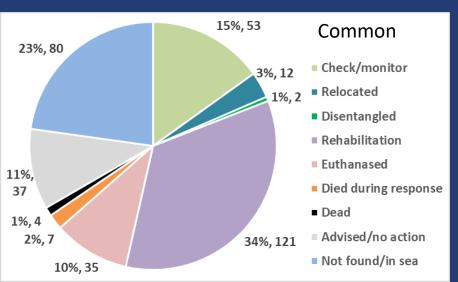


Calls: pinnipeds by outcome



Of all grey seals calls, the highest proportion of animals were checked and monitored with no further action, whilst around a tenth each were relocated or taken for rehabilitation.

Almost 400 animals were dealt with over the phone via photo and video assessment by Hotline Coordinators and required no further action.



With common seals a much higher proportion of cases required rehabilitation or euthanasia compared with grey seals, largely owing to the issues with mouth rot and other health issues that common seals are more susceptible to.



Cornwall Seal Hospital

2021 was an extremely exciting year and saw the huge fundraising and construction efforts required to build our new seal hospital from the ground up in just under seven months. This central, easily accessible and yet private location has proven to be a fantastic find. Project management efforts were led by Medic Lizzi Larbalestier, who dedicated an enormous amount of her Spring and Summer to the build and supported by or Hospital Manager Dr. Natalie Arrow. She coordinated a team of tradespeople to quickly and efficiently complete not only the groundworks, construct the buildings and install the utilities, but also see the buildings furnished and finished to a beautifully high standard.

The hospital consists of two buildings. First is the 'seal barn' that contains ten spacious pens, with each having its own individually controlled heat mat, in a naturally lit and well-ventilated environment. The barn also has its own small prep area at the front, containing platform weighing scales, a computer, and a large sink/washing up area. The second building is the 'medic hub'. This houses the feed and vet prep room, a storage room (including a large chest freezer for fish!), a lab (containing blood analysis machines, a microscopy station, and an ultrasound machine), toilet, office, and a classroom/kitchen area.

The total cost of the project, including specialist diagnostic veterinary equipment, was £150,000. Funds were raised via numerous means, including a very successful Crowdfunder campaign which raised over £40k, and support from numerous grants, generous individuals and sponsorships from businesses and other organisations.



Cornwall Seal Hospital

In its first season from September 2021 to March 2022 the new hospital has admitted 75 seal pups (74 grey seals and 1 common seal). This is down on our figures from last season, when we had admitted 139 and was our second busiest season for admissions on record. We suspect this is partly due to the kinder weather which we experienced earlier this season, compared to the previous year which saw multiple large storms. This has been good news for the hospital, as it has allowed time for the team to settle into the new facilities. So far, our maximum number of pups in at any one time has been 7. These times were taken as good opportunities to see how many Medics were needed in per shift to ensure checks were completed in a sensible time and to see how they coped with the workload. We have been very successful in this regard, with four Medics on per shift (acting in two teams) when we're busy, though of course we will continue to monitor this.

Operations have been very smooth since opening. The new lab has hugely improved our diagnostic capabilities, with fast blood results helping to guide treatment decisions and 'snotty' pups are now being screened early for lungworm using the microscope. The classroom has been used mainly as a break room and meeting space, as well as hosting two first aid courses. It has also hosted its first out-of-area Medics for training – a group of four from Suffolk and Norfolk over an intensive training weekend. The hospital's public Facebook page now has over 2100 followers and content is posted regularly to educate, raise awareness and funds.





Seal Holding Units

13 seal pups (8 grey seals and 5 common seals) were admitted to the Mobile Seal Rescue Unit in the calendar year of 2021. The unit is generously funded by the Seal Protection Action Group and has been in operation since 2018. Seals can be held here temporarily for a few nights until they can be moved on to rehabilitation or released again. A small team of Medics led by Suffolk Area Coordinator Jo Collins put in an enormous amount of effort to manage the unit alongside a veterinary surgery to ensure pups are given quality short term care until they can move on.

BDMLR Medics also operate a further three regular temporary holding units in Yorkshire, Northumberland and Inverness, which between them held 118 seals (28 common, 90 grey) in 2021 – with thanks to Em Mayman and Chris Cook, Jane Hardy and Martin Boon plus all assisting Medics for their efforts.



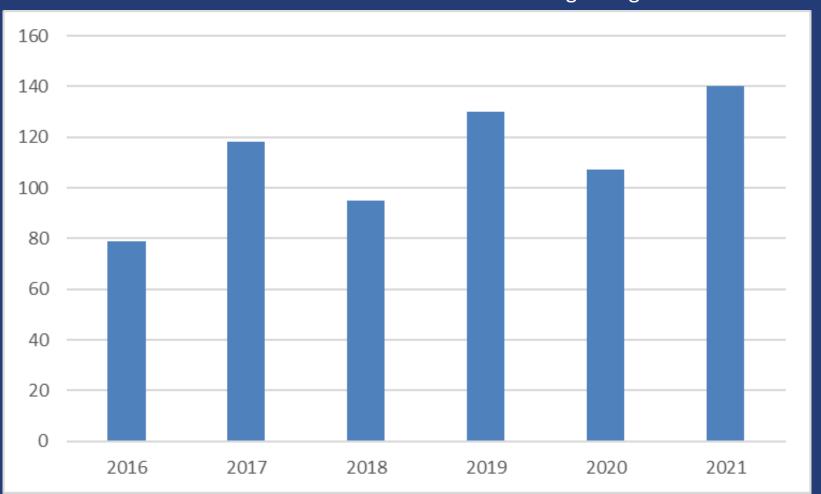






Calls: cetaceans by year

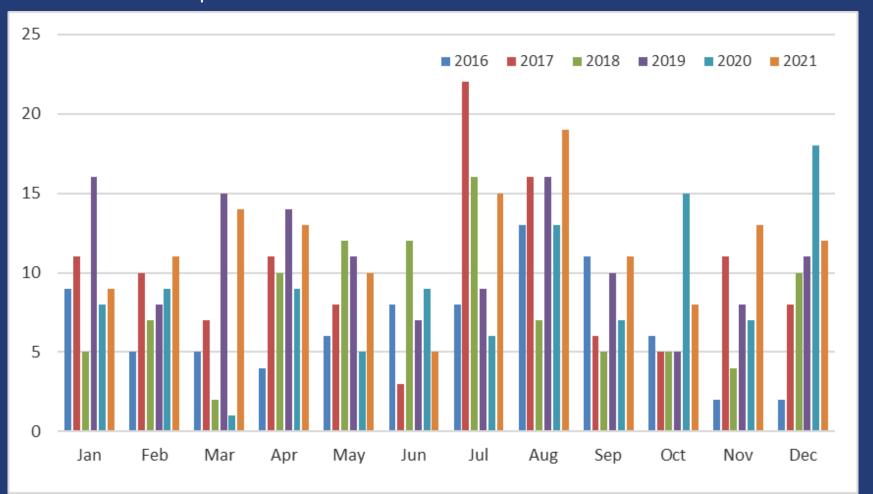
Annual calls for cetaceans show a slowly increasing trend overall, however the total does fluctuate each year. This data appears to be in line with other sources such as CSIP that report a gradual increase over time and likely explained by greater awareness and reporting. It is hard to say whether there is an actual increase in cetaceans live stranding though.





Calls: cetaceans by month

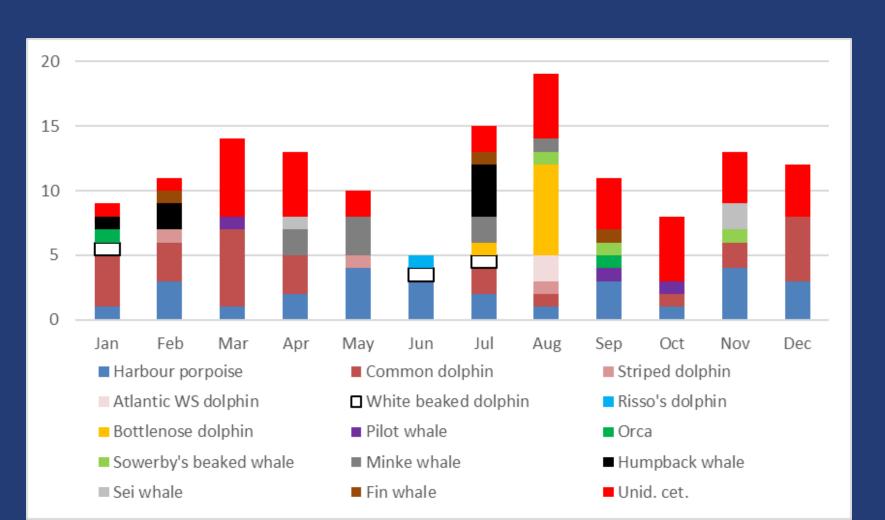
Overall, monthly report totals vary annually and there appears to be no real trend for any month to be consistently busier over time. This does demonstrate that even though beaches tend to be much busier in summer, this increased abundance of people does not generally translate to increased numbers of reports in those months.



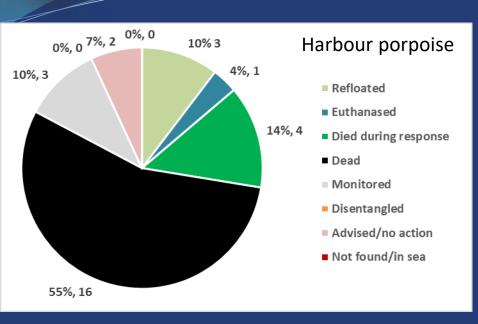


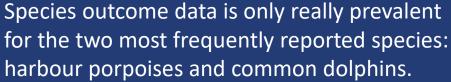
Calls: cetaceans by species

August was the busiest month for reports, followed by July and March. There aren't any obvious trends in the monthly data, however harbour porpoises and common dolphins as the two most frequently reported species appear in virtually every month of the year most years.



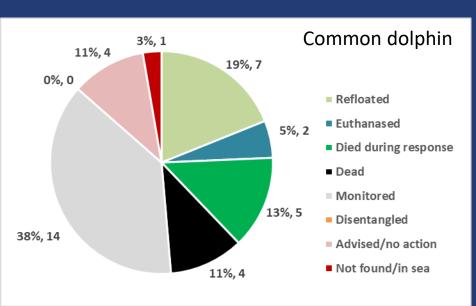
Calls: overall cetaceans by outcome





Of all harbour porpoises reported, just over half were animals that were already deceased and passed on to CSIP/SMASS. Eight animals were dealt with as live strandings, and of these half died during the response phase, though it is known that harbour porpoises are more likely to pass away during strandings.

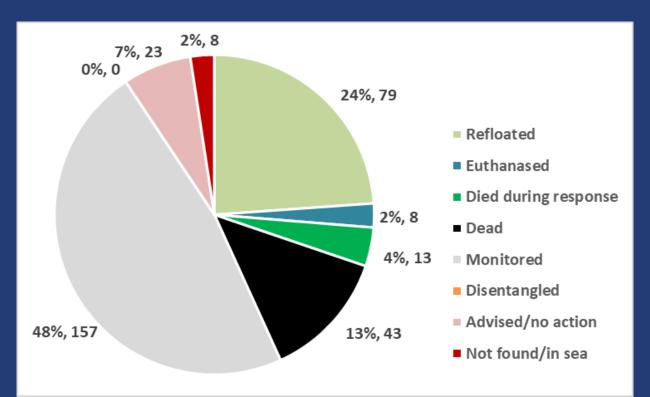
Of all common dolphins reported, just over a third involved monitoring animals potentially in danger of stranding. 14 animals were dealt with as live strandings, two thirds of which had successful welfare outcomes either through refloatation or euthanasia.



Calls: overall cetaceans by outcome

This chart depicts the outcomes of all cetacean species and animals recorded in 2021. Almost half of the animals involved required monitoring, mainly skewed by the largest bottlenose dolphin mass stranding on record in Cromarty that had over 100 individuals involved.

100 live stranded animals were dealt with, almost 90% of which had positive welfare outcomes through refloatation or euthanasia, though again heavily skewed by the aforementioned bottlenose dolphin mass stranding where many animals refloated on the incoming tide.





Calls: cetaceans summary

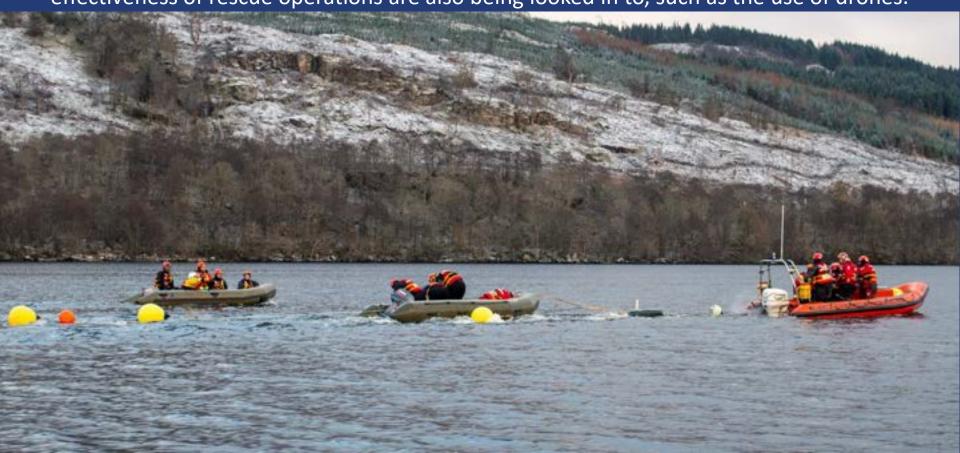
Harbour porpoises were the most frequently reported cetacean as usual, followed closely by common dolphins. There appear to be vague seasonal trends for both species emerging over the years, with harbour porpoises more often reported in spring and summer and common dolphins in winter. However, both species are still represented in all or most months of the year as they are widespread and abundant year-round.

Due to the scarcity of data for most other cetacean species it is difficult to draw conclusions regarding trends with them. However, as a species group, beaked whales are demonstrating seasonality from mid summer to early winter in recent years, as since 2018 beaked whales have only been reported between July and December.



Large Whale Disentanglement Team

The national recruitment drive to join the Large Whale Disentanglement Team was very successful with new members from most regions of the country. Monthly training sessions have been implemented to get all members trained up to a high standard and new members progressing up through the different levels. A mock whale tail has been created for training purposes to better emulate a real situation and improve skills. New techniques to enhance the effectiveness of rescue operations are also being looked in to, such as the use of drones.





- Scottish Entanglement Alliance: This is a collaborative project with partners including WDC, SMASS, the Scottish Creel Fisheries Federation and others to investigate the extent of unreported entanglement of cetaceans, basking sharks and turtles in Scottish creel fisheries. As part of this project a whale disentanglement workshop for fishermen was delivered to give them an understanding of the process and the support BDMLR's Large Whale Disentanglement Team can provide, which was well received and has helped build links and goodwill with the community. The final project report was published in late 2021 and all resources are available to view here: https://www.scottishentanglement.org/downloads/
- P Seal Alliance: The coalition has had some major success in the last year with the launch of a national Government-backed seal watching code of conduct called 'Watching Seals Well'. The timing of the launch ended up coinciding in the same week that 'Freddie' the well-known common seal in the Thames was attacked and severely injured by a dog, which resulted in national media front page headlines. This helped get the code promoted far more than expected, and generated a Government petition that was signed by 26,319 people from every single UK constituency over six months to get seals the same protection in law from disturbance as cetaceans already do, which is ongoing in the background. The website can be viewed here: https://www.sealalliance.org/













Seal Network UK: BDMLR were specifically consulted over the change in law to ban all shooting of seals in England, Wales and Northern Ireland. This came about as a result of a prospective trade deal with the USA where the Marine Mammal Protection Act prohibits the killing of animals in the course of food production. This ban passed into law in March 2021 across the whole of the UK.

We have also shared our data on common seal callouts in East Anglia and Kent to show them to be increasing and potentially evidence of habitat use change. This has been fed back to the Sea Mammal Research Unit and DEFRA, who will extend their range of surveys to cover more of this area in future.

Finally, we received support and funding (allocated to CSIP) for the common seal mouth rot investigation too – so all in all, SNUK has been an incredibly successful coalition with our Government contacts since its formation in 2019 that has resulted in some very significant outcomes for marine mammal conservation and research!



- Common seal mouth rot investigation: Over the past few years Medics had reported an increasing incidence of weaned common seal pups presenting with swollen muzzles, infected facial wounds and severely ulcerated mouths. Many required euthanasia due to poor welfare. To investigate the condition, some initial sampling/analysis efforts were made in 2020, led by Dr. Natalie Arrow (BDMLR) and Dr. Jamie Bojko (Teeside University). This was followed by a much larger data collection and sampling effort in 2021, with Defra funding a small pilot study to allow Dr. Bojko to perform molecular diagnostics in the lab. Further funding from DEFRA will hopefully be confirmed soon to allow more of the collected samples to be processed and further conclusions to be drawn about the condition.
- Dolphinaria-Free Europe: We continue to support this international coalition to raise awareness of cetacean captivity issues and take part in actions such as petitions and writing to national and European governments on specific subjects. In the last year DFE has been able to prevent the movement of belugas from Spain to Canada and dolphins from the Netherlands to China. Other actions include writing in support of the new Animals Abroad Bill in the UK, proposed a phase out of dolphinaria in Europe to the European Commission; completed a white paper on the use of species conservation to justify captivity; and supported the ban on marine mammal captivity that was announced for the Brussels capitol region and pushed for it to be expanded to other regions of Belgium.



- Pinniped Entanglement Group: we are represented on this international forum for rescue organisations to share new rescue techniques and raising awareness of the issue. A new website was launched at www.pinnipedentanglementgroup.org and features BDMLR as a key UK partner. The currently available technical equipment online is very expensive, so some progress is being made on getting these made in-house for a fraction of the cost with the aim of giving us more options for safer adult seal capture.
- Seal Rescue Conference: BDMLR co-hosted the 2021 conference with the Cornish Seal Sanctuary and Cornwall Seal Group Research Trust. Due to Covid the event ended up being held online, and was attended by 40 representatives of seal rescue, rehabilitation and research organisations around Europe. Hosting of the 2022 conference passed to Zeehondencentrum Pieterburen, however BDMLR remains as the key driving organisation behind the scenes with managing the conference and group.



G7/Rural Affairs Advisory Committee: BDMLR led efforts to create an emergency protocol for strandings as well as a detailed document and code of conduct on minimising wildlife disturbance from activities linked to the G7 summit's security operation led by Devon and Cornwall Police's new Rural Affairs Advisory Committee, which was set up specifically for the event. This was supported by a major monitoring effort by BDMLR and other local conservation group volunteers. Over 8 days, 49 volunteers surveyed four sites for a total of 365 hours and reported back all disturbance incidents. These were summarised in a daily briefing that was sent to the RAAG and the MOD, with recommendations on further actions if any issues arose. A real-time cetacean and basking shark reporting system was also implemented, whereby sightings were passed directly to Silver Command to share with the marine security team.

Due to the success of this protocol, the RAAG has been maintained as a G7 legacy project and we have access to their officers for support with wildlife issues. This partnership was valuable during the Isles of Scilly walrus incident and the situation with Spearmint the solitary social seal in Plymouth. Further successful engagement was also achieved with the organisers of the Tour of Britain cycling race, where a detailed marine wildlife disturbance mitigation document was provided to them ahead of the event for the race stages in Cornwall and North Wales.

Around the G7 event we also held field meetings with Environment Secretary George Eustice MP and later the Undersecretary for the Environment Rebecca Pow MP to discuss seal conservation issues including support for protective legislation.

Marine wildlife disturbance mitigation at the G7 summit













The 2021 G7 summit provided unique challenges to rural and wildlife policing, particularly as Comwall comes with a raft of statutory site designations and legal restrictions, as well as being a significant habitat for wildlife such as marine mammals. Devon and Cornwall Police set up a working group including statutory bodies and conservation organisations, called the Rural Alfairs Advisory Group (RAAG), to address this with the aim of minimising impact on the area and its wildlife, given the huge scale of the event.

A local coalition, the Comwall Marine and Coastal Code Group (CMCCG), was consulted and worked together with the RAAG to provide the G7 security team. 'Operation Trelawny', with:

- A detailed guide to sensitive marine wildlife sites including seal haul out locations
- Specific mitigation advice for each sensitive widtle site for all marine, land and aerial activity
- A marine wildlife code of conduct best practice guide for marine wildlife encounters
- Devised a survey profocol using volunteers at four key sites G7 sites from down to dusk over eight days to monitor activity, record disturbance and recommend mitigation
- Daily feedback reports on activity and ideas for future mitigation.
- A real time reporting system for whales, dolphins, porpoises (cetaceans) and basking sharks to alert marine security teams in high alert areas to their presence and act accordingly

In total, 49 valunteers from CMCCG groups surveyed for 365 hours across the four sites, amounting to 60% of total survey coverage time. available. Despite the huge amount of G7-related activity, only a small handful of relatively low-level disturbance were recorded. reported and mitigated for. This included a successful request for a Royal Navy vessel to move further away from a seal haut out site after a couple of seals were disturbed into the sea by engine noise, despite being more than the recommended distance away already. The real time reporting system only needed to be used twice, as cetacean and basking shark activity was relatively low at the survey sites during the survey period. However, the second time occurred at a critical moment during the finale of the summit when the Red Arrows arrived. for their performance – accompanied by a pad of battlenose dolphins into the main high risk security area in St Ives Bay. The system proved its worth, as the fleet of marine security vessels were able to avert a direct collision with the pod as they crossed the mouth of Hayle estuary towards one another. The pad left the bay without incident.





It is the view of all organisations involved that the minimal impact of the G7 summit on wildlife was largely down to the proactive engagement and collaborative working of Devon and Cornwall Police and the Minktry of Defence with the Cornwall Marine and Coastal Code Group (especially British Divers Marine Life Rescue. Cornwall Seal Group Research Trust and Cornwall Wildlife Trust). It is hoped that these militaction model protocols can be used in other parts of the country for future large scale events and planned security operations that may impact sensitive marine wildlife species. The G7 RAAG will also continue to exist beyond this event as a legacy project, continuing to work with local organisations on events and situations. This proved necessary with the infamous walrus that turned up in the Isles of Scilly for several weeks in the summer, and for the Tour of Britain cycle race that passed by a number of sensitive wildlife sites foo.







- Research: We have a number of research projects ongoing, as follows:
 - Michal Zatrak (PhD): investigating stress and disease via sample collection from seals
 - Natalie Arrow (MSc): volunteer response to cetacean live strandings
 - Ellie Barlow (MSc): national seal entanglement data analysis
 - Plus various smaller projects such as student surveys, photography projects and interviews.

Scientific publications we have co-authored (available on Resources page of our website):

- Sue Sayer et al, 2021. Post release monitoring of rehabilitated grey seal pups over large temporal and spatial scales. Marine Mammal Science
- Sarah Nelms et al, 2021. The role of citizen science in addressing plastic pollution:
 challenges and opportunities. Environmental Policy
- Anon., 2021. Out of habitat marine mammals workshop report
- Plus the aforementioned Scottish Entanglement Alliance project report and resources, as well as contributing as non-authors to other academic research studies.



_Underdogs

Projects

Media projects: We had several media projects this year, including the launch of the documentary feature film 'From the Wild Sea' by independent Danish filmmaker Robin Petre. The film has now been shown at over a dozen major film festivals worldwide including Berlin, Copenhagen, Sheffield, Sydney, Missouri, Warsaw and more, and has won an award! We also took part in a high-impact film documentary called 'Underwater Underdogs' by the producers of the Oscar winning 'My Octopus Teacher', which is hosted online here: https://www.waterbear.com/sign-in?utm_source=Underwater_Underdogs&utm_medium=Social&utm_campaign=Underwater_

We are currently involved in a television documentary with STV for Channel 4 about large whale strandings with CSIP and SMASS, which aired in 2022.

We also had some high profile appearances on television, with interviews in international media, including ITV's 'Lorraine' and an article in the Wall Street Journal about the walrus in Scilly, and have filmed a piece with presenter Gillian Burke for The One Show about the new seal hospital that aired in early 2022. We even had a Medic as a contestant on game show 'The Chase' name check us as well!

















































































Cornwall Marine & Coastal Code Group















































British Divers Marine Life Rescue

www.bdmlr.org.uk































