

Dead marine megafauna strandings annual report 2023



Clare Rogerson – Marine Conservation Assistant

Dr Lara Howe – Marine Officer



Introduction

On behalf of the Isle of Man Department of Environment, Food and Agriculture (DEFA), Manx Wildlife Trust have collated information regarding dead marine megafauna strandings since 2013. The present report summarises the annual findings from 2023. Cetacean data obtained is additionally utilised in the annual UK Cetacean Strandings Investigation Programme (CSIP-UK) report.

Training

During 2023, a further seven volunteers were trained to attend marine mammal strandings and were added to the database. There are currently 109 trained volunteers, and each possesses a 'stranding pack' which contains all necessary equipment to effectively and safely record data in the field (Appendix 1).

Methodology

Dead marine megafauna strandings observed around the Isle of Man are reported to Dr Lara Howe (Marine Officer, Manx Wildlife Trust) via phone, email or social media. Details obtained from the reporter, including location and any other available information, are passed on to a trained volunteer who will attend the stranding.

Following location of the stranded individual, volunteers must report findings on the appropriate recording form (Appendix 4/Appendix 5/Appendix 6). Initially, date, time and site details (name of location, OS six-figure grid reference and GPS coordinates) must be recorded. Following this, details of the stranded individual are recorded including species, sex, age, carcass condition (e.g. fresh, decomposed, advanced decomposition), identifiable markings, presence of trauma and presence of tags. Additionally, measurements are taken. The measurements required vary, depending on whether the individual is a cetacean, pinniped or other. Finally, photographs are taken of the body and head, and any notable features including evidence of trauma or entrapment. In some circumstances it may not be possible to obtain all of the required data to complete the recording form due to levels of decomposition, however volunteers are asked to record as much information as possible. Forms and photographs are submitted and added to the stranding database. Cetacean and pinniped stranding records are also sent to CSIP-UK.

Results

In total there were 72 stranded individuals recorded around the Isle of Man in 2023 (Figure 1). Of these, 51 were pinnipeds (43 grey seals, *Halichoerus grypus*, two common seals, *Phoca vitulina*, and six individuals for which species was unknown), and the other 21 individuals were cetaceans (16 harbour porpoise, *Phocoena phocoena*, three Risso's dolphin, *Grampus griseus*, one common dolphin, *Delphinus delphis* and one minke whale).

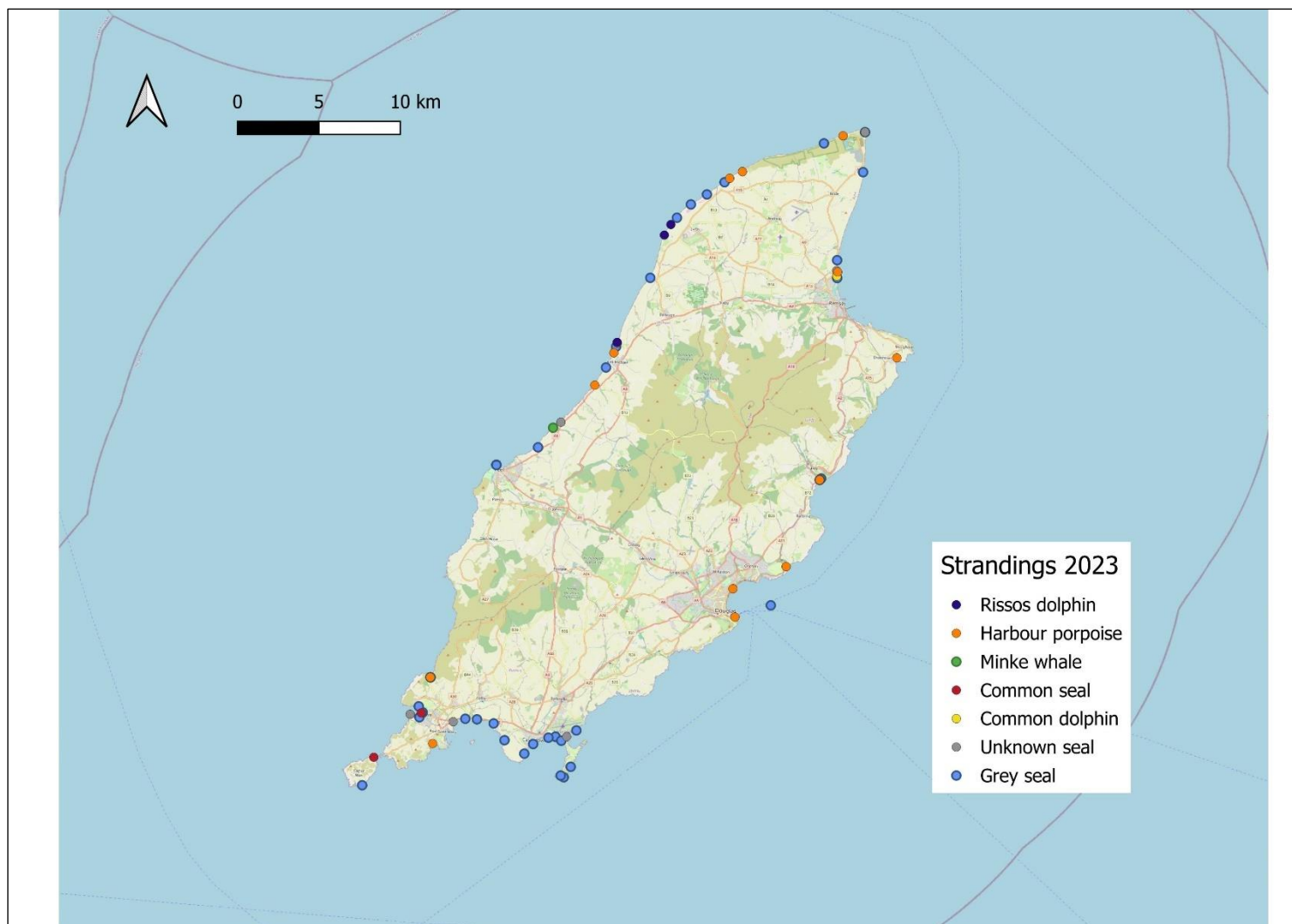


Figure 1 – Strandings reported around Isle of Man in 2023 (n = 72).



Figure 2 – Closer view of the North of the Isle of Man, depicting strandings in this area during 2023.



Figure 3 – Closer View of the South of the Isle of Man, depicting strandings in the area during 2023.

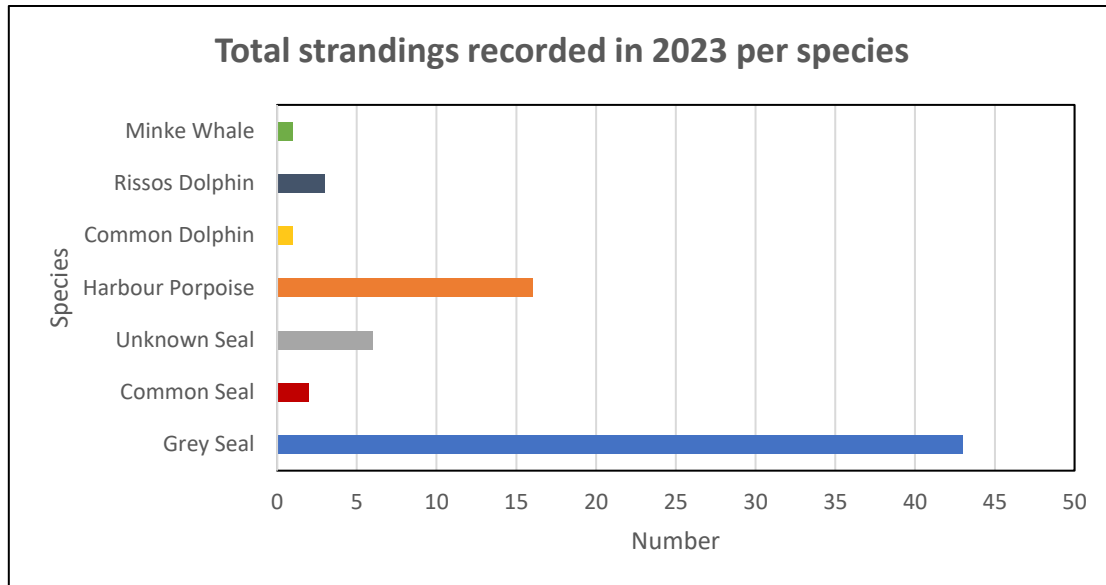


Figure 4 – Total number of stranded individuals (per species) recorded around Isle of Man in 2023.

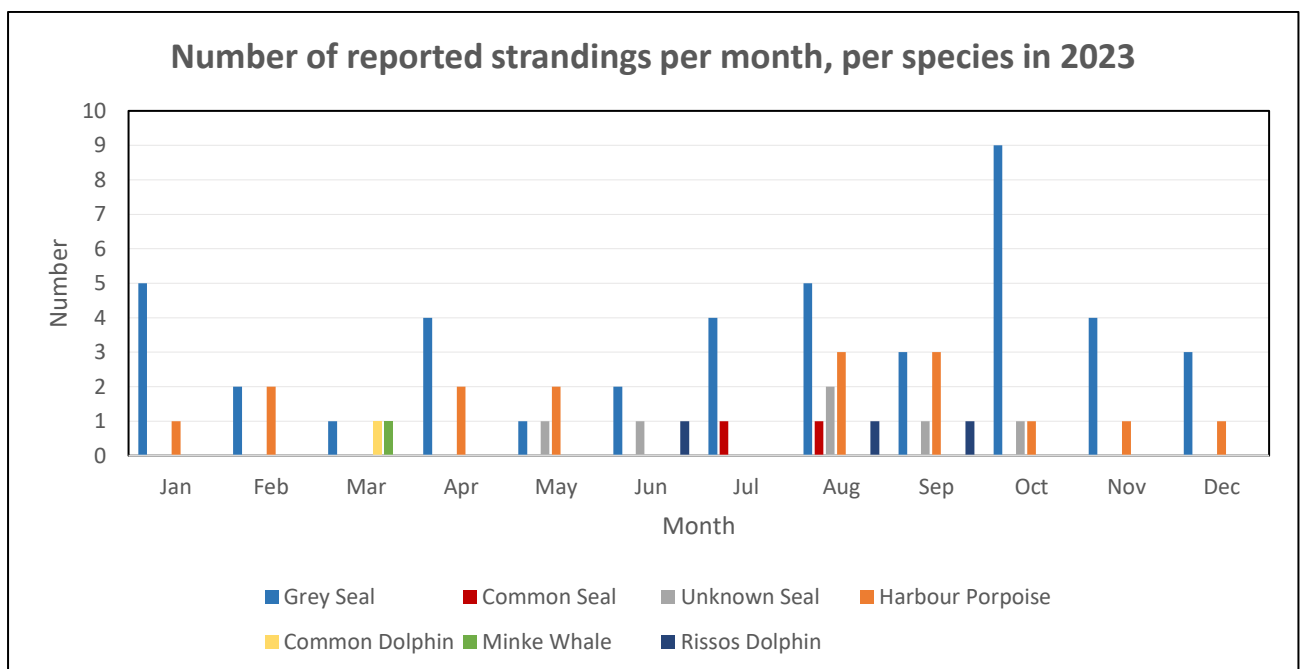


Figure 5 – Number of strandings reported per month around Isle of Man in 2023.

Figure 5 depicts the pattern of strandings reported, per month, during 2023. The number of reported grey seal strandings was highest in October (n=9), however, at least one grey seal stranding was recorded each month, with an average of 3.58 reports per month over the 12 months. Common seal strandings were only recorded in July and August, with



small numbers (n= max.2, average 1) of unknown seal strandings reported between May and October.

At least one cetacean stranding was recorded every month of the year, with the exception of July. 66.6% of the total number of cetacean strandings occurred between May and September, unlike the two preceding years, when the majority of strandings were recorded during the autumn and winter months, from October to January.

Seals

In total, 51 seal strandings were reported (43 grey seals, *Halichoerus grypus*, two common seals, *Phoca vitulina* and six individuals for which species was unknown), compared with 28 in 2022. Of these, sixteen seals were unfound or unattended by volunteers. This was the first time since 2020 that common seals were reported.

The following results (Figures 6 & 7) are based upon data from the seals that were successfully located by volunteers.

When considering the distribution of seal strandings, the greatest proportion were observed in the south around the coastlines of Port Erin, Port St Mary and Castletown. This is to be expected due to the geography, prevailing winds and tidal patterns experienced around the south coast (See Appendix 2 & 3). The greatest congregations of seals are known to be around the south coast, in the regions of the Calf and the Sound, and around the north coast at the Point of Ayre.



Figure 6 – Grey seal strandings reported around Isle of Man in 2023 (n= 43).

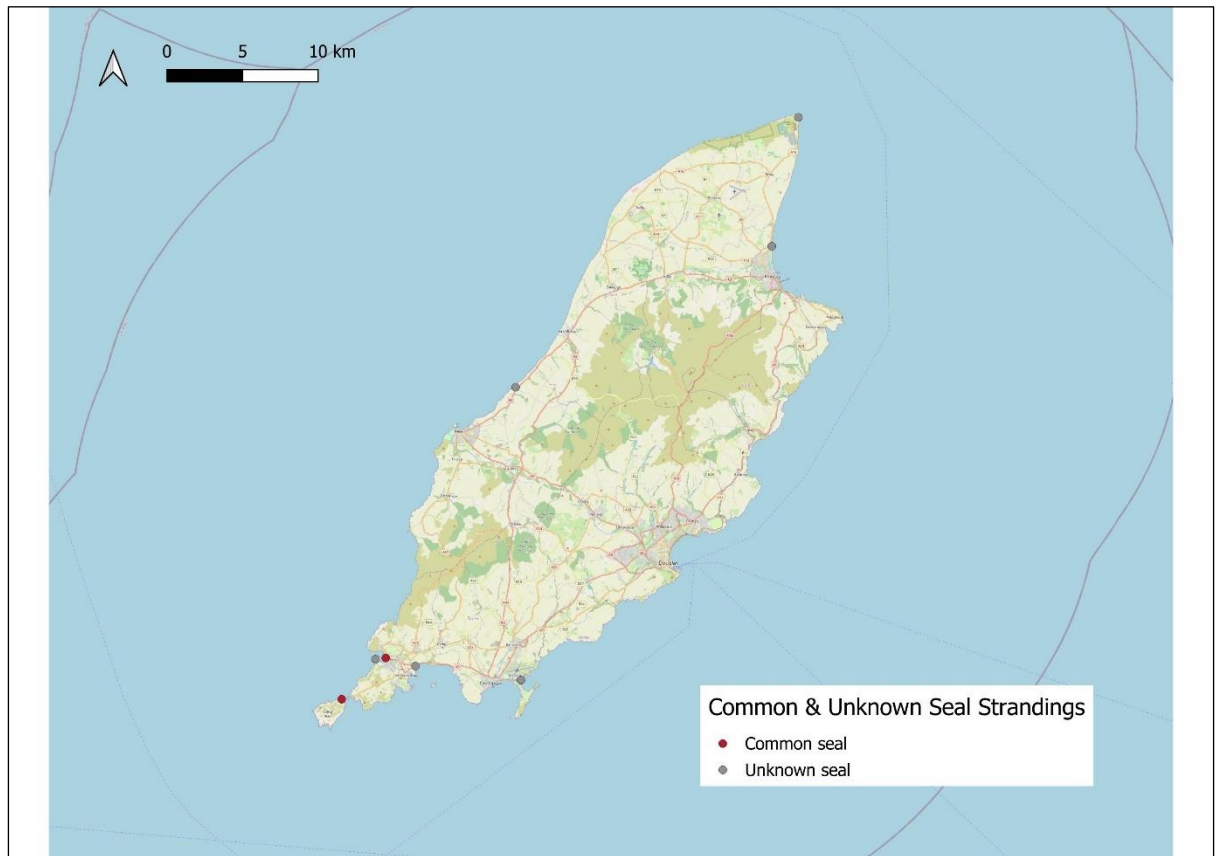


Figure 7 – Common seal & unknown seal strandings reported around Isle of Man in 2023 (n=2, n=6).

Of the attended individuals, nine were considered freshly deceased, 18 were recorded as decomposed and two were in a state of advanced decomposition.

The relative proportions of individuals belonging to each age group is displayed in Table 1 (of which were identified). Pups and juveniles made up almost half of total seal strandings (46.5%). Sex was unknown for almost all stranded grey seals, apart from two individuals which were determined to be female and five which were determined to be male.

Table 1 – Relative proportion (%) of stranded seals belonging to each age group (adult, juvenile, or pup).

Pup	Juvenile	Adult	Unknown
15.6	15.6	23.5	45.1



Cetacean Strandings

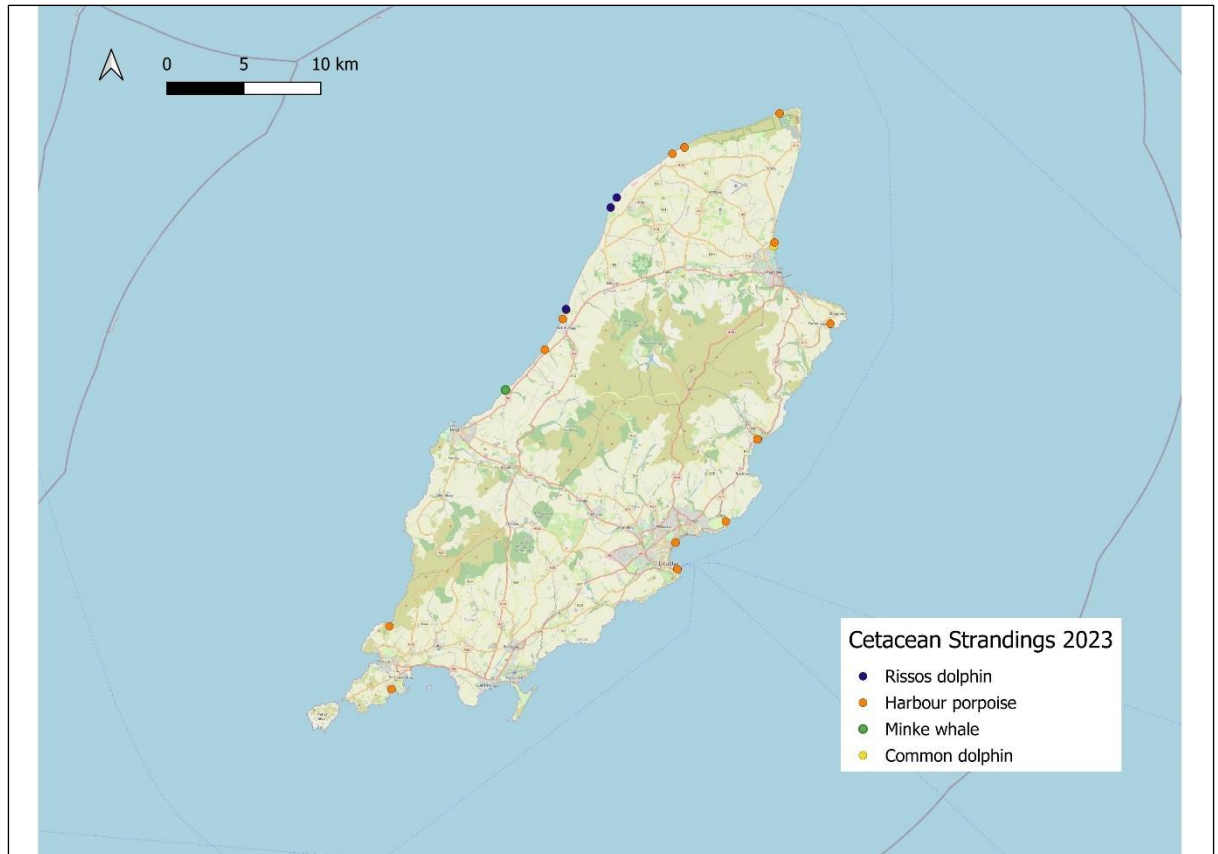


Figure 8 – Cetacean strandings recorded around Isle of Man in 2023 (n = 21).

All cetaceans

In total, 21 cetacean strandings were recorded in 2023: three Risso's dolphin, 16 harbour porpoise, one minke whale and one common dolphin.

Harbour Porpoise

In total, 16 harbour porpoise strandings occurred in 2023, compared with 10 in 2022 and 20 in 2021 (Figure 8 & 9). Harbour porpoise strandings accounted for 76% of the total number of cetacean strandings in 2023 compared with 83% in 2022.

50% of individuals recorded were located on the west coast of the Island and 50% were located on the east coast of the Island (Figure 9).



Of those recorded, three were reported to be freshly deceased with the remaining in a state of decomposition or advanced decomposition. Two of the individuals were identified as female, two as male and the remaining were not identified as either female or male. All harbour porpoise individuals were recorded as adult, with the exception of one juvenile recorded.



Figure 9 – Harbour porpoise strandings recorded around Isle of Man in 2023 (n = 16).



Figure 10 – All other cetacean strandings recorded around Isle of Man in 2023 (n = 1, n=3, n=1).

Common Dolphin

One Common dolphin stranding was reported in 2023, compared with one reported in 2022 and two in 2021 (Figure 8 & 10).

The attended Common dolphin was a female measuring 188cm in length.

Minke Whale

One Minke whale stranding was reported in 2023.

Photographs were obtained showing advanced decomposition, but no measurements were taken as the stranding occurred on a beach only accessible from the sea.

Risso's Dolphin

Three Risso's dolphins strandings were reported in 2023. The first, in June, a male of length 228cm, the second in August, a female of length 254cm and the third, in September, a male of length 297cm. Although accurate ageing of each was not possible,



their length measurements suggest all three were sub-adult or adult. All three individuals were stranded on the north-west coast of the Island.

Necropsies were completed on two of the three Risso's dolphins recorded. Although there were no signs of antemortem injury significant enough to be determined as cause of death, both individuals had depleted blubber stores compared to the volume of fat expected for individuals of this size and approximate age.

Tissue samples were collected should future funding enable further analysis.

Conclusions

In 2023, the total number of stranded individuals was recorded to be 72, which was 36% higher than the previous year of 46, and 8% higher than 2021, making 2023 strandings the highest on record, to date.

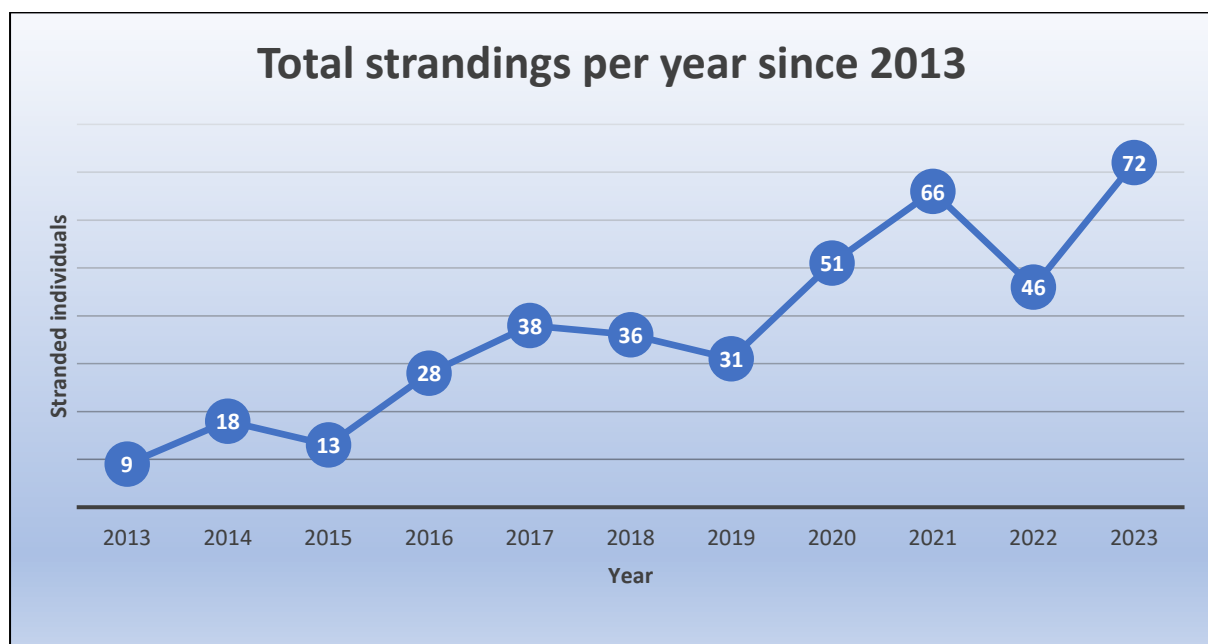


Figure 10 – Number of strandings reported each year since monitoring began in 2013.

Up until 2022, when there was a 32% decrease in recorded strandings compared with the previous year, there is a general positive trend in the number of strandings reported since monitoring began in 2013 (Figure 10). It is likely that the primary cause for the positive trend was the increased level of public perception and knowledge of how to report a stranding. Furthermore, 2021 saw the coldest winter recorded since 2010 and two major storms (Christoph and Darcey) which may also account for the high level of stranded individuals recorded during that year. Following the dip in strandings recorded



in 2022, the 2023 records suggest a continuation of the positive trend in strandings numbers.

The location of stranded individuals recorded was unremarkable in that there were no recorded concentrations of strandings in any particular area, however locations are likely related to the geographical suitability of the terrain for stranding, prevailing wind directions, combined with the direction of the incoming and outgoing tides and localised wave patterns, particularly those following high-tide when strandings most frequently occur (Appendices 2 & 3).

It is unsurprising that the majority of strandings were either grey seal (60%) or harbour porpoise (22%) as these are the most common species of pinniped and cetacean, respectively, occurring in Manx waters. This trend is confirmed by the reports of previous years, for example in 2022, 62% of total strandings recorded were grey seals and 22% of total strandings recorded were harbour porpoise.

The majority of strandings (64%) occurred during the late summer, autumn and winter months, specifically during January and the period from August to December. Adverse weather conditions typically occur during this period and thus it is possible that greater wind/wave action during these temporal periods resulted in a greater number of carcasses washing ashore. Increased storminess, as a result of Climate Change, may result in more strandings washing up in future. Furthermore, autumn coincides with grey seal pupping season therefore, in addition to the potential for death during their initial months (as a consequence of usual infant mortality rate), pups, which are less adept at swimming than adults, are more susceptible to drowning or death from exhaustion, exposure and malnutrition.

The three Risso's dolphins recorded stranded in 2023 (one stranding in each of the months of June, August and September) were the first of this species to be recorded since records began in 2013. It is possible that all three were related and/or were affected by the same cause of death, but this has not been confirmed. All showed signs of malnourishment, i.e. thin blubber layer, which may suggest illness that prevented normal hunting behaviour and/or usual physiological function, or the reduction in available prey.

For each individual stranded, there was no substantial, abnormal evidence of trauma or injury that were thought to extend beyond the level expected for washed-up marine megafaunal carcasses.

Despite world-wide reports of some seal and sea-lion species fatally contracting the H₅N₁ strain of avian influenza experienced internationally in 2023, there was no evidence to suggest that the Isle of Man's population were directly affected. However, no samples were collected to confirm this.



Appendices

Appendix 1: Stranding volunteer equipment list.

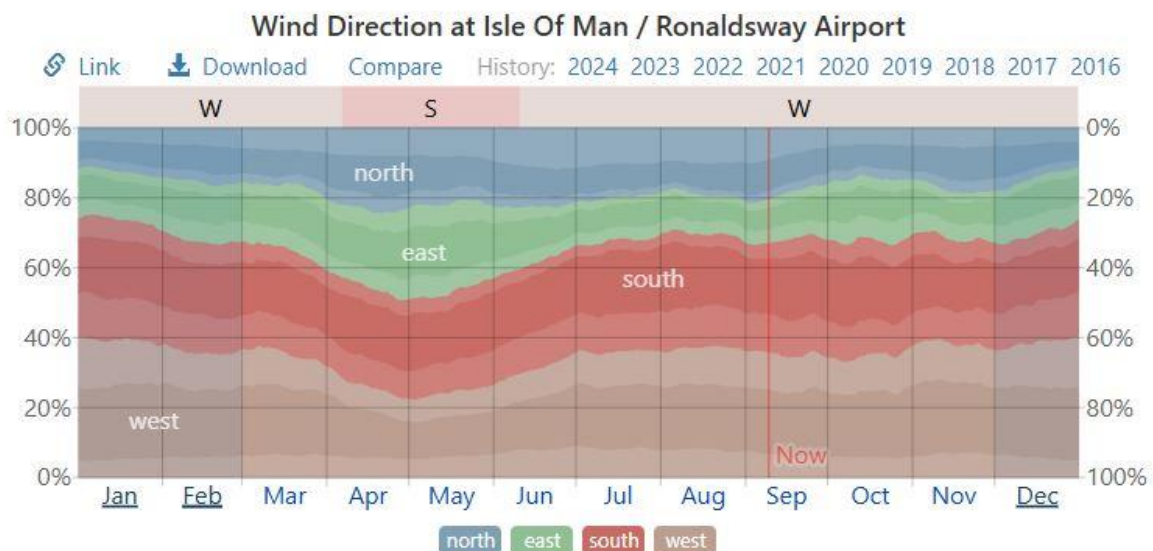
MWT Marine Strandings Network Marine Strandings Equipment List	
Item	
Tape measure	
Waterproof kit bag	
Waterproof, washable trousers and jacket	
Warm clothing	
Suitable footwear	
Disposable gloves	
Surgical mask	
Bactericidal wipes for tape measures etc.	
First aid kit (in car or taken on site if working more than 1km from vehicle)	
Tide times	
Mobile phone – charged up (check network coverage)	
Whistle and/or alarm if working alone	
Digital camera or mobile phone with camera of 6 megapixels or higher	
Risk assessment form	
Recording forms	
Change of clothes	
Clipboard/pencil/pen	



Appendix 2: General Tidal flow around the Isle of Man (Brown, 1951).



Appendix 3: Prevailing wind direction for the Isle of Man (Ronaldsway Airport, 2023).



The percentage of hours in which the mean wind direction is from each of the four cardinal wind directions, excluding hours in which the mean wind speed is less than 1.6 kph. The lightly tinted areas at the boundaries are the percentage of hours spent in the implied intermediate directions (northeast, southeast, southwest, and northwest).



Appendix 4: Seal stranding recording form.

Seal Stranding Recording Form			
Please remember your own health and safety is paramount: watch for the tide, always wear gloves and do not lift heavy weights.			
Reported by:		Recorded by:	
Telephone:		Telephone:	
Date/Time:		Date recorded:	
Location:		Grid ref:	
Alive when stranded?		yes no	
Species (see id notes below):		grey common harp hooded	
Sex (male, female or unknown):		male female unknown	
Age (adult, juvenile, pup or unknown):		adult juvenile pup unknown	
Is carcass complete (head, tail, all flippers present):		yes no	
Carcass condition (e.g. fresh, decomposed or advanced decomposition):		fresh decomp adv decomp	
Obvious traumas other than scavenging (e.g. gunshot, net marks, etc.):			
Identifiable markings (scars, patterns on coat, missing claws, digits, etc.):			
Flipper tags, or hole between digits where tag may have been (if so please note which flipper, tag colour and any number or address):			
Hat tags (colour and number):			
Body Measurements: (cm)			
1. Head – hind flipper. Tip of the nose to the end of the hind flippers.			
2. Head – tail. Tip of the nose to the end of the tail.			
3. Girth. Taken beneath the flipper pits around the body.			
4. Head. Tip of the nose to the back of the head.			
5. Partial digit. Measured on the leading digit from the joint below the claw to the knuckle.			
<p>Photos: If possible please take photos (digital are ideal) of the whole body and also close-ups of the left and right hand side of the head. If there are any unusual traumas such as gunshot, net marks, missing head, etc., please photograph those too.</p> <p>Seal Species Identification: There are two resident species of seal in the UK, the common seal and almost exclusively encountered around the Cornish coast, the grey seal. It is the head shape and its characteristics that offer most easily recognisable features:</p> <p>The common seal has a small head with rounded crown and a blunt nose which is sloping forming a concave bridge between the forehead and nose. The nostrils form a V shape, joining at the base.</p> <p>The grey seal has a large head with flattened crown and a straight long roman nose which offers a straight or convex profile. The nostrils are parallel and do not meet.</p> <p>Occasionally other species such as harp or hooded seals visit our waters. For identification of these and other species use a reliable reference book or id chart.</p>			
<p align="center">Please return this form and your photos to:</p> <p align="center">Strandings Records Coordinator, c/o Cornwall Wildlife Trust, Five Acres, Allet, Truro TR4 9DJ Email: records@cwtsstrandings.org Website: www.cwtsstrandings.org</p>			
<p align="center"><small>CORNWALL WILDLIFE TRUST WORKING IN ASSOCIATION WITH C-SMOG, THE NATIONAL SEAL SANCTUARY AND THE GODREVY SEAL GROUP</small></p>			



Appendix 5: Stranded whales/dolphins/porpoise recording form.

This form should be filled in and posted, immediately after telephoning or sending a fax, to:

Department of Zoology,
The Natural History Museum,
Cromwell Road, London SW7 5BD
Tel: 0207 942 5155 Fax: 020 7942 5054



Stranded Whales, Dolphins and Porpoises

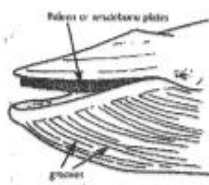
Note: Rubber gloves should be worn when handling cetaceans, alive or dead.

Place and date where carcase first seen The position of a locality not likely to be given on an OS map should be indicated by its relation to some better known place, bay or headland.		Date	
Place			
County		Grid ref.	
Name of Finder			

Is the tail horizontal? If the answer to this question is 'No', it is <u>not</u> necessary to fill up the rest of this form as the animal is therefore not a whale, dolphin or porpoise.	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
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Is there a hole ('blowhole') on the top of the head?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Is it a single hole or a pair of holes?	Single	<input type="checkbox"/>	Pair	<input type="checkbox"/>
Does the mouth contain teeth/tooth sockets or baleen/whalebone plates?	Teeth	<input type="checkbox"/>	Baleen	<input type="checkbox"/>
If neither teeth nor baleen can be found, state whether the two halves of the lower jaw are: (a) Arched outwards and widely separated half way back (In which case the specimen is a Whalebone Whale, and the baleen has been washed out): (b) Close together in front, where the jaw is accordingly narrow (A Toothed Whale in which the teeth are concealed beneath the gum).	(a)	<input type="checkbox"/>	(b)	<input type="checkbox"/>

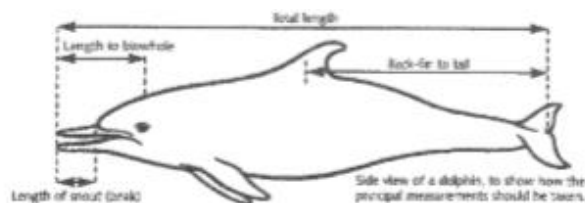
Whalebone Whales if baleen present, state:



(a) The colour of the baleen plates. If not everywhere alike indicate the arrangement; e.g. 'white for ... cm at front end of right side, the rest as stated				
(b) The colour of the hairy fringes of the plates				
Grooves is the throat marked by numerous deep grooves?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Grooves is the throat marked by a pair of grooves?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

Toothed Whales if teeth are present, state:

(a) Whether they occur in both jaws or in the lower jaw only.	Both	<input type="checkbox"/>	Lower	<input type="checkbox"/>
(b) The number of teeth and empty sockets of one side of the upper jaw.	Teeth	<input type="checkbox"/>	Empty sockets	<input type="checkbox"/>
(c) The number of teeth and empty sockets of one side of the lower jaw.	Teeth	<input type="checkbox"/>	Empty sockets	<input type="checkbox"/>
(d) If only few teeth & sockets present, their position in the jaw.	Middle	<input type="checkbox"/>	Back	<input type="checkbox"/>
(e) The diameter of one of the largest teeth.	Diameter			
(f) Whether teeth spade-shaped or conical/needle-shaped.	Spade-shaped	<input type="checkbox"/>	Needle-shaped	<input type="checkbox"/>



Total length of the animal measured in a straight line (preferably in metric units)

Length from the tip of the snout to the blowhole.

Length from the middle of the base of the back-fin to the middle of the tail

Length of one of the two flippers.

Length, in the middle line, of the snout or beak if present

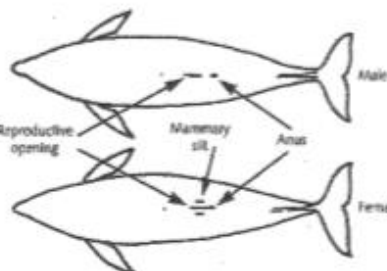
Vertical height of the back-fin if present.

Is the animal male or female? (In male, penis may be extruded. In female, mammary slits usually visible).

Male ☐

Female ☐

Length of gap between Reproductive opening and The anus.

 cm


Shape of the head (for instance, 'beak absent' or 'beak six inches long, forehead much swollen').

Colour of the skin, calling attention to the position of any white parts or stripes observed.

Please fill in diagram at top of page.

Condition of the animal when first seen:

Live ☐

Dead ☐

Fresh ☐

Uncertain ☐

Decomposed ☐

Comments on condition (e.g. smelly, leaking body fluids, bones visible, penis extruded, small cuts, big wounds).

Is it lying in such a position that it could be secured for the Museum? If wanted, either entire, or its head, flippers or complete skeleton?

Additional Comments (if tangled in netting, please keep a sample).

Name and address (please print).

Tel. nos

Fax. nos



Appendix 6 – Basking shark stranding recording form.

Basking Shark Stranding Recording Form

Reported by:	Recorded by:
Telephone:	Telephone:
Address:	Date recorded:
Date first seen:	Location:
Time first seen:	Grid ref:
Alive when stranded? <input type="checkbox"/> YES <input type="checkbox"/> NO	

Total length:	m	Claspers present? <input type="checkbox"/> YES (male) <input type="checkbox"/> NO (female)
Snout to 1 st dorsal length:	cm	Gill rakers present? <input type="checkbox"/> YES <input type="checkbox"/> NO
1 st dorsal to caudal:	cm	Food in back of throat (orange paste)? <input type="checkbox"/> YES <input type="checkbox"/> NO
Snout to 1 st gill slit:	cm	Tissue samples taken (*where requested):
1 st dorsal height:	cm	Muscle for genetic analysis? <input type="checkbox"/> YES <input type="checkbox"/> NO
Pectoral length:	cm	Fin sample? <input type="checkbox"/> YES <input type="checkbox"/> NO
Girth (half way around x2):	cm	Skin sample? <input type="checkbox"/> YES <input type="checkbox"/> NO
Caudal height:	cm	Photos taken? <input type="checkbox"/> YES <input type="checkbox"/> NO
Natural scars/markings (take photos if possible):	By-catch evidence (take photos if possible):	

Please return this form and your photos to:

Strandings Co-ordinator, Cornwall Wildlife Trust, Five Acres, Allet, Truro TR4 9DJ
 Email: coordinator@cwtsstrandings.org Website: www.cwtsstrandings.org



CORNWALL WILDLIFE TRUST IN ASSOCIATION WITH THE MARINE BIOLOGICAL ASSOCIATION

