

National Whale and Dolphin Watch 2013 Report

27th July to 4th August 2013



National Whale and Dolphin Watch 2013

Facts and figures

- **900** hours of observation at **78** land-watch sites and onboard **ten** vessels
- **970** sightings reported
- **Ten** species recorded
- **114** dedicated observers
- **Memorable sightings** include a sei whale spotted off Yorkshire, a group of 300 Atlantic white-sided dolphins seen off Shetland and a group of over 100 common dolphins seen from land in Cornwall.

INTRODUCTION

National Whale and Dolphin Watch (NWDW) is an annual event organised by the Sea Watch Foundation during which members of the public are invited to join organised cetacean watches around the UK. The event aims to raise the profile of British cetaceans while collecting a large amount of data over a concentrated period of time.

NWDW 2013 was successful in achieving both those goals. High levels of public engagement were attained through a combination of excellent media coverage in the run-up to the event; the organisation of a series of training courses, talks and events for observers and other interested members of the general public; and effective collaboration with other organisations (WiSe network, Wildlife Trusts, local Environmental Records Centres and other cetacean charities). A specific mention should be made of the Big Watch Weekend which was organised as part of NWDW 2013 by ORCA and ERIC North-East (Environmental Records and Information Centre, North-East) who were particularly successful in harnessing public interest (which is reflected in the data collection). Data collection was just as fruitful over the full nine day period with a significant increase in the volume of data and, more specifically, increased effort-related data and boat-based data which are both particularly valuable when it comes to analysing trends.

RESULTS

Effort

Thanks to the efforts of 114 dedicated cetacean observers from all over the UK, 900 hours of effort related-data were collected during the course of the event. Observers (collecting effort-related data) were stationed at 78 land watch sites and on ten different vessels around the country (Fig.1). In addition to these, 180 observers reported casual sightings both from land and at sea.

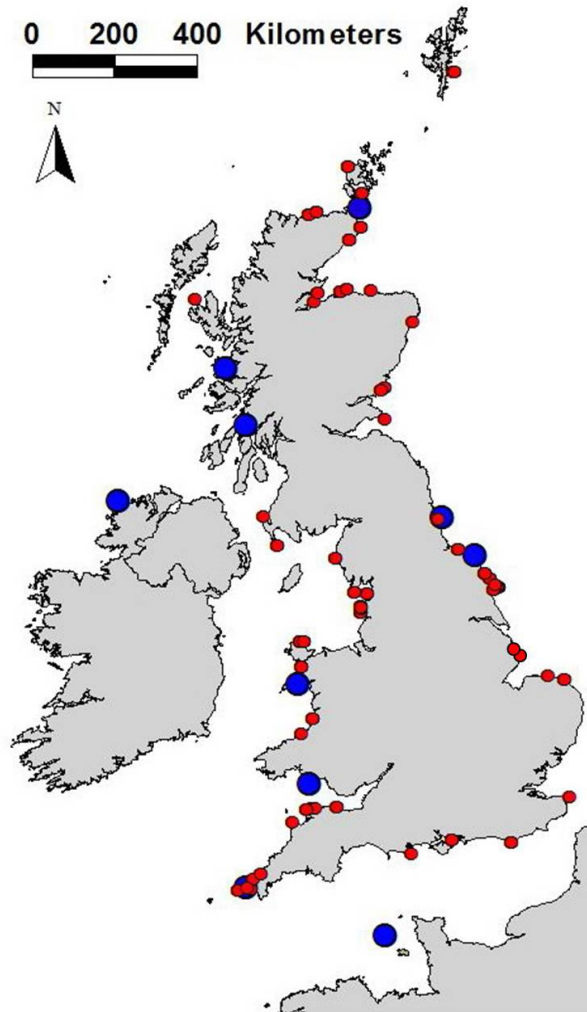


Figure 1. Watch locations for NWDW 2013 (n=78) (land watch sites = red; boat-based sites=blue)

The number of watch locations has shown a steady increase since 2011 (48 sites in 2011; 72 sites in 2012, 78 in 2013) but most remarkable is the amount of effort-related data collected which has doubled (354 hours in 2011, 435 in 2012, 900 in 2013) over the three year period.

This year the volume of effort data recorded in each region varied widely and was strongly linked to observer numbers. Areas with strong regional networks and links with other organisations produced the highest levels of effort -related data collection (Fig 2.).

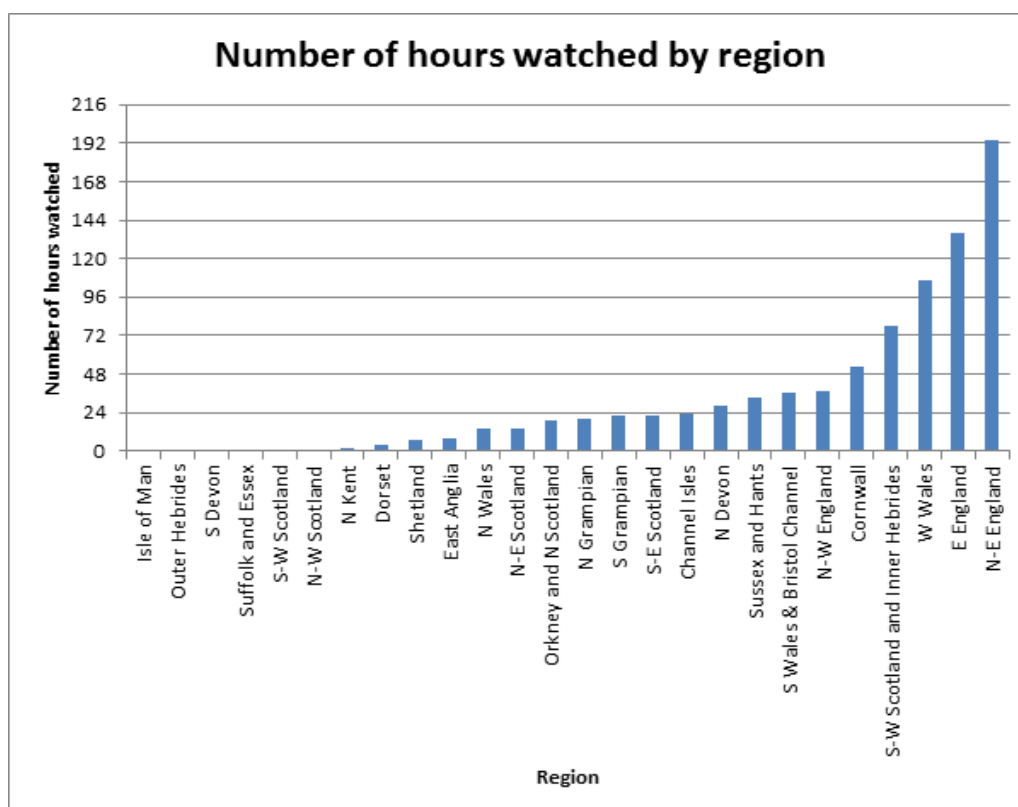


Figure 2. Number of hours of effort-related data collected by region

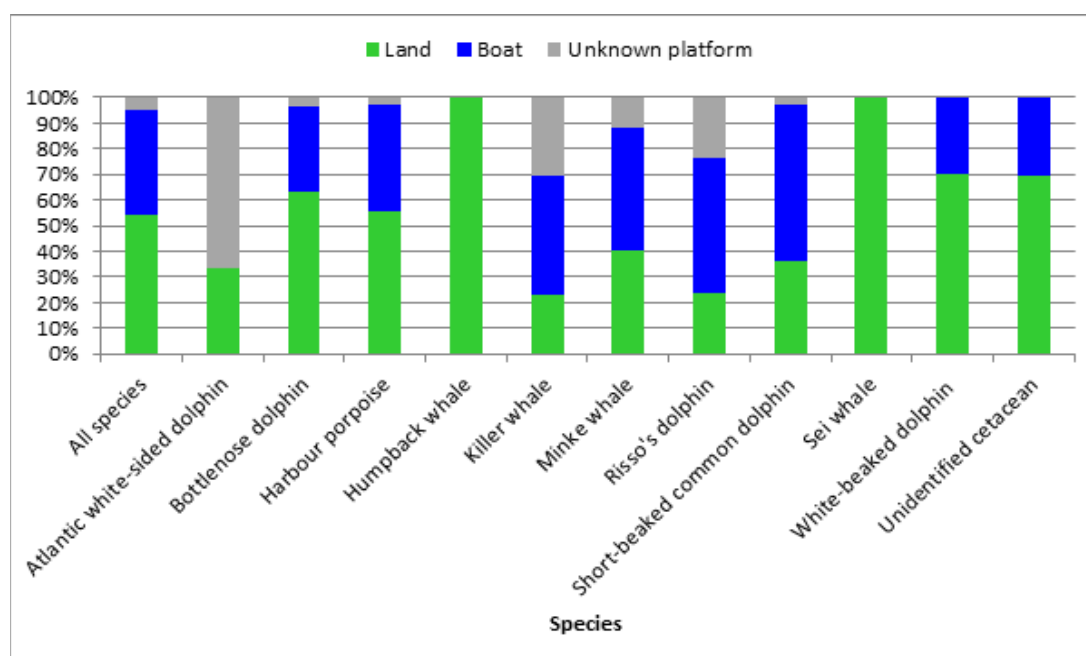


Figure 3. Proportion of sightings per species reported from land, boats or unknown platforms

Despite the large majority of effort-related data still being collected from land (rather than at sea), the sightings data show a more balanced picture in terms of platform coverage than in previous

years. Just under half of all sightings were reported at sea (41%) (Fig.3) as opposed to 2012, when only a third of sightings were reported from boats (31%).

Weather

Cetacean data collection is strongly weather dependant. Factors such as sea state, swell height and visibility to the horizon affect how easily animals can be detected during a watch. Heavy rain and wind can even cause watches to be cancelled altogether. For these reasons, every year, we rely heavily on good weather conditions for the success of NWDW. This year's event was scheduled over nine days in order to increase the chances of coinciding with a favourable weather window. As it happened, the event took place at the end of a heat wave and one of the hottest July's on record. Despite the fact that parts of the UK experienced heavy rain during the event, we have to put some of the success of NWDW 2013 down to the good weather in the run-up to the event which brought members of the public out onto the UK's coastline in large numbers. A summary of the weather conditions and sightings by day is provided in Appendices 1 and 2.

Sightings

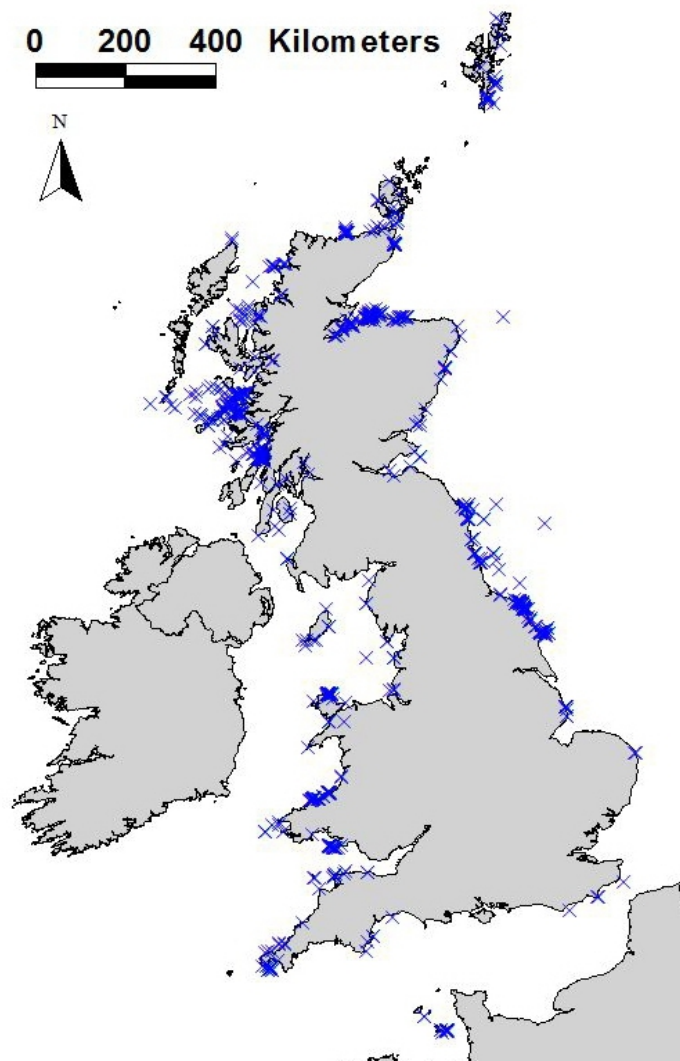


Figure 4. Sightings of cetaceans during NWDW 2013 (n=970)

970 sightings of cetaceans totalling 4762 individual animals were reported during NWDW 2013 (Fig. 4). This represents an 80% increase in sighting reports by comparison with last year's event. These reports included ten different species of cetacean which is the same number as in 2011 and 2012. However, the list of species varies slightly from year to year (cf. NWDW report 2011, NWDW report 2012).

The heterogeneous distribution of sightings around the UK's coastline reflects a combination of factors: observer coverage, species distribution and sightability (how easily the cetaceans can be detected). 439 sightings (45%) were reported in Scotland; these were closely followed by 328 sightings (39%) reported in England. Observers in Wales recorded 183 sightings (19%) and finally the Channel Islands and the Isle of Man reported 15 sightings (1.5%) and five sightings respectively (0.5%) (Fig. 4, Fig. 5).

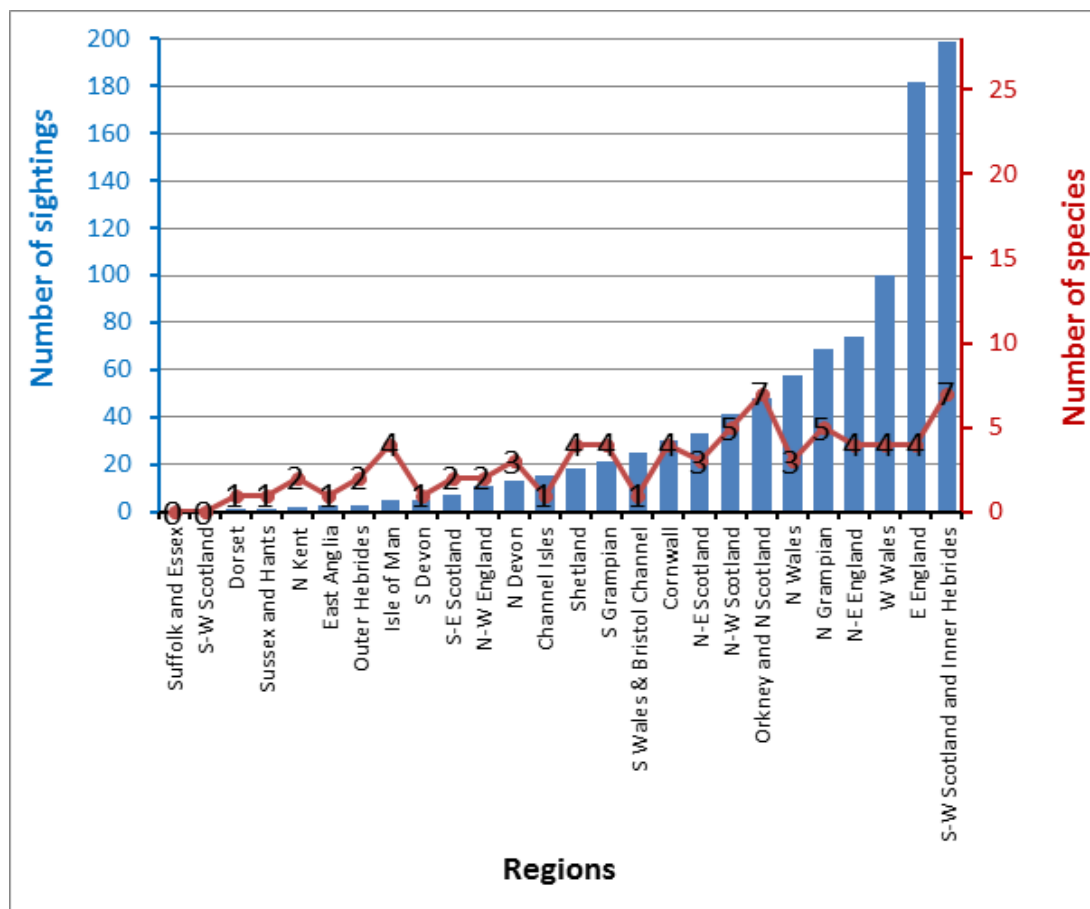


Figure 5. Number of sightings (casual and effort-related) and species per region during NWDW 2013

South-West Scotland and the Inner Hebrides (199 sightings), East England (182 sightings) and West Wales (100 sightings) were the most successful regions in terms of the absolute number sightings reported. South-West Scotland and the Inner Hebrides ranked joint first in terms of species diversity (seven species reported) and were followed by North Grampian and North-West Scotland (five species reported).

The whole of the south coast of England, East Anglia, North-West England, South-East Scotland and the Outer Hebrides recorded fairly low numbers of sightings reports (less than one per day during the event). These regions also demonstrated the lowest levels of species diversity (one to two

species). Interestingly, the Isle of Man reported four different species of cetaceans despite similarly low numbers of sightings.

The ratio of “casual” sightings (without associated effort data) to “effort-related” sightings is vastly different to that of last year’s event. Although casual records still make up the bulk of sightings, the percentage of effort-related sightings has risen from 16% in 2012 to 46% this year. This is a great improvement in terms of data collection which will considerably contribute to the quality of the dataset since effort-related data enables the calculation of “sighting rates” i.e. how many cetaceans can be seen per hour in a particular location. Figure 7 places Wales and Scotland at the top of the list with sighting rates superior to “1” indicating an average of one or more cetaceans seen per hour of watching. Based on this year’s results, the UK’s national average is a sighting rate of 0.52 or one cetacean seen every two hours of watching.

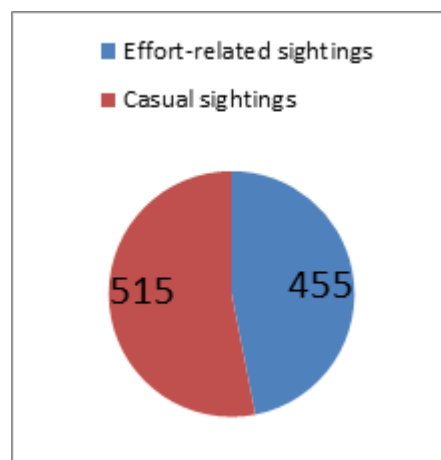


Figure 6. Proportion of casual (n=515; 64%) and effort-related sightings (n=455; 46%)

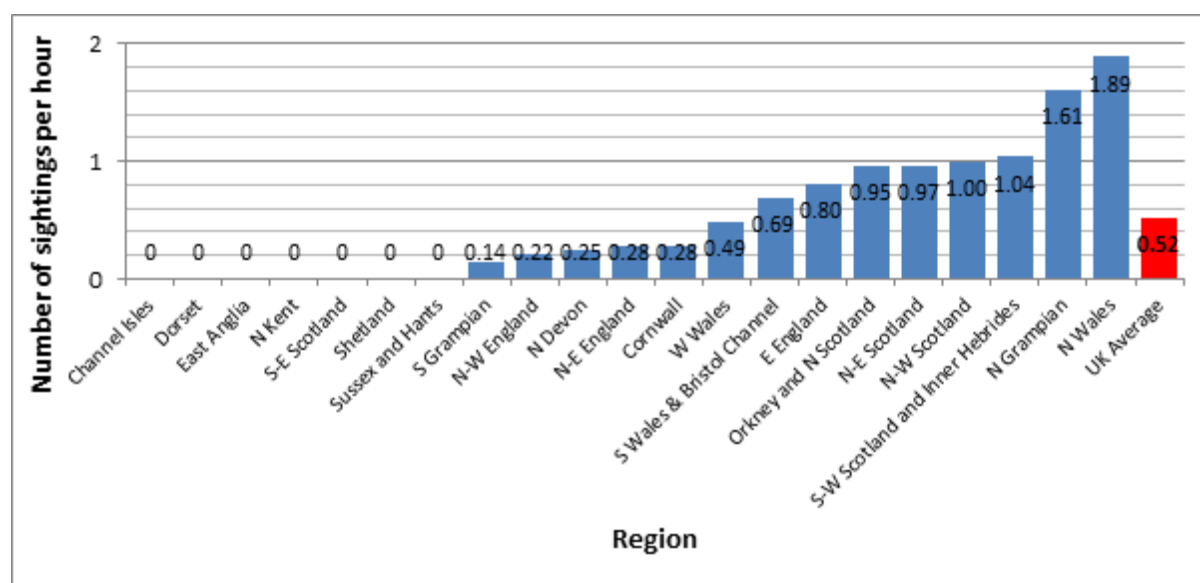


Figure 7. Sighting rates per region during NWDW 2013

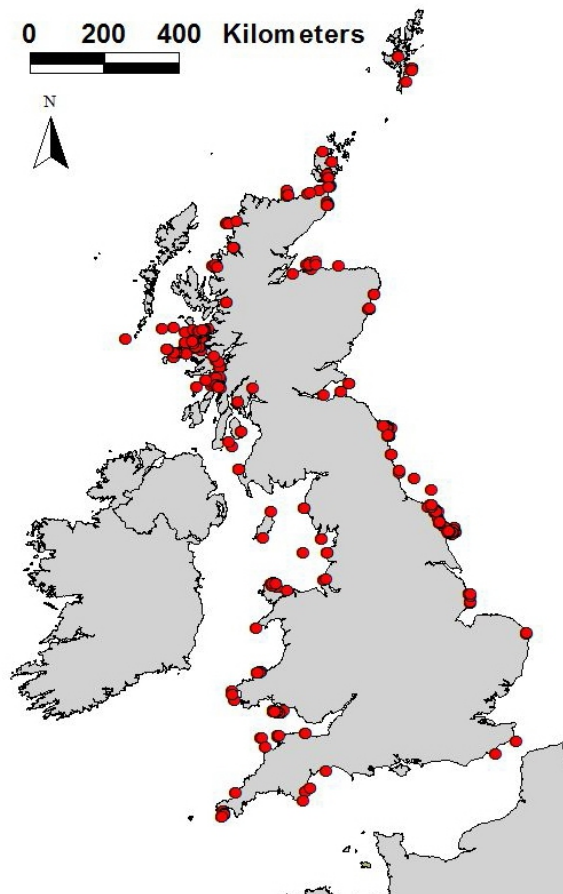


Figure 8. Sightings of harbour porpoise during NWDW 2013 (n=569; 58%)

Harbour porpoises are common in most parts of the UK and this was reflected by this year's NWDW results. The species was recorded 569 times and made up over half of the records for the event (58%). As illustrated by Figure 8, sightings were distributed around the whole of the UK coastline and concentrated in areas of high effort such as North-East England, Eastern England and the Inner Hebrides (Fig. 2). The size of groups of this species varied widely from a single individual to the largest group of 32 animals which was seen off Point Lynas, North Anglesey (Table 1).

As ever, bottlenose dolphins were the second most frequently reported species during NWDW with 187 sightings (20%). Two large semi-resident populations of bottlenose dolphins can be found in UK waters: one in Cardigan Bay, West Wales; the other in the Moray Firth, North-East Scotland. Animals from both these populations were well recorded during the event as illustrated in Figure 9. In addition, bottlenose dolphins were also recorded off East Grampian, East Sussex, Cornwall and North Devon, the Isle of Man, and the west coast of Scotland.

1234 individual bottlenose dolphins were recorded during the event. However, we cannot assume that all of these sightings were of different dolphins, many animals will have been spotted more than once. The largest group was recorded off Chanonry Point, Scotland and consisted of 40 animals (Table 1).

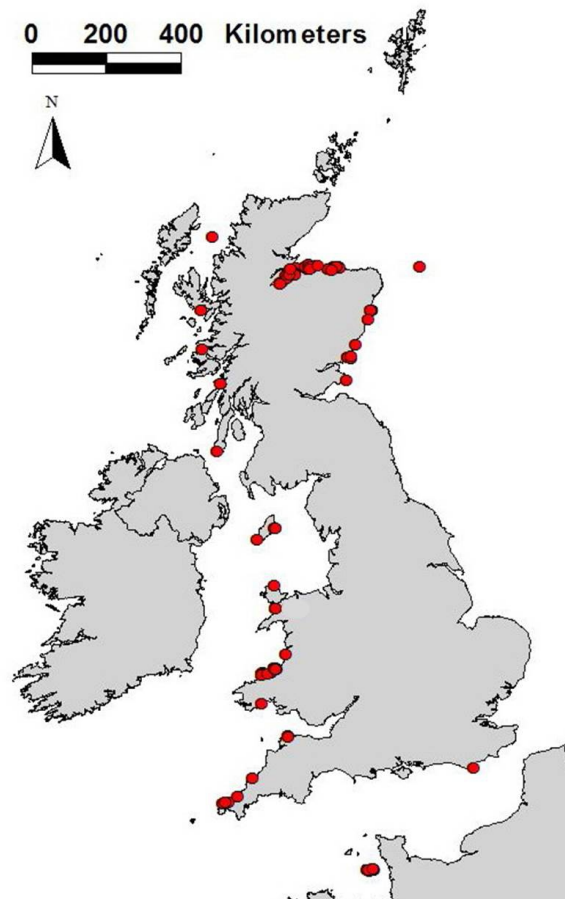


Figure 9. Sightings of bottlenose dolphins during NWDW 2013 (n=187; 19%)

In contrast to the two previous species, the third most frequently reported species, the minke whale, was seen exclusively in the northern half of the British Isles (Fig. 10). In these areas, the 99 sightings of the species were concentrated in areas of high effort: Eastern England and southern Moray Firth (Fig. 10). The largest group of seven minke whales was seen in Robin Hood's Bay, North Yorkshire (Table 1).

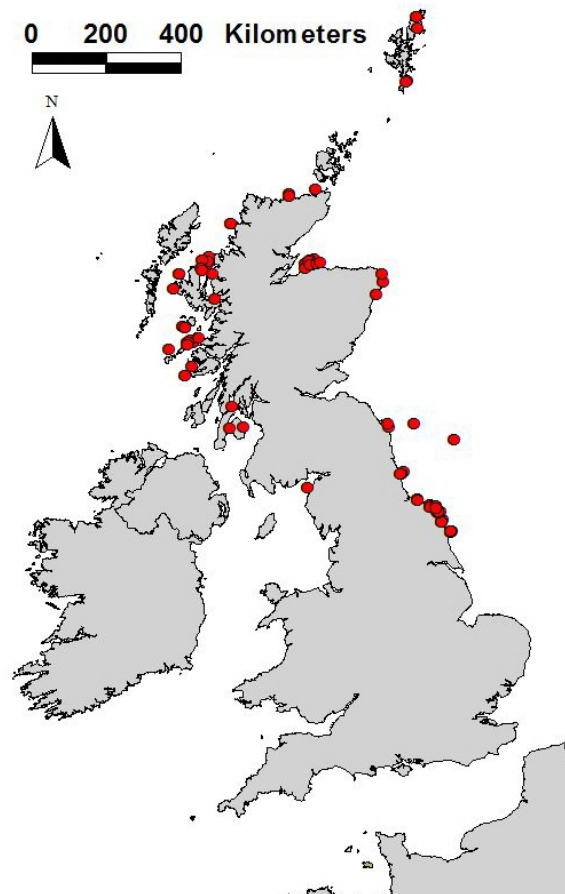


Figure 10. Sightings of minke whales during NWDW 2013 (n=99; 10%)

Other species of dolphins were less frequently reported but nevertheless presented very distinct distributions. Atlantic white-sided dolphins were reported three times during the event and exclusively in the waters surrounding the Shetland Isles. The largest group consisted of 300 animals (Fig. 11; Table 1). These animals often congregate in large groups in northern British waters so a group of this size, although noteworthy, is not unexpected.

Killer whales were seen 13 times off the west and north coasts of Scotland and around Shetland in groups of up to five individuals (Fig. 11; Table 1). This is a relatively high number of sightings compared with previous years.

Risso's dolphins demonstrated a wider distribution. They were seen in groups of up to seven individuals off Pembrokeshire and Anglesey in Wales, the Isle of Man, the Outer Hebrides and at Duncansby Head in Northern Scotland (Fig. 11, Table 1).

Common dolphin sightings were well spread throughout UK waters ranging from the Channel Isles all the way up to Orkney. Sightings of this species were most frequent in the Hebrides where groups ranged up to 250 individuals (Fig. 11, Table 1).

White-beaked dolphins were mainly spotted in the North Sea off North-East England but with a single possible sighting off Kent and two confirmed sightings in the Outer Hebrides and off the North

Coast of Scotland. Maximum observed group size for this species was 40 animals which were seen off Northumberland (Fig. 11, Table 1).

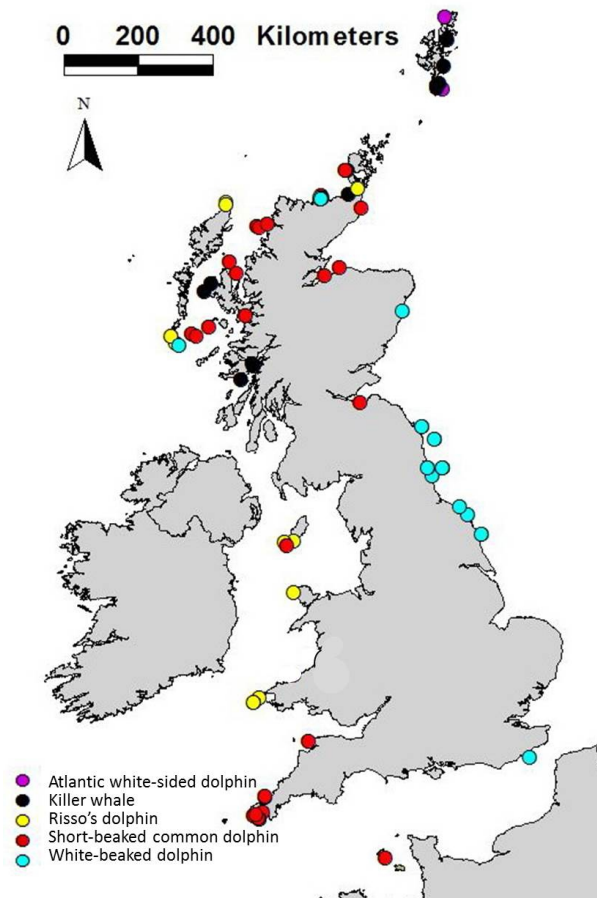


Figure 11. Sightings of Atlantic white-sided dolphin (n=3; 0.3%), killer whale (n=3; 1.35%), Risso's dolphin (n=17; 1.7%), short-beaked common dolphin (n=33; 3.4%), white-beaked dolphin (n=10; 2.08%) during NWDW 2013

Single humpback whales were seen off Whitburn Coastal Park, Sunderland and Creswell, Northumberland. A lone sei whale was also observed in Robins Hood Bay, Yorkshire (Fig. 12, Table 1).

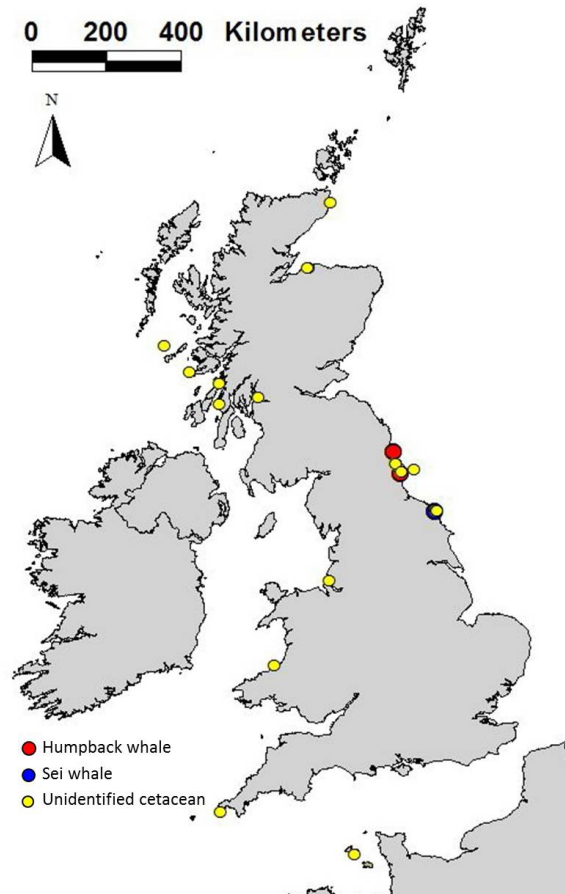


Figure 12. Distribution of humpback whales (n=2; 0.21%), sei whales (n=1, 0.1%) and unidentified cetaceans (n=26; 2.7%) during NWDW 2013

Table 1. Quantitative description of sightings per species during NWDW 2013

Species	Number of sightings	%	Number of individuals	%	Average Group size
Atlantic white-sided dolphin	3	0.30	560	11.76	186.67
Bottlenose dolphin	187	19.46	1234	25.91	6.60
Harbour porpoise	569	59.21	1372	28.81	2.45
Humpback whale	2	0.21	2	<0.1	1.00
Killer whale	13	1.35	41	0.86	3.15
Minke whale	99	10.30	126	2.65	1.27
Risso's dolphin	17	1.77	85	1.78	5.00
Short-beaked common dolphin	33	3.43	1093	22.95	33.12
Sei whale	1	0.10	1	<0.1	1.00
White-beaked dolphin	20	2.08	163	3.42	3.00
Total	970	100.00	4762	100.00	4.94

ACKNOWLEDGEMENTS

Sea Watch would like to thank BG for the continued support of NWDW. Thanks also to all the volunteers and regional coordinators who contributed to making this year's event such a success. We would also like to thank Wendy Nekar, Sea Watch Press Officer for her tireless promotion of the event and her support over the past eight years.

This year we also benefitted from the support of a number of organisations: ORCA, ERIC NE, the Wildlife Trusts (Lincolnshire, Cornwall, Cumbria, Cornwall, Devon, Somerset), Marine Conservation Society, MarineLife, MWDW, HWDT to name but a few. We really appreciate all of their contributions and look forward to collaborating with them again in 2014.

APPENDIX 1.

General overview of the weather by country for the period of NWDW 2013 (met office – metoffice.gov.uk)

Much of July was settled with high pressure established over the UK and with plenty of sunshine in most areas. This was the UK's most notable summer heat wave since 2006. The UK overall had a rather dry month compared to normal, with nearly all of the month's rain falling during the last ten days, often as thundery outbreaks.

August opened with some unsettled weather, but a southerly feed of hot and humid air led to very high temperatures across South East England on the 1st, giving the highest temperatures of the year so far. Many areas received plenty of showery rain over the first few days of August, with some persistent heavy rain and torrential downpours in Wales on the 4th.

England

The 27th July started dry but an area of at times heavy rain spread north during the afternoon with 60 mm falling in parts of the Midlands and 80 mm at Carlisle (Cumbria), again leading to some flooding. The rain continued to move north on 28th; Keswick (Cumbria) recorded 35 mm and there were scattered showers over the rest of the country, and again it remained warm and humid. The 29th was a day of sunshine and heavy showers, with thunder in many areas, and Lyneham (Wiltshire) recorded 35 mm of which 21 mm fell in one late-morning thunderstorm. The 30th was drier for northern parts with only some scattered showers, but some southern areas saw rain spread from the south during the morning, clearing in the afternoon. Rain spread into western areas during the morning of 31st, and with southerly winds, temperatures rose to 26°C in the South-East.

A hot and sunny day on the 1st August, with the temperatures reaching 34.1 °C at Heathrow (Greater London). A band of patchy rain spread from the west on the 2nd. There were some thunderstorms and torrential downpours but temperatures still reached 26 °C in many areas. On the 3rd it was generally bright although there were scattered showers in the west and it was cooler in the north. The 4th was a day of sunshine and showers with the heaviest in the north and west. Temperatures fell back to nearer average for the time of year.

Wales

After another sunny start on 27th July, cloud increased with rain during the afternoon and evening. Sunshine and showers during 28th, 29th and 30th, some of the showers heavy on the

latter two days. The 31st was overcast with rain, heavy at times, during the day; 41.8 mm was recorded at Capel Curig (Gwynedd).

The 1st August was mainly dry and sunny with more cloud on western coasts. It was very warm with a maximum of 28.7 °C at Cardiff Bute Park. Warm with sunshine and isolated showers on the 2nd and 3rd. Cooler on 4th with some heavy rain at times.

Scotland

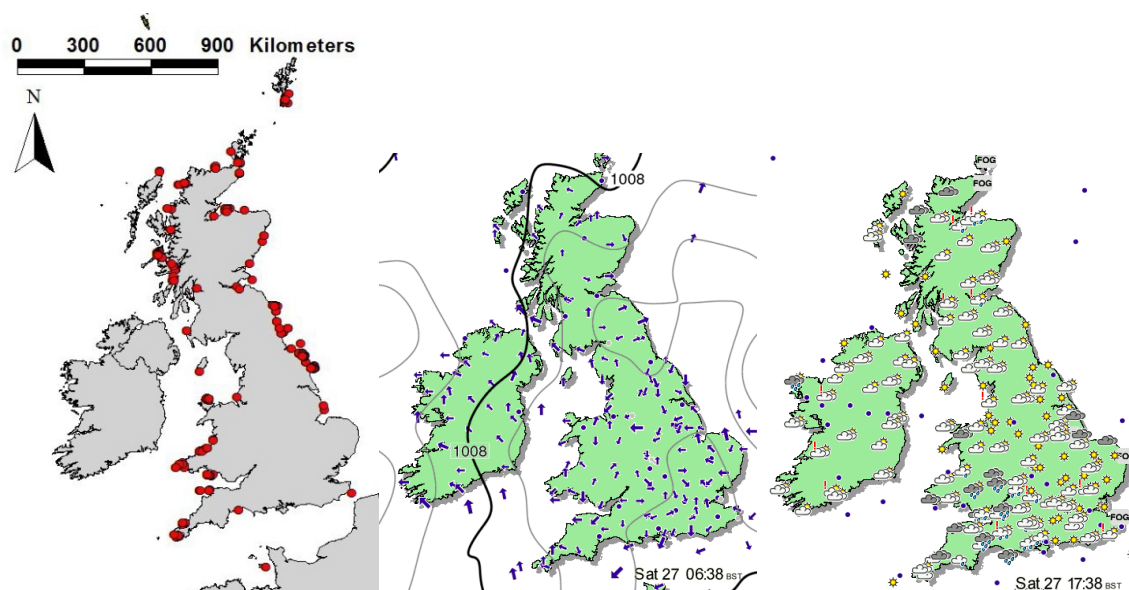
A dry and bright morning on 27th July, but scattered thundery showers developed later. Heavy rain for all areas on 28th cleared from the south during the afternoon. Heavy thundery showers or longer spells of rain for most areas on 29th. Most areas started dry on 30th but scattered showers, some heavy, built up through the day. Mostly dry on 31st but rain spread in from the south-west later in the afternoon.

Rain for most areas on 1st August cleared slowly later in the day. Scattered showers on 2nd and 3rd, some of them heavy. More showers on the 4th but dry for many areas.

APPENDIX 2 – Weather

General overview of the weather by day during the period of NWDW 2013 using weather maps from XC Weather (xcweather.co.uk)

Saturday, 27th July

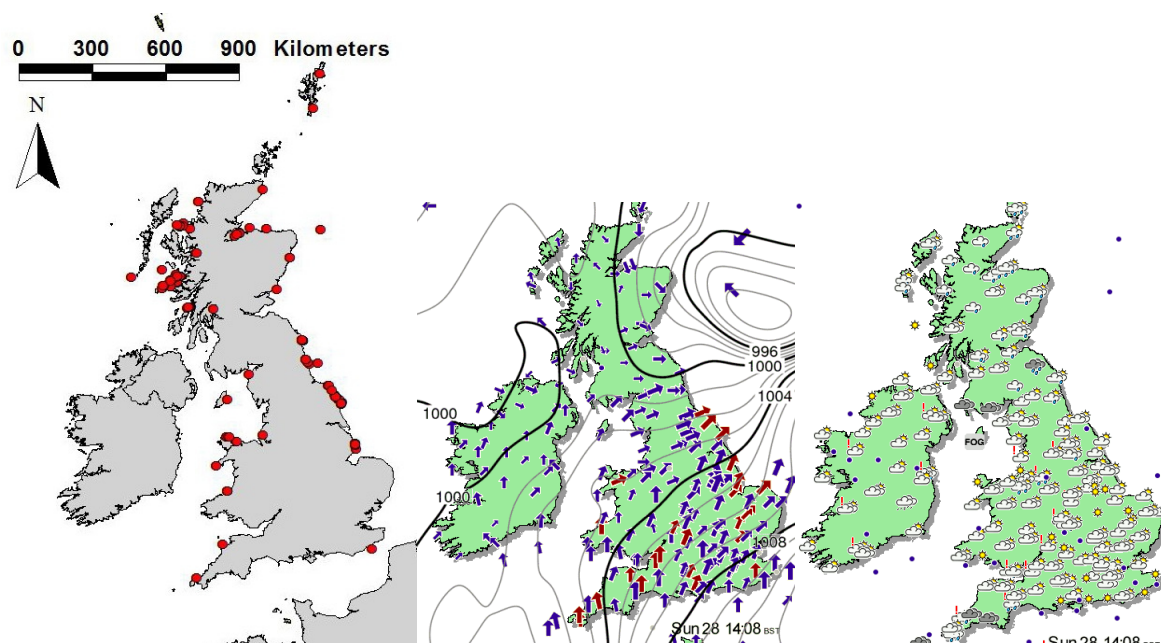


Cetacean sightings on day 1 of NWDW 2013 (27th July)

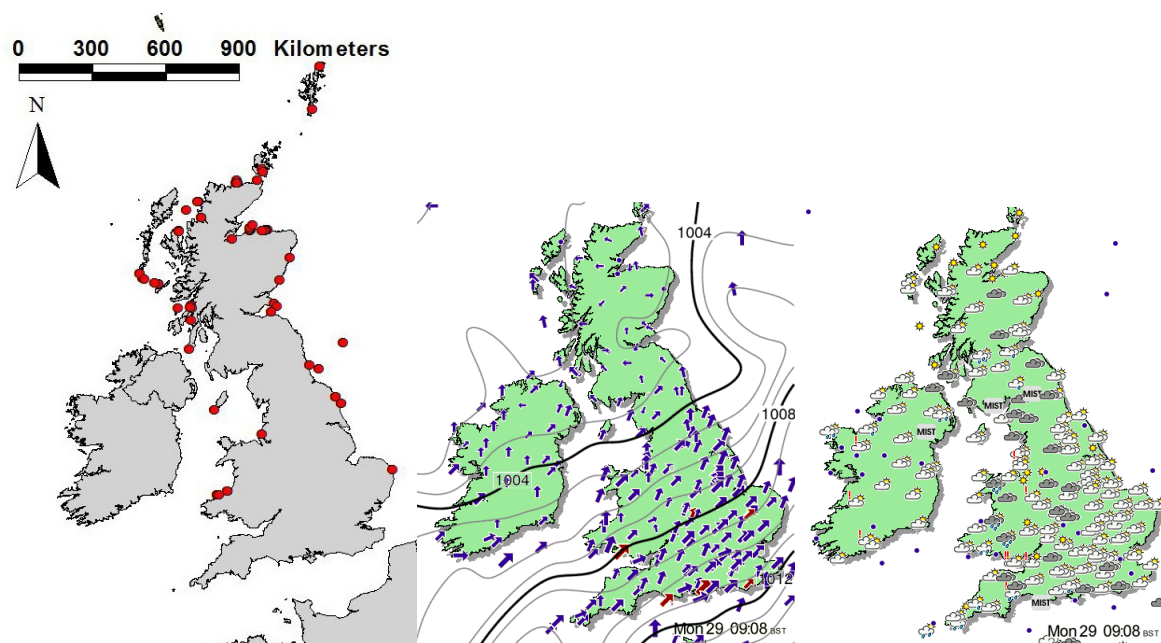
Pressure map on day 1 of NWDW 2013 (27th July)

Weather map on day 1 of NWDW 2013 (27th July)

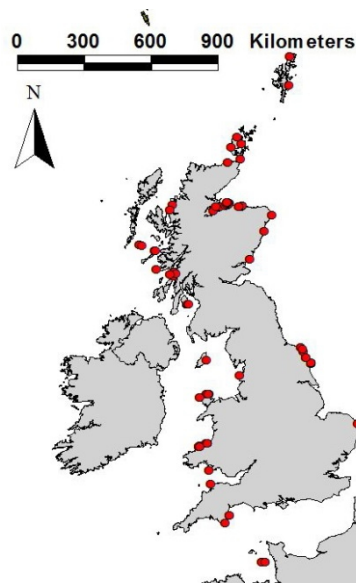
Sunday, 28th July

Cetacean sightings on day 2 of NWDW 2013 (28th July)Pressure map on day 2 of NWDW 2013 (28th July)Weather map on day 2 of NWDW 2013 (28th July)

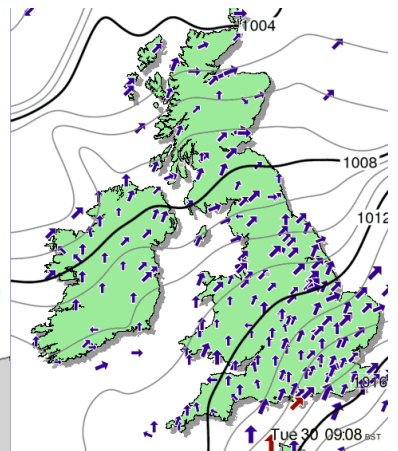
Monday, 29th July

Cetacean sightings on day 3 of NWDW 2013 (29th July)Pressure map on day 3 of NWDW 2013 (29th July)Weather map on day 3 of NWDW 2013 (29th July)

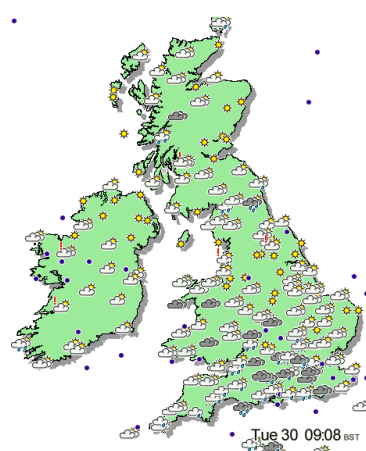
Tuesday, 30th July



Cetacean sightings on day 4 of NWDW 2013 (30th July)

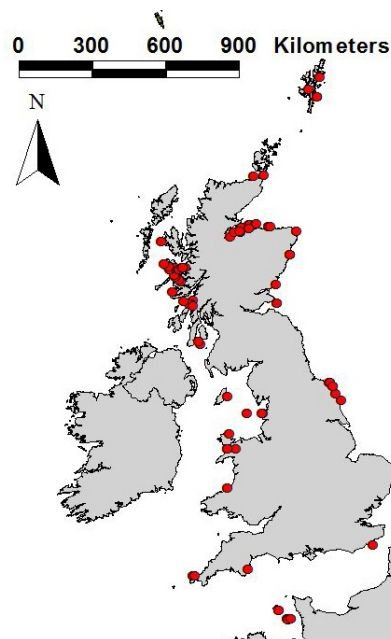


Pressure map on day 4 of NWDW 2013 (30th July)

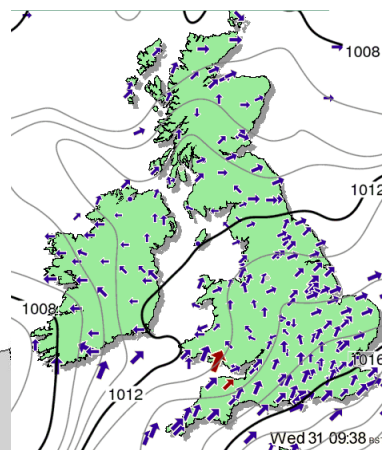


Weather map on day 4 of NWDW 2013 (30th July)

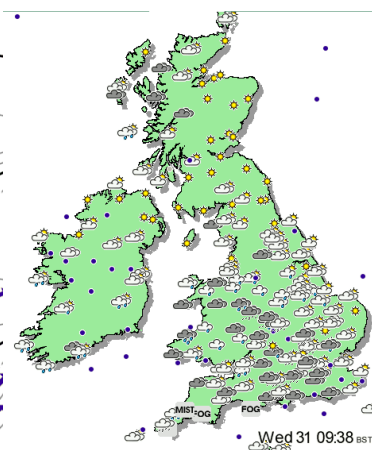
Wednesday, 31st July



Cetacean sightings on day 5 of NWDW 2013 (31st July)

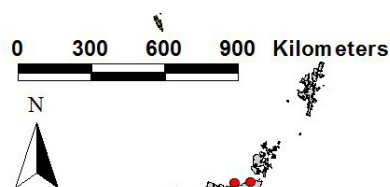


Pressure map on day 5 of NWDW 2013 (31st July)

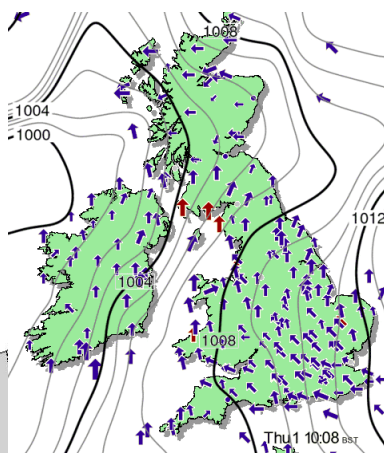


Weather map on day 5 of NWDW 2013 (31st July)

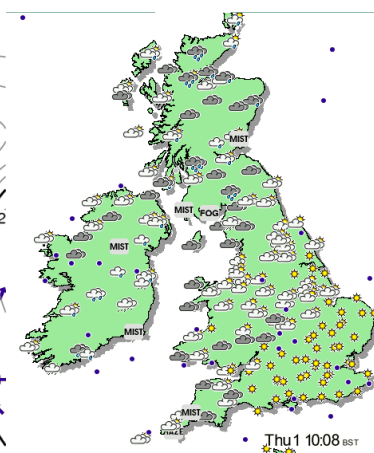
Thursday, 1st August



Cetacean sightings on day 6 of NWDW 2013 (1st August)

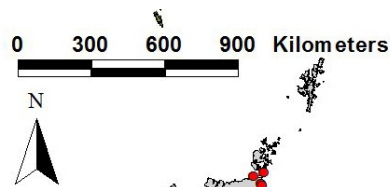


Pressure map on day 6 of NWDW 2013 (1st August)

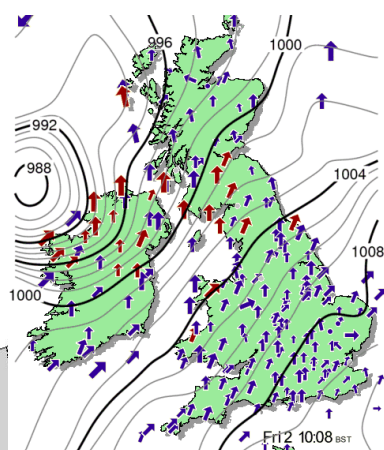


Weather map on day 6 of NWDW 2013 (1st August)

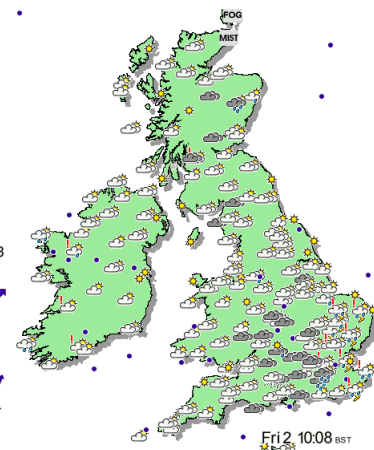
Friday, 2nd August



Cetacean sightings on day 7 of NWDW 2013 (2nd August)



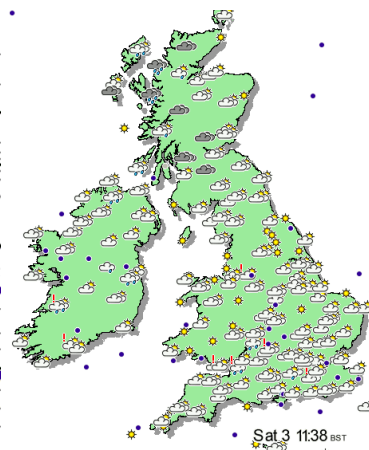
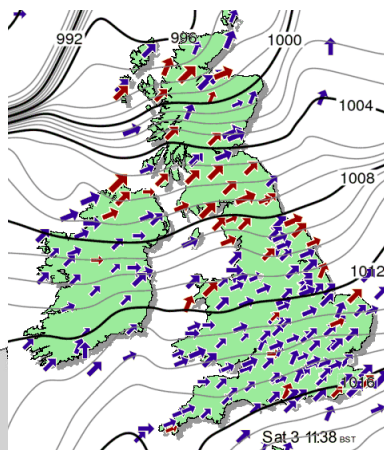
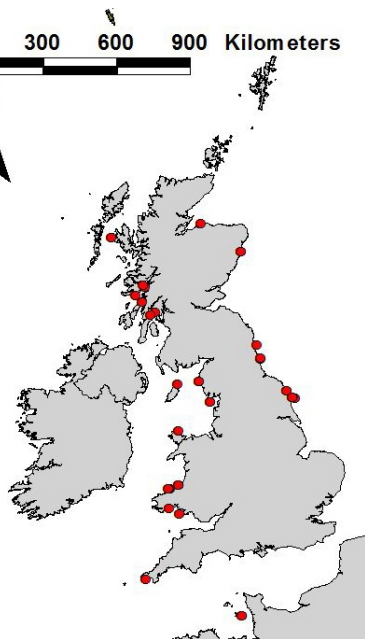
Pressure map on day 7 of NWDW 2013 (2nd August)



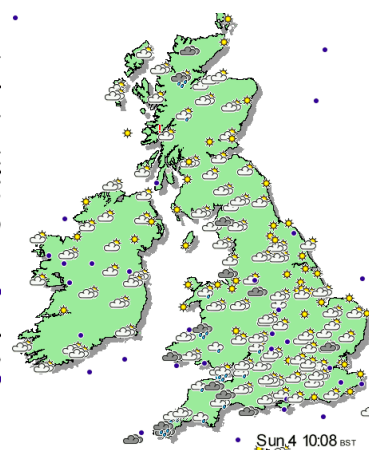
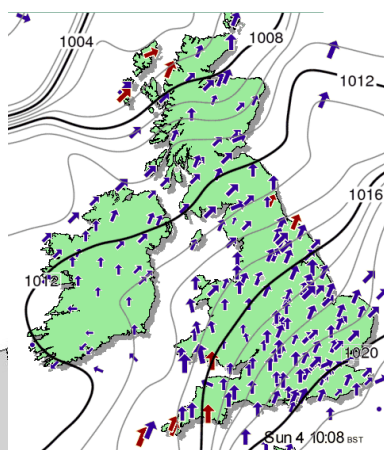
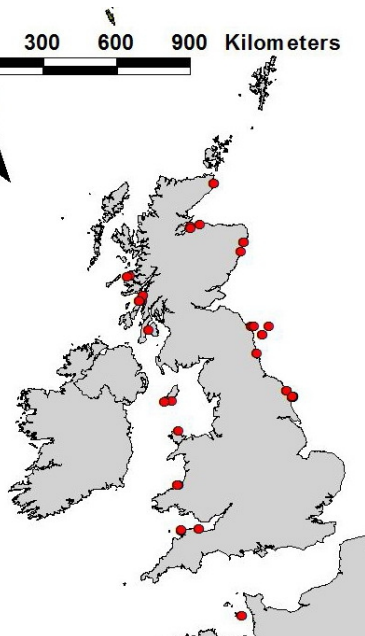
Weather map on day 7 of NWDW 2013 (2nd August)

Saturday, 3rd August

0 300 600 900 Kilometers

Cetacean sightings on day 8 of NWDW 2013 (3rd August)Pressure map on day 8 of NWDW 2013 (3rd August)Weather map on day 8 of NWDW 2013 (3rd August)*Sunday, 4th August*

0 300 600 900 Kilometers

Cetacean sightings on day 9 of NWDW 2013 (4th August)Pressure map on day 9 of NWDW 2013 (4th August)Weather map on day 9 of NWDW 2013 (4th August)