

**CETACEANS IN LIVERPOOL BAY AND NORTHERN IRISH SEA:  
AN UPDATE FOR THE PERIOD 2001-05**

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**INTRODUCTION** As noted in the previous review (Evans and Shepherd, 2001), Liverpool Bay and the waters adjacent to the northern Irish Sea are not rich areas for cetaceans compared with other parts of the United Kingdom. No new species have been recorded since 2001, so that the total number of species of cetaceans recorded since 1975 in near-shore waters remains at fifteen (Evans, 1996b; Reid *et al.*, 2003; Evans *et al.*, 2003). These include six species which are either present at any time of the year or recorded annually as seasonal visitors: minke whale *Balaenoptera acutorostrata*, long-finned pilot whale *Globicephala melas*, Risso's dolphin *Grampus griseus*, bottlenose dolphin *Tursiops truncatus*, common dolphin *Delphinus delphis*, and harbour porpoise *Phocoena phocoena*. Other cetacean species that have been recorded only casually in the region include: fin whale *Balaenoptera physalus*, sei whale *Balaenoptera borealis*, sperm whale *Physeter macrocephalus*, northern bottlenose whale *Hyperoodon ampullatus*, Sowerby's beaked whale *Mesoplodon bidens*, white-beaked dolphin *Lagenorhynchus albirostris*, Atlantic white-sided dolphin *Lagenorhynchus acutus*, striped dolphin *Stenella coeruleoalba*, and killer whale *Orcinus orca*.

Since 2001, there has been no confirmed report of long-finned pilot whale in the region (although there have been a number of possible sightings) and so it is not considered further here. It is primarily an offshore species anyway, and is therefore not part of the cetacean fauna of Liverpool Bay itself. A summary of the current status and any possible changes of the other five species is provided in the next section.

Several points should be noted in the interpretation of the appended plots of sightings between 2001-05. First, there has been greater observation effort in the region in the last few years, in part as a direct response to interest in the area for wind farm development. This means that for the more regular species, there have been more records in the last four years than in the previous ten. However, to counterbalance this, the maps do not

include data sets that have only recently been submitted but have not yet been fully checked. Where there are significant data sets, mention of them is made in the text, along with a preliminary interpretation of their findings.

**STATUS & ECOLOGY** Five species are considered here from the perspective of possible status changes and how these compare with patterns observed over the UK and NW European shelf as a whole.

**Minke Whale (*Balaenoptera acutorostrata*)** The minke whale is the commonest species of baleen whale in British & Irish waters, and numbers appear to have increased markedly since the 1980s (Evans *et al.*, 2003). On the other hand, there have been few sightings of the species in the region since 2001 (although some recent records from around the Isle of Man are not yet incorporated in the database and therefore have not been plotted). The species is rare in the north-east sector of the Irish Sea although in June and July 2005 there has been one possibly two minke whales around Anglesey (Sea Watch, unpublished data). No live sightings of the species have been reported from Liverpool Bay itself.

**Risso's Dolphin (*Grampus griseus*)** This is another species which scarcely comes into the north-east part of the Irish Sea, with most records in the past being concentrated around the Isle of Man and Bardsey Island and the Lleyn Peninsula of North Wales. In recent years, it has been seen less commonly off Bardsey and there have been no records east of Anglesey within or adjacent to Liverpool Bay. A small number of sightings (not yet included in the database and maps attached here) have occurred to the north and west of the Isle of Man.

**Bottlenose Dolphin (*Tursiops truncatus*)** The bottlenose dolphin is the second most commonly recorded species in the northern Irish Sea, and probably the most abundant species at least in coastal waters where it typically frequents (Evans *et al.*, 2003; Reid *et al.*, 2003). An increase in coverage of the region over the last few years has revealed the species to be more regular than previously thought (although in past decades the species appears to have been scarce). Sightings have occurred over a large part of the region (in coastal waters).

Comparing sightings since 2001 with those before that date, there is no evidence for a change in status or a major distributional shift. The species is seen along the North Welsh coast around Anglesey, and further east in the vicinity of Morecambe Bay. This distribution is very similar to that obtained in the years prior to 2001 (Evans and Shepherd, 2001), and although sightings occur in most months of the year, there is some indication that the species ranges over wider areas during the winter months. As in other parts of the Irish Sea, peak numbers have been recorded during August (Evans *et al.*, 2003).

**Short-beaked Common Dolphin (*Delphinus delphis*)** Previously known as the common dolphin, there has been a recent taxonomic split of this species into long-beaked

and short-beaked common dolphin (Evans and Raga, 2001). Only the latter species occurs in European seas, where it is found mainly offshore although it regularly comes onto the continental shelf, particularly in the southern Irish Sea (Evans *et al.*, 2003; Reid *et al.*, 2003).

Since 2001, there have been five confirmed live sightings of the species in the north-eastern Irish Sea, with the nearest to Liverpool Bay being reported from west of Blackpool (Lancs). With its typically pelagic distribution, the species is casual in the area of concern. There is no indication that common dolphins have shifted their distribution or markedly changed their status in this region since 2001 compared with the years prior to this date.

**Harbour Porpoise (*Phocoena phocoena*)** The harbour porpoise is the most widely distributed and commonly recorded species of cetacean in the northern Irish Sea, as well as elsewhere in the UK (Evans *et al.*, 2003; Reid *et al.*, 2003). Recent vessel surveys and acoustic monitoring along the North Welsh coast (R. Shucksmith and E. Dicks, unpubl. data) and further north in the region of the Solway Firth, (I. Gloyne-Philips, *pers. comm.*) have produced additional records. Previously, clusters of sightings were identified around the Isle of Man, off the Mull of Galloway, and off the north coast of Anglesey and the Llyn Peninsula in north Wales (Evans and Shepherd, 2001). With recent extensions of survey effort, the species appears to be more or less continuously distributed around the coasts of South-west Scotland, North Wales and North-west England, including Liverpool Bay. There is no evidence that the species has become less common or changed its distribution since 2001.

An analysis of effort-related sightings data collected between 1980 and 2002 was used to locate hotspots of porpoise distribution in UK waters (Evans and Wang, 2003). However, this did not reveal any areas of concentration in the northern Irish Sea of UK importance.

The species is apparently resident throughout the year in the region, although peak numbers are recorded in late winter and spring (Evans *et al.*, 2003). The area is used both for feeding and breeding.

**CONCLUSIONS** Although wind farm construction activities may have had a detrimental effect on particular near shore species of cetacean like the harbour porpoise, causing avoidance during pile driving, as has been found elsewhere (see, for example, Tougaard *et al.*, 2003), there is no evidence for long-term distributional changes of any cetacean species from a comparison of sightings data before wind farm construction commenced with those thereafter. However, an important caveat should be made. There have been no systematic effort-related observations collected over the two periods in the vicinity of Liverpool Bay, and the results presented here have had to focus upon overall distribution patterns from incidental sightings.

It is recommended that resources be placed in establishing monitoring schemes of this kind at such localities, involving a mixture of regular dedicated visual watches/surveys

with passive acoustic monitoring using click detectors (PODs). Neither method on their own would be sufficient, however, since each has advantages and limitations (Evans and Hammond, 2004).

## REFERENCES

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