

**Disposal at Sea Licence Application by
Arklow Energy Ltd. Wicklow (EPA Application No. S0027-01)**

Submission by the Irish Whale and Dolphin Group



The Irish Whale and Dolphin Group (IWDG) is an All-Ireland group and registered charity (CHY 11163) established in December 1990 "dedicated to the conservation and better understanding of cetaceans (whales, dolphins and porpoises) in Irish waters through study, education and interpretation".

The IWDG would like to comment on the proposal to carry out extensive levelling of the sand and sediment on the Arklow Bank on behalf of Arklow Energy Ltd. Wicklow (EPA Application No. S0027-01). The proposal to remove up to 99,999 wet tonnes of material over an eight-year permit term may have a significant impact on cetaceans. The IWDG did submit observations on the original EIS for Arklow Banks windfarm and then consider the marine mammal survey inadequate.

The IWDG consider the Marine Mammal Risk Assessment is inadequate and a proper assessment of the use of the area by cetaceans should have been undertaken to inform impact assessment and mitigation. The IWDG also consider the proposed absence of any mitigation inadequate.

Comments:

1. A8.5.1: "Twenty-four cetacean species have been recorded in the wider Irish Sea, the majority from sightings or acoustic recordings as well as occasional strandings".

IWDG response: There are 25 species recorded in Irish waters following the sighting of a Bowhead Whale in the Irish Sea in 2017. Also, this statement is misleading as the IWDG record around 150 stranding events per annum (see McGovern et al. 2016) with many on the east coast, which is not "occasional"

2. A8.5.3: "A site specific marine mammal survey was undertaken to support the Environmental Impact Assessment. The surveys were run twice per month in the period of July to September 2000 and once per month between October 2000 and February 2001.

IWDG response: This assessment was primarily a bird survey with cetacean observations tagged on and not a dedicated survey, which was considered inadequate at the time and is now 15 years out of date. A more recent dedicated cetacean survey, including the use of Static Acoustic Monitoring (SAM) should have been carried out to provide a baseline. It is noted that bird data up to 2010 is available for the EIS and this reflects the lack of consideration given to marine mammals.

3. A8.5.4 "Harbour porpoise was the only species recorded regularly during the survey with a total of 89 observations during 16 of the 18 survey days. This was translated by the EIA into an extrapolated peak of 173 animals in the 406 km² study area.

IWDG response: Sightings were recorded on 89% of surveys, with a mean of 5-6 sightings per survey, suggesting a regular and consistent presence. The lack of sightings of a high number of sightings of harbour porpoise per survey, was most likely due to the surveys being carried out in not ideal sea conditions. Cetacean recording was added on to seabird surveys which can be carried out in higher seastates than cetacean surveys. If seastate $\leq 1-2$ was used then sighting rate would be much higher (see Berrow et al. 2011) and a proper assessment of the density of porpoises possible. It is likely that these sandbanks are important foraging areas for harbour porpoise as they are nursery ground for a wide variety of fish species and other predators such as seabirds are known to forage extensively at offshore sandbanks. Harbour porpoise favour areas with strong tidal currents in which to forage and these banks are ideal foraging grounds. An array of SAM would have been very useful in assessing the use of the bank by harbour porpoise.

4. A8.5.5: "The National Biodiversity Data Centre's online database was accessed for cetacean and pinniped records in the vicinity of the proposed works at Arklow Bank. The results of the data search are shown in Figure A8.2 to Figure A8.8."

IWDG response: The NBDC marine database includes data from a number of sources and a wide geographical area but this is not adequate to assess the marine mammal community in the area and exposed to the proposed activity. One record of bottlenose dolphin does not reflect the use of this area which is used occasionally by the highly mobile inshore population of bottlenose dolphins (see O'Brien et al. 2009; IJsseldijk et al. 2012). The impact on individuals from this population may have wide reaching impacts as they occur in all Irish coastal waters and the population may be a slow as <200 individuals (Ingram et al. 2009). No records of striped dolphin, yet a map for this species is shown? (and only one record of common and one of grey seal, which although is not a cetacean and outside the remit of the IWDG does not accurately reflect the distribution and abundance of seals in the area).

5. A8.5.7: "Other species recorded less regularly in the vicinity of Arklow Bank include the bottle-nosed dolphin, Risso's dolphin, striped dolphin and minke whale (Figure A8.3 to Figure A8.6).

IWDG response: This statement demonstrates the poor quality of this MMRA. Striped dolphins are a pelagic species associated with water depths of >1000m and do not occur in the Irish sea.

6. A8.5.9: "A review of data collected by the Irish Whale and Dolphin Group suggests that the majority of cetacean species are sighted along Ireland's southern and western coasts rather than in the Irish Sea itself. However, Risso's dolphin, bottle-nosed dolphin and harbour porpoise remain regularly sighted marine mammals off counties Wexford and Wicklow in the Irish Sea²³. Grey seals are located with lesser numbers off the east coast of Ireland, whereas harbour seals are known to have a more widespread and coastal distribution."

IWDG response: Species diversity may be greater off the south and west coasts but the Irish Sea is of enormous importance for harbour porpoise with the highest densities recorded in north Dublin (where surveying has been carried out) which are some of the highest densities

in Europe (see Wall et al. 2013). It is likely that porpoises in the Irish Sea are part of one population and sandbanks such as Arklow might be important foraging grounds for a significant proportion of the population. The MMRA does not fully consider this due to a chronic lack of relevant data.

7. Figure A8.9 "Generalised distribution and habitat of cetacean species in Irish waters."

IWDG response: Very misleading and inaccurate maps and not very relevant

8. A8.5.13: "It should be noted that no one species exclusively utilises the habitat provided by Arklow Bank, and that all of the cetacean and pinniped species recorded in the area have large areas of marine habitat available to them which provide suitable foraging habitat. Additionally, Arklow Bank has been shown to support little benthic fauna compared to other areas of available foraging habitat".

IWDG response: IWDG do not consider that the data available for this assessment is adequate to provide this conclusion. A proposed works of this scale should obtain relevant data at an appropriate scale to ensure a proper assessment is made of the marine mammal community in the area and ideally their use.

Impacts of the Proposed Activity

9. A8.6.2: "Sound from seabed levelling operations are reported to produce a low frequency omnidirectional sound of several tens of Hz to several thousand Hz at sound pressure levels of 135 – 186 dB re: 1 µPa (decibel at reference pressure of 1 microPascal root-mean-square²⁴). While sound exposure levels from such operations are thought to be below that expected to cause injury to marine mammals, they have the potential to cause lower level disturbance, masking of acoustic cues (communication, signals) or behavioural impacts. However, noise generated by the plough passing over the seabed, from the physical presence of the vessel and possibly highly localised increases in water turbidity have the potential to cause low level disturbance to marine mammals.

IWDG response: If this sound exposure at source is considered the case then the noise may travel a considerable distance from the source and consideration of the resonified area should be made. Dredging produces a lower sound exposure levels (see Todd et. al. 2015) and yet is considered by NPWS Guidelines to require an MMO for both dredging and disposal. The IWDG do not consider an adequate assessment of the potential for long term displacement has been carried out given that the applicant is looking for a license to level sediment for up to 8 years.

Assessment Criteria

10. A8.7.1: "From the data sources accessed, the most likely species to be encountered are harbour porpoise, although the presence of this species is considered sporadic between 1996 and 2013. Other species may also be present, but the sightings of these species are noted to occur less regularly".

IWDG response: IWDG do not agree with this and consider the applicants have made an inadequate assessment and harbour porpoise have been shown to occur regularly and consistently and are quite likely to be more abundant than the applicants have shown.

11. "Is it possible to estimate the number of individuals of each species that are likely to be affected? The number of sightings available for Arklow Bank is low, so the number of cetaceans likely to be encountered on any given day could vary from zero to a small group of dolphins, as previously up to six have been recorded. Therefore it is not possible to accurately estimate the number of individuals that are likely to be affected."

IWDG response: It is possible to estimate the number of individuals present, through dedicated line transect surveys using distance sampling (see Berrow et al. 2014).

12. "Will individuals be disturbed at a sensitive location or sensitive time of their life cycle? No sensitive areas are evident within the vicinity of Arklow Bank based on the data accessed, so it is unlikely that the proposed seabed levelling will cause a disturbance at a sensitive location or time in their life cycle. Please refer to the information to support Habitats Regulations Screening in Appendix 9".

IWDG response: No sensitive areas or time of day/seasons are evident because no attempt has been made to collect the relevant data. IWDG consider it possible to likely.

13. "Will the plan or project cause displacement from key functional areas, e.g., for breeding, foraging, resting or migration? Based on the datasets available, it is unlikely that the proposed seabed levelling works will cause displacement from key functional areas. As described in under Assessment Criteria ii, Arklow Bank is not considered to be a key area for foraging due to the poor assemblage and high energy environment at seabed level; there is no pathway to known functional areas (such as SACs or more favourable foraging areas) due to the small extent of works proposed, which will not overlap or will undergo substantial abatement, dispersion or elimination over the distances considered."

IWDG response: No displacement from key functional areas are evident because no attempt has been made to collect the relevant data. IWDG consider it possible to likely.

14. "How quickly is the affected population likely to recover once the plan or project has ceased? It is expected that any marine mammals displaced from the vicinity of the Dump Site would quickly return after the works have stopped. Displacement, if evident, is expected to be short-lived based on the duration of the proposed works (period of days to weeks during daylight hours only)."

IWDG response: It is not possible to estimate this as no baseline data has been collected with which to assess the use of the site or to monitor the short or long terms effects. IWDG consider it possible to likely.

In summary, a project of this size and magnitude and with the applicant looking for a Disposal at Sea license for an 8 year period and to level up to 99,999 wet tonnes of material, the IWDG recommend a more site specific, dedicated marine mammal survey should have been carried out including the use of Static Acoustic Monitoring. These data are required to make a proper assessment and to provide a baseline to ensure that no long term significant impact has been caused by the project.

References

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