

Joint Statutory Nature Conservation Bodies Position Statement

ORJIP Project 4, Stage1 of Phase 2 “The use of Acoustic Deterrents for the mitigation of injury to marine mammals during pile driving for offshore wind farm construction”

18th October 2016

This note is intended to clarify the current SNCB position in relation to Acoustic Deterrent Devices (ADD) use for piling mitigation operations and is primarily based on the evidence reviewed within the Phase 2 report (Sparling *et al.*, 2015) and the Gordon *et al.*, (2015) report. The latter report is a Marine Scotland funded research project that assessed harbour seal responses to a variety of ADD devices in Kyle Rhea in 2013 and the Moray Firth in 2014.

Background

The SNCBs (JNCC, NE, SNH and NRW) have welcomed and supported the ORJIP ADD work programme in order to gather evidence at a strategic level to help inform possible options for piling mitigation during offshore wind farm construction. ORJIP Project 4, Phase 1 reported in October 2013 (Herschel *et al.*, 2013) and recommended that further work was required to understand species responses to ADDs and their effectiveness as a possible mitigation measure.

A second report (Project 4, Phase 2 report: Sparling *et al.*, 2015), provided an update to the Phase 1 review and its recommendations. Specifically, the Phase 2 report updated the review and gap analysis of the available evidence on use of ADDs as piling mitigation for marine mammals. The Phase 2 report highlighted residual uncertainties in the evidence base for ADD effectiveness, proposed options for field trials and possible methods for testing ADDs in the offshore environment. Five key species on which to focus effort were identified: harbour porpoise, harbour seal, grey seal, bottlenose dolphin¹ and minke whale.

Stage 2 of Phase 2 is an in-field study and intends to test reactions of minke whales to the Lofitech ADD. The decision to focus on a single species, the minke whale, was taken due to financial and timing constraints. It should be noted that the SNCB position statement is solely related to the Phase 2 report, rather than this ongoing fieldwork.

SNCB Position

The SNCBs cannot at this time agree to the use of ADDs in all instances as an alternative to Marine Mammal Observers (MMOs)/Passive Acoustic Monitoring (PAM) in mitigation protocols for offshore renewables piling operations for the following reasons:

1. The term ADD is generic and can refer to a wide range of devices with varied acoustic characteristics and varying evidence of effectiveness.

¹ Later changed to white beaked dolphin due to their more frequent presence around current planned wind farms and uncertainties concerning dolphin species hearing sensitivity.

2. The SNCBs consider the evidence presented to date shows that the Lofitech ADD device can elicit behavioural responses from harbour porpoise and harbour seal, displacing the majority of animals by hundreds of metres. However, currently there is no evidence on the potential for deterrence of other species using this equipment. The SNCBs will consider new evidence as and when it becomes available.
3. There is limited evidence to suggest other ADD devices provided similar deterrent effect to the Lofitech device (with the possible exception of the Airmar dB Plus II device) for harbour porpoise and seal species.
4. The SNCBs will review any application to use ADDs only on a case by case basis, evaluating the possibility of impact on other marine mammal species that may be present in the area.

Comment

The use of ADDs as an alternative to Marine Mammal Observers (MMO) and Passive Acoustic Monitoring (PAM) would be a fundamental change to current UK practice and therefore requires careful SNCB consideration. The JNCC piling guidelines (JNCC 2010) have been routinely applied offshore for the last six years. The deployment of MMOs and PAM as part of the mitigation associated with other loud impulsive noise sources (e.g. seismic surveys) has also been widely adopted by the offshore oil and gas industry in the UK and elsewhere during the last two decades.

Whilst no mitigation method can be 100% effective, the existing guidelines aim to promote the use of the best available options for each circumstance. This is why in certain cases, particularly in areas with seals, a combination of methods (i.e. MMOs, PAM and ADDs) have been advised by the SNCBs, to provide a level of protection to all marine mammal species likely to occur. However, the SNCBs acknowledge that the piling guidelines need to be revised in light of the feedback received since their implementation. JNCC are currently reviewing the seismic guidelines and have plans to review the pile driving protocol pending funding.

Within this project species were grouped in functional hearing groups (low, medium and high frequency, as per Southall *et al*, 2007), and although we support this logic, we would highlight that the behavioural reactions and hearing sensitivities of different species within the same functional group to a noise cue may not be the same. Species composition for each development will need to be considered.

The Sparling *et al.*, (2015) report comments that a blanket agreement to use ADDs is unlikely at the present time. A generic decision tree was therefore developed in the report to guide the consideration of ADD based mitigation. However, within the report there is also the caveat that more development and agreement of this approach is required. The SNCBs agree that more development of this risk assessment approach is required (for example, providing definitions including what are 'appreciable numbers' of animals), and we believe this is a good starting point for future discussions.

The SNCBs welcome further evidence regarding the effectiveness of ADDs on marine mammals, including that on harbour porpoise and harbour seal given there are still gaps in knowledge. Certain evidence presented in the Phase 2 report was not available for SNCB review (e.g. evidence from the DEPONS project).

Conclusion - the SNCBs agree that the evidence presented in the Phase 2, Stage 1 report supports the premise that some ADDs could significantly reduce the risk of harbour porpoise and harbour seals being present within the typical zones of auditory injury resulting from pile-driving.

Therefore the SNCBs consider that certain types of ADDs have the potential to be used as an alternative to the mitigation provided by MMOs and PAM for harbour porpoise, harbour seals and potentially for grey seals. SNCB advice on cases applying to use ADDs as an alternative to MMOs/PAM will be considered on a case-by-case basis.

References

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