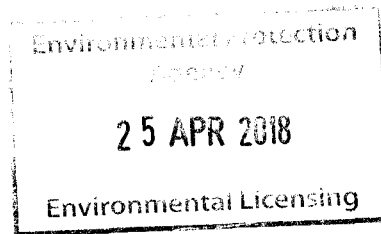


Environmental Licensing Programme,
Environmental Protection Agency,
P.O. Box 3000,
Johnstown Castle Estate,
County Wexford.



[25/04/18]

Submission pursuant to Dumping at Sea Permit application from Malahide Marina Village Ltd in relation to Malahide Marina (Register Number: S0031-01)

To Whom It May Concern:

Thank you for referring this application to An Taisce for comment under Section 5(1)(a) of the Dumping at Sea Act 1996, as amended. We have the following observations in relation to this application.

Malahide Marina is surrounded by the Malahide Estuary SAC (000205), which is a fine example of an estuarine system with all the main habitats represented. The Marina is within the outer estuary, which drains almost completely at low tide, exposing sand and mud flats. There is a large bed of Eelgrass (Dwarf Eelgrass, *Zostera noltii*, and Narrow-leaved Eelgrass, *Zostera angustifolia*) in the north section of the outer estuary, along with Beaked Tasselweed (*Ruppia maritima*) and extensive mats of green algae (*Enteromorpha* spp., *Ulva lactuca*). Common Cord-grass (*Spartina anglica*) is also widespread in this sheltered part of the estuary.

The site is also adjacent to a Special Protection Area (SPA) under the E.U. Birds Directive (2009/147/EC), Malahide Estuary SPA (004025), which is of special conservation interest for wintering bird species. The site houses a population of Light-bellied Brent Goose (*Branta bernicla hrota*) that is of international significance. It is also designated for: Great Crested Grebe (*Podiceps cristatus*), Shelduck (*Tadorna tadorna*), Pintail (*Anas acuta*), Goldeneye (*Bucephala clangula*), Red-breasted Merganser (*Mergus serrator*), Oystercatcher (*Haematopus ostralegus*), Golden Plover (*Pluvialis apricaria*), Grey Plover (*Pluvialis squatarola*), Knot (*Calidris canutus*), Dunlin (*Calidris alpina*), Black-tailed Godwit (*Limosa limosa*), Bar-tailed Godwit (*Limosa lapponica*) and Redshank (*Tringa totanus*). The E.U. Birds Directive pays particular attention to wetlands and, as such, this SPA is of special conservation interest for Wetland & Waterbirds (NPWS, 2013).

An Taisce's main concern relates to levels of Hexachlorobenzene (HCB) found in one of the sampling sites (MH5). HCB is an organochlorine, which a fungicide formerly used as a seed treatment. It has been banned globally under the Stockholm Convention on Persistent Organic Pollutants.

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Guidance on the chemical assessment of dredge material for disposal in Irish waters can be found in Cronin et al. (2006). These guidelines provide information on the chemical contaminants to be analysed and on acceptable limits. The applicant asserts in their Natura Impact Statement that *'the results of sediment analysis found that the mobilised sediments in all cases contain values below the lower Irish action levels for the full suite of parameters examined under the Marine Institute requirements for analysis of dredged spoil (Cronin et al., 2006), with the exception of nickel and arsenic at a number of sites.'* However, levels of HCB were reported in their Dredge Material Analysis Report to be 3.12 µg/kg for sample MH5, for which the upper Irish limit is 1 µg/kg. Of the 5 sampling sites chosen (MH1-MH5), only 2 were tested for organochlorines (MH1 and MH5), thus it could be said that 50% of the tested sites had levels exceeding the Irish upper limit. According to Cronin et al. (2006) sediments with contaminant concentrations exceeding the relevant upper level guidance values would be classed as heavily contaminated; they may cause biological effects and will require further assessment (*'Class 3: - Heavily contaminated; - Very likely to cause biological effects / toxicity to marine organisms. - Alternative management options to be considered'*). HCB is very toxic to aquatic organisms. It may cause long term adverse effects in the aquatic environment and its release into waterways should be avoided (EEA, 2015). It is persistent in the environment. Ecological investigations have found that biomagnification up the food chain does occur. Hexachlorobenzene has a half-life in the soil of between 3 and 6 years (EEA, 2015). Risk of bioaccumulation in an aquatic species is high, thus there is the very real potential for HCB build-up in the designated bird communities. An Taisce note that the applicant states in their Method Statement that *'Anywhere known to consist of contaminated material will not be dredged or levelled using water injection. If contaminated material is suspected whilst working is being undertaken, operations will be suspended and an investigation will be carried out.'*

The SAC is designated for Tidal Mudflats and Sandflats (1140), of which one of the conservation targets set by the NPWS is to conserve the high quality of the *Mytilus edulis* dominated community, and to conserve the following community types in a natural condition: Sand to muddy sand with *Peringia ulvae*, *Tubificoides benedii* and *Cerastoderma edule* community complex. From the NPWS maps of the site (NPWS, 2013), there is a section of *Mytilus edulis* dominated community quite close to Malahide Marina. In addition, there are some areas of fine sand with oligochaetes, amphipods, bivalves and polychaetes community complexes further out in the estuary, for which the NPWS (2016) also have a conservation target: *'Conserve the following community types in a natural condition: Fine sand with oligochaetes, amphipods, bivalves and polychaetes community complex.'*

In section 3.6 of the applicants Dredge Material Analysis report they state:

'As the material from the dredge site has been shown to have low levels of contamination, it is considered that the presence of the dredge material is not considered a risk.'

An Taisce have concerns that, as outlined above, according to Cronin et al. (2016) the sediment from 50% of the sites tested for HCB would be classified as heavily contaminated. It is difficult to fully assess the risk given that only 2 of the 5 sites were sampled for this. The

water injection dredging re-suspends dredged material, which should then move out into the natural current of the estuary. According to the applicant's report it will be 'well dispersed,' although they assert that the re-suspended sediment will **tend** to travel to the deepest point in the estuary, namely the "short deeps" (An Taisce emphasis). We would infer that there is still a risk that the sediment will be dispersed throughout the outer estuary into the adjacent SAC and SPA. The applicant also asserts that the silt will not be detectable within the background silt, but they do not give evidence that this is the case in regard to HCB levels. Given that the HCB level from MH5 was over 3 times the upper Irish limit, dilution may not sufficiently alleviate this risk. An Taisce would raise concerns that there may be an impact on the qualifying interests of the SAC, namely the Tidal Mudflats and Sandflats (1140) and the attendant *Mytilus* community. It may also impact on the community complexes further out in the estuary for which there is a requirement to protect. These species likely provide an important food source for the wintering birds for which the SPA was designated. Irrespective of the potential impact of HCB, An Taisce would have concerns regarding the potential impact of sedimentation on the *Mytilus* community.

In respect of potential impacts on European sites (i.e. SPAs, SACs, cSACs, etc.), the Minister must screen for the need for an Appropriate Assessment under regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011), which provides:

"A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site."

The European Court of Justice (ECJ) has interpreted this screening requirement very broadly, and regulation 42 must by law be read in light of this interpretation. That is, the ECJ held, in Case C-127/02 (emphasis added):

"any plan or project not directly connected with or necessary to the management of the site is to be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives **if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects.**"

From the argument laid out here, An Taisce would submit that given the information provided, it is not possible to exclude the potential for impact on the qualifying interest of the SAC and the SPA. We would recommend that further information be requested in regard to the full extent of HCB pollution within the proposed dredging area, prior to granting consent.

We should be grateful if you would provide to us in due course: an acknowledgement of this submission; the nature of the decision; the date of the decision; in the case of a decision to grant an approval, any conditions attached thereto, and the main reasons and considerations on which the decision is based; and, where conditions are imposed in relation to any grant of approval, the main reasons for the imposition of any such conditions.

Is mise le meas,



Elaine McGoff,

Natural Environment Office,
An Taisce – The National Trust for Ireland

References

Cronin, M., McGovern, E., McMahon, T., and Boelens, R. (2006). Guidelines for the assessment of dredge material in Irish waters. Marine Environment and Health Series, No 24, 2006. Marine Institute, Galway

EEA (2015). <https://www.eea.europa.eu/data-and-maps/indicators/hazardous-substances-in-marine-organisms/hazardous-substances-in-marine-organisms-1>

NPWS (2013) Conservation Objectives: Malahide Estuary SAC 000205. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

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