



March 15, 2012

To: Tara Higgins, Office of Climate Change, Licensing & Resource Use,
Environmental Protection Agency,

From: Dr. Francis O'Beirn, Benthos Ecology, MEFS, Marine Institute

RE: Iarnrod Eireann Maintenance Dredging at Rosslare Europort (S0016-01)

ENVIRONMENTAL PROTECTION
AGENCY

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Observations: In relation to the Appropriate Assessment, I am uncomfortable with the wording and the justifications used to reject the likelihood of any significant impact on Natura sites. The rejection of any likely impacts is primarily based upon unreferenced conclusions with little or no sound information underpinning the claims.

It is not clear what point the developers are trying to make with the constant reference to the depth of the proposed dump site and its hydrodynamics in light of impact on the adjacent SAC (See AA Section 6.4.1)? Given these claims it would suggest that material will likely migrate into the SAC as the spoil site would seem to be highly dispersive contrary to the claims in the Appropriate Assessment. This is further supported by the fact that the distance from the edge of the spoil site to the SAC boundary is actually 250m, so it is inconceivable that spoil material will not directly settle in the SAC at some stage during disposal operations. The reference to 1nm to the centre of the SAC (AA Section 6.4.5) is a fudge. The dispersion model also predicts deposition into the SAC.

The spoil material is described in the application as "very soft sandy clayey silty mud" (Attachment C2 – Application Form); this is obtuse and unscientific definition. I would suggest that this material is predominantly mud and will disperse easily upon release from the hopper – no indication has been provided that the sediments are consolidated. The dispersion model submitted with the application confirms this contention. It is clear that the material in its entirety will not be retained within the spoil site and this is also acknowledged in the transport model. In addition, the transport model does indicate that a maximum accumulation of 4.4mm will occur upon disposal of a load of 1000T of spoil material. Given that up to 150,000T is to be disposed, the risk of accumulation of sediment per campaign could be a maximum of 0.66m assuming no re-suspension or advection of material occurs.

Conclusions: If this were a once off disposal campaign and given the nature of the sediment composition of the spoil site (mobile sands) it is unlikely that, over the long term, any spoil material would be retained at the site. However, given the fact that it is expected that these activities will continue for up to 8 years, the risk of accumulation of material does present. This was not adequately dealt with in the application or supporting documents.

It must be noted that the spoil site lies broadly within the coastal cell (Wicklow Head to Greenore Point). This is considered positive as material moved from the spoil area will likely be retained within the coastal cell and may, over time, migrate back into calmer areas, e.g. Rosslare Harbour.

The material is considered, for the most part, uncontaminated so the risks associated with the release of large amounts of contaminated spoil do not arise.

Notwithstanding the erosional nature of the site, the risk of accumulation of sediments and even extermination of faunal communities cannot be discounted given that up to 8 campaigns are envisioned, with maximum loads of 150K tonnes of spoil per campaign.

It is acknowledged in the sediment transport model (and contrary to the AA) that spoil material may settle in the adjacent SAC – however, the overall quantities are expected to small, are unlikely to

persist assuming material will be re-suspended and advected from the area, given that the SAC is shallower in nature and likely exposed to more turbulent flow. Any deposition in the SAC will not likely cause long term harm to the integrity of the habitat. However, this contention should be confirmed via directed monitoring.

It is up to the EPA to determine the value and policy in relation to the use of this area and similar erosional areas as spoil sites in the future. Ideally, material should be disposed on a like-for-like basis as these habitats and benthic communities therein will demonstrate a certain tolerance to deposition and accumulation of similar sedimentary types.

If the EPA is of a mind to issue a licence then, given the sedimentary data from the spoil site was captured in 2002, it would be advisable to reconfirm the sediment types found at the spoil site prior to any disposal activity by conducting a particle size analysis of sediments from those location sampled in 2002 (along with others –see below). These data can then be used as a realistic baseline against which to compare monitoring results. The continued use of the site should be informed by favourable monitoring results of the site. A range of acceptable monitoring criteria and thresholds should be agreed in advance and should form the basis of conditions relating to any permit that might be issued.

Furthermore, in order to determine the effectiveness of the proposed area as a spoil site (i.e. ability to retain deposited material) and to validate the deposition model, monitoring should be conducted following each campaign. This can be carried out by a combination of both bathymetric surveying and particle size analysis of a representative number of sediment samples from the general area (within the spoil site at the northern and southern boundaries and within the Long Bank SAC). I would suggest that the first monitoring event occur immediately upon completion of the disposal with a second monitoring event scheduled for 6 months later prior to the commencement of subsequent dredging /disposal campaign.

Finally, in terms of timing of dumping: ideally dumping should occur at slack water, however, this may present some unrealistic operational constraints. I suggest that disposal should occur at specific locations within the boundaries of the spoil site to take account of the direction of water flow and to ensure that the maximum amount of material will be deposited within the spoil site.

Consent of Crown in right of New Zealand required for any release