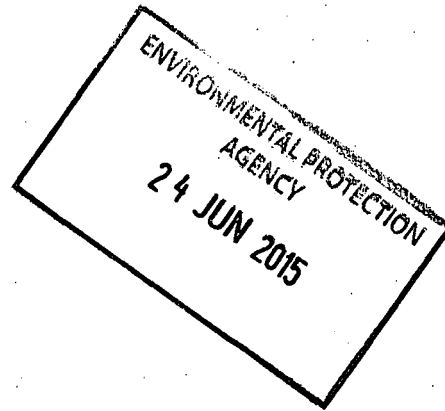




Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government



Noeleen Roche
Programme Officer
Office of Climate, Licensing & Resource Use
Environmental Protection Agency
PO Box 3000
Johnstown Castle
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Our Ref: MS51/14/180
Your Ref: S0023-01

23 June 2015

RE: S0023-01 Dumping at sea (DAS) application from Sligo County Council to Environmental Protection Agency (EPS) re Sligo Harbour Dredging.

Dear Noeleen,

In relation to the above, having examined the proposed DAS Application the Departments comments are as follows:

Dumping at sea:

The mainstay of the environmental considerations of this element of the scheme rest with the EPA who are the Regulatory Agency with responsibility for issuing a permit under DAS Acts.

The issue of examining alternative options to Dumping at Sea is discussed in detail with reference to Section 1.5.3 of the Environmental Appraisal Report (EAR) (Vol 1), which accompanied the Foreshore Licence Application, which examined all options viz:

- Beneficial reuse
- Disposal on land
- Incineration
- Reclamation within Sligo Harbour
- Disposal at Sea

Owing to the environmental constraints within Sligo Harbour and the physical composition of the sediments, dumping at sea was considered the only viable disposal mechanism available for the disposal of the dredged material.

Sediment quality analysis has been undertaken on the sediments to be dredged, under the supervision of the Marine Institute (MI). The results of the analysis are described in more detail in Ch. 10 of the EAR. The results demonstrate that the sediments are clean in terms of the guidance values set by MI, and do not pose any known environmental threat, should they be disposed at sea. In terms of the sediment analysis at the proposed dump site, the detailed report of the

granulometric and chemical composition of the proposed dump site is reported in Section 10.4.2 of EAR. In general the sediments collected in and around the proposed dump site were typically made up of fine sand with varying amounts of coarse sand and gravel. This corresponds well with the properties of the sediments to be dredged. The predicted impacts of the dumping of dredged sediments at sea in terms of marine ecology, fisheries and archaeology are described in detail in Ch. 6, 7 and 12 respectively. These impacts are considered to be insignificant and the disposal of the dredged material at an offshore dump site, subject to licensing, is considered to be the most appropriate means of disposing of the dredged material from the capital and maintenance dredging of Sligo Harbour.

Dumping at sea proposal:

The capital works will involve the disposal of 250000m³ of fine sand and silt at an offshore dump site. An off shore dump site has been identified in outer Donegal Bay-app 34 miles from the dredging areas and a separate DAS Application has been made to the EPA in accordance with the Dumping at Sea Acts 1996-2010. This proposed site is approximately 63km from the deep-water jetty in Sligo Port and approximately 17 nautical miles south west of Malin More Head. Given the distance to the proposed disposal site it was calculated that dredging would take app 5-6 months to complete.

In terms of the selection of an off shore dump site details of all the consultations are presented at Section 2.1 of the EAR. The list of Consultees included the SFPA, IFI, BIM, DAFF and MI. Opinions were also sought from the Killybegs Fishing Organisation (KFO) and the Irish Fish Producers Organisation (IFPO).

The KFO expressed their support for the dredging project; however they reiterated their objections to any dumping taking place inside the Malin More Head-Stags line and added that the site should also be in excess of 100m of water depth.

The locations of the potential dump sites evaluated through the consultation process is shown on Fig 2.1(ref Pg. 2-3 in EAR). This shows that the site finally chosen is west of the Malin-More Head-Stags line and is in a water depth of 92-93, this dump site will be 1km² in area. BIM have indicated that the site appears to avoid the main fishing areas and the MI responded that they could see no issues with the chosen site, especially given that the material is clean. The KFO and IFPO have indicated their continued concerns about dumping at sea being the chosen method of disposal arguing that alternative disposal methods on land should have been examined in more detail.

Predicted impacts from the offshore dumpsite:

The mainstay of the likely impacts relate to its potential impact on subtidal flora and fauna, and this is discussed in detail with reference to Section 6.3 of the EAR, which presents an impact hypothesis for the predicted impacts of dumping the dredged sediments at this location based on baseline data acquired at the site and the dumpsite plume model and settlement pattern described in Ch. 11 of the EAR. In terms of the baseline studies in consultation with the MI it was recommended that this should involve a hydrodynamic survey, benthic community study and sediment chemistry analysis. The studies/survey results are presented and discussed at 6.3 of EAR, these are mainly matters which EPA and MI will address when reviewing the DAS Application.

Hydrodynamic modelling was undertaken as part of the study to investigate the impact of the dumping operation on sedimentation and suspended sediment loads in the area of the proposed dumpsite. The main results from the model simulations were as follows:

- The suspended sediment values beyond the immediate vicinity of the dumping operation are minimal.
- The majority of the dumped material will be deposited and remain within 2km of the dump site and only a small amount of material will be transported further off shore by residual current.
- Most of the material will settle on the sea bed close to the dump site. Some material will migrate towards the east under the influence of tidal action, but all particles will settle within 5.5 km of the dump site.
- An area extending across app 2km to the east and south of the dump site will experience deposition in excess of 20mm. Within this, an area of app 0.5km² will experience deposition depths in excess of 130mm.
- Results from the model sediment analysis predict concentrations of 3.5mg/l or less within several hundred metres of the disposal site. The impacts on fish from suspended solids have been shown experimentally to be at levels greater than 10mg/l therefore there will be no significant impact on fish species as a result of the dumping operation.
- The proposed dredging will not have a significant impact on the bed sediments or water quality in the waters beyond the immediate vicinity of the dumping site. Sediment transport due to wave action is likely to be limited at the site due to the 90m water depth. In addition any material that may be re suspended during extreme swell events will not be transported far from the site due to weak tidal currents.
- Many sessile and some mobile species covered by the dumped material will be lost, notably where material settles deepest after each dumping event. This may include crab although there is evidence to show that smothering is unlikely to cause mortality in crabs, which are able to escape from under silt and migrate away from an area where dumping is taking place. The impacted seafloor will be recolonized from the surrounding faunal community and will integrate as part of the overall habitat. Recolonisation should take place within a relatively short period of time (12-18 months).

Conclusion on impacts/mitigation:

Given that the material is required to be dumped only within the limits of the proposed dump site, there are few mitigation measures that can be proposed to reduce the impact of the material on the sea floor and short term impacts on the water column as predicted by the hydrodynamic model. The proposed dump site has endeavoured to mitigate against impacts through site selection it being chosen as an area where the residual currents will not transport sediment east into Donegal Bay and does not occur in a known area of spawning.

It is recommended that the dump site and surrounding area to a radius of 1km should be closed to commercial fishing activity during the dumping operations. This will help to avoid any damage to or loss of fishing gear (the views and advice of Sea Fisheries Protection Authority (SFPA) should be sought in relation to this proposal and how it could be implemented)

No unusual species of habitats were found within the proposed dump site during the video and grab sampling studies. Given the relatively small area of impact relative to surrounding habitats, there should be no significant negative impact on the bottom communities in Donegal Bay. Any areas affected by sedimentation will be quickly recolonized on completion of the dumping. No significant impact is predicted to occur on fish species as a result of the dumping operation.

In terms of water quality and in particular elevation of sediment levels in the water column, while no particular mitigation measures are proposed, a monitoring programme is recommended to ensure that the modelled levels are not exceeded (this monitoring programme should be along the lines of that as set out for 'Fisheries and Aquaculture' (Ref Section 7.8 of EAR Pg. 7-26 and also Table 15.1 on Pg. 15-6). A suitable monitoring programme should be set down by the EPA in consultation with the Marine Institute.

Impacts on Natura 200 sites:

The nearest Natura 2000 site to the proposed dump site is over 25km to the North East (Slieve League SAC Site Code 000189). The Dumping at Sea element of this scheme involves no infrastructure element (i.e. placement of structures) and therefore no impact on Natura 2000 sites is possible, in terms of the potential impact from the environmental element of the operations, this will mainly be a matter for the EPA to evaluate in conjunction with their assessment of the DAS Permit Application so AA Screening etc. It will be a matter for them as the consenting authority in this regard.

In any event the results of the Hydrodynamic Model Studies as discussed above conclude that:

The majority of the dumped material will be deposited and remain within 2km of the dump site and only a small amount of material will be transported further off shore by residual current.

Most of the material will settle on the sea bed close to the dump site. Some material will migrate towards the east under the influence of tidal action, but all particles will settle within 5.5 km of the dump site.

Therefore from an environmental perspective in view of the significant distance to nearest SAC (25KM) there is unlikely to be any impact to Natura 2000 Sites.

CONCLUSIONS/RECOMMENDATIONS

The Consultants have demonstrated satisfactorily that there is no technically, viable and economically feasible alternative option to Dumping at Sea. In choosing the Dump Site in outer Donegal Bay they have sought to minimise any impacts on fisheries interests in Donegal Harbour in particular taking cognisance of the views of BIM, MI and KFO in choosing the actual location. Hydrodynamic Modelling has demonstrated that there should be no significant impact to water quality or fisheries interest outside of the immediate vicinity of the Dump Site itself (indeed there will be no significant deposition beyond 2km of the dump site and absolutely no impact beyond 5.5km). While no particular Mitigation Measures are considered necessary a water quality monitoring programme is recommended to determine that modelled levels are not exceeded. This exercise would also take regular measurements of DO and Turbidity at the site and the surrounding

area during dumping operations. This monitoring programme should be agreed in consultation with Marine Institute.

In conclusion subject to the above, this Department has no objection to the proposed Dumping At Sea of the 250000m³ of dredged material, in conjunction with the proposed maintenance and capital dredging of Sligo Harbour, at the proposed Dump Site in outer Donegal Bay as submitted to the EPA subject to

- A copy of the said Permit once issued should be forwarded to DOECLG immediately on issue.
- The Foreshore License in relation to the Capital and Maintenance Dredging at Sligo Harbour to run to a date in tandem with any EPA DAS Permit period
- The timing of the dumping at sea operations to conform if necessary to the requirements of NPWS (DAHG) and SFPA (DAFF).
- Notification of the dump site on admiralty charts and all appropriate marine notices in conjunction with the proposed dumping at sea operation to conform to the requirements of the Department of Transport

Yours Sincerely,



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