Attachment-C.1

Alternative measures investigation

DUMPING AT SEA PERMIT APPLICATION

Fenit Harbour,

Tralee, Co. Kerry

Comhairle Contae Chiaraí
Kerry County Council
1 MANAGEMENT OF DREDGE MATERIALS

In terms of managing the materials generated by the dredging activities, the following are the various options that were considered:

- Disposal on land at a waste facility
- Deposit within a marine structure
- Land reclamation on the coast or inland
- Re-use on land in combination with another activity, e.g. agriculture
- Disposal at Sea

Each of the options outlined above is discussed in the following sub-sections.

1.1 Disposal on land at a waste facility.

In order for the dredge material to be brought on land and to an appropriate waste facility, be it an inert waste facility or a landfill site for capping etc, it would first have to be brought via barge or be pumped from a dredger to a defined location. This location would have to be on the coast and would need to large enough and of the right contours to enable temporary storage. It would also need to be bunded in order to allow the material to settle and for the water to run off and settle out of the material. The sea water would then need to be discharged back to the ocean. Such a site would need planning and a waste licence in order to store it temporarily. In addition the applicant would need to either own or have a lease on such lands.

This is not an option for many reasons, but the practicality of getting the material on land in a suitable fashion is technically very difficult, given that it is effectively liquid muds and sands which is not easily transported or delivered to a site. There are no suitable lands within the vicinity of Fenit and the applicant does not have control of any such sites. The requirement for planning, waste licence and the substantial costs that would be required along with the extent of time required makes this option un workable for many reasons.

1.2 Deposition within a marine structure

In some instances where there are marine engineering works taking place in a harbour, dredge material can often be used as bulk fill for within a structure or revetment. In that instance the material has to be clean, but also has to be suitably de-watered and of a suitable composition to be useful from an engineering perspective.

Currently and in the short to medium term there are no proposed works planned for within Fenit Harbour so there is no suitable project available for re-use of the material.
1.3 Land Reclamation on the coast or inland.
In some instances there are areas of coastline or lands adjoining the coast that may require coastal protection work in the form of engineered structures or there may be areas of low lying lands that would be suitable for reclamation. In both instances the location would be subject to planning and may also require a waste permit. In addition the lands would need to have good access from the seaward side or on land via road.

The applicant would need to own the land or have a lease on the land and permission to use it for the purpose of reclamation or coastal protection.

At present there are no such suitable lands available adjacent to Fenit on the coast or inland at suitable distances. Neither is there any consent available for such lands. In addition the practicality of depositing clean, dry and suitable dredge spoil to these locations is not technically feasible.

1.4 Re-use on land in combination with another activity, e.g. agriculture
In order to adopt this approach, the dredge material would have to be transportable to such a location. The proposed use may require planning, waste permit or other consent. The material would need to be clean and dry and readily transportable in a truck. In order to achieve that large holding and drying area would need to be established within the harbour, suitably bunded etc. It would then take time to dry and drain off.

At present there is no identifiable location or activity that could re-use dredged material from the harbour. In addition there is no large suitably structured storage and drying facility in the harbour to deal with any dredge material.

1.5 Disposal at Sea
This option has been used historically for Fenit Port and has worked well in previous dredge campaigns. There is a suitable historic site used for deposition of materials in the outer bay. This approach is the most favourable for the material that is being dredged in the harbour. The material being deposited comes from within the natural deposition of silt/muds/sand in the bay.

It is effective and is suitable in terms of time use and delivery of material from the dredge location to the deposition site. The material does not have to be dried, or stored temporarily before it can be transported to the deposition location. It does not require planning or waste consent on land. It is a commonly used approach internationally and it has evolved because it is the most effective and suitable way to deal with such material in a marine environment.

2 PREFERRED OPTION
After consideration of the above options it is deemed that disposal at sea is the most appropriate method for the disposal of material from Fenit Harbour and Marina. This is largely based on reasons of no immediate suitable alternative means of managing the material by any of the other land-based and beneficial reuse options considered above. The decision is also influenced by the performance
of the past dumping at sea practices, the provision of an adequate disposal site at the historic disposal site, it is the favoured solution for the harbour authority and was previously acceptable to the other stakeholders in the area.

3 MINIMISATION OF MATERIAL TO BE DISPOSED

The results from the sediment sampling undertaken indicate that copper concentrations at sampling station 1 was above the Upper guidance level. This sampling location is against the quay wall of the inner harbour on the fishery berth. It is approx 8 metres from the corner of the former workshop/sheds that were demolished over the last year. Historically these structures would have contained metal filings and dust as they included a metal work shop where welding and metal cutting activities were undertaken. The slab outside those buildings slopes with a fall directly towards the berth, so it likely to be a localised accumulation. To ensure the suitability of the spoil sediment for disposal at sea it is proposed that the area marked Area D in the image below will not be included in the dredging campaign.