

INSPECTORS REPORT

WASTE LICENCE REGISTER NUMBER 172-1

APPLICANT: The Minister for Communications, Marine and Natural Resources

FACILITY: New quay development at Rossaveel, Co. Galway.

INSPECTOR'S RECOMMENDATION: That a waste licence is granted subject to conditions.

(1) Introduction:

The Minister for Communications, Marine and Natural Resources proposes to dredge the entrance to Rossaveel harbour. Suitable dredging spoils will then be recovered for land reclamation in order to construct a new quay and extend the existing quay in Rossaveel harbour. Once the quay is complete a significant area of new deep water berthage will be available. In addition, a new area of small craft pontoon berthage will be provided. This will be primarily to serve the fishing industry. Reclaimed areas will be hardstand and will be available for appropriate industrial/retail use in the future.

Approximately 160,000m³ of material will be dredged with 134,000m³ (268,000 tonnes) destined for recovery at this facility. The remaining material (primarily silt) is unsuitable for recovery and will therefore be dredged and dumped at sea in line with dumping at sea guidelines from the Department of Communications, Marine and Natural Resources. It is unsuitable for recovery due to its settling characteristics and the presence of anthropogenic contamination (primarily TBT).

The material dredged from the harbour will be loaded into a barge and transported to the recovery site and deposited using a backhoe digger (JCB). The material will be broken rock, sand & gravel, and therefore the quantity of supernatant arising will be lower than other forms of dredging (*e.g.* suction dredging *as per* Killybegs Development Reg. No. 149-1). The material will be deposited, spread and graded. The final quay wall will then be constructed and the facility prepared for the construction of buildings. The completion of the quay wall and associated infrastructure *etc.* is expected to take ~30 months.

The applicant has indicated that they intend to commence dredging in late 2002. It is expected that dredging will take approximately 7 months to complete on a 24-hour basis. There are 2 houses located within 500m of the facility boundary.

This application was received on 26th April 2002. The application relates to the recovery of inorganic material under *Class 4-4th Schedule* and the temporary storage of dredged material for recovery on-site *Class 13-4th Schedule*.

Quantity of waste to be accepted (Total)	268,000 tonnes for recovery.
Environmental Impact Statement Required	The EIS has been assessed and I am satisfied that it complies with Article 13 of Waste Licensing Regulations 1997 (S.I. 133 of 1997)
Number of Submissions Received	One

FACILITY VISITS:

DATE	PURPOSE	PERSONNEL
15/5/02	Site notice check	Cormac Mac Gearailt

(2) Facility development:

This site is currently undeveloped foreshore adjacent to the existing piers and marine industrial units. The applicant has proposed to reclaim an area of foreshore for the purposes of constructing a new quay for the port, a significant area of land for potential industrial development and an area of berthage for small craft. The recovery of dredging spoils for this purpose is permitted in this licence.

It is proposed to operate the dredger on a 24-hour basis. This is common in this industry given the high rental cost for this specialised type of equipment. This recommended Proposed Decision allows waste acceptance on a 24-hour basis. Pile driving will be limited to daytime (8am-8pm) only, as proposed by the applicant.

Given the short lifetime (~ 7 months), and the fact that only recovery of dredging spoils is to be carried out at the facility, a Schedule of Objectives & Targets is not required. However, an Environmental Management System (EMS) remains a requirement of this licence, which includes corrective action procedures and an awareness and training programme. The applicant will also be required to produce a communications programme.

(3) Waste Types and Quantities

The applicant has applied to recover a maximum of 268,000 tonnes of dredging spoils. These spoils will consist of rocks, sands and gravels. It is expected that little settlement will occur due to the nature of the materials.

Other dredged material (unusable silt - estimated by the applicant at approximately 50,000 Tonnes) will be disposed of at sea. This silt will not be recovered for use as infill due to poor settling characteristics and the presence of TBT (Tri-butyl-tin) contamination.

A survey of the dredge area noted a TBT contamination level of 0.05mg/kg at one location. All other samples were found to be below the detection limit of 0.01mg/kg. 30 samples were taken in this survey. This compares with 14 samples in Killybegs returning TBT values ranging from 0.02-5.1 mg/kg out of a total of 54 samples. The contamination noted above is confined to the inner harbour area. A licence for dumping at sea will be required from the Marine Licence Vetting Committee (formerly Dept. of Marine, now Dept. of Communications, Marine and Natural Resources). Since the TBT contamination is significantly lower than in the Killybegs situation, further *in-situ* sediment monitoring for TBT is not required under this recommended Proposed Decision. However, under Schedule F the licensee will be required to monitor incoming waste for TBT on a monthly basis.

S.I. 12 of 2001 [Water Quality (Dangerous Substances) Regulations, 2001] sets standards for certain metals, solvents and pesticides, including TBT in the aquatic environment. These regulations require that licences issued by the Agency shall determine the application on the basis of the specified standards. These regulations apply to licences applied for after the commencement date (i.e. 1 July 2001).

Given the following:

- initial investigations of the extent of TBT contamination as outlined above;
- the water partitioning behaviour of TBT (K_{ow} Octanol/Water partitioning coefficient is low as it binds strongly to sediment and does not dissolve very well in water);
- compliance with the Waste Acceptance Criteria of 0.02mg/kg;

it is likely that the relevant water quality standard outlined in S.I.12 of 2001 (*i.e.* TBT in water 0.001µg/l) will not be breached by the waste recovery activities permitted by this licence.

Monitoring for the metal parameters outlined in S.I.12 of 2001 will be required.

(4) Emissions to Air

The only potential emissions to air of significance from this facility will be dust emissions. Condition 7.3 requires that site roads and dredging stockpiles be sprayed with water to minimise dust emissions where required. Dust monitoring will be carried out on a monthly basis at three locations (to be proposed by the licensee).

- **Noise**

Given that the nature of the activity to be carried out is construction, noise is to be regulated accordingly. A limit of 65dB(A) is to be applied for daytime (8am-10pm) periods and 45dB(A) for night-time periods. These limits will be applied at 3 noise monitoring locations. The licensee will be required to operate plant, and employ noise abatement measures, as outlined in “*BS 5228 - Noise control on construction and open sites*”. These measures would include for example use of well maintained plant and the maintenance of silencers on appropriate equipment. Pile driving shall only be carried out at the facility during daytime hours.

(5) Emissions to Groundwater/Hydrogeology

- **Geology/Hydrogeology**

The facility is primarily to be constructed on land reclaimed from the sea (below the high water mark). The bedrock in the vicinity of the facility is granite. Generally this bedrock is considered a poor aquifer. The deposited waste material will be in direct hydraulic connection with groundwaters. However, due to the nature of the dredge spoils, no emission to groundwater of environmental significance is expected, and no lining is required for this facility. This recovery activity is not a landfilling activity and therefore the requirements of the Landfill Directive do not apply.

(6) Emissions to Surface Water

There will be diffuse emissions to the marine environment from the recovery site. It is expected that suspended solids will arise due to the deposition of this waste. However it should be noted that since the materials will be blasted and then lifted using a backhoe digger (JCB) the majority of solids arising will be from the dredging process itself. The dredging will take place approx. 200m-1000m from the reclamation site.

The following measures have been included in the recommended Proposed Decision in relation to this diffuse discharge:

- The licensee will be required to use silt screens to limit the dispersion of sediment fines from the reclamation area.
- Surface Water monitoring will be required upstream and downstream of the recovery site for metals, suspended solids and turbidity.

Benthic (sediment) monitoring was carried out as part of the EIS and a further monitoring event will be required three months after completion of the dredging operations (Schedule D.5). This will allow assessment of the extent of any impact on the benthic environment resulting from the dredge spoils recovery process.

The above monitoring results will, in addition to providing a clear picture of the impact of this waste activity, contribute to a database of information for future activities of this nature.

(7) Other Environmental Impacts of the Development

Restoration and Aftercare.

The facility will ultimately serve to provide infrastructure to service the fishing industry.

Following the cessation of waste recovery operations a post-closure monitoring programme with timeframes shall be submitted to the Agency. This will be primarily for the purposes of post closure benthic monitoring for a limited period after the activities cease.

(8) Waste Management Plans

Not applicable, as the facility is outside the jurisdiction of the local authority (below high water mark).

(9) Submissions/Complaints

One submission was received from The Western Regional Fisheries Board, Galway [Date Received 20/5/02].

This submission states the following;

- a) *That the dredging and disposal operation should be carried out outside the March-May period to prevent impact on migratory fish.*
- b) *There is a need to ensure that the lobster fishery is not impacted*
- c) *That dumping at sea should be carried out during the ebb-tide to prevent re-suspension of suspended solids and their transportation back into the bay.*

RESPONSE

- a) Control of the dredging and dumping at sea aspect of this operation are outside the scope of this recommended Proposed Decision. The submitter was informed by letter (18/6/02) from the Agency that the application, was solely for the recovery of a portion of the dredge spoils (waste) for use in the construction of the quay wall and associated hardstand.
- b) Any emissions of suspended solids from the facility will be monitored, and controlled by the use of silt screens. The relevant water quality standard outlined in SI 12 of 2001 (*i.e.* TBT in water 0.001µg/l) is not likely to be breached by the waste recovery activities permitted by this licence.
- c) See response a) above

(10) Recommendation.

I recommend that a waste licence, subject to conditions, be **granted** for the waste activities and reasons outlined below;

- **Class 4-4th Schedule** [*Recycling or reclamation of inorganic materials (not metals)*]

The applicant applied to recover 268,000 tonnes of dredging spoils (primarily sand, gravel and rock) at this facility. The recovery of these spoils is permitted under the terms of the proposed decision.

- **Class 13 - 4th Schedule** [*Storage of dredge spoil at the facility prior to placing it behind the constructed quay wall*]

This will involve the stockpiling of dredge spoils prior to emplacement.

I am satisfied that the waste activities permitted above, if carried on in accordance with the conditions in the proposed decision, will comply with the requirements of Section 40(4) of the Waste Management Act 1996.

Signed _____

Dated:

Cormac Mac Gearailt,
Inspector, Environmental Management & Planning.

APPENDIX 1
LOCATION MAP & LAYOUT PLAN

- **Figure 1.1 EIS Volume 1- Attached**

(See also Aerial photo of site Figure B.2.2 Application Volume 1- not attached – see tag on original application file)