



To:	Tara Higgins
From:	Margot Cronin, Terry McMahon
Applicant Name	Port of Cork
Description of Works	Proposed dredging and Dumping at Sea
Location of Works	Ringaskiddy, Cork Harbour
Date:	08 May 2015

As part of the proposed development of port facilities and new berths at Ringaskiddy, it is intended that 457 500 t (305,000 m³) will be dredged and dumped at sea at the Power Head dumpsite. Approximately 215 000m³ will be taken from Ringaskiddy West, 90 000m³ from Ringaskiddy East.

Dredging Operation:

Dredging methods are most likely to be trailing suction and backhoe.

The output from the sediment transport model indicates that increased turbidity due to dredging is not likely to impact on any sensitive areas or activities.

Quantity of material:

Quantity:

Quantities of material to be dredged and dumped are:

Ringaskiddy West	215 000m ³
Ringaskiddy East	90 000m ³

Quality of material:

Grain size

Granulometry of the material has been categorised as:

Ringaskiddy West	100 % fine sand / silt / mud
Ringaskiddy East	65 % fine sand / silt 35% coarse sand

Sediment quality:

The results of fairly extensive testing indicate that the material to be dredged is essentially clean, that is, concentrations of measured parameters are predominantly below the lower action level and thus it is considered that biological effects are unlikely to occur. The one exception to this is for nickel. Results for nickel concentrations are in the class 2¹. These results are broadly similar to tests from the same area in previous years. Nickel concentrations of the same scale are regularly reported from many areas of the Irish coast, presumed to be due to natural geological variation. It is considered that concentrations of nickel in this range should not cause undue concern, in the absence of other contamination.

Disposal

Dumpsite:

The dumpsite proposed for use is located approximately 4 nm south of Power Head. It is an established dumpsite, which has been in use since 1978.

The results of sediment chemistry testing of the material to be dredged would not preclude dumping at sea, in the absence of a realistic alternative.

¹ The lower action level for nickel concentrations in dredged material for disposal in Irish waters was based on the ERL due to lack of available national data upon which to base a locally derived figure.

Impact at dumpsite

There appears to be little lasting impact at the dump site. Side scan and multi-beam surveys between 1999 and 2013 indicate that no significant accumulation of material has occurred, despite the disposal of quantities of sediment totalling in excess of 7 million m³.

Effects of dumping this material are expected to be limited to physical impact, and biological effects as a result of contamination within the sediment are not expected to occur.

Given the fact that the material to be dredged can generally be considered to be essentially clean and that dumping at sea of the material at this site has been ongoing for many years in this area, the Marine Institute is of the view that the activity is not likely to have a significant impact on the marine environment or other legitimate uses /users of the area and therefore has no objections to a dumping at sea licence being granted.

Notes:

1. The modelled differences in current speed resulting from the development, as indicated in Figure 12.21 in the EIS, may need to be further investigated. The resultant changes, which look to be greatest between Ringaskiddy and Rocky Island, may cause increased sediment load and may lead to additional scouring, e.g. at the bridge support. (The text of the EIS (section 12.2.3) indicates that the modelled current velocity differences resulting from the development, takes no account of directionality and therefore the differences may be positive or negative.)
2. Side scan and multi-beam surveys at the dumpsite over the years indicate that no great accumulation of material has occurred, despite the disposal of quantities of sediment totalling in excess of 7 000 000 m³. Should monitoring be better targeted to determine the fate of these sediments?
3. The EIS states that sediment was tested for eco-toxicity (30 minute EC50). This is, in fact, not the case. The consultants have confirmed that sediments were not tested for toxicity and that this was an "erratum" in the report.

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