

From: margot.cronin@marine.ie
To: [Jim Moriarty](#)
Subject: Dublin Harbour
Date: Tuesday 19 March 2024 10:44:54
Attachments: [20240209_DubHbr_MI_comments_2024.docx](#)

Good morning Jim,

Attached are my comments re Dublin Harbour sediment chemistry.

Give me a shout on 083 344 3280 if you need clarification on anything.

All the best, Margot

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Foras na Mara

Tá an t-eolas sa ríomhphost seo, agus in aon cheangaltáin leis, faoi rún agus tá sé dírithe ar an bhfaighteoir/na faighteoirí beartaithe amháin agus níor cheart ach dóibh siúd é a úsáid. D'fhéadfadh an t-eolas seo a bheith faoi réir pribhléid dhlíthiúil agus ghairmiúil. Mura tusa faighteoir beartaithe an ríomhphoist seo, níor cheart duit an teachtaireacht seo, nó aon chuid di, a úsáid, a nochtadh, a chóipeáil, a dháileadh nó a choinneáil. Má fuair tú an ríomhphost seo go hearráideach, cuir an seoltóir ar an eolas láithreach agus scríos gach cóip den ríomhphost seo ó chóra(i)s do ríomhaire, le do thoil. [Ár bPolasaí Príobháideachta.](#)



To: Jim Moriarty, EPA

From: Margot Cronin, MI

RE: Dublin Port Company Dublin Harbour Dumping at Sea permit application

Date: 19/03/2024

Background

This application relates to capital dredging and dumping at sea of 825,000 tonnes (500,000 m³ including contingency) of material from:

Location	Quantities (tonnes)
Deepening the navigation channel between North Wall Quay Extension and the Western Oil Jetty, including riverside Berth 35;	121,008
Deepening of Alexandra Basin East and deepening/widening of berths;	47,020
Deepening of the Oil Basin and widening of berths;	7,842
Deepening of the Ferryport Basin;	27,970
Deepening of riverside Berth 52;	127,515
Widening the South Port (Berths 42 - 47) berths; and	26,146
Removal of ridge between channel and the Poolbeg Oil Jetty (Berth 48).	11,296
Contingency	131,203

The sediments were sampled and analysed in 2021, and again in 2023. Both sets of results are broadly similar. Most samples have concentrations of metals and organics below the lower action level.

Some samples taken for chemical analysis are not positioned within the final project boundaries and have been excluded from the assessment if they are located more than 25m from the proposed dredging areas.

Results of certified reference material analyses are considered acceptable.

Discussion

Latest bathymetry indicates the following depth of sediment to be removed:

Deepening the navigation channel between North Wall Quay Extension and the Western Oil Jetty, including riverside Berth 35;	< 2 m
Deepening of Alexandra Basin East	< 2m in NE area
Widening of berths – Alex Basin East	< 1 m
Deepening of the Oil Basin;	< 3 m

Widening of oil berths	< 2 m
Deepening of the Ferryport Basin	1.5 - 4 m in north third 0 – 2 m in middle third 0 – 2 m in south third
Deepening of riverside Berth 52;	0.5 – 8 m
Widening the South Port (Berths 42 - 44)	< 3 m
Widening the South Port (Berths 45)	< 1 m
Widening the South Port (Berths 46 - 47)	< 1.5 m
Removal of ridge between the navigation channel and the Poolbeg Oil Jetty (Berth 48).	0 – 2 m

In the original analysis in 2020, there were some results above lower guidance levels for copper, lead, US EPA PAH Σ 16 and ICES PCB Σ 7 though all within the lower quartile of Class 2, and in general the material was considered relatively clean. As the application was not processed within the time line for sediment chemistry, sampling and analysis were repeated in 2023. This time there were two areas with upper guidance level exceedance. Sample 30 in the northwest corner of Alex Basin East demonstrated class 3 levels of contamination in several heavy metals, though not all. Results of subsequently resampling of a wider area around sample 30 were found to be below or close to the lower guidance levels. It should be noted, no sample was taken specifically from this area in 2021 due to coarse sediment encountered, so it has not been possible to compare with the previous results.

Class 3 levels of DBT were detected in samples 06 and 07, along with some Class 2 parameters, in the entrance area to Alex Basin West. TBT and its less toxic metabolite DBT are known to occur as isolated hotspots which can be caused by paint flakes from hulls of boats still carrying the antifoulant, or from disturbance of sediment containing historic deposits. Subsequent repeat sampling and analysis results indicated TBT and DBT results well below the lower guidance level for both samples, suggesting the presence of paint flakes in the original samples. The remaining metals in sample 6 are broadly similar to the original sample, although repeated metals results for sample 7 show a decrease in metals concentrations, likely attributed to the difference in grain size between the first and second samples where sample 7 (original) had a higher content of fine sediment. These locations were sampled and analysed a third time, and again demonstrated TBT+DBT below the lower guidance level. This indicates that the DBT found in the original samples was most likely from isolated paint flakes.

Results demonstrate concentrations of metals, PAH, TBT, PCB mostly below lower guidance levels or within the low quartile of Class 2. There were also some DDX results above the Effects Range Low (ERL), though all are below any action lower levels set by other OSPAR Contracting Parties. (Ireland has not set guidance levels for DDT compounds). The sediment quality is considered fairly typical of port sediment, and fairly similar to previous chemistry results. The sediment chemistry is in line with previous analyses and indicates reasonable quality for urban port sediment.

Recommendations:

Areas Berth 52 and north end of Ferryport basin should be left until last in the proposed dredging campaign. These areas will be subject to further testing at depth in the coming month.

The chemistry alone of the samples for remaining areas, through several iterations of testing, would not preclude dumping at sea, in the absence of a feasible alternative.