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County Wexford
Ireland

DUMPING AT SEA PERMIT

Permit Register Number:	S0004-03
Permit Holder:	Dublin Port Company Port Centre Alexandra Road Dublin 1 County Dublin
Location of Loading:	Inner Liffey Channel and Dublin Bay
Location of Dumping:	Dumping area located west of the Burford Bank in outer Dublin Bay, approximately 6.75km offshore (from the lighthouse at the end of the Great South Wall)



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DUMPING AT SEA ACT 1996 AS AMENDED

DUMPING AT SEA PERMIT

Decision of the Agency, under Section 5(1) of the
Dumping at Sea Act 1996 as amended

Reference Number: S0004-03

The Agency in exercise of the powers conferred on it by the Dumping at Sea Act 1996 as amended, for the reasons hereinafter set out, hereby grants this Dumping at Sea permit to Dublin Port Company subject to conditions, as set out in the schedule attached hereto.

The permit authorises the loading and dumping at sea of dredged material from Inner Liffey Channel and Dublin Bay subject to conditions.

A copy of the Decision is attached.

Loading and dumping at sea of a substance or material, in accordance with the Dumping at Sea Act 1996 as amended

GIVEN under the Seal of the Agency this 4th day of October, 2022

**PRESENT when the seal of the Agency
was affixed hereto:**


Ray Cullinane, Authorised Person



INTRODUCTION

This introduction is not part of the permit and does not purport to be a legal interpretation of the permit.

This permit authorises the loading of dredged material from the Inner Liffey Channel and Dublin Bay, arising from maintenance dredging works and the dumping of the material at an established dumping site immediately west of the Burford Bank in outer Dublin Bay. The activities involve the loading and dumping of a maximum of 3,960,000 tonnes (wet weight) of dredged material during the months of April to September from 2022–2029, or a maximum quantity of 495,000 tonnes (wet weight) per annum for eight years. Chemical analysis has shown that the sediments from the loading areas are suitable for dumping at sea.

The loading of sediments shall be undertaken using a trailing suction hopper dredger, unless otherwise agreed by the Agency. To minimise the release of suspended solids into the Liffey Channel, over-spilling from the vessel shall be prohibited during the loading of dredged material landward (west) of the Bull Walls entrance. Dumping shall be effected by release of the dredged material through the hull of the vessel. The permit holder is required to manage the permitted activities to ensure the protection of the marine environment. Loading and dumping activities shall not take place concurrently with loading and dumping activities authorised by any other dumping at sea permit held by the permit holder. The permit sets monitoring requirements for bathymetry, turbidity and marine mammals. The permit holder is required to submit reports on the loading and dumping activities and monitoring results to the Agency.

The permit sets out in detail the conditions under which Dublin Port Company will carry out loading and dumping at sea.

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Glossary of Terms

All terms in this permit should be interpreted in accordance with the definitions in the Dumping at Sea Act 1996 as amended, unless otherwise defined in the glossary.

Accident	For the purpose of this permit an accident means an unplanned event that may result in pollution.
AER	Annual Environmental Report.
Approval	Approval in writing.
Annually	All or part of a period of twelve consecutive months.
Application	The application by the permit holder for this permit.
Attachment	Any reference to Attachments in this permit refers to attachments submitted as part of this permit application.
Biannually	At approximately six – monthly intervals.
Biennially	Once every two years.
Campaign	A planned period of sustained loading and/or dumping activity.
CEN	Comité Européen De Normalisation – European Committee for Standardisation.
Chart	Any reference to a chart or chart number means a chart or chart number contained in the application, unless otherwise specified in this permit.
Closed Period	Period of time when loading and/or dumping at sea is prohibited in order to protect designated species or sites.
Competent Laboratory	A testing facility meeting the general management and technical requirements of EN ISO/IEC-17025 standard, or other equivalent standards accepted at international level and utilising methods of analysis, including laboratory, field, and on-line methods, which are validated and documented in accordance with the above standard(s) for the specific tests.
Day	Any 24 hour period.
DBT	Dibutyltin
Documentation	Any report, record, results, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this permit.
Dumping	(a) any deliberate disposal in the maritime area (including side-cast dredging, plough dredging, water injection dredging and other such dredging techniques) of a substance or material from or in conjunction with a vessel or aircraft or offshore installation, (b) any deliberate disposal in the maritime area of vessels, aircraft or offshore installations.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this permit.

Exclusion Zone	Area where loading and/or dumping at sea is prohibited to protect the marine environment or designated species or sites.
Exclusive Economic Zone	The outer limit of the exclusive economic zone is the line every point of which lies at a distance of 200 nautical miles from the nearest point of the baseline.
HCB	Hexachlorobenzene.
HCH	Hexachlorocyclohexane.
Incident	The following shall constitute an incident for the purposes of this permit: <ul style="list-style-type: none">(i) an emergency;(ii) any loading or dumping at sea activity which does not comply with the requirements of this permit;(iii) any indication that pollution has, or may have, taken place;(iv) activation of the alarmed turbidity sensors specified in <i>Schedule C.1.2 Water Quality Monitoring</i> of this permit.
Inland Waters	All sea areas which lie on the landward side of the baseline of the territorial seas.
Maintain	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to perform its function adequately.
Map	Any reference to a map or map number means a map or map number contained in the application, unless otherwise specified in this permit.
Master	The person having the command or charge of the vessel.
Material Unsuitable for Disposal	Sediment that is chemically contaminated such that it does not meet the assessment criteria to be classified as Class 1 (i.e. contaminant concentrations are below lower action levels), in accordance with <i>Guidelines for the Assessment of Dredge Material for Disposal in Irish Water</i> (Marine Institute, 2006) and <i>Addendum to 2006 Guidelines for the Assessment of Dredged material in Irish Waters</i> (Marine Institute, 2019), unless otherwise authorised by the Agency.
Monthly	A minimum of 12 times per year, at intervals of approximately one month.
Monitored Zone	Area which must be monitored for marine mammals by a Marine Mammal Observer.
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic.
PAH	Polycyclic aromatic hydrocarbons.
PCB	Polychlorinated biphenyls.
Permit Holder	Dublin Port Company, Port Centre, Alexandra Road, Dublin 1, County Dublin.
Pollution	The introduction by man, directly or indirectly, of substances or energy into the maritime area which results, or is likely to result, in hazards to human health, harm to living resources and marine ecosystems, damage to amenities or interference with other legitimate uses of the sea.

Position	Latitude and longitude coordinates in degrees and decimal minutes, based on the WGS 84 datum.
Quarterly	All or part of a period of three consecutive months beginning on the first day of January, April, July or October.
SAC	Special Area of Conservation designated under the <i>Habitats Directive</i> , Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.
Sample(s)	Unless the context of this permit indicates to the contrary, the term sample(s) shall include measurements taken by electronic instruments.
Solid Waste	Any persistent, manufactured or processed solid material or items discarded, disposed of or abandoned in the marine and coastal environment, as defined in the OSPAR Guidelines for the Management of Dredged Material at Sea.
SOP	Standard operating procedure.
SPA	Special Protection Area designated under the <i>Birds Directive</i> , Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.
Standard Method	A National, European or internationally recognised procedure (e.g., I.S. EN, ISO, CEN, BS or equivalent); or an in-house documented procedure based on the above references; a procedure as detailed in the current edition of "Standard Methods for the Examination of Water and Wastewater" (prepared and published jointly by A.P.H.A., A.W.W.A. & W.E.F.), American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA; or an alternative method as may be agreed by the Agency.
TBT	Tributyltin.
The Agency	Environmental Protection Agency.
The Maritime Area	Comprises <ul style="list-style-type: none">(i) the inland waters and territorial seas of the State, and the seabed and subsoil beneath them,(ii) any area for the time being standing designated by order under section 2 of the Continental Shelf Act 1968 for the purposes of that Act, and the waters above it, and(iii) the exclusive economic zone of the State.
Triennially	Once every three years.

Decision & Reasons for the Decision

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this permit, the loading and dumping activities will comply with and will not contravene any of the requirements of Section 5 of the Dumping at Sea Act 1996 as amended.

The Agency also considers that the activities will not adversely affect the integrity of any European Site, and has decided to impose conditions for the purposes of ensuring they do not do so. It has determined that the activity/activities, if managed, operated and controlled in accordance with the permit, will not have any adverse effect on the integrity of any of those sites.

The Agency has accordingly decided to grant a permit to Dublin Port Company to carry on the activities listed in *Part I Schedule of Activities Permitted*, subject to the conditions set out in *Part III Conditions*.

In reaching this decision the Agency has considered the documentation relating to: the application, Register Number: S0004-03 and the supporting documentation received from the applicant; the submissions and comments received; the Inspector's Report dated 26 September 2022; and has carried out an Appropriate Assessment of the likely significant effects of the permitted activities on European Sites.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activities, individually or in combination with other plans or projects are likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Sites at; Rockabill to Dalkey Island SAC, South Dublin Bay & River Tolka Estuary SPA, North Bull Island SPA, North Dublin Bay SAC, South Dublin Bay SAC and Lambay Island SAC.

The activities are not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, that it cannot be excluded, on the basis of objective information, that the activities, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the activities was required, and for this reason determined to require the applicant to submit a Natura Impact Statement. This determination is based on the nature, scale and location of the proposed dumping activity within the Rockabill to Dalkey Island SAC with potential for significant impacts on its qualifying interests, reefs and harbour porpoises. The South Dublin Bay & River Tolka Estuary SPA lies adjacent to the loading area (with a small part of the SPA within it). The North Bull Island SPA also lies in close proximity to the loading area. There is the potential for significant impacts on waterbirds and wetland habitats within both of these SPAs. North Dublin Bay SAC and South Dublin Bay SAC are also in close proximity to the proposed loading and dumping activities, and there is the possibility of impacts on the qualifying interests, or habitats, of those European sites. There is potential for ex-situ effects on harbour and grey seals, both qualifying interests of the Lambay Island SAC. It is noted that a Natura Impact Statement (NIS), dated February 2021, was submitted as part of the permit application. Following a request for additional information by the Agency, the NIS was updated in June 2022 to include a further assessment of the cumulative impacts of the project along with other proposed dumping at sea permits.

The Agency has completed the Appropriate Assessment of potential impacts on these sites and has made certain, based on best scientific knowledge in the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive, that the activities, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site, in particular Rockabill to Dalkey Island SAC, South Dublin Bay & River Tolka Estuary SPA, North Bull Island SPA, North Dublin Bay SAC, South Dublin Bay SAC and Lambay Island SAC, having regard to their conservation objectives and will not affect the preservation of these sites at favourable conservation status if carried out in accordance with this permit and the conditions attached hereto for the following reasons:

- The material to be dumped is essentially clean silt and fine sand which has been deemed suitable for dumping at sea.
- Condition 1.2/*Schedule A.1 Quality of Dredged Material to be Dumped at Sea* of this permit imposes a maximum volume of 4,100m³ in the hopper for dumping voyages from the inner Liffey Channel to the dumping site to minimise sediment plumes at the dumping site due to the silty nature of sediment in the channel.

- Modelling simulations undertaken to assess the likely water quality impact of the loading and dumping activities show that there will be no significant elevation in suspended solids outside the immediate zone of the activities and no adverse impact on water quality in the Liffey/Tolka estuaries or the greater Dublin Bay area.
- Hydrodynamic models carried out to predict the deposition of silty material from the dumping activities, in combination with other proposed dumping at sea permits, show minimal levels of silt deposition in comparison with natural sediment deposition.
- Measures to limit release of suspended solids and reduce impacts on water quality (Conditions 3.9 and 3.10) will result in the avoidance of any potential adverse impacts on the qualifying interests of the European Sites.
- A marine mammal observer will be employed to monitor, record and protect marine mammals, including Harbour porpoise and seals, in accordance with NPWS guidelines for the duration of the loading and dumping activities (Condition 4.9).
- A Closed Period (Condition 3.6/*Schedule A.3 Closed Period* of this permit) provides for the temporal separation of activities from any loading and dumping activities associated with capital dredging. Thus the modelled rates of loading and the model predictions will not be exceeded as a result of maintenance and capital projects in combination. Condition 3.4 states that loading and dumping activities shall not take place concurrently with loading and dumping activities authorised by any other dumping at sea permit held by the permit holder to ensure that there is no overlap between these activities and no cumulative impact on the receiving waters.

The Agency is satisfied that no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of those European Sites; Rockabill to Dalkey Island SAC, South Dublin Bay & River Tolka Estuary SPA, North Bull Island SPA, North Dublin Bay SAC, South Dublin Bay SAC and Lambay Island SAC.

Part I Schedule of Activities Permitted

In pursuance of the powers conferred on it by the Dumping at Sea Act 1996 as amended, the Environmental Protection Agency (the Agency), under Section 5 of the said Act, grants this Dumping at Sea Permit to Dublin Port Company, Port Centre, Alexandra Road, Dublin 1, County Dublin. The permit authorises the loading and dumping at sea activities, subject to conditions listed in Part III, with the reasons therefor and the associated schedules attached thereto.

Part II Schedule of Activities Refused

None of the proposed activities as set out in the licence application have been refused.

Part III Conditions

Condition 1. Scope

1.1 Statutory Obligations

This permit is for the purposes of permitting under the Dumping at Sea Act 1996 as amended, only and nothing in this permit shall be construed as negating the permit holder's statutory obligations or requirements under any other enactments or regulations.

1.2 The material or substance to which this permit relates shall be dredged material loaded from that part of the maritime area specified in *Schedule A: Limitations* of this permit.

1.3 For the purposes of this permit, the location of the loading areas authorised by this permit are in those parts of the maritime area bounded by the coordinates specified in *Attachment D.2 – Dwg. of Loading Area* of the application. Any reference in this permit to “loading areas” shall mean the areas thus specified. The permitted loading activity shall be carried on only within the areas specified.

1.4 For the purposes of this permit, the location of the dumping site is that part of the maritime area bounded by the coordinates specified in *Schedule A: Limitations* of this permit. Any reference in this permit to “dumping site” shall mean the areas thus outlined. The permitted dumping activity shall be carried on only within the area outlined.

1.5 For the purposes of this permit, the location of the exclusion zones authorised by this permit are in that part of the maritime area marked *Known Shipwreck Sites with Exclusion Zones [30m Radius/60m Ø]* on Drawing No. *Figure 1 – Maintenance Dredging Campaign 2022–2029 with Archaeological/Industrial Heritage Features superimposed* in *Application Form – Attachment F.1 – Marine Archaeology* of the application.

1.6 The permit holder shall carry on the permitted activity in accordance with the limitations set out in *Schedule A: Limitations* of this permit.

1.7 Loading and dumping at sea shall be controlled and operated as set out in the permit. All programmes required to be carried out under the terms of this permit become part of this permit.

1.8 No change to the loading and dumping activities authorised by this permit shall be carried out or commenced without the prior approval of the Agency.

<i>Reason: To clarify the scope of this permit.</i>

Condition 2. Management of the Loading and Dumping at Sea Activities

2.1 The permit holder shall ensure that all or any of the following:

- litter
- man-made debris
- odour

associated with, or arising from, the permitted activities do not result in an impairment of, or an interference with, amenities or the environment.

2.2 The permit holder shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and experience as required and shall be aware of the requirements of this permit.

2.3 The permit holder shall ensure that a nominated, suitably qualified and experienced person is present at all times when activities covered by this permit are ongoing.

- 2.4 The permit holder shall notify the Agency of the intended date of commencement of the loading and dumping activities, at least fourteen calendar days in advance of commencement, by webform or by such other means as may be specified by the Agency, unless otherwise agreed by the Agency.
- 2.5 Documentation
- The permit holder shall issue a copy of this permit to all relevant personnel whose duties relate to any condition of this permit and provide the information, instruction, training and supervision necessary to ensure compliance with the conditions of this permit.
- 2.6 Corrective Action and Preventative Action
- 2.6.1 The permit holder shall establish, maintain and implement procedures to ensure that corrective action is taken should the specified requirements of this permit not be fulfilled. The responsibility and authority for persons initiating further investigation and corrective action in the event of a reported non-conformity with this permit shall be defined.
- 2.6.2 Where a breach of one or more of the conditions of this permit occurs, the permit holder shall without delay take measures to restore compliance with the conditions of this permit in the shortest possible time and initiate any feasible preventative actions to prevent recurrence of the breach.
- 2.6.3 All corrective and preventative actions shall be documented.
- 2.7 Public Awareness and Communications Programme
- 2.7.1 The permit holder shall, within one month of the date of grant of this permit, establish, maintain and implement a Public Awareness and Communications Programme to ensure members of the public can obtain information at reasonable times, concerning the environmental performance of the permitted activity.
- 2.7.2 The Public Awareness and Communications Programme shall include a specific programme of outreach to interested parties on matters relating to the environmental performance of the permitted activity.
- 2.8 Marine Litter
- 2.8.1 All reasonable and practicable efforts should be made to remove any solid waste collected during the loading and dumping activity and returned to land.
- 2.8.2 All reasonable and practicable efforts should be made to remove floating material collected during the loading and dumping activity and returned to land.
- 2.8.3 The permit holder shall ensure that dredged material is passed through grid screens no larger than 30cm to minimise the amount of man-made materials disposed of at sea. Any solid waste must be separated from the dredged material and disposed or recovered on shore.
- 2.8.4 Disposal or recovery of solid waste shall only take place in accordance with the conditions of this permit and in accordance with the appropriate National and European legislation and protocols.
- 2.8.5 Solid waste sent for disposal or recovery shall be transported only by an authorised waste contractor. The solid waste shall be transported from the site of the activity to the site of the recovery/disposal only in a manner that will not adversely affect the environment and in accordance with the appropriate National and European legislation and protocols.

Reason: *To make provision for management of the loading and dumping at sea activities on a planned basis having regard to the desirability of ongoing assessment, recording and reporting of matters affecting the marine environment.*

Condition 3. Loading and Dumping at Sea Activities

- 3.1 All loading and dumping activities shall be completed by 30th September 2029.
- 3.2 No material shall be dumped at sea which has been categorised as unsuitable for disposal.
- 3.3 Loading activities shall take place on one side of the channel at a time within the inner Liffey Channel, defined as the navigation channel landward (west) of the Bull Walls entrance, in order not to impede fish mobility.
- 3.4 Loading and dumping activities shall not take place concurrently with loading and dumping activities authorised by any other dumping at sea permit held by the permit holder.
- 3.5 Dumping shall be effected by release of the material through the hull of the vessel while the vessel is in motion.
- 3.6 Loading shall be prohibited during the Closed Periods specified in *Schedule A.3 Closed Period* of this permit.
- 3.7 Loading shall be carried out by trailing suction hopper dredger (TSHD), unless otherwise agreed by the Agency in accordance with Condition 1.8.
- 3.8 The TSHD pumps shall be switched off while the drag head is being lifted and returned to the bottom as the dredger turns between successive lines of dredging to minimise the risk of fish entrainment.
- 3.9 The permit holder shall limit the release of suspended solids into the water column during loading and on voyages to and from the dumping site.
- 3.10 No over-spilling from the vessel shall be permitted while the loading activity is being carried out in the inner Liffey Channel.
- 3.11 Dumping activities shall be conducted to ensure a uniform spread of material throughout the dumping site.
- 3.12 The permit holder shall liaise with the Harbour Master at Dublin Port Company prior to the commencement of and during the loading and dumping activities.
- 3.13 Information relating to the activity shall be recorded during each dumping voyage to the satisfaction of the Agency and shall as a minimum contain details of the following:
 - (i) The name of the vessel;
 - (ii) The source of the substance or material;
 - (iii) The date, time, location and position at which the voyage for the purposes of dumping began;
 - (iv) The date, time and position at which the loading began;
 - (v) The date, time and position at which the loading ended;
 - (vi) The date, time and position at which dumping began;
 - (vii) The date, time and position at which dumping ended;
 - (viii) The quantity, stated in metric tonnes, of the substance or material dumped;
 - (ix) The date, time and position at which the vessel completed the voyage for the purpose of dumping;
 - (x) Automatically logged vessel track record data.
- 3.14 Prior to the commencement of the permitted activity, the permit holder shall consult with the Marine Survey Office of the Department of Transport to ensure that all vessels used in connection with the loading and dumping activities specified in this permit meet the requirements of the Marine Survey Office, including that they are licensed as a passenger boat. The permit holder shall ensure that the vessels used in connection with this permit are fully certified for the entire period of loading and dumping activities specified in this permit.
- 3.15 The permit holder shall permit authorised officers, archaeologists and marine biologists to be on board the vessel. They shall permit and facilitate the carrying out by the authorised officers of their functions under the Dumping at Sea Act 1996 as amended, and shall comply with the provisions of that Act in relation to the authorised officers and those functions.

- 3.16 The permit holder shall continue to investigate alternative re-use options for the dredged material that is the subject of this permit. A report on this investigation shall be submitted as part of the AER.

Reason: *To provide for appropriate controls on loading and dumping at sea activities to ensure the protection of the marine environment.*

Condition 4. Control and Monitoring

- 4.1 The permit holder shall carry out such sampling, analyses, measurements, examinations maintenance and calibrations as set out below and in accordance with *Schedule C: Monitoring* of this permit.
- 4.1.1 Analyses and measurements shall be undertaken by competent staff in accordance with documented operating procedures.
- 4.1.2 Such procedures shall be assessed for their suitability for the test matrix and performance characteristics shall be determined.
- 4.1.3 Such procedures shall be subject to a programme of Analytical Quality Control using control standards with evaluation of test responses.
- 4.1.4 Analysis for compliance purposes, including any sub-contracted analysis, shall be done by a competent laboratory.
- 4.2 The permit holder shall ensure that:
- (i) sampling and analysis for all parameters listed in the schedules to this permit; and
- (ii) any reference measurements for the calibration of automated measurement systems shall be carried out by an appropriate Standard Method.
- 4.3 The frequency, methods and scope of monitoring, sampling and analyses, as set out in this permit, may be amended with the approval of the Agency following evaluation of test results.
- 4.4 Bathymetry
- 4.4.1 The permit holder shall carry out pre-dredge and post-dredge bathymetric surveys of the Loading Areas in accordance with *Schedule C.1 Monitoring at Loading Areas* of this permit.
- 4.4.2 The permit holder shall carry out pre-dumping and post-dumping bathymetric surveys of the Dumping Site in accordance with *Schedule C.2 Monitoring at Dumping Site* of this permit.
- 4.5 Sediment Chemistry and Grain Size Analysis
- 4.5.1 The permit holder shall carry out chemical and granulometric analysis of sediments within the Loading Areas in 2023, 2026 and 2029 in accordance with *Schedule C.1.3 Sediment Monitoring* of this permit. A report on this analysis shall be submitted to the Agency within 1 month of completion of the analysis.
- 4.5.2 Following submission of the results of the monitoring specified in Condition 4.5.1, loading may not proceed without the approval of the Agency.
- 4.6 The permit holder shall determine the rate of erosion and the predicted sediment deposition of the non-silt material from the dumping site. A report shall be submitted to the Agency as part of the AER.
- 4.7 Archaeology
- 4.7.1 The permit holder shall ensure that the exclusion zones around the 'Millstone Wreck' and the wreck at the base of the Poolbeg Lighthouse Dublin Bay, specified in Condition 1.5 of this permit, are adhered to. No loading activities shall take place within the exclusion zone.

- 4.7.2 The permit holder shall immediately notify the Underwater Archaeology Unit, National Monuments Service, Department of Housing, Local Government and Heritage if any material of archaeological potential is encountered during the course of the permitted activities.
- 4.8 Turbidity and Suspended Solids
- 4.8.1 The permit holder shall carry out suspended solids monitoring, based on site-specific relationships established between turbidity and suspended solids, within the vicinity of the loading and dumping areas in accordance with *Schedules C.1.2 and C.2.1 Water Quality Monitoring* of this permit during the course of the loading and dumping activities.
- 4.8.2 The loading and dumping activities shall not give rise to turbidity levels at any monitoring location which exceed the predicted suspended solids values as agreed by the Agency, and in accordance with *Attachment F.1 - Coastal Processes Assessment*, submitted with the application for the dumping at sea permit.
- 4.8.3 Where relevant ambient turbidity monitoring results are available from any other statutory body, including the Agency, the permit holder may submit those results to contribute to the fulfilment of the requirements of *Schedules C.1.2 and C.2.1 Water Quality Monitoring* of this permit.
- 4.8.4 A report on this monitoring, including compliance with Condition 4.8.2, shall be submitted to the Agency as part of the AER.
- 4.9 Marine Mammals
- 4.9.1 The permit holder shall appoint a Marine Mammal Observer who shall meet the monitoring and reporting requirements of the National Parks and Wildlife Service. Full reporting on Marine Mammal Observer operations and mitigation undertaken should be made to the Agency and offshore@housing.gov.ie within 1 month of completion of each campaign.
- 4.9.2 The permit holder shall implement the risk control and mitigation measures for marine mammals as specified in the application, including implementing a mitigation zone of 500 metres from the dredging vessel for pre-start mitigation prior to commencement of the loading activity, unless otherwise agreed by the Agency.
- 4.9.3 Loading activities shall only commence in daylight hours where effective visual monitoring, as performed and determined by the MMO, has been achieved. Where effective visual monitoring, as determined by the MMO, is not possible the sound-producing activities shall be postponed until effective visual monitoring is possible.
- 4.9.4 Once the loading activity commences, loading may continue: (i) at night-time; or (ii) if weather or visibility conditions deteriorate; or (iii) if marine mammals occur within a 500 metre radial distance of the sound source, i.e., within the mitigation zone.
- 4.9.5 Dumping shall not take place if a cetacean or seal is detected within a 50 metre radial distance of the dumping activity.
- 4.9.6 The implementation of the risk control and mitigation measures for marine mammals shall be to the satisfaction of the Agency.
- 4.10 Where relevant ambient monitoring results are available from any other statutory body, including the Agency, the permit holder may submit those results to contribute to the fulfilment of the requirements of *Schedule C: Monitoring* of this permit.

Reason: <i>To provide for the protection of the marine environment by way of monitoring of the impacts associated with the loading and dumping at sea activities.</i>
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Condition 5. Incident Prevention and Emergency Response

5.1 Incidents

In the event of an incident the permit holder shall immediately:

- (i) identify the date, time and place of the incident;
- (ii) as soon as practicable notify the Agency, in a format prescribed, and other relevant authorities;
- (iii) carry out an investigation to identify the nature, source and cause of the incident and any impact arising therefrom;
- (iv) isolate the source of any such impact;
- (v) evaluate the pollution, if any, caused by the incident; and
- (vi) identify and execute measures to minimise the impact and the effects thereof.

5.2 The permit holder shall provide a report of the investigation into the incident to the Agency for its approval within one month of the incident occurring or as otherwise agreed by the Agency. The report shall include a proposal to:

- (i) identify and put in place measures to avoid recurrence of the incident; and
- (ii) identify and put in place any other appropriate remedial actions.

5.3 The permit holder shall, in advance of the commencement of the activities, ensure that a documented Accident Prevention Procedure is in place that addresses hazards, particularly in relation to the prevention of accidents with a possible impact on the environment.

5.4 The permit holder shall, in advance of the commencement of the activities, ensure that a documented Emergency Response Procedure is in place that addresses any emergency situation which may arise. This procedure shall include provision for minimising the effects of any emergency on the environment.

<p><i>Reason: To provide for the protection of the marine environment.</i></p>
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Condition 6. Notification, Records and Reports

6.1 The permit holder shall notify the Agency by webform or by any other means as may be specified by the Agency as soon as practicable after the occurrence of any incident. The permit holder shall include as part of the notification, the date and time of the incident, summary details of the occurrence, and where available, the steps taken to minimise any impacts.

6.2 In the case of any incident relating to any impact on water, the permit holder shall notify the Marine Institute, Sea Fisheries Protection Authority, Inland Fisheries Ireland, Bord Iascaigh Mhara and any other relevant authorities as soon as practicable after such an incident.

6.3 In the case of any incident relating to archaeology, marine mammals or migratory fish, the permit holder shall notify the National Monuments Service, National Parks and Wildlife Service, Marine Institute, Sea Fisheries Protection Authority and Inland Fisheries Ireland and any other relevant authorities as soon as practicable after such an incident.

6.4 The permit holder shall make a record of any incident. This record shall include details of the nature, extent, and impact of, and circumstances giving rise to, the incident. The record shall include all corrective actions taken to manage the incident, and the effect on the marine environment, and avoid recurrence. The permit holder shall, as soon as practicable following incident notification, submit to the Agency the incident record.

6.5 The permit holder shall record all complaints related to the loading and dumping activities. Each such record shall give details of the date and time of the complaint, the name of the complainant (if provided), and give details of the nature of the complaint. A record shall be kept of the

response made and any corrective action undertaken in the case of each complaint. This record shall be made available to the Agency upon request.

- 6.6 The permit holder shall as a minimum keep the following documents together and available for inspection by the Agency:
- (i) the permit(s) relating to the loading and dumping activities;
 - (ii) the previous years' AERs for the loading and dumping activities;
 - (iii) records of all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this permit and any previous permits dating back at least three years;
 - (iv) all correspondence with the Agency;
 - (v) complaints register;
 - (vi) up to date drawings/plans showing the location of the loading area, the dumping site and exclusion zones authorised by this permit;
 - (vii) marine positional log, and
 - (viii) any elements of the permit application and associated documentation referenced in this permit.

The documentation shall clearly state the associated permit registration number. This documentation shall be available to the Agency for inspection at all reasonable times and shall be submitted to the Agency, as required, in such a format as may be requested, including electronic submittal of the information or a summary of such information.

- 6.7 The permit holder shall submit electronically to the Agency, by the 31st March of each year, an AER covering the previous calendar year. This report shall include as a minimum the information specified in *Schedule D: Annual Environmental Report* of this permit, and shall be prepared in accordance with any relevant guidelines issued by the Agency or as otherwise prescribed by the Agency.
- 6.8 A full record, which shall be open to inspection by authorised officer of the Agency at all times, shall be kept by the permit holder on matters relating to each load of the substance or material intended to be dumped and put on board the vessel. This record shall be maintained continually and shall as a minimum contain those details specified in Condition 3.13 of this permit. This information shall be submitted as required by and as may be prescribed by the Agency as part of the Annual Environmental Report and immediately on request by an authorised officer.
- 6.9 All reports shall be certified accurate and representative by the permit holder, manager or a nominated, suitably qualified and experienced deputy.
- 6.10 The permit holder shall notify the Agency in writing upon completion of the loading and dumping activities to which this permit relates.
- 6.11 The permit holder shall submit the reports, proposals and submissions required by this permit by the deadlines specified. The permit holder shall not be in compliance with the requirements of this condition unless it has submitted every report, proposal and submission, the deadline for which has passed.
- 6.12 The permit holder shall carry out every action required by the Agency, and arising out of such reports, proposals or submission, by such deadline as the Agency may specify. The permit holder shall not be in compliance with the requirements of this condition unless and until it has carried out every such action.

<p>Reason: <i>To provide for the collection and reporting of adequate information on the loading and dumping at sea activity.</i></p>
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Condition 7. Financial Charges

7.1 Agency Charges

7.1.1 The permit holder shall pay to the Agency a contribution or such sum, as the Agency from time to time determines having regard to variations in the extent of reporting, auditing, inspections, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activities as the Agency considers necessary for the performance of its functions under the Dumping at Sea Act 1996 as amended.

7.1.2 The cost of any other tests, sampling, analysis and monitoring which the Agency may require in relation to the loading and/or dumping of the substance or material the subject of this permit shall be borne by the permit holder. Furthermore, the cost of any tests, sampling, analysis and monitoring surveys carried out by an authorised officer or by or on behalf of the Agency in relation to the sampling of a substance or material the subject of this permit shall also be borne by the holder of the permit.

7.2 The Permit Holder shall indemnify the Agency and its authorised officers against all cost incurred by him as a result of a breach of any of the conditions of this permit.

<p><i>Reason: To provide for adequate financing for monitoring to protect the marine environment.</i></p>

SCHEDULE A: Limitations

A.1 Quantity of Dredged Material to be Dumped at Sea

	Maximum volume (m ³), including entrained water, per dumping voyage from the inner Liffey Channel ^{Note 1}	Total maximum quantity (tonnes, wet weight) permitted annually	Total maximum quantity (tonnes, wet weight)
Dredged material	4,100	495,000	3,960,000

Note 1: The hopper fill capacity limit per voyage applies to dumping voyages from the inner Liffey Channel only, as defined in Condition 3.3, to the dumping site, to prevent sediment plumes at the dumping site due to the silty nature of sediment in the channel.

A.2 Location of Dumping Site

	Latitude	Longitude
Dmp 1	53°20.084	6°3.0596
Dmp 2	53°20.084	6°1.8798
Dmp 3	53°19.184	6°1.8798
Dmp 4	53°19.184	6°2.7697
Dmp 5	53°19.394	6°3.0597

A.3 Closed Period

From	To	Applicable Areas	Reason for Closed Period
1 st October	31 st March	Loading areas as per Condition 1.3	To avoid overlap with loading and dumping activities associated with any capital projects between October to March
1 st April	14 th May	Loading areas in the inner Liffey Channel upstream of Berth 49, including the main channel and channel side berths, but not including basins	To protect migrating Atlantic salmon smolts and River Lamprey.

SCHEDULE B: Emission Limits

There shall be no noise emissions of environmental significance.

SCHEDULE C: Monitoring

C.1 Monitoring at Loading Areas

Parameters	Monitoring Frequency/Time	Monitoring Locations	Analysis Method/Technique
Bathymetry & concurrent tide observations	<ul style="list-style-type: none"> • Within one week prior to the commencement of each loading campaign. • Within one week following completion of each loading campaign. 	Loading Areas as per Condition 1.3	High resolution bathymetric survey and concurrent tidal height measurements.

C.1.2 Water Quality Monitoring

Parameters	Monitoring Frequency/Time	Monitoring Locations	Analysis Method/Technique
Turbidity	Continuous for duration of loading activity and at a minimum one week prior to commencement of the loading activity and one week after completion of the loading activity.	<ol style="list-style-type: none"> 1. East Link Bridge 53°20.74 6°13.58 2. Poolbeg Jetty 53°20.52 6°11.58 3. Northbank Light 53°20.72 6°10.13 4. Tolka Estuary 53°20.69 6°9.566 	Alarmed turbidity sensor, deployed on moored buoy, to demonstrate compliance with Condition 4.8.2.

C.1.3 Sediment Monitoring

Parameters	Monitoring Frequency/Time	Monitoring Locations	Analysis Method/Technique
Visual inspection (to include colour, texture, odour, presence of animals etc.)	2023, 2026, 2029	Loading area at sediment sampling locations 1– 32 as shown in Figure 2.1.1 and sediment sampling locations DC03A–DC07 as shown in Figure 2.1.2 of application document 'Maintenance Dredging – 2022/29 Supporting Information and Attachments'.	Grab sampling of surface sediments and analysis by Standard Method ^{Note 2}
Water content & sediment density	2023, 2026, 2029		
Sediment grain size: ^{Note 1} % gravel (> 2mm fraction) % sand (< 2mm fraction) % mud/silt (< 63µm fraction)	2023, 2026, 2029		
Total organic carbon; Carbonate; Mercury; Arsenic; Cadmium; Copper; Lead; Zinc; Chromium; Nickel; Lithium; Aluminium; TBT; DBT; HCB; γ-HCH (Lindane); Total extractable hydrocarbons; Individual congeners of PCB 28, 52, 101, 118, 138, 153, 180; Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenzo(ah)anthracene, Benzo(ghi)perylene, Indeno(123-cd)pyrene, pp DDT, pp DDD, pp DDE.	2023, 2026, 2029		
Radionuclides	2027	To be agreed by the Agency	Grab sampling of surface sediments and analysis by gamma spectrometry

Note 1: Monitoring of granulometry shall include but not be limited to the following fractions: >2 mm, <2 mm, >63 µm and <63 µm.

Note 2: Sampling and analyses shall be conducted in accordance with the analytical and quality requirements set out in: M. Cronin et al. 2006. *Guidelines for the Assessment of Dredge Material for Disposal in Irish Waters*. Marine Environment & Health Series, No. 24. Marine Institute.

C.1.4 Marine Mammal Monitoring

Parameters	Monitoring Frequency/Time	Monitoring Locations	Analysis Method/Technique
Marine mammals	<ul style="list-style-type: none">• Duration of the loading activities	Within a 500m radial distance of the dredging vessel in the Loading Area	Monitoring to be undertaken by an independent Marine Mammal Observer with relevant experience.

C.2 Monitoring at Dumping Site

Parameters	Monitoring Frequency/Time	Monitoring Locations	Analysis Method/Technique
Bathymetry & concurrent tide observations	<ul style="list-style-type: none"> • Within one week prior to the commencement of each dumping campaign. • Within one week following completion of each dumping campaign. 	Dumping Site as per <i>Schedule A.2 Location of Dumping Site</i> of this permit.	High resolution bathymetric survey and concurrent tidal height measurements.

C.2.1 Water Quality Monitoring

Parameters	Monitoring Frequency and Timing	Monitoring Locations	Analysis Method/Technique
Turbidity	Once per annum prior to and immediately following a dumping activity, or as otherwise required by the Agency.	<ol style="list-style-type: none"> 1. A minimum of three locations shall be monitored within the modelled zone of impact of the dumping activity. 2. Control point ^{Note 1} 	Turbidity probe to demonstrate compliance with Condition 4.8.2.

Note 1: The control site should be situated well outside the zone of impact of the dumping activity and be representative of background turbidity levels in Dublin Bay.

C.2.2 Marine Mammal Monitoring

Parameters	Monitoring Frequency/Time	Monitoring Locations	Analysis Method/Technique
Marine mammals	Duration of the dumping activities.	Within a 500m radial distance of the dumping activity.	Monitoring to be undertaken by an independent Marine Mammal Observer with relevant experience.

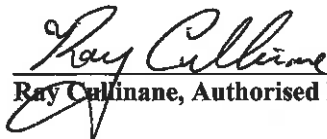
SCHEDULE D: Annual Environmental Report

Annual Environmental Report Content ^{Note 1}
Register/log of loading and dumping activities. OSPAR dumping report. Reported incidents summary. Complaints summary. Monitoring Summary. Marine Mammal Monitoring Report. Accident Prevention Procedure. Emergency Response Procedure. Investigation of alternative re-uses summary. Any other items specified by the Agency.

Note 1: Content may be revised subject to the approval of the Agency.

Sealed by the seal of the Agency on this the 4th day of October 2022.

PRESENT when the seal of the Agency was affixed hereto:



Ray Cullinane, Authorised Person

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