

Mr John Carlton
Shannon Foynes Port Company
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Co Limerick

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22 January 2013

Reg. No. S0009-02

re: Notice of a decision on a dumping at sea permit application in accordance with the Dumping at Sea Acts 1996 to 2012.

Dear Mr Carlton,

In accordance with the Dumping at Sea Acts as amended, the Agency hereby notifies you of its decision to grant a dumping at sea permit subject to conditions to Shannon Foynes Port Company. Please find accompanying a copy of the Agency's decision.

All documentation relating to the application is available to view on the Agency's website at www.epa.ie, including information on public participation and judicial review processes.

Please use the register number of the dumping at sea permit, **S0009-02**, in any future communication in respect of same.

You will be contacted in due course by an inspector in the Office of Environmental Enforcement, Environmental Protection Agency who will discuss the implementation of the conditions of the licence.

Yours sincerely,



Eve O'Sullivan
Programme Officer
Office of Environmental Licensing Programme

Encl.



Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

DUMPING AT SEA PERMIT

Permit Register Number:	S0009-02
Permit Holder:	Shannon Foynes Port Company Mill House Foynes County Limerick
Location of Loading:	Foynes Port and Limerick Dock
Location of Dumping:	Shannon Estuary

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DUMPING AT SEA ACTS 1996 TO 2010

DUMPING AT SEA PERMIT

Decision of the Agency, under Section 5(1) of the
Dumping at Sea Acts 1996 to 2010.

Reference number: **S0009-02**

The Agency in exercise of the powers conferred on it by the Dumping at Sea Acts 1996 to 2010, for the reasons hereinafter set out, hereby grants this dumping at sea permit to Shannon Foynes Port Company in respect of Foynes Port and Limerick Dock, subject to conditions, as set out in the schedule attached hereto.


The permit authorises the loading and dumping at sea of dredged material from Foynes Port and Limerick Dock 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 Acts 1996 to 2010*

GIVEN under the Seal of the Agency this 22nd day of January 2013

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


Frank Clinton, 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 is for the loading of dredged material from maintenance dredging at Foynes Port and Limerick Dock and the dumping of the dredged material in the Shannon Estuary. Chemical analysis has confirmed that the material in question is suitable for dumping at sea. Under this permit, a maximum of 276,000 tonnes of material shall be loaded and dumped annually by trailer suction hopper dredger, up to a total maximum of 1,656,000 tonnes over six years. A limited quantity of material (16,000 tonnes) is also permitted to be plough dredged annually, up to a total maximum of 96,000 tonnes over six years. The permit holder is required to manage the permitted activities to ensure the protection of the marine environment and 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 Shannon Foynes 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 Acts 1996 to 2010, unless otherwise defined in the section.

AER	Annual Environmental Report.
Agreement	Agreement 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.
Campaign	A planned period of sustained 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.
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.
Closed period	Period of time when loading and dumping at sea is prohibited in order to protect designated species or sites.
Day	Any 24 hour period.
Daytime	0800 hrs to 2200 hrs.
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	<ul style="list-style-type: none">(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; and(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.
Environmental damage	As defined in Directive 2004/35/EC.
EPA	Environmental Protection Agency.
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
Harbour Authority	As defined in Section 1 of the Dumping at Sea Acts 1996 to 2010.
HCB	Hexachlorobenzene
HCH	Hexachlorocyclohexane
Incident	The following shall constitute as 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 environmental pollution has, or may have, taken place; and(v) a complaint of an environmental nature.
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.
Master	The person having the command or charge of the vessel.
Monthly	A minimum of 12 times per year, at intervals of approximately one month.
Neap tide	The tide with the smallest tidal range (i.e. the lowest high water and the highest low water), occurring twice monthly at the middle of the moon's first and last quarters.
Noise-sensitive location (NSL)	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic



PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyls
Permit Holder	Shannon Foynes Port Company, Mill House, Foynes, County Limerick.
RPII	Radiological Protection Institute of Ireland.
Position	Latitude and longitude coordinates in degrees and decimal minutes, based on the WGS 84 datum.
Sample(s)	Unless the context of this permit indicates to the contrary, the term sample(s) shall include measurements taken by electronic instruments.
Spring tide	The tide with the greatest tidal range (i.e. the highest high water and the lowest low water), occurring twice monthly at the full and new moon periods.
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
TEH	Total extractable hydrocarbons
The Agency	Environmental Protection Agency.
The Maritime Area	As defined in Section 1 of the Dumping at Sea Acts 1996 to 2010, '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 Acts 1996 to 2010.

In reaching this decision the Environmental Protection Agency has considered the application and supporting documentation received from the applicant, all submissions received from other parties and the report of its inspector.

Part I Schedule of Activities Permitted

In pursuance of the powers conferred on it by the Dumping at Sea Acts 1996 to 2010, the Environmental Protection Agency (the Agency), under Section 5 of the said Acts, grants this Dumping at Sea Permit to Shannon Foynes Port Company, Mill House, Foynes, County Limerick. The permit authorises the loading and dumping at sea activities described below, subject to conditions listed in Part II, with the reasons therefor and the associated schedules attached thereto.

Part II Conditions

Condition 1. Scope

- 1.1 Statutory Obligations
 - 1.1.1 This permit is for the purposes of loading and dumping at sea under the Dumping at Sea Acts 1996 to 2010, 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.
 - 1.1.2 This permit may be technically amended, as and when considered necessary by the Agency.
- 1.2 The material or substance to which this permit relates shall be dredged material from that part of the sea specified in *Schedule A: Limitations*, of this permit.
- 1.3 For the purposes of this permit, the locations of the loading areas authorised by this permit are in those parts of the maritime area bounded by the coordinates specified in *Schedule A: Limitations*, of this permit and outlined in red on Drawings No. 1 and 2 of Attachment B.3 of the application for this permit. Any reference in this permit to "loading areas" shall mean the areas thus outlined. The permitted loading activity shall be carried out only within the areas outlined.
- 1.4 For the purposes of this permit, the locations of the dumping sites authorised by this permit are in those parts of the maritime area bounded by the coordinates specified in *Schedule A: Limitations*, of this permit and outlined in blue on Maps No. 3 and 4 of Attachment E.2 of the application for this permit. Any reference in this permit to "dumping sites" shall mean the areas thus outlined. The permitted dumping activity shall be carried out only within the areas outlined.
- 1.5 For the purposes of this permit, the locations of the plough dredging areas authorised by this permit are in those parts of the maritime area bounded by the coordinates specified in *Schedule A: Limitations*, of this permit. The permitted plough dredging activity shall be carried out only within the areas outlined.
- 1.6 Loading and dumping at sea shall be limited as 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 commenced without the prior written agreement of the Agency.

Reason: <i>To clarify the scope of this permit.</i>
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Condition 2. Management of the loading and dumping at sea activities

- 2.1 The permit holder shall adopt all reasonably practicable measures to minimise the noise impact of the permitted activities. Noise from the permitted activities shall not cause a nuisance at any NSLs.
- 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 at least two weeks prior to the commencement of the loading and dumping activities, 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.
- 2.6 Corrective Action
The permit holder shall initiate an investigation and corrective action in the event of a reported non-conformity with this permit to the satisfaction of the Agency.
- 2.7 Communications Programme
The permit holder shall, within one month of the date of grant of this permit, establish and maintain a Public Awareness and Communication Programme to ensure members of the public can obtain information at reasonable times.

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 Loading and dumping activities must be completed within six years of the date of commencement of the permitted activities.
- 3.2 A closed period from 1st February to 30th June inclusive shall apply to all loading and dumping activities, including plough dredging, at Limerick Dock and Limerick Approach Channel.
- 3.3 Plough dredging that is urgently required for the purpose of navigational safety shall only be permitted during the closed period specified in Condition 3.2 with the prior written agreement of the Agency.
- 3.4 No material shall be dumped at sea which has been categorised as unsuitable for disposal.
- 3.5 Loading shall be carried out by trailing suction hopper dredger.
- 3.6 The permit holder shall take all reasonably practicable measures during loading to limit the release of suspended solids into the water column.
- 3.7 Dumping from the trailer suction hopper dredger shall be effected by release of the material through the hull of the vessel while the vessel is in motion.
- 3.8 Dumping activities shall be conducted to ensure a uniform spread of material throughout the dumping sites.
- 3.9 Every alternate load of material loaded from Limerick Dock and Limerick Approach Channel shall be dumped at Dumping Sites A, B and C in rotation.
- 3.10 Dumping at Dumping Sites A and B shall be conducted on ebb tides as far as reasonably practicable.
- 3.11 Plough dredging shall be confined to those areas specified in *Schedule A.3 Location of Plough Dredging Areas*, of this permit.
- 3.12 Plough dredging shall be conducted during daytime hours only.
- 3.13 Plough dredging shall be conducted on ebb tides only.
- 3.14 Plough dredging shall be conducted during spring tides as far as reasonably practicable.

- 3.15 All mitigation measures set out in the Natura Impact Statement submitted as part of the application for this permit shall be implemented unless otherwise agreed by the Agency.
- 3.16 Following submission of the results of the sediment analysis specified in Condition 4.5 and *Schedule B.1 Monitoring at Loading Areas*, of this permit, loading and dumping activities may not proceed without the written agreement of the Agency.
- 3.17 The permit holder shall liaise with the Harbour Master at the Shannon Foynes Port Company prior to the commencement of and during the loading and dumping activities.
- 3.18 Information relating to the activity shall be automatically recorded during each dumping voyage 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 dumping began;
 - (v) The date, time and position at which dumping ended;
 - (vi) The quantity, stated in metric tonnes, of the substance or material dumped;
 - (vii) The date, time and position at which the vessel completed the voyage for the purpose of dumping; and
 - (viii) Logged vessel track record data.
- 3.19 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. 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.
- 3.20 The permit holder shall permit authorised officers to be on board the vessel. They shall permit and facilitate the carrying out by the authorised officer of his functions under the Dumping at Sea Acts 1996 to 2010, and shall comply with the provisions of those Acts in relation to the authorised officer and those functions.

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 B: 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 or competent person.
- 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 agreement of the Agency following evaluation of test results.

4.4 Bathymetry

- 4.4.1 The permit holder shall carry out pre-loading and post-loading bathymetric surveys of the loading areas in accordance with *Schedule B.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 sites in accordance with *Schedule B.2 Monitoring at Dumping Sites*, of this permit.
- 4.4.3 The permit holder shall carry out pre-dredge and post-dredge bathymetric surveys of the plough dredging areas in accordance with *Schedule B.3 Monitoring at Plough Dredging Areas*, of this permit.

4.5 Sediment analysis

- 4.5.1 The permit holder shall carry out analysis of the sediment at the loading areas in accordance with *Schedule B.1 Monitoring at Loading Areas*, of this permit. A report on this analysis shall be submitted to the Agency within 1 month of completion of the analysis.

4.6 Marine Mammals

- 4.6.1 An independent Marine Mammal Observer with relevant expertise shall accompany the loading/dumping vessel(s) in the vicinity of Foynes to monitor and record the activity of dolphins during the duration of the permitted activities.
- 4.6.2 All loading/dumping activity shall be suspended if dolphin activity occurs within a distance of 2.5 km (approximately 1.5 nautical miles) of the vessel(s).
- 4.6.3 A report on the monitoring to which this condition refers shall be forwarded to offshore@ahg.gov.ie within 1 month of completion of each loading/dumping campaign. The report shall also be submitted to the Agency as part of the Annual Environmental Report.

4.7 Archaeology

- 4.7.1 The Underwater Archaeology Unit of the Department of Arts, Heritage and the Gaeltacht shall be informed immediately if material of archaeological potential is recovered during the course of the loading activity.
- 4.7.2 The fishweir complex at O'Brien's Point shall be re-assessed in 2016 by a suitably qualified archaeologist under a licence issued by the Department of Arts, Heritage and the Gaeltacht. The archaeological report shall be submitted to the Agency as part of the Annual Environmental Report.

Reason: *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.*

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 environmental 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 agreement 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 document 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.

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

- 6.1 The permit holder shall notify the Agency by both telephone and either email or webform, to the Agency's headquarters in Wexford, or to such other Agency office as may be specified by the Agency, as soon as practicable after the occurrence of any incident (as defined in this permit). 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 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:
- (i) the permit(s) relating to the dumping sites;
 - (ii) the previous years' AERs for the dumping sites;
 - (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; and
- (vi) up to date drawings/plans showing the location of the loading areas and the dumping sites authorised by this permit.

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 C: 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 3.19 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.

Reason: *To provide for the collection and reporting of adequate information on the loading and dumping at sea activity.*

Condition 7. Financial Charges and Provisions

- 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 discharges as the Agency considers necessary for the performance of its functions under the Dumping at Sea Acts 1996 to 2010.
 - 7.1.2 The cost of any other tests, sampling, analysis and monitoring which the Agency may require in relation to the loading and 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 occurred by him as a result of a breach of any of the conditions of this permit.
- 7.3 Environmental Liabilities
 - 7.3.1 The permit holder shall as part of the AER, provide an annual statement as to the measures taken or adopted at the loading areas and the dumping sites in relation to the prevention of environmental damage, and the financial provisions in place in relation to the underwriting of costs for remedial actions following anticipated events or accidents/incidents, as may be associated with loading and dumping at sea.

- 7.3.2 The permit holder shall arrange for the completion, by an independent and appropriate qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) to address the liabilities from loading and dumping at sea. A report on this assessment, to the satisfaction of the Agency, shall be submitted as part of the second AER (required under Condition 6.7). The ELRA shall be reviewed as necessary to reflect any significant change to the volume or character of the material/substance to be loaded and dumped at sea, and in any case every three years following initial agreement. The results of the review shall be notified as part of the AER.
- 7.3.3 As part of the measures identified in Condition 7.3.1, the permit holder shall, to the satisfaction of the Agency, make financial provision to cover any liabilities identified in Condition 7.3.2. The amount of indemnity held shall be reviewed and revised as necessary, but at least triennially. Proof of renewal or revision of such financial indemnity shall be included in the annual 'Statement of Measures' report identified in Condition 7.3.1.
- 7.3.4 The permit holder shall have regard to the most recent Environmental Protection Agency Guidance on Environmental Liability Risk Assessment, Decommissioning Management Plans and Financial Provision when implementing Conditions 7.3.2 and 7.3.3 above.

Reason: <i>To provide for adequate financing for monitoring and financial provisions for measures to protect the marine environment.</i>

SCHEDULE A: Limitations**A.1 Dumping at sea of a material/substance****Quantity of Material to be Loaded and Dumped at Sea**

Material/ substance	Dumping Site	Maximum quantity to be dumped annually (tonnes)	Total maximum quantity to be dumped over 6 years (tonnes)
Dredged material	Dumping Site A	40,000	240,000
	Dumping Site B	40,000	240,000
	Dumping Site C	196,000	1,176,000
	Total	276,000	1,656,000

Quantity of Material to be Plough Dredged

Material/ substance	Plough Dredging Area	Maximum quantity to be dumped annually (tonnes)	Total maximum quantity to be dumped over 6 years (tonnes)
Dredged material	A: Limerick Dock	1,000	6,000
	B: Limerick Approach Channel	5,000	30,000
	C: Foynes Harbour	10,000	60,000
	Total	16,000	96,000

**A.2 Location of Loading Areas****Loading Area A: Limerick Dock**

	Latitude	Longitude
(i)	52°39.600' N	8°38.370' W
(ii)	52°39.546' N	8°38.328' W
(iii)	52°39.444' N	8°38.664' W
(iv)	52°39.474' N	8°38.682' W
(v)	52°39.492' N	8°38.616' W
(vi)	52°39.498' N	8°38.622' W
(vii)	52°39.498' N	8°38.676' W
(viii)	52°39.510' N	8°38.676' W
(ix)	52°39.510' N	8°38.616' W
(x)	52°39.558' N	8°38.568' W

Loading Area B: Limerick Approach Channel

	Latitude	Longitude
(i)	52°39.558' N	8°38.916' W
(ii)	52°39.558' N	8°38.676' W
(iii)	52°39.498' N	8°38.676' W
(iv)	52°39.498' N	8°38.916' W

Loading Area C: Foynes Harbour

	Latitude	Longitude
(i)	52°36.816' N	9°6.624' W
(ii)	52°36.918' N	9°6.576' W
(iii)	52°36.918' N	9°6.498' W
(iv)	52°36.954' N	9°6.222' W
(v)	52°36.978' N	9°6.138' W
(vi)	52°36.990' N	9°6.066' W
(vii)	52°36.990' N	9°6.024' W
(viii)	52°36.984' N	9°5.982' W
(ix)	52°36.966' N	9°5.934' W
(x)	52°36.948' N	9°5.916' W
(xi)	52°36.912' N	9°5.916' W
(xii)	52°36.894' N	9°5.934' W
(xiii)	52°36.768' N	9°6.354' W

Loading Area D: Foynes Approach Channel

	Latitude	Longitude
(i)	52°36.816' N	9°6.624' W
(ii)	52°36.918' N	9°6.822' W
(iii)	52°37.122' N	9°7.854' W
(iv)	52°37.176' N	9°7.854' W
(v)	52°36.942' N	9°6.654' W
(vi)	52°36.918' N	9°6.576' W

**A.3 Location of Plough Dredging Areas****Plough Dredging Area A: Limerick Dock**

	Latitude	Longitude
(i)	52°39.600' N	8°38.370' W
(ii)	52°39.546' N	8°38.328' W
(iii)	52°39.444' N	8°38.664' W
(iv)	52°39.474' N	8°38.682' W
(v)	52°39.492' N	8°38.616' W
(vi)	52°39.498' N	8°38.622' W
(vii)	52°39.498' N	8°38.676' W
(viii)	52°39.510' N	8°38.676' W
(ix)	52°39.510' N	8°38.616' W
(x)	52°39.558' N	8°38.568' W

Plough Dredging Area B: Limerick Approach Channel

	Latitude	Longitude
(i)	52°39.500' N	8°38.680' W
(ii)	52°39.500' N	8°38.850' W
(iii)	52°39.530' N	8°38.850' W
(iv)	52°39.520' N	8°38.680' W

Plough Dredging Area C: Foynes Harbour

	Latitude	Longitude
(i)	52°36.890' N	9°5.930' W
(ii)	52°36.770' N	9°6.350' W
(iii)	52°36.820' N	9°6.620' W
(iv)	52°36.840' N	9°6.620' W
(v)	52°36.800' N	9°6.350' W
(vi)	52°36.910' N	9°5.950' W

**A.4 Location of Dumping Sites****Dumping Site A**

	Latitude	Longitude
(i)	52°40.542' N	8°44.394' W
(ii)	52°40.350' N	8°43.794' W
(iii)	52°40.440' N	8°44.424' W

Dumping Site B

	Latitude	Longitude
(i)	52°40.668' N	8°51.192' W
(ii)	52°40.722' N	8°50.688' W
(iii)	52°40.620' N	8°50.658' W
(iv)	52°40.572' N	8°51.108' W

Dumping Site C

	Latitude	Longitude
(i)	52°37.194' N	9°8.850' W
(ii)	52°37.542' N	9°8.484' W
(iii)	52°37.458' N	9°8.328' W
(iv)	52°37.122' N	9°8.688' W

**A.5 Closed Period**

From	To	Applicable Areas	Reason for Closed Period
1 st February	30 th June	Loading Areas A and B Dumping Sites A and B Plough Dredging Areas A and B ^{Note 1}	Primarily for the protection of migratory fish

Note 1: With the exception of emergency plough dredging agreed by the Agency in accordance with Condition 3.3 of this permit.



SCHEDULE B: Monitoring**B.1 Monitoring at Loading Areas** *Note 1*

Parameters	Timing	Monitoring Locations	Analysis Method/Technique
Bathymetry & concurrent tide observations	Within one week prior to the commencement of each loading campaign. Within one week following completion of each loading campaign.	Loading Areas A, B, C and D.	Bathymetric survey lines to run perpendicular to direction of residual flow; vertical resolution ≥ 20 cm; horizontal control by DGPS; line interval at 25 m. Tidal height measurements to be taken every 15 minutes at levelled benchmark.
Sediment analysis: Granulometry <i>Note 2</i> Total organic carbon Mercury Zinc Nickel Copper Chromium Aluminium Manganese Lithium Lead Arsenic Cadmium Dibutyl tin Tributyl tin γ -HCH (Lindane) HCB PCB 7 <i>Note 3</i> PAH <i>Note 4</i> TEH Radionuclides	2017	Grab samples of surface sediments to be taken at: Limerick: DR1: 52°39.536' N, 08°38.825' W DR2: 52°39.539' N, 08°38.734' W DR2: 52°39.461' N, 08°38.825' W DR3: 52°38.686' N, 08°38.825' W DR4: 52°39.558' N, 08°38.541' W DR5: 52°39.580' N, 08°38.381' W Foynes: DR6: 52°36.836' N, 09°06.172' W DR7: 52°36.810' N, 09°06.513' W DR8: 52°36.872' N, 09°06.689' W DR9: 52°37.005' N, 09°06.987' W	Standard method <i>Note 5</i>
Radionuclides	2017	To be agreed by the RPII	Standard method
Marine mammals	Duration of the loading activities	Loading Areas C and D	Monitoring to be undertaken by an independent Marine Mammal Observer with relevant experience

Note 1: The frequency, methods and scope of monitoring, sampling and analyses may be amended in accordance with Condition 4.3.

Note 2: Monitoring of granulometry shall include the following fractions: >2 mm, <2 mm, >63 μ m and <63 μ m.

Note 3: ICES 7 polychlorinated biphenyls: PCB 028/052/101/138/153/180/118.

Note 4: Polycyclic aromatic hydrocarbons: 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.

Note 5: 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.*

B.2 Monitoring at Dumping Sites *Note 1*

Parameters	Timing	Monitoring Locations	Analysis Method/Technique
Bathymetry & concurrent tide observations	Within one week prior to commencement of each dumping campaign. Within one week following completion of each dumping campaign.	Dumping Sites A, B and C.	Bathymetric survey lines to run perpendicular to direction of residual flow; vertical resolution ≥ 20 cm; horizontal control by DGPS; line interval at 25 m. Tidal height measurements to be taken every 15 minutes at levelled benchmark.
Marine mammals	Duration of the dumping activities	Dumping Site C	Monitoring to be undertaken by an independent Marine Mammal Observer with relevant experience
Archaeology	2016	Fishweir complex at O'Brien's Point adjacent to Dumping Site C.	Monitoring to be undertaken by a suitably qualified archaeologist under a licence issued by the Department of Arts, Heritage and the Gaeltacht

Note 1: The frequency, methods and scope of monitoring, sampling and analyses may be amended in accordance with Condition 4.3.

**B.3 Monitoring at Plough Dredging Areas** *Note 1*

Parameters	Timing	Monitoring Locations	Analysis Method/Technique
Bathymetry & concurrent tide observations	Within one week prior to commencement of each plough dredging campaign. Within one week following completion of each plough dredging campaign.	Plough Dredging Areas A, B and C.	Bathymetric survey lines to run perpendicular to direction of residual flow; vertical resolution ≥ 20 cm; horizontal control by DGPS; line interval at 25 m. Tidal height measurements to be taken every 15 minutes at levelled benchmark.

Note 1: The frequency, methods and scope of monitoring, sampling and analyses may be amended in accordance with Condition 4.3.


SCHEDULE C: Annual Environmental Report

Annual Environmental Report Content ^{Note 1}
<p>Register/log of loading and dumping activities.</p> <p>OSPAR dumping report.</p> <p>Marine positional log.</p> <p>Reported incidents summary.</p> <p>Complaints summary.</p> <p>Monitoring summary.</p> <p>Marine mammal monitoring report.</p> <p>Accident prevention procedure.</p> <p>Emergency response procedure.</p> <p>Statement of measures in relation to prevention of environmental damage and remedial actions (Environmental Liabilities).</p> <p>Environmental Liabilities Risk Assessment Review (every three years or more frequently as dictated by relevant on-site change including financial provisions.</p> <p>Any other items specified by the Agency.</p>

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

Sealed by the seal of the Agency on this the 22nd day of January 2013

PRESENT when the seal of the Agency
Was affixed hereto:



Frank Clinton, Authorised Person

