

# Dumping at Sea Annual Environmental Report (AER) 2021

Permit Register Number: S0011-03

Permit Holder: Donegal Co. Council

Address: County House  
The Diamond  
Lifford  
Co. Donegal  
F93 Y622

Location of Loading: Buncrana Harbour

Location of Dumping: Buncrana Harbour  
160m from pier

# Declaration

---

I, Cathal Sweeney, Executive Engineer, confirm, by ticking the box below, that all the information provided in this report is truthful, accurate and complete to the best of my knowledge and belief.

In addition, I confirm that all monitoring and performance reporting and summarised herein is available for inspection by the EPA.

**Tick here**



## **Annual Environmental Report 2021**

Dumping at Sea Permit S0011-03

Buncrana Harbour

Donegal Co. Council

County House, The Diamond, Lifford, Co. Donegal F93 Y622



ISSUE FORM	
Project number	18670
Document number	6006
Document title	Annual Environmental Report 2021, Buncrana Dumping at Sea Permit S0011-03
Document status	FINAL
Document prepared by	Úna Williams - March 2021

## Table of Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
<b>2</b>	<b>BACKGROUND .....</b>	<b>1</b>
<b>3</b>	<b>REGISTER/LOG OF DREDGING/LOADING &amp; DUMPING ACTIVITIES.....</b>	<b>3</b>
<b>4</b>	<b>OSPAR DUMPING REPORT .....</b>	<b>3</b>
<b>5</b>	<b>REPORTED INCIDENTS SUMMARY .....</b>	<b>3</b>
<b>6</b>	<b>COMPLAINTS SUMMARY .....</b>	<b>3</b>
<b>7</b>	<b>MONITORING SUMMARY .....</b>	<b>3</b>
<b>8</b>	<b>MARINE MAMMAL MONITORING.....</b>	<b>4</b>
<b>9</b>	<b>ACCIDENT PREVENTION PROCEDURE .....</b>	<b>4</b>
<b>10</b>	<b>EMERGENCY RESPONSE PROCEDURE.....</b>	<b>6</b>
<b>11</b>	<b>INVESTIGATION OF ALTERNATIVE RE-USES .....</b>	<b>7</b>

## TABLE OF TABLES

Figure 1: Loading/Dredging Area at Buncrana Harbour .....	2
Figure 2: Disposal/Dumping Area located approximately 160m from Buncrana Harbour .....	2

## TABLE OF FIGURES

Table 1: Daily quantities (tonnes) of material dredged in summer 2020 **Error! Bookmark not defined.**

## LIST OF APPENDICES

<b>Appendix 1</b>	Chemical and Granulometric Analysis of Sediments
<b>Appendix 2</b>	OSPAR Report
<b>Appendix 3</b>	Donegal County Council Incident Reporting Form

## 1 INTRODUCTION

Donegal County Council (DCC) was granted a Dumping at Sea (DaS) Permit (Reg. No. S0011-03) by the Environmental Protection Agency (EPA) in July 2018. The Permit facilitates maintenance dredging at Buncrana Harbour in County Donegal for up to 8,000 tonnes of material each year for eight years (a maximum of 64,000 tonnes), with subsequent disposal at sea by plough dredging.

Condition 6.7 of the Permit requires DCC to submit an Annual Environmental Report (AER) as follows: *“The permit holder shall submit electronically to the Agency, by the 31<sup>st</sup> 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”.*

### SCHEDULE D: Content of Annual Environmental Report

#### Annual Environmental Report Content

**Register/log of 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**

The Dumping at Sea Permit application was prepared by Malachy Walsh and Partners (MWP) Engineering and Environment Consultants on behalf of Donegal County Council. MWP have also prepared this Annual Environmental Report (AER).

## 2 BACKGROUND

The purpose of dredging at Buncrana Pier is to re-establish and maintain a safe and navigable water depth within the approach channel and at the main berths. The material to be dredged consists of recently deposited clean sediment from within the berthing area on the south face of Buncrana Pier and the approach channel to Buncrana Harbour. The method of dredging and disposal involves plough dredging the material out to a large area of deep channel located beyond the -2m CD contour where it will settle out.

It is envisaged that dredging will be undertaken twice a year with each campaign lasting 7 to 12 days, subject to tides and weather.

The dredge/loading area and the disposal/dumping area are shown in **Figure 1** and **Figure 2**, respectively. The dredge area measures approximately 1.45 ha and includes the approach channel to the pier and slipway, and the main berths at the pier. The dumping area is approximately 27.45 ha and encompasses the area surrounding the pier and slipway, extending northwest, due west and southwest.



Figure 1: Loading/Dredging Area at Buncrana Harbour



Figure 2: Disposal/Dumping Area located approximately 160m from Buncrana Harbour

### 3 REGISTER/LOG OF DREDGING/LOADING & DUMPING ACTIVITIES

No dredging and therefore no Dumping at Sea took place at Buncrana Harbour in 2021 due to impact of Covid and the requirement to carry out chemical and granulometric analysis of sediments within the Plough Dredging Site in 2021. Details of sampling and analysis are included in **Appendix 1**.

### 4 OSPAR DUMPING REPORT

The OSPAR Report is included in **Appendix 2** of this report.

### 5 REPORTED INCIDENTS SUMMARY

There were no reported incidents as no dredging or Dumping at Sea was carried out and there were no reported incidents from the sampling activity. The Accident Prevention Procedure is detailed in **Section 9**, below, while the Emergency Response Procedure is detailed in **Section 10**.

A copy of Donegal County Council Incident Reporting and Investigation form is included in **Appendix 3**

### 6 COMPLAINTS SUMMARY

There were no complaints as no dredging or Dumping at Sea was carried out in 2021.

### 7 MONITORING SUMMARY

The monitoring requirements for the Dredging/Loading and Dumping Areas are set out in Condition 4 and Schedule C of the Permit. No dredging or Dumping at Sea was carried out in 2021 therefore no monitoring took place in 2021 as required by the Permit.

#### **Schedule C.1 Monitoring at Plough Dredging Area**

Condition 4.4 and Schedule C.1 require Bathymetry Surveys and concurrent tide observations pre- and post-dredging activities.

#### **Schedule C.2 Sediment Monitoring**

Condition 4.5 and Schedule C.2 set out the sediment monitoring requirements. Condition 4.5.1 requires *“the permit hold shall carry out chemical and granulometric analysis of sediments within the Plough Dredging Sites in 2021 and 2024 in accordance with Schedule C.2 Sediment Monitoring”*. The results must be reported to the Agency within a month and dredging cannot proceed without the agreement of the Agency.

Sediment monitoring was carried out 2021. Sampling from 3 locations within the area to be dredged annually was completed with chemical and granulometric analysis of sediments carried out by an approved laboratory. A report on the sampling and analysis is included in **Appendix 1**. Chemical analysis results are also included in **Appendix 1**.

Repeat granulometric and chemical sampling analysis of the sediment is required every three years, i.e. to be completed in 2024.

## 8 MARINE MAMMAL MONITORING

### Schedule C.3 Marine Mammal Monitoring

Condition 4.6 and Schedule C.3 set out the marine mammal monitoring requirements. Condition 4.6.1 requires *“the permit holder shall appoint a Marine Mammal Observer who shall meet the monitoring and reporting requirements of the NPWS. Full reporting on Marine Mammal Observer operations and mitigation undertaken should be made to the Agency and [offshore@ahq.gov.ie](mailto:offshore@ahq.gov.ie) within 1 month of completion of each campaign”*.

No dredging or Dumping at Sea was carried out in 2021 therefore no Marine Mammal Monitoring was required in 2021.

## 9 ACCIDENT PREVENTION PROCEDURE

A Safety Statement for Buncrana Harbour was put in place by The Piers and Harbours Section of Donegal County Council. It was drafted to comply with Section 20 of the Safety, Health and Welfare at Work Act, 2005. It covers activities within the Harbour area as defined in the First Schedule of the “Donegal County Council (Certain Harbours) Bye-Laws 2010. It relates to the Buncrana Harbour Area and covers structures and equipment under the control of Donegal County Council, including piers, slipways, walkways, shared facilities, roads, etc. Employees of Donegal County Council engaged in activities within the Harbour area should familiarise themselves with the safety measures when working in the Harbour area.

In order to safeguard the Safety, Health and Welfare of all those engaged in dredging and Dumping at Sea operations the principles of prevention will be adopted as it is recognised that “prevention is the best cure”. These principles include:

- The avoidance of risks
- The evaluation of unavoidable risks
- The combating of risks at source
- The adaptation of work to the individual especially in relation to the design of places of work.  
The choice of work equipment and the modification of systems of work
- The adaptation of the place of work to technical progress
- The replacement of dangerous articles, substances or systems of work by less dangerous alternatives
- Prioritising collective measures over individual measures
- The facilitation of training

However, beyond this, it is essential that both employers and employees engaged in dredging operations are aware of their particular duties/responsibilities under the Safety, Health and Welfare at Work Act (SHWWA) 2005.

### 9.1 DUTIES OF THE EMPLOYER

There is a duty upon all employers engaged in dredging operations in Buncrana Harbour as well as those providing specialist sub-contracting work viz. monitoring etc. to ensure the health, safety and welfare at work of the employees so far as is reasonably practicable. To achieve this, employers shall:

- Manage and conduct the work activities in a safe manner
- Manage and conduct the work activities to prevent improper conduct

- Ensure that the design, provision and maintenance of the place of work (insofar as they are able within the remit of the contract) is safe and without risk to health
- Ensure that there is safe access to and egress from the place of work
- Ensure that tools, equipment and machinery is properly maintained, certified where required and not used where it is unfit for purpose.
- Reduce exposure to noise, vibration, ionising or other radiation, and substances not conducive to good health
- Ensure that the systems of work to complete tasks are properly planned, organised performed, maintained and revised as appropriate.
- Provide and maintain welfare facilities at locations under its control.
- Provide appropriate training, information and supervision.
- Provide suitable personal protective equipment where risks cannot be eliminated.
- Make provisions for procedures to be adopted in the case of an emergency or serious and imminent danger.
- Report accidents and dangerous occurrences.
- Obtaining where necessary the services of a competent person to meet their obligations under the Safety, Health and Welfare at Work Act 2005.

## 9.2 DUTIES OF THE EMPLOYEE

As well as employers having to take responsibility to ensure dredging operations are carried out in a safe manner to ensure the safety and health of all those who are engaged in the operation, there is also a duty upon every employee to ensure that their actions or omissions do not give rise to a situation where health and safety are compromised. Their duties include the following:

- Take reasonable care to protect their own health and safety as well as the health and safety of any other person affected by their acts or omissions.
- Ensure they are not under the influence of an intoxicant.
- Co-operate with their employer so far as is necessary to enable the employer to comply with the relevant statutory provisions.
- Not engage in improper conduct that is likely to endanger his or her own safety or that of any other person.
- Attend such training as requested by his/her employer.
- Having regard to training and instructions given by the employer, the employee shall make correct use of any article or substance provided for use by the employee
- Report to his/her employer or any other appropriate person as soon as is practicable the following:
  - Any work being carried out, or likely to be carried out in a manner which might endanger the safety, health or welfare at work of the employee or that of any other person
  - Any defect in the place of work, the systems of work, any article or substance which might endanger the safety, health or welfare at work of the employee or that of any other person
  - Any contravention of the relevant statutory provisions which may endanger the safety, health and welfare at work of the employee or that of any other person.
- Abide by their work conditions which are specific to the position they hold.
- Abide by site specific safety plans
- Take all reasonable steps to ensure their own safety and that of others when carrying out their tasks.
- Comply with all aspects of relevant statutory instruments whilst carrying out their tasks.
- Ensure all ongoing works are left in a safe secure state and where this is not possible to safeguard uninvited access.

Specific preventative measures involving dredging operations shall include:

- Only going to sea when it is safe to do so
- Load the vessel evenly so as to not unduly exert it to forces which could render the vessel unstable in the water.
- Inform other sea farers of dredging operations in advance of commencement.
- Have on board a signalling system which can be easily deployed to the emergency services if danger looms
- Have on board a horn to warn off other vessels if they are encroaching too close to the dredging vessels
- Vessels carrying out dredging operations shall be well lit up when working during hours of darkness.
- Ensure that the material is deposited at the designated dumpsite only and does not leak during transport operations.

## 10 EMERGENCY RESPONSE PROCEDURE

The most likely scenarios from an environmental viewpoint where an emergency response would be required would be the following:

### **(1) Release of material whilst being transported to dump area/site**

#### **(2) Dredger going on fire**

#### **(3) Oil spill from dredging vessel**

#### **(4) Dredger sinking/going aground**

### **(1) Release of material whilst being transported to dump area/site**

In the event of release of material whilst going to sea operations will be halted until such time as the leak remains unresolved or until a suitable fully functioning replacement vessel is deployed to carry out the operation. The Department of Agriculture, Food and Marine and the Environmental Protection Agency are to be informed as is the Environmental Section of Donegal County Council. The response of the marine mammal observer will be considered. Following discussions with all parties, guidance will be taken as to what other stakeholders are to be notified.

### **(2) Dredger going on fire**

Should the dredger go on fire the emergency services will be called upon to save life. The environmental fallout of such an event should be minimised as the cargo is inert and the silt is encapsulated by water. Immediate firefighting action will be undertaken by crew members for as long as possible. Depending on the scale of the fire the vessel ought to be brought back to port where the emergency services firefighting services can tackle the blaze. The response of the marine mammal observer will be considered. In such an event guidance will be taken from the Chief Fire Officer of Donegal County Council and/or Department of Agriculture, Food and the Marine as to what is the best policy to save life and reduce the potential damage to the environment.

### **(3) Oil spill from dredging vessel**

An oil spill from the dredger is a possibility, albeit small, as any adjacent rock outcrops are well marked, they appear on all the navigational charts and the vessel should not be travelling where water depth is less than her draft. Should oil be released because of an accident, Donegal County Council has a range of equipment including booms to help contain and gather any oil spillages. Equipment will also be deployed from the council's stock from Greencastle Harbour with additional equipment maintained by the Coast Guard at Killybegs Harbour. The Coast Guard will also be contacted to provide assistance

with clean-up operations as well as making sure other vessels in the area are made aware of the problem. The Environmental Protection Agency and the Sea Fisheries Protection Authority will be notified, and the response of the marine mammal observer will be taken into account. Guidance from these authorities in conjunction with that received from the emergency services will be followed to help alleviate the threat to the marine environment.

#### **(4) Dredger sinking/going aground**

The likelihood of the dredging vessel going aground or sinking is very slight but has to be considered. The rock outcrops are well marked, and the vessel itself is fitted with the latest sonar, telecommunication and computerised system to readily detect any unknowns in the water and stay out of trouble. Following on from the deployment of the Coast Guard and emergency services to save life the threat to the environment is dependent on what damage has taken place to the structure of the vessel as well as the location of the sinking/grounding. The most likely source of a threat to the marine environment is from an oil spill and the procedures outlined above will be put into play.

In all the above, the advice from the vessels' operators and insurers would also have to be considered when weighing up the optimum measures to reduce the impact on the marine environment.

## **11 INVESTIGATION OF ALTERNATIVE RE-USES**

Several alternative approaches to Dumping at Sea (DaS) by means of plough dredging/bed levelling adjacent to Buncrana Pier were examined as part of the DaS permit application, namely:

- a) Disposal on land at a waste facility
- b) Deposit within a marine structure
- c) Land reclamation on the coast or inland
- d) Re-use on land in combination with another activity, e.g. agriculture
- e) Disposal at Sea – at existing permitted DaS sites within the estuary or further afield.

In some ports and depending on the tidal regime, currents and the volume, other approaches such as these may suit. Another limiting factor is the availability of suitable dump sites or facilities on land.

The situation at Buncrana Pier is ideally suited to the use of a plough dredger as it poses less risk in terms of weather and availability and is a proven method of dredging that has been used successfully within Lough Swilly and at Buncrana Bay in the past.

Maintaining consistent navigable depths at the pier is essential to provide continuous access for the RNLI Lifeboat. A plough can be easily deployed and has greater flexibility in terms of the time frame for deployment at the harbour, particularly when a storm or flood event will have caused immediate accumulation of material within the harbour. The option of procuring a dredger to come to port from a distant location to remove small quantities of material in a swift and cost-effective manner is very difficult.

It was concluded that the use of a plough dredger as has been used for many years has proven to be the optimal approach for dredging at Buncrana Harbour. This method ensures local deposition within the designated dump site area with no negative environmental effects.

# **Appendix 1**

## Chemical and Granulometric Analysis of Sediments

## **Appendix 2**

### OSPAR Dumping Report

## **Appendix 3**

### Donegal County Council Incident Reporting Form