REPORT OF THE MARINE LICENCE VETTING COMMITTEE (MLVC)

on

FORESHORE LICENCE APPLICATION FOR MAINTENANCE DREDGING IN THE RIVER BOYNE ESTUARY

by

DROGHEDA PORT COMPANY

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Chair, Marine Licence Vetting Committee
05 November 2012
Drogheda Port Company – Foreshore Licence Application for maintenance dredging in the River Boyne Estuary (MS51/2/226)

Background

In May 2012 Drogheda Port Company submitted an application for a Foreshore Licence to facilitate maintenance dredging within the River Boyne estuary and seaward approaches.

Maintenance dredging is required to maintain safe navigational water depths at the seaward approaches and at the entrance to estuary, to maintain a safe navigational channel to the berthing facilities and to maintain safe berths and ship swinging area in order to allow vessels to safely enter, manoeuvre within and exit the port.

Maintenance dredging at this location has occurred on a regular basis in the past and the most recent permit allowing this activity to be carried out, was granted, under Section 5 of the Dumping at Sea Act, 1996 (as amended), by the Minister for Agriculture, Fisheries and Food (Permit No. 387) and covered the period 25th January 2010 to 12th February 2013. This permit allowed the dredging, and subsequent disposal at sea, of a maximum of 252,800 tonnes of material from the town quays of the port including all berths, shipping swinging areas and the estuarial channel to sea and a maximum of 1,322,000 tonnes from the bar mouth and approach channel to the port.

The current application is for the period up to February 2021. Based on the data on actual quantities dredged over the period 2001 to 2011 the annual average quantity of material to be dredged is estimated to be 220,000m$^3$. This quantity is comprised of 30,000 m$^3$ from the port to sea as well as all berths and swinging areas, 90,000m$^3$ from the seaward approaches and a contingency of 100,000m$^3$. This is equivalent to a total of approximately 352,000 tonnes annually, assuming a factor of 1.6 is used to convert from m$^3$ to tonnes. The contingency is to cover unexpected or unplanned events that may impede navigation e.g. collapse of the river retaining walls that created the estuarine polder and release of material into the channel, as occurred in the year 2000.

The actual quantity of material to be dredged in any one year will vary depending on a number of factors including river flow rates, storm events and wind direction (accelerated accretion of material occurs, particularly in the seaward approaches and the entrance channel, during periods with sustained winds with a strong easterly component). Data for the period 2001 – 2011 provided by Drogheda Port Company shows that the quantity of material dredged in any one year ranged from a minimum of 74,070m$^3$ in 2008 to a maximum of 176,854 m$^3$ in 2003.

Under previous Dumping at Sea permits all the material dredged was disposed of at sea. The current Foreshore Licence application, however, also includes the proposal by Drogheda Port Company to bring ashore an annual maximum of 60,000m$^3$ of sand dredged from the entrance channel and its subsequent commercial re-use.
It is intended that the remainder of the dredged material will be disposed of at sea and Drogheda Port Company has made an application to the Environmental Protection Agency for a Dumping at Sea permit to allow this activity to take place.

The proposed activity is not of a class that would require the submission of an Environmental Impact Statement.

**Natura 2000 designation**

The proposed dredging will take place within the Boyne Coast and Estuary SAC (Site Code 001957) and the Boyne Estuary SPA (Site Code 004080).

**Public Consultation**

A public notice in relation to this application was published in the “Irish Times” on 30th May 2012. The relevant documents were on display at Drogheda Borough Council office, Boyne Centre, Drogheda, Co Louth for a period of 21 working days, and were also available on the Department’s website as well as the Applicant’s website.

A total of 3 submissions were received during the public consultation phase. These included:

1. Mr. Hugh Leech, on behalf of the Laytown & Bettystown Golf Club – Objects to the proposal on the grounds of impacts on beaches, erosion of beaches impacting on golf course, suggests the proposal has solely a revenue generating motive and that removal of sand from a fragile system is intrinsically wrong.

2. Mr. Hugh Leech, as a member of the Committee of Laytown Strand Races – Endorses the objection submitted by Laytown & Bettystown Golf Club. Suggests the removal of sand as proposed would result in the exposure of underlying stones on the beach between Laytown and Bettystown, where races have been run for 137 years. This, in turn, would result in the withdrawal by the Turf Club of a licence to conduct races in this area.

3. Mr. Leo Boyle, on behalf of the Boyne Draftnet Fishermen’s Association and the Mornington Mussel Fishermen’s Association – No concerns with maintenance dredging provided all the material is disposed of at sea. Concerns in relation to proposal for taking sand ashore and subsequent “beneficial reuse”. Suggest that Drogheda Port Company are “endeavouring to have beneficial reuse translated into commercial mining of sand” which would result in loss of fishing stations and impact on the regeneration of the Boyne mussel beds. Suggest the proposed dredging would result in loss of sand between Laytown, Bettystown and Mornington beaches, adversely impact on Laytown Strand Races, Laytown & Bettystown Golf Club and recreational use of the beaches and impact on nesting of little terns on Baltray Strand.
Prescribed Bodies Consultation
Written submissions on the proposed development were received from the Department of Environment, Community and Local Government (Engineering), Department of Agriculture, Food and the Marine, Marine Institute, Marine Survey Office, Sea Fisheries Protection Authority, Inland Fisheries Ireland, Department of Arts Heritage and the Gaeltacht, (Nature Conservation and Underwater Archaeology).

There were no objections in principle to the proposed activity.

Application Documents Considered by the MLVC
The MLVC considered this application at its meeting on 14\textsuperscript{th} September 2012 and the following documents were considered

- Foreshore Licence Application and accompanying documents submitted by Drogheda Port Company in support of the application which included:
  - Drogheda Port Company Five Year Maintenance Dredging Programme September 2001 – Kirk, McClure, Morton
  - Annual Quantities Actual Dredging 2001 – 2011
  - Dumping at Sea Permit No. 387
  - Sediment Plume Analysis extract from 1997 EIS
  - Aquatic Ecological Study (extract), Aquatic Services Unit, June 2006
  - Letter from D. Fadden, Principal officer, Department of the Environment, December 2003
  - Boyne Entrance Channel Dredging Impact on Sediment Cell, RPS, 2012
  - Sampling and analysis of Drogheda Harbour Sediments, Enterprise Ireland, January, 2012-10-31
  - Figure 1, Location of Maintenance Dredging Dumpsites
  - Figure 2, Loading Site Extent and Boundary
  - Figure 3 & 4 Sampling and Monitoring Points
  - Figure 5, OS Maps 6” Scale
  - British Admiralty Chart 143, River Boyne to Drogheda
  - Natura Impact Statement, Scott Cawley, 17\textsuperscript{th} August 2012

- Submissions received during the public and prescribed body consultation
- The applicants responses to the Submission received during the public and prescribed body consultation

In addition to the documents listed above Drogheda Port Company also submitted, in November 2102, a document entitled “Assessment of Risk to Marine Mammals from Proposed Dredging and Dumping at Sea Activity”

A number of general issues of concerns were indentified
Quantity of material to be dredged

Drogheda Port Company has applied to dredge a total of 960,000 m$^3$ (approximately 1,536,000 tonnes) with an annual contingency of 100,000 m$^3$ (approximately 160,000 tonnes) of sediments over an 8 year period up to February 2021. This is equivalent to an annual average of 120,000 m$^3$ with an annual contingency of 100,000 m$^3$. The MLVC is satisfied that the estimated amounts of material to be dredged (including contingency) seem justified on the basis of the quantities dredged during previous dredging campaigns. Data for the period 2001 – 2011 provided by Drogheda Port Company shows that the quantity of material dredged in any one year ranged from a minimum of 74,070 m$^3$ in 2008 to a maximum of 176,854 m$^3$ in 2003.

Chemical Characteristics of the material to be dredged

As noted in the submission from the Marine Institute the results of the chemical analysis of sediment samples from the proposed dredging area are, for the most part, below Action 1 level, as set out in the 2006 Guidelines for Assessment of Dredged Material for Disposal in Irish Waters. Samples of sediments taken upstream in the vicinity of the Maxol Terminal and Tom Roe’s Point, show concentration of cadmium, zinc and nickel, in most cases, marginally exceeding action level 1. On the basis of these data the MLVC is satisfied that, from a sediment chemistry perspective, the dredging, as proposed, is not likely to have a negative impact on the marine environment.

Impact on beaches at Laytown, Bettystown and Mornington

The impact on beaches was raised in each of the 3 submissions received during the public consultation period and the applicant made a comprehensive response in respect of these issues. Studies on coastal sediment transport in this area have shown that both the erosion and accretion of sand in this area is not related to the dredging of sediment within the River Boyne estuary. The net sediment drift runs northwest to north from Skerries to Clogher Head and the net annual bed sediment transport into the beaches in Co. Meath and Co. Louth is from the southeast. The available data also shows that the training walls at the mouth of the River Boyne estuary have trapped sediments on the southern side which has resulted in accretion of the shoreline at Mornington.

The MLVC is satisfied that the available scientific data shows that the dredging of sediments within the River Boyne estuary and seaward approaches will not result in erosion of the beaches to the south. The MLVC is satisfied that there are not likely to be significant adverse impacts on the Laytown & Bettystown golf course and that the Laytown Races will not be impacted.

Beneficial reuse of dredged material

While it is proposed to dispose of the majority of the dredge material at sea, subject to the granting of a Dumping at Sea Permit by the EPA, Drogheda Port Company propose to bring ashore a maximum of 60,000 m$^3$ of sand dredged from the river entrance and seaward approaches annually and reuse this materially commercially.
The MLVC is satisfied that, based on the data and information provided by Drogheda Port Company, and in particular the report of February 2012 prepared by RPS Consulting Engineers entitled “Boyne Entrance Channel Dredging, Impact on Sediment Cell”, the bringing ashore of a maximum of 60,000m$^3$ of sand as proposed does not represent “over dredging” or “sand mining” and is not likely to result in significant environmental impacts. The evaluation of re-use options is one of the key steps set out in the OSPAR Guidelines for the Management of Dredged Material (Agreement 2009-04). The MLVC notes the commitment by Drogheda Port Company to dredging only when water depths are reduced below a safe navigational level. Where dredging is not required to ensure safe navigational depths than no dredging will take place.

The MLVC notes, however, that while dredged material has been beneficially re-used in the past e.g. for beach re-nourishment at Rosslare Strand, Co. Wexford, construction of breakwater at the RNLI Station in Baltimore Harbour, Co. Cork, the re-use of a portion of the dredged material as proposed in this instance has not previously been carried out in Ireland and no clear national policy or policy guidelines are available.

Impact on Archaeology

The submission from the Department of Arts, Heritage and the Gaeltacht in respect of underwater archaeology has identified a number of sensitive locations and has recommended that no dredging should take place within 10m of these sites. The locations include the site of wreck known as the “Boyne Boat” located in close proximity to the Queensborough navigational beacon and the site of the wreck of the four barges located adjacent to the turning area at Harbourville, Stagreenan. The MLVC is satisfied that, provided that no dredging takes place as recommended above there will be no adverse impact on the archaeological heritage of the area.

Impact on fisheries and aquaculture

The submission from the SFPA states that the area to dredged is no longer classified as a shellfish production area (River Boyne Mussels) and the submission from the Department of Agriculture Food and the Marine notes that there are no aquaculture production sites or important sea-fishing locations within or adjacent the proposed dredging location. The MLVC is satisfied, therefore, that there will be no impact on these activities.

Impact on Marine Mammals

The Department of Arts, Heritage and the Gaeltacht published a draft document entitled “Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters” in March 2012. The Guidance recommends that a range of marine and coastal activities, including dredging, should undergo a risk assessment for anthropogenic sound – related impacts on relevant protected marine mammal species, to inform the consenting process.
A risk assessment, as recommended, was carried out Drogheda Port Company. On the basis of the data and information provided in this document and considering the non-continuous and temporary nature of the proposed dredging activity, the few existing records for marine mammals within or in proximity to the proposed activities and the location of the proposed activity the MLVC is of the view that the proposed dredging activity is not likely to have a significant impact on marine mammals either at an individual or population level.

Duration of the Permit

This application is for a permit to cover an 8-year period, up to February 2021. This is for a longer period than permits have been previously issued under the Dumping at Sea Acts which have typically been for a maximum period of 5-years. While the duration of the permit is an administrative matter and outside the scope and remit of the MLVC it is recommended that in determining the durations of the permit the Department should have due regard to the OSPAR Guidelines for the Management of Dredge Material (Agreement 2009-04) particularly with regard to frequency of sampling and chemical analysis of the material to be dredged. The MLVC is of the view that sampling and chemical analysis of the material to be dredged should be carried out at least once over the duration of any permit granted, and not less than once every 5 years.

MLVC Recommendation

On the basis of the above the MLVC recommend that a permit be issued and recommend that the following conditions be attached.

Recommended Licence Conditions

1. The Licensee shall use that part of the Foreshore the subject matter of this licence for the purposes as outlined in the application and for no other purposes whatsoever.

2. The Licensee shall furnish the names/registered number of all vessels involved in the operation to the Marine Survey Office in Dublin to ensure compliance with respect to Irish Load line and other relevant vessel certification.

3. The Licensee shall arrange the publication of a Marine Notice through the Maritime Safety Directorate giving general description of operations and approximate dates of commencement and completion.

4. The Licensee shall ensure that all vessels/floating plant shall have appropriate certification from the Marine Survey Office.

5. No dredging shall be permitted within 10m of the site of wreck known as the “Boyne Boat” located in close proximity to the Queensborough navigational
beacon or within 10m of the site of the wreck of the four barges located adjacent to the turning area at Harbourville, Stagreenan

6. The Licensee shall keep and maintain in the State for inspection on demand by the Minister, records of all dredging operations, including, in particular, the quantities of dredged material brought ashore. These records shall be produced by the Licensee on demand by the Minister and in any event not later than 24 hours from the making of that demand.
Annex to MLVC report on Foreshore Licence Application for Maintenance Dredging in the River Boyne Estuary by Drogheda Port Company (MS51/2/226)

Background

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Maintenance dredging at this location has occurred on a regular basis in the past and the most recent permit allowing this activity to be carried out, was granted, under Section 5 of the Dumping at Sea Act, 1996 (as amended), by the Minister for Agriculture, Fisheries and Food (Permit No. 387) and covered the period 25th January 2010 to 12th February 2013.

Under previous Dumping at Sea permits all the material dredged was disposed of at sea. The current Foreshore Licence application, however, also includes the proposal by Drogheda Port Company to bring ashore an annual maximum of 60,000 m³ of sand dredged from the entrance channel and its subsequent commercial re-use.

Location of the proposed activity

The area from which it is proposed to dredge sand for subsequent beneficial re-use is shown on Figure 1 entitled “Loading Site Extent and Boundary” which was submitted by the applicant as Supporting Information on 25th January 2013. The area of foreshore involved is some 4.42 Ha and which can be considered to be small in scale.

Requirement for Environmental Impact Assessment:

Under Clause 2(b) of Part II of Schedule 5 of the Planning and Development Regulations, 2001 (S.I. No. 600 of 2001) an application for a development involving the “extraction of stone, gravel, sand or clay, where the area of extraction would be greater than 5 hectares” must be accompanied by an Environmental Impact Statement (EIS) and an Environmental Impact Assessment (EIA) be carried out. As the proposed activity is of a class of development that would require environmental impact assessment but for its proposed scale i.e. from an area of 4.42 hectares which is below the threshold of 5 hectares, further screening to ascertain whether significant effects are likely is required; such screening to be conducted in accordance with Schedule 7 of the Planning and Development Regulations, 2001.
The area from which it is proposed to extract sand lies with the Boyne Coast and Estuary SAC (Site Code 001957) and the Boyne Estuary SPA (Site Code 004080). An assessment of the effects of maintenance dredging within the River Boyne and seaward approaches, which includes the proposed area from which would be brought ashore, has been carried out. It was concluded that the dredging would not have significant effects on the qualifying interests of the Natura 2000 sites. Given the very small area from which it is proposed to bring sand ashore it is reasonable to conclude that this activity similarly would not have significant effects on the qualifying interests of the Natura 2000 sites.

Existing infrastructure will be used and no additional infrastructure developments are needed. The activity will not result in the production of significant volumes of waste. There will be emissions from burning of fuel onboard the dredger and any plant used in the dredging operation. Given the scale of the activity it is considered that these emissions will not be significant.

The proposed activity will not result in significant social changes e.g. demography, traditional lifestyle in the area.

The risk of accidents is considered to be minor. The publication of Marine Notices will ensure that the risk of collisions with vessels operating within the estuary will also be minor.

The risk of a significant oil spill is considered to be minor. Emergency spill kits and oil spill containment equipment will be held on board dredging vessels and Drogheda Port Company has an emergency response plan in place. No significant volumes of other toxic or hazardous substance will be used during the activity. The activity will not result in a significant deterioration in water quality.

There will be noise associated with the dredging operation but it is considered that the noise levels will not be significant and will be within the normal levels of noise generated during routine port operations. The activity will be of short duration thus noise production will not be continuous. Dredging is typically carried out about 3 hours before high water to about 1 hour after high water.

The proposed activity will not have a significant impact on important, high quality or scarce natural resources. Groundwater, surface waters, fisheries, tourism will not be affected.

Terrestrial land use will not be affected and there is no spatial overlap with other users of the inter-tidal foreshore.

While a number of archaeological features are known to be present in the upper estuary area e.g. the Boyne Boat in proximity to the Queensborough beacon, wreck of the four barges adjacent to the turning area at Harbourville, Stagreenan there are no areas or features of historic, cultural or archaeological importance on or around the location from which it is proposed to bring sand ashore which could be affected by the proposed activity.
There are no aquaculture production sites or important sea-fishing locations within or adjacent to the proposed dredging area and therefore there will be no impact on these activities.

Use of the area by the public is minimal and access to the area for recreational use e.g. sailing will not be significantly impacted.

On the basis of the above it can be concluded that the proposed activity will not have significant effects on the environment and that an Environmental Impact Statement and further Environmental Impact Assessment is not required for this project.

Dr. Terry McMahon
Chair, MLVC
01 February 2013