

**REPORT OF THE MARINE LICENCE VETTING COMMITTEE (MLVC)**

**On**

**FORESHORE LICENCE APPLICATION FOR THE DEVELOPMENT OF A  
STORMWATER OUTFALL AND ASSOCIATED WORKS FS 0006845**

**AT PORTMARNOCK, CO.DUBLIN**

**PJ Shaw - (DHPLG)**

**WATER MARINE ADVISOR**

**Member of Marine Licence Vetting Committee**

**11th July 2018**

# **Foreshore Licence and Lease Application for Development of a Stormwater Outfall and associated works at Portmarnock, Co Dublin (Fingal Co Co) FS 0006845**

## **Background**

This application has been received from J.B. Barry (Consulting Engineers) on behalf of Fingal County Council for a foreshore licence to construct a storm water outfall to Baldoyle estuary from a 41HA residentially zoned area to facilitate the proposed residential development of the Portmarnock South LAP lands south of Station Road, Portmarnock, Co. Dublin. This Plan proposes an initial build of 150 residential units with a future build out of the entire LAP Lands to consist of 1200 residential units. The location of the storm outfall (the only foreshore element of this project) is contained within lands formerly owned by Helsingor Ltd (in receivership) .It is the intention of the Statutory Receiver "that these will soon be transferred to Fingal County Council under the terms of the Local Area Plan and there are on-going pre-contract discussions in this regard. There is however no binding contract in place yet" (see Letter from Receiver to St Marnocks DAC II dated 7/2/2018).

A planning permission for Phase 1A (101 Houses) of the Portmarnock South LAP lands was obtained from ABP in July 2014 and construction is now nearing completion. The storm water from this phase is through the existing Fingal Co storm network located in Station Road. A Planning application for Phase 1B (150 houses) was made to ABP in December 2017 (ref No ABP-300514-17) and this was granted permission under the Strategic Housing Development regulations subject to 23 No Conditions on 23/3/2018 .To comply with the requirements of the Portmarnock South LAP, this phase requires the construction of a regional wetland, which provides attenuation, and a new storm water outfall to Baldoyle Estuary which will cater for the entire Portmarnock South LAP lands with the exception of the small area along Station Road.

## **Description of works and foreshore element**

Details of the Outfall Arrangement are shown on Drawing No. Y17205-C-204 Rev J

The proposed storm water outfall works are as follows

- Installation of a 525mm outfall storm sewer complete with a Tideflex non-return valve
- Excavation for the construction of a concrete base slab and wing walls with a total area of 32m<sup>2</sup>. A 14m<sup>2</sup> section of the concrete base and associated element of the wing walls(as shown on Drawings ) is below HWM and so requires a Foreshore Licence

- Reinstatement of the disturbed land and foreshore

Details of the proposed regional wetland and storm water outfall are shown on drawing Y17205-C-202 Rev G.

The concrete wing walls, base slab will be provided to minimise scouring of the existing channel in the estuary and are sized based on the recommendations of R.P.S. Coastal Engineering Division as a result of the “Estuary Bed Erosion Study “2017. It is envisaged that the culvert will be precast and lowered into position in sections. Excavated material will be stored on lands owned by the proprietor and will be reused to backfill the culvert to the original Foreshore level. Surplus and unsuitable material will be disposed of offsite under Licensee.

### **Stormwater Drainage design:**

The storm water drainage for the entire Portmarnock South LAP lands is divided into two catchments namely (ref Figure 1 in JB Barry’s Engineering Report)

- Catchment No 1 at app 37.55Ha
- Catchment No 2 at app 1.55Ha (along Station Road)

Catchment 1 drains to the Baldoyle Estuary via proposed regional wetlands and new storm water outfall .The Storm Water network for Catchment 1(ref Drawing No Y17205-C-209 Rev A) has been designed to cater for the existing Phase 1A, the proposed Phase 1B and all future phases of the entire development with the exception of Catchment 2 (which outfalls to the Fingal Co storm sewer network in Station Road). The regional wetland will provide attenuation for Catchment 1 with outflows restricted for the 1year, 30year and 100year critical storm events. The Q100 year outflow has been estimated at 200l/sec in accordance with the Greater Dublin Strategic Drainage Study. A flow control device will be installed on the outfall from the wetland limiting the outflow to 200l/sec. The network has been modelled using the Micro Drainage suite of Programmes with attenuated outflows as per above and design criterion as outlined on Pg. 2 of JB Barry’s Engineering Report

The main findings from this modelling study are as follows:

- The system for the 1:1year critical storm event ,operate as an open channel under free discharge conditions, with some minor surcharging without flooding under the +3.70m OD tidal condition.
- The system for the 1:30 year critical storm event surcharges for both conditions but without flooding.

- The system for the 1:100 year critical storm event surcharges for both conditions but without flooding

The results are considered acceptable Engineering Practice for surface water design and a 525mm diameter pipe outfall from the wetlands to the Balydoyle Estuary is considered of adequate size in this regard.

SUDS devices that are being employed in the proposed residential development include water butts, soakaways, permeable paving, bio retention areas, filter strips, swales, silt traps, hydrocarbon interceptors, detention basin and regional wetland. The storm water runoff from the proposed development will pass through a minimum of 3 SUDS devices. This treatment train approach will ensure compliance with the requirements of Volume 2, New Development, of the Greater Dublin Strategic Drainage Study (GSDSDS) and the Portmarnock South LAP

### **Estuary bed erosion/scour**

An assessment of the potential scouring of the existing channel in the estuary has been carried out by the Coastal Engineering Department of R.P.S (Consulting Engineers). The full report is presented in the "Baldoye Estuary Storm Water Outfall Estuary Bed Erosion Study" dated December 2017(ref Appendix 2 in either NIS or Engineering Report). RPS used their suite of coastal process models to simulate the changes in the flow regime in the upper part of Baldoye Estuary. The combined flow and sediment transport models include the simulation of bed level changes under the flow regime which was used to assess the risk of bed erosion resulting from the operation of the storm water outfall. The Mike 21 FM coupled flexible mesh flow and transport model was used for the study and detailed findings are presented in the Erosion Study report. The sediment transport model Mike 21 FM ST uses currents for the hydrodynamic flow model together with bed sediment data to compute the sediment transport rate and then calculates the resulting change in bed levels. This study was based on the proposed outfall and drainage design details and the main conclusions were as follows:

- The computational model studies have shown that any increase in flow velocities due to proposed storm water outfall discharge are restricted to the channel leading from the proposed outfall to the River Sluice channel.
- The increase in the flow velocities away from the immediate area of the outfall structure itself will be less than 0.08m/s even during 1 in 100 year storm events. Thus the proposed storm water outfall will have no significant impact on the overall flow regime of the Baldoye Estuary.
- Modelling of changes in the sediment transport regime indicates that there will be no significant bed erosion in the estuary channels as a result of storm water discharge for return periods of up to 1 in 100 years.

- The storm river flows in the Baldoyle Estuary are more than 30 times larger than the proposed storm water outfall discharge.

The report concludes that the proposed storm water outfall will have no significant impact on the hydraulic or sediment regime of Baldoyle Estuary. The MLVC agree with this conclusion.

### **Estuarine Ecology**

A Natura Impact Statement prepared by Brady Shipman Martin accompanies this application .The NIS includes a specialist report on Marine and Coastal habitats prepared by John Brophy (who carried out the original study in 2005) and Fionnuala O'Neill of BEC Consultants .This concludes that no Annex 1 habitat will be lost or disturbed due to the construction and operation of the proposed outfall. In addition, there will be no significant impact on the mudflat or saltmarsh habitats of Baldoyle Estuary due to changes in flow from the proposed development.

The NIS concludes that as no works are proposed within any area of the Annex 1 habitat, it will not be necessary to reinstate any saltmarsh or mudflat habitat .It is however intended to reinstate any areas disturbed during the construction of the outfall within the Baldoyle Bay SAC/SPA boundary. The area that will be disturbed is not part of the Qualifying Interest/Scientific Conservation Interests of the SAC/SPA.

On completion of the works the construction area will be regarded using the retained soil (from construction works). No imported seed will be utilised –the reinstatement will rely on natural vegetative means and regeneration from the existing seed bank.

The reinstated area will be monitored for a period of one year post construction to ensure success and to ensure that no non-native /invasive species become established.

There are 18 No Natura 2000 sites identified within 15 km of the proposed outfall as listed at Table 1 in the NIS. After an initial evaluation of these sites it was possible to rule out the potential significant adverse effects arising out of the development on the majority of the European sites

The relevant European sites scoped in for detailed appraisal in the NIS were as follows:

- Baldoyle Bay SAC and SPA
- North Bull Island SPA
- Malahide Estuary SPA

The NIS outlines the appropriate mitigation measures required to negate the potential impacts identified and concluded that once these mitigation measures (ref Section 4.4 of NIS) are implemented, there will be no residual impact on any Natura 2000 site. Some of these mitigation measures are of relevance to the proposed Surface Water Outfall installation and include for the following:

- A suitably qualified ecologist to be contracted for the entire duration of the construction phase
- The working period for development of the regional wetland, including the construction of the outfall to Baldoyle Bay will be restricted, with no such works being permitted between the months of November and March inclusive.
- The working site for the proposed surface water outfall will be reduced to the minimum practicable area. In particular no working will be permitted with the area of Annex 1 habitat that is adjacent to the proposed outfall location. On completion of this element of the works, the area of grassland/scrub will be regraded.
- The contractor to take all adequate precautions as part of the construction methodology to avoid any pollution from construction activities via run-off to the surface water drainage network or directly to Baldoyle Bay .Petrol interceptors and temporary attenuation and settlement facilities may be required in appropriate locations during construction.
- All hazardous substances such as fuels, oils, cement and concrete products will be stored on-site in secure, bunded areas remote from drainage connections to the existing surface water drainage network.
- Take full account of Construction Management Plan the contractor will put in place a risk assessment in order to ensure compliance .Any necessary discharge permits and licences will be obtained.
- All plant will be fully maintained and in full working order, for example with engine covers in place to reduce noise. No works will be undertaken outside permitted hours.

The MLVC is satisfied that these Mitigation Measures will help to minimise any potential impact to the foreshore and marine environment and so can be set as a condition within the Foreshore Licence

The NIS which accompanied the application was prepared for the planning application to ABP in connection with the overall development of which the marine outfall is a minor element .The Planning Inspector's report pertaining to

the ABP Planning Permission is available on the ABP web site (ref ABP-300514-17) and an AA Report is presented here at 10.9 which concludes that *“the mitigation measures proposed are such that will ensure that the maintenance of favourable conservation conditions of each of the qualifying interests and/or species. It is therefore concluded that subject to the carrying out of the proposed mitigation measures in the NIS that there would be no adverse impact on the integrity of the Baldoyle SPA or SAC or other Natura 2000 site within the 15km range of the development project.”* The MLVC is satisfied with and concurs with these findings as presented in the Planning Inspector’s Report

### **Archaeology**

An Archaeological assessment was carried out by Courtneydeery Heritage Consultancy and their findings are presented in the document entitled “Portmarnock South Phase 1B Archaeological Report” dated December 2017. An archaeological assessment of the vicinity of the proposed storm water outfall is contained in Sections 7 and 8.4 of this Archaeological Report. The report concludes that prior to the commencement of construction works, all excavation/exploratory work within the area will be archaeologically supervised or investigated as deemed necessary by the National Monuments Section of Department of Culture Heritage and the Gaelteacht.

If any features are revealed, it is proposed to record them as required by excavation. Photographic and scaled survey will be undertaken and a written description prepared prior to their removal. It is proposed that investigation/supervision works can take place in a coordinated manner with other disciplines in order to minimise disturbance and disruption to the estuary.

### **Construction Method Statement**

This is presented in Section 5(Pg.4) of the JB Barry “Engineering Report”. In particular the MLVC note at 5.3 “Mitigation measures” proposed which include for:

- Works compound to be located away from foreshore.
- Fuelling of plant will be done within bunded areas. Drip tray to be used.
- Keep area of construction to a minimum.
- Minimise disturbance to adjacent habitats.
- Construction to be carried out at low water.
- Pumped groundwater to be discharged through settling tanks.
- Employ biosecurity measures to prevent the spread of invasive species.

These mitigation measures take cognisance of those that were recommended in the NIS (see earlier) and the MLVC recommends that their implementation can be made a condition of the licence.

It is estimated that the proposed works will commence in September 2018 and last for duration of approximately 6 weeks.

The proposed works on the foreshore are not of a class that would require the submission of an Environmental Impact Statement.

### **MLVC Considerations**

The following documents were considered:

Foreshore Licence Application and associated documentation including:

1. Completed Application form dated 9/2/2018.
2. "Portmarnock South Foreshore Licence Application Engineering Report" by JB Barry and dated January 2018 –
3. Estuary Bed Erosion Study by JB Barry and dated December 2017 – (ref Appendix 2 in NIS and Engineering Report")
4. "Portmarnock Phase 1B Natura Impact Statement " by Brady Shipman Martin dated 18/12/2018 –deals with entire project including in Appendix 5 a 'Construction Management Plan'
5. "Portmarnock Phase 1B Archaeological Report " prepared by Courtney Deery Heritage Consultancy dated December 2017 –deals with entire project-
6. Drawings to describe the proposed works as follows:
  - Y17205-C-201 Rev G Proposed Storm Sewers Layout –Phase 1B - dated July 2017-
  - Y17205-C-202 Rev G Proposed Regional Wetland-Plan and Sections-dated Nov 2017-
  - Y17205-C-204 Rev J Storm Water Outfall Details-dated Aug 2017-
  - Y17205-C-205 Rev D Storm Water Outfall Location Plans- dated Aug 2017-
  - Y17205-C-209 Rev A Storm Water Network –Portmarnock South LAP-dated Jan 2018-
  - Y17205-C-401 Rev A British Admiralty Map-dated Dec 2017-
  - Y17205-C-402 Rev A Foreshore Licence/Lease Map –dated Dec 2017-

In relation to the Foreshore element of this project Drawing No's ----- C-204 Rev J and C-402 Rev A are the key drawings where the foreshore area is described and shown in red outline at 14m2.



- Written submissions from the Marine Institute, Department of Housing, Planning and Local Government (Water Services Advisor) Inland Fisheries Ireland Department of Arts Heritage Regional Rural and Gaelteacht Affairs –Underwater Archaeology and National Parks and Wildlife Services (NPWS)-, the Sea Fisheries Protection Authority and the Marine Survey Office.

No objections to the requisite Foreshore Consents being issued were raised, however some observations and concerns were expressed by both Inland Fisheries Ireland (IFI) and Sea Fisheries Protection Authority (SFPA) while the Dept. of Heritage, Regional, Rural and Gaelteacht Affairs put forward suggested conditions to address marine archaeology. The IFI request that the Method Statement should be agreed in accordance with best environmental practice for the construction of the outfall structure and request sight of the Construction Management Plan in advance of any works commencement. The SFPA raised concerns about potential risks to food safety if a system failure permits untreated sewage into the receiving waters of the Malahide Shellfish Production area. They also point out that “all failures in the system in Mayne Road and Portmarnock bridge stations must be notified to both SFPA HQ and local SFPA Howth so that immediate measures can be put in place to ensure that contaminated shellfish does not enter the food chain. The MLVC is satisfied that IFI concerns can be addressed by the inclusion of an appropriate condition in the Foreshore Licence and that, since this is a proposed Surface Water outfall with no foul water or storm water overflow proposed, this should allay any SFPA concerns. The issues in relation to the Mayne Road and Portmarnock bridge stations are not part of this Foreshore Licence Application, however the MLVC would recommend that the DHPLG can pass on this communication directly to the Applicant in due course informing them of this requirement.

### **Conclusions and Recommendations**

Considering the nature, scale, and location of the proposed works it is concluded that, subject to compliance with the specific conditions set out below, the proposed works would not have a significant negative impact on the marine environment, would not have an adverse impact on other legitimate uses / users of the area and would not have a significant impact on the Conservation Objective of any Natura 2000. It is, therefore, recommended that the requisite Licences and Lease can be granted for the proposed Marine Surface water outfall and associated works at Portmarnock

### **Proposed Conditions**

1.
  - a. The Consent holder shall take measures to ensure that the Outfall pipeline and associated infrastructure (inclusive of wing walls, apron, tidal flex valve etc.) is maintained in a state of good repair

and condition to prevent it becoming injurious to public health and safety or a source of pollution or littering.

- b. The Consent holder shall use the area of foreshore in question for the purposes outlined in the application and for no other purpose whatsoever.
- c. On-going monitoring arrangements shall be put in place in order to ensure compliance with 1(a) and 1(b) above.

**Reason:** *To promote the orderly development in strict accordance with Application documents and in the interest of public health and safety.*

- 2. The Consent holder may temporarily use the adjacent foreshore for the purpose of carrying out the works and maintenance and shall restore the said foreshore to its original condition on completion of the works or maintenance.

**Reason:** *To promote orderly development in strict accordance with Application documents.*

- 3. The Consent holder shall notify the Department of Housing, Planning and Local Government 14 days in advance of the commencement of works.

**Reason:** *To keep the Department informed and notified as to proposed works schedule.*

- 4. Contractors Method Statements for all construction operations on the foreshore ,in accordance with best environmental practice, shall be submitted by the Consent holder to the Department of Housing Planning and Local Government prior to the commencement of any works on the foreshore

**Reason:** *To promote orderly development in strict accordance with the Application documents.*

- 5. The Consent holder shall inform the Department of Housing, Planning and Local Government of the completion of works within two months of completion and shall provide certification by an engineer stating that they conform to the relevant Irish or British Standard Specification or Codes of Practice for strength, stability and durability that the works were completed in accordance with the Plans and Drawings approved by the Minister

**Reason:** *To promote orderly development in strict accordance with Application documents.*

6.
  - a. Any damage caused to the Foreshore in connection with the works shall be made good on completion of the works to the satisfaction of the Department of Housing Planning and Local Government. This shall be inclusive where relevant of the reinstatement of any sea wall knocked out to its previous condition.
  - b. All works on the foreshore shall be undertaken at Low Water.

**Reason:** *In the interest of environmental protection and control.*

7.
  - a. The site shall be secured during the course of the works from public access or encroachment by means of suitable barriers and the Consent holder shall comply with the relevant Health & Safety Legislation.
  - b. Surface Water Drainage arrangements for the site contributing to the outfall pipe shall conform to the S.U.D.S principals.
  - c. The surface water drainage network shall include for the provision of Hydrocarbon Interceptors and silt trap facilities of appropriate capacity to deal with the contributing hydraulic loading to the Outfall Pipe.
  - d. Appropriate method of operation shall be adopted during the Construction period in order to ensure that no spillage of fuel, cement or any other pollutant matter occurs to the Baldoyle Estuary.

**Reason:** *In the interest of public health and safety and environmental protection and control.*

8.
  - a. Mitigation Measures as set out at 4.4 of the Natura Impact Statement shall be adopted in order to protect estuarine ecology and birdlife.

**Reason:** *In the interest of protection of marine ecology, fish species fisheries interests and birdlife.*

- b. Mitigation Measures as set out at Section 5 (Pg.4/5) of the Engineering Report 2018 shall be adopted.

**Reason:** *In the interest of environmental protection and control.*

- c. Archaeological Mitigation Measures, as set out in Section 8 of the "Courtney Deery Archaeological Report" dated Dec 2017(ref Pgs. 50-57)in relation to the construction stage works, shall be implemented in full .

**Reason:** *In order to protect and preserve underwater marine archaeology.*

9. The Consent holder shall dispose of unsuitable excavated material in connection with the outfall installation and associated works in conformance to the relevant waste disposal legislation.

**Reason:** *In the interest of environmental protection and control.*

10. The Consent holder is required to arrange the publication of a local marine notice. This local marine notice should give a general description of operations and approximate dates of commencement and completion. The notice should be placed in a locally read newspaper at least two weeks prior operations.

**Reason:** *In the interest of navigational safety.*

11. The Consent holder will submit to IFI a Construction Management Plan (CMP) and IFI would require agreeing with this Plan in advance of any works commencement. The final CMP as agreed with IFI (Eastern RBD) shall be submitted to Department of Housing Planning and Local Government prior to the commencement of any works on the foreshore.

**Reason:** *In the interest of environmental protection and control and protection of all fish species and fisheries interests.*

12. The Consent holder is required to engage the services of a suitably qualified archaeologist to monitor all areas the proposed storm water outfall (which have not previously been the subject archaeological monitoring). It is recommended that the archaeologist be licensed under the National Monuments Acts 1930-2004 where a monitoring strategy will be agreed by the Department of Culture , Heritage and the Gaelteacht (Underwater Archaeology Unit)

**Reason:** *In order to protect and preserve underwater marine archaeology.*

13. Should archaeological material be found during the course of monitoring, the archaeologist shall have work on the site stopped, pending a decision as to how best to deal with the archaeology. The

developer shall be advised by the Department of Culture, Heritage and the Gaeltacht with regard to any necessary mitigating action (e.g. preservation in situ, dive and/or geophysical survey or excavation). The Consent holder shall facilitate the archaeologist in recording any material found.

***Reason:*** *In order to protect and preserve underwater marine archaeology.*

14. The Department of Culture, Heritage and the Gaeltacht shall be furnished with a report describing the results of the archaeological monitoring.

***Reason:*** *In order to protect and preserve underwater marine archaeology.*

15. Adequate maintenance testing and inspection regimes must be maintained during the construction stage, and right through the operational phase of the system to ensure that the possibility of pollution or unwanted discharges are minimised. Hydrocarbon interceptors, swales and other flow control devices should be fit for purpose and reviewed as per where relevant manufacturer's guidelines.

***Reason:*** *In the interest of environmental protection and control and for proper management control of all development works and operations.*

ENDS