

Submission No 777

**From:** [Licensing Staff](#)  
**To:** [Grainne Power](#)  
**Subject:** FW: Re Dublin Port Company DAS Submission  
**Date:** 22 March 2016 15:42:38  
**Attachments:** [Dublin Port Company EPA Submission OceanDivers 2016 Final.pdf](#)

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**From:** Brian Murphy [REDACTED]  
**Sent:** 22 March 2016 15:12  
**To:** Licensing Staff  
**Subject:** Re Dublin Port Company DAS Submission

Please find attached submission from Oceandivers re Dublin Port application for a Dumping at Sea permit.

Regards

Brian Murphy  
Oceandivers  
[REDACTED]

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Environmental Protection Agency  
Office of Climate, Licensing & Resource Use  
PO Box 3000 Johnstown Castle Estate  
Co. Wexford

March 2016

**Re: Dumping at Sea permit application by Dublin Port in respect of Dublin Port & The  
Alexander Basin Redevelopment (ABR) Project**

To whom it may concern,

Oceandivers are a Professional Association of Diving Instructors (PADI) 5\* Scuba Diving Centre. We operate licence Dive Charter Boats within the Dublin Bay area. Our livelihood, and the livelihoods of the many other scuba professionals along the east coast, depends directly on the water quality in Dublin Bay. We have been delivering reef and wreck dives within the area since 1989 to both local and tourist divers. We have a first-hand understanding of the factors that affect the quality of water and marine life in the bay area. We have witnessed the improvement in water quality and the increase in marine life within the greater Dublin Bay area and on wreck sites on the Kish bank and beyond with the improvements made over the years in the treatment and dispersal of sewage entering the bay.

We note that the Dublin Port Company has resubmitted its application for a Dumping at Sea Permit at a site west of the Burford Bank and South of Howth Head. We acknowledge that they have included additional information and methodologies that they claim will prevent the contamination and destruction of sensitive marine life in the bay while dumping spoil in the proposed site. However we would argue that these proposed methodologies of creating banded areas and capping fine silt and sediments with coarser material is absolutely nonsensical and totally impractical in a marine environment. Similar works were carried out in Arklow 2014/2015 with spoil being dumped in specially prepared area east of Arklow Harbour. The dumped material was washed away by tidal movement before any capping could be placed. The proposed dumpsite has been used as a dump site for many years and yet it remains at a constant chart datum, evidence in itself that it is not possible to contain materials of this nature in a confined space underwater.

While the Dublin Port Company identifies other sites internationally where such projects were deemed successful there is a lack of scientific evidence to support these claims and the examples cited in their submission are not accompanied by complete references.

Most importantly the application lacks adequate studies of alternatives sites or means of disposal at sea and on land. There is insufficient scientific evidence to prove beyond reasonable doubt that there will be no damaging effects on the environment. The potential in-combination effects of this project and other proposals for dumping at the same site will

have unknown consequences which could have serious negative impact on all seabed types and possibly the entire eco system of the bay.

Model simulations for distribution of fine material by tidal flow appear erroneous and incredulous as they suggest that there will be a greater dispersal of material during neap tides rather than spring tides which have a much greater effect on the strength of the tidal flow. They also suggest that greatest dispersal takes place at periods of High Water which is when the tide is reaching its "Slack" period rather than mid cycle when the greatest movement of water takes place and the current is at its strongest. These anomalies immediately cast doubt on the accuracy of their modelling and hence on all aspects of their application. Tidal flow is a fundamental concept requiring limited expertise and understanding.

As a Profession Diver I have worked on many marine civil engineering projects both here in Ireland and internationally. It is my professional opinion that it is not possible to contain dredged material in any area of open sea bed that is subject to the effect of tide and sea state. It is equally impossible and impractical to attempt to build containing walls with heavy material and successfully deposit within this area eliminating the risk of material being carried away by the tide. The ability to accurately place spoil material on all but the calmest day during slack water times is unrealistic. It is an absolute certainty that fine materials will be continuously dispersed by the tidal and water movement caused by surface weather conditions. These fine silts will coat all life on the sea bed cutting out light and choking filter feeders of all types. We have witnessed this phenomenon during previous periods of dumping at this site and the effects from even relatively small dumping projects take years to remediate.

I believe that if there is no alternative to dumping at sea then the proposed dumping must take place at a suitable distance from Dublin Bay and any designated conservation sites to ensure beyond doubt that there will be no impact on the Bay or the adjacent SPAs and SACs. I believe that such a site would be at least 10 miles east of the Kish Bank.

We object in the strongest terms possible to the granting of a Dumping at Sea Permit to Dublin Port Company for the dumping at sea of spoil generated by the proposed dredging of Dublin Port and the associated channel area. We also propose that this dump site be closed as it exists within an SAC.

## **Resource**

Dublin Bay is a natural resource that needs to be protected fully for the benefit of the environment and the people of Ireland. It provides excellent opportunities for marine- based activities including, angling, sailing, windsurfing, kite-boarding, scuba diving, sea kayaking, snorkelling and swimming. The area attracts millions of walkers to its coastline every year to enjoy the views and the panorama that is Dublin Bay.

The quality of the water, including its colour and tone, is of vital importance to all of these users. Clear clean water is attractive and encourages marine activity. Grey, silty muddy water has the opposite effect. Dumping of spoil with thousands of tonnes of silt and dust mixed with unknown quantities of imbedded toxins will have a major negative impact on the water quality in Dublin Bay and the marine life within. For the Dublin Port Company to state that the proposed dumping will have no adverse effect on the quality of the water in the bay or on marine life is misleading. Fáilte Ireland are investing heavily in the promotion of Ireland as an outdoor activity destination with a specific focus on marine activities. How can we hope to promote marine activities in our capital if we turn the bay into a dumping ground?

## Marine Life

As divers, we see first-hand the range and variety of marine life in Dublin Bay and on the wrecks in the surrounding waters. We observe changes that take place throughout the year and slower changes that place over the years. The islands from Lambay to the north and Dalkey Island to the south provide excellent dive sites with an abundance of marine life. This life includes numerous soft corals, sponges, seaweeds, crustaceans, fish and marine mammals.

Since the sewerage treatment plants in Dublin were upgraded along with the associated outfall pipelines, we have observed a steady improvement in the quality of the water in the bay. Marine life in the bay has become more prolific. Porpoise are encountered on almost every trip to Dalkey Island and the Muglins. Dolphins are often encountered throughout the summer months. We now have a number of Blue Flag beaches along the coast between Skerries and Bray.

Water clarity has been better in the last five years than ever before. 2012 was an exception. Clarity declined due to dumping by Dublin Port and works on the Dargle River in Bray causing a significant increase in the amount of suspended particulate matter. Marine life, including plants and animals, is very sensitive to changes in the environment. Filter feeders that are established in their preferred eco system will not tolerate a coating of fine material and will slowly die back.

Dumping in the proposed site will certainly result in fine sediments being spread over the entire bay area. Nowhere will remain free from sedimentation on the sea bed. In the same way that dropping spoil from an aircraft would lead to a massive dust cloud spreading over a vast area as a result of the effects of wind, the tide will do the same as the fine particles remain in suspension for a very long period of time.

The tidal flow on the east coast floods into the Irish Sea from the north and the south and ebbs in the reverse. Consequently the area around Dublin sees little flushing so whatever is held in suspension will drift a little north and then drift back a little south on each tide, slowly settling over the entire bay area. Following a strong easterly wind in Dublin Bay, when the clarity of the water has been reduced, it takes three to four days for the "dust to settle" and conditions to improve. If the Dublin Port Company is planning to dump for a period of five years there will be a plume of fine particulate matter constantly in suspension in the water greatly reducing the underwater visibility, coating everything in fines silt resulting in unknown damage to the marine life in the bay and directly affecting our livelihood and that of others who make their living from the sea.

## Special Area of Conservation.

The proposed dumping will have a significant negative impact on a number of designated SAC sites in close proximity to the proposed dumping area. These sites are part of a European network of nature conservation sites, known as Natura 2000, which was established with the aim of preserving our rich natural heritage for future generations.

The area from Rockabill to Dalkey Island is a designated SAC, the site the Dublin Port Company wants to use as a dump is right in the middle of this area. It makes no sense that an area that deserves special protection may even be considered as an option for the disposal of spoil that will most certainly have an adverse impact within. The material that is dumped **will not** remain within the designated dumping area because of the nature of the fine silts and sediments in the spoil and the strong tidal influence in the area. Instead it will be dispersed throughout the whole of Dublin Bay and surrounding areas affecting marine life, bird life, water quality, tourism, and the lively hoods of many.

The EU Habitats Directive requires that an Appropriate Assessment is carried out for any projects

or plans that may affect a Natura 2000 site. The process requires that all options are considered and is predicated on the precautionary principle. Where a significant negative impact on a Natura 2000 site is anticipated or cannot be ruled out as a result of a proposed plan or project, the development can only be sanctioned where there is an imperative reason of over-riding public interest (IROPI) and even then, where there is no viable alternative. The proposed development has not considered adequately the alternative means or locations for disposal. The revised AA Natura Impact Statement prepared for the proposed dumping at sea has not provided robust scientific evidence that there would be no significant negative impact on the Natura 2000 network, basing its conclusion on whimsical mitigation that is blatantly ineffective for such a site. As the AA process undertaken is fundamentally flawed, in the event of approval being granted by the EPA for this development, it will be appealed to the European Courts for review.

### **OSPAR Convention**

[The Convention for the Protection of the Marine Environment of the North-East Atlantic](#) (the "OSPAR Convention")

The OSPAR Convention is the current legal instrument guiding international cooperation on the protection of the marine environment of the North-East Atlantic.

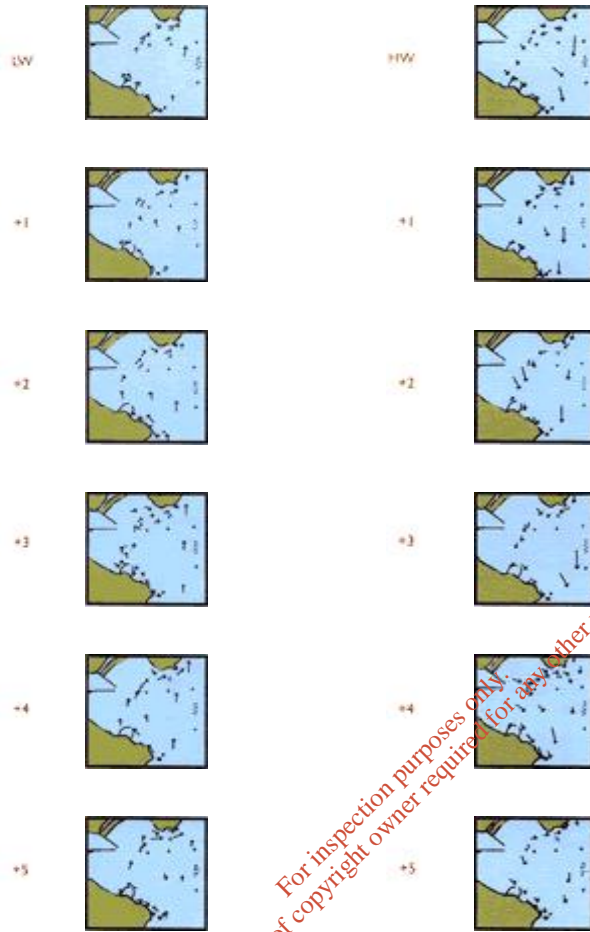
Under the convention, the dumping of all wastes or other matter is prohibited. All countries who have signed up must control deposits to the sea and are only permitted to dispose of the following: Dredged material and inert materials of natural origin, that is solid, chemically unprocessed, geological material the chemical constituents of which are unlikely to be released into the marine environment; and fish waste from industrial processing operations. Ireland is a signatory to the convention.

The waste from Dublin Port does not fall into any of these categories as it will heavily contaminated with the residual chemical and toxic material that has accumulated in the port over decades of industrial usage. To allow this material be dumped in Dublin Bay will be in direct contravention of the OSPAR convention.

### **Environmental Impact Assessment.**

The environmental impact assessment carried out on behalf of Dublin Port Company states that there will be no adverse effect on marine life outside the dredging area and that most of the spoil will remain within the proposed dumping zone. We believe that the studies into the settlement of dumped materials is inadequate and fails to show the real consequences of continuous dumping on such a scale for a period of six years. It is also stated that the dominant tide runs to the north and that eventually any suspended material will settle in the northern area of the Irish Sea. Even a cursory glance at tidal stream information (see table below) available on the Dun Laoghaire Harbour Website, which conveniently covers the dumping area, shows that the spoil will spread to the entire bay.

Whilst offshore the tides flood and ebb to the north and south, closer to the shore they are greatly affected by the meandering nature of the coastline. There are significant tidal anomalies all along the coast from Wicklow Head to Rockabill that are charted in sailing almanacs. Further, the dump zone's location immediately west of the Burford Bank virtually assures that the suspended particulate matter will be caught in the tidal flows that circulate around Dublin Bay. Our intimate knowledge of the tides in and around Dublin Bay, based on over twenty years experience working on and in the Irish Sea, confirms this. The report's claim that on a small percentage of dumped material will not remain within the dump zone borders on the ludicrous.



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## Image from Dublin Bay



Willie Siddall from Oceandivers highlights some of the soft Corals and Sponges on the "Coral Garden" reef off Dalkey Island in August 2012.

### Ireland's Ocean Economy

The Socio-Economic Marine Research Unit at NUI Galway produced a report on Ireland's Ocean Economy. The report is very comprehensive and deals with all aspects of the Ocean Economy. However, as seen below, it states that water-based tourism and leisure is the largest contributor in terms of turnover and employment. On a national basis, the turnover from this sector was in excess of €900,000,000 and employed over 5,000 people in 2007. Instead of polluting our sea we need to manage it properly so that this important sector can grow and continue to provide and create employment, attract marine leisure activity tourists and help to promote marine biodiversity.

*"In 2007 the ocean economy had a turnover of €3.4 billion, of which €1.44 billion was direct Gross Value Added. The Irish Marine sector employed approximately 17,000 individuals. Ireland's total Gross Domestic Product (GDP) in 2007 was €189.7 billion..*

The established industries in the marine sector account for 95% of total marine turnover. This category is dominated by **marine tourism** and maritime transport (Table 3.1). Within the established sector, **water-based tourism and leisure; is the largest contributor in terms of turnover, value added, direct and indirect10 gross value added and employment. “**

	Turn over	Direct GVA	Direct Employment	Direct & Indirect
<b>Established Markets</b>				
Shipping & Maritime Transport	889,018	328,579	2,194	516,929
Water -based Tourism & Leisure	944,380	453,310	5,836	826,650
Cruise	45,323	30,355	0	55,355
Other Marine Services	140,110	62,420	569	111,386
Sea-Fisheries	251,000	100,307	2,200	168,347
Aquaculture	105,700	42,280	1,061	70,959
Seafood Processing	395,593	88,204	2,090	155,239
Oil & Gas	197,300	137,117	790	220,758
Marine Manufacturing	265,227	110,429	1,600	176,965
<b>Established Markets Sub-</b>	<b>3,233,6</b>	<b>1,353,001</b>	<b>16,340</b>	<b>2,302,588</b>
<b>Emerging Markets</b>				
High Tech Marine Products &	43,618	27,299	350	42,796
Marine Commerce	99,595	47,138	65	78,589
Marine Biotechnology &	18,075	8,671	185	14,552
Marine Renewable Energy	6,218	4,415	101	7,108
<b>Emerging Markets Subtotal Total</b>	<b>167,506</b>	<b>87,523</b>	<b>701</b>	<b>143,045</b>
	3,401,1	1,440,524	17,041	2,445,633

### Conclusion:

It would be better for the bay and the Irish Sea if this spoil was diverted to a disused quarry or other land fill site. Alternatively dumping in a deep water site at a minimum distance of 25km from the coast could be an option, subject to a comprehensive Environmental Impact Assessment. The use of two barges for transport and dumping would deal with the additional time implications of travelling further to sea thus allowing the removal process to continue without disruption. Whilst there would be additional cost implication, this would probably be less than the cost of road transport. Dumping further out to sea will significantly reduce the risk of damage within the bay area and to the Natura 2000 network.

On behalf of Oceandivers,

*Brian Murphy*

Brian Murphy