

**Eve O'Sullivan**

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**Subject:** S0012-03 PORT OF WATERFORD - AMENDMENT  
**Attachments:** EPA DREDGING AMENDMENT APR 2020.docx

**From:** Jody Power [REDACTED]  
**Sent:** 22 April 2020 13:44  
**To:** Licensing Staff <[licensing@epa.ie](mailto:licensing@epa.ie)>  
**Subject:** S0012-03 PORT OF WATERFORD - AMENDMENT

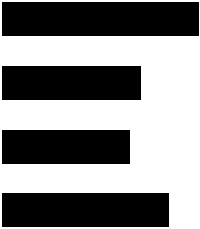
Dear Sir/ Madam,

Please find attached my submission to the proposed amendment  
# S0012-03.

With best regards,

Cllr. Jody Power

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Licensing Dept.

EPA

Johnstown Castle Estate, Co. Wexford.

21 Apr 2020

**Re: Amendment to Permit # S0012-03 for the Disposal of Dredge Material.**

Dear Sir/Madam,

The application to amend Permit # S0012-03 to allow plough dredging to take place within the months of March to June inclusive, which also results in an annual increase in ploughed tonnages raises many questions, which are penned hereunder:

1. The application makes no reference to any EIA that must accompany such a material alteration to the existing permit, as directed by EC EIA Directive 85/337/EE and its later amendment 97/11/EC. These directives outline the predicted effects of such dredging and a mandatory monitoring and evaluation programme thereafter. An increase in ploughing in the times specified will, in all likelihood, increase the turbidity of estuarial waters, increasing the established sediment and silt suspensions already in the water table, not only because of the mechanical action of the ploughing but also due to storm surges associated with this time of year. Cognisance must also be taken of the increase in the natural and anthropogenic turbidity of the river system since sea dredge disposal dumping started in 1996 at the current site, a site slap- bang in the middle of the slip-stream of fluvial exchange, at the harbour entrance. The “joke” in the local fishing villages of the estuary exclaims that the dumped spoils, by dredger bottom doors, results in the silt being back up in Cheekpoint before the returning dredger on a flood tide.

This is even more of a concern when the tidal dynamics of the estuary, as stated in the Port of Waterford publication (1) which read “.....the vast majority of sediment comes in from the sea and once it enters the estuary it is very difficult for it to move out again. Therefore, much of

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2: ENDESSA Public Oral Hearing at Mount Brandon Hotel, New Ross June 2007 in a presentation by HSE Environmental Division, Naas in compliance with planning Application # 2575540007N.

3: International Maritime Organisation, 2001. “*Ship’s Hull Anti-Fouling Convention*” London.

4: ISO 19030, 2016. *Ships and Marine Technology – Measurement of Changes in Hull and Propeller Performance.*

5: Corbin, JC et al. 2018. *Trace Metals in Soot and PM<sub>2.5</sub> from Heavy-Fuel-Oil Combustion in a Marine Engine.* Environmental Science and Technology.

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*the suspended sediment in the water is in almost constant circulation in the estuary system”* . The results of the large quantities of suspended particulate matter [SPM] are all too evident in the destruction of the natural landscapes of Cheekpoint with accumulations of mud slob, the unusable quay and harbour there, gorged with accumulations of mud and the recent necessity of dredging of Passage East and Dunmore East harbours. These are the visible results. What becomes of the habitats and ecology of our harbour’s marine ecosystem?? We do know that high turbidity results in low levels of transmitted light which can negatively impact the functioning of light-dependent organisms such as phytoplankton, eelgrass and visual predators. Local traditional fisher-folk have long complained to deaf ears of the recognisable and continued reduction of the fauna and flora biomass of the estuary. Furthermore, high turbidity levels due to SPM concentrations interfere with the food intake of filter feeding benthos, (bivalves and copepods) and clogging of fish gills – an all important matter for the estuarial migrating elvers, salmon and cod species, now almost extinct. The recent disappearance of long established mussel colonies, reductions in the cockle mass and significant mortalities in oyster fisheries screams of an ecosystem in serious decline. It would appear that the proposed increased ploughing in this regard will only accelerate the impending biological extinction in Waterford Estuary.

2. The application declares an increase in annual ploughed tons but does not specify any actual amount.
3. High levels of Norovirus are discharged into the harbour through untreated sewage outflows at Arthurstown and Duncannon, Co. Wexford and the inability of current “ best engineering practice” to fully neutralise this virus from newly constructed waste water treatment plant outflows. This virus bio-accumulates in farmed oysters and must be measured before human consumption. Higher dynamic energy levels in the estuary water table ensure this poison is transported throughout the estuary. Should this virus mutate and enter the food chain or inadvertently be consumed through eyes, nose and mouth by swimmers, we have a potential Irish incubated pandemic on our hands, something we are all too familiar with these COVID - 19 days.
4. Directive 2008/105/EC mandate States to develop environmental quality Standards for Priority Substances [ substances incompatible with human and biological life]. These categorised substances comprise mainly of dangerous particulate matter of heavy metals such

2

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as Mercury Hg, Arsenic As, Chromium Cr, Cadmium Cd, Lead Pb, to name but a few and also, Polycyclic Aromatic Hydrocarbons (PAHs), and Polychlorinated Biphenyl's (PCBs), the latter, a mutation of the dreaded highly toxic Dioxin family of molecules. The public consultation oral hearings associated with the planning application of Endessa(2) to modify the existing power station at Great Island [on the opposite river bank to Cheekpoint] revealed the presence of elevated levels of such priority substances in the local mud beds due, inter alia, to the combustion of Heavy Fuel Oil [HFO – a mixture of waste hydrocarbon based oils and all their metallic additives] at the old, now defunct, ESB power generating plant. How will increased ploughing of these muds inflate the now exposed heavy metal and priority substance levels in the water table for transportation throughout the estuary?

5. Shipping also aggravates the priority substance distribution in the estuary. Ship underwater hulls were, until recently, painted with leaching biocide paints, namely TiButylTin [TBT], a broad spectrum biocide for severe toxicity to prevent marine growth. Such paints were banned in 2001 by the IMO (3), but remain toxic, with a high persistent life, for a considerable time when deposited in harbour sediments. Modern shipping use anti-fouling paints such as Ingoral, Diuron, Chlorohalonil, Zinc and Copper Pyrithiones, some of which are even more toxic and persistent than TBT. With these priority substances present, increased ploughing can only add to the already elevated toxic strain on the estuary bio-system.
6. To compound matters shipping, ISO 19030 (4) establishing a Ship's Energy Efficiency Management Plan [SEEMP], dictates the application of anti-fouling hull paints thereby lowering HFO consumption and increasing energy efficiency. This endeavour lowers the toxic atmospheric emissions caused by the combustion of HFO but mandates the use of toxic anti-fouling hull paints, again contributing to estuarial sediment loading of toxic priority substances.
7. Other states have mandated the exclusive use of marine distillate fuels [MDO] in their territorial waters because of the toxic emissions of HFO marine use but Ireland refused to participate for purely economic reasons, ignoring the grave human health costs and environmental destruction of our coastal and portal communities, a destruction well documented in the literature (5). To comply with Sulphur Emission Reduction Directives of the IMO and the EU and to continue to use HFO within territorial waters, Open Loop Sea Water

3

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Scrubbing of the exhaust gases from shipping is now in vogue. This technology removes the pollutants from atmospheric emissions, in compliance with the directives, by washing them directly into the sea or estuarial waters. Port of Waterford has banned Open Loop Scrubbing for now and is to be commended for such action. But, unfortunately, there is no enforcement of such laws and therefore, compliance cannot be verified.

8. The recent documented anthropogenic discharges of substantial amounts of the biocide Sodiumhypochloride(6) into the estuary by SSE Generating Station, Great Island, in the vicinity of the dredging, make for chilling and infuriating reading.
9. Noting the amendment months selected, from March to June inclusive, this time span coincides with the migration habits of our remaining salmon stock. Returning salmon enter the harbour in Jan/ Feb / March of each year and the young salmon smolts return to the ocean in Apr/May/June of each year. Both migrations require the salmon to dally in saline waters of the estuary to locations where metamorphoses can take place allowing the fish to survive going from sea to fresh water and visa versa. Increased turbidity can only aggravate and antagonise this dwindling species, especially the young smolts, a loss, once extinct, can never be replaced. The present window for salmon migration must be preserved.

In conclusion, in this era of rapid biodiversity loss and environmental degradation, it behoves us all to raise our concerns and demand that due consideration and cognisance be attributed to single minded commercial interests that neglects to protect our natural but fragile habitat, a habitat without which, we shall have no commercial interests. Noting the toxic loading of Waterford estuary as outlined above and the consequent biodiversity loss, we must preserve our small time window for salmon migration and refuse the application amendment until a full scientific Environmental Impact assessment and analysis is completed and a better regime of environmental audit and enforcement is instituted to protect what's left. We count on our EPA to get this proactive balance right, a balance that cannot permit our ecosystems and biodiversity to deteriorate further, a balance that recognises the overarching reactive influence of the Aarhus Convention and EU Environmental Law, in the final analysis.

With best regards,

JP Power, CEng. CMarEng. MMA MBA FIEI FIMarEST

4

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