



Strategic Infrastructure Development Submission RE: 06D.PA0042

Submission made by

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Case

06D.PA0042: Eight year permission for the construction of a cruise berth facility in Dún Laoghaire Harbour

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Air Pollution

A very large cruise ship like “Oasis of the Seas”, with more than 6,000 passengers and crew, uses a huge quantity of diesel – up to 27,000 litres per hour*. Even while idling in the port it needs to power its air conditioning and electrical systems. The ship would be equivalent to a 96MW diesel power plant in Dún Laoghaire Harbour and would damage local residential air quality.

**Ref: Rated power output in MW of engines of Oasis of the Seas*

<http://www.wartsila.com/media/news/28-10-2009-wartsila-powers-royal-caribbean's-oasis-of-the-seas-the-largest-and-most-revolutionary-cruise-ship-in-the-world>

Burning 27,000 litres of diesel per hour produces:

70 tonnes CO₂ / hour

1.7 tonnes SO_x / hour

1 tonne NO_x / hour

A large cruise ship burns the equivalent diesel of 5,000 cars. The emissions of diesel cars are however controlled by the EURO 5 and EURO 6 standards to reduce Particulate Matter, SO_x and NO_x emissions. These standards do not apply to marine diesel engines.

The Irish Sea is not included in any of the Emission Control Areas (ECAs) designated by Annex VI of the 1997 MARPOL protocol.

This proposal envisages an additional 247 cruise ships (Page 19 of DKM economic impact document). This implies that super large cruise ships would eventually arrive and depart from Dún Laoghaire most days of the year. There would thus be sizable air emissions of various pollutants for most of the year.

In contrast with the recently Dublin Port cruise docks, the Dún Laoghaire proposal is sited in a residential and amenity area, so that the air pollutants would be inhaled by many people at home or at leisure.

Section 5.7 of the EIS (Climate) for this proposal uses a methodology for air dispersal modelling that is not explained. The input variables (such as fuel

consumption, number of ships and engine emissions) are not listed so that it is impossible to verify or repeat the calculations that have been carried out by the EIS author to arrive at the conclusion that the "impact of the development is not significant". Instead of detailing the methodology used and listing the input variables assumed, the author of the EIS merely listed the names of several organisations such as DEFRA, EPA and the NRA and then baldly states that the EIS follows their methodologies. For the EIS to have any credibility, the applicant should show which models are used and then show the input variables assumed and then show how they arrive at the final predicted output variables.

The air pollution impacts are only considered with reference to nearby residential buildings. This ignores the fact that the harbour is host to millions of annual amenity visitors. The East Pier alone is walked by 1.2 million people per year. Added to that are rowers, divers, sailors, swimmers, anglers and sea scouts. All of these people would be exercising and deeply inhaling the pollutants emitted by these ships. The applicant should rewrite the EIS to model these impacts.

Noise Pollution

The applicant designates six sites on the seafront as the "nearest noise-sensitive receptors". As with the applicant's air pollution assessment, the applicant has ignored the millions of amenity users of the harbour. Noise carries well over water. The 1.2 million visitors to the East Pier who come for a relaxing and healthy walk will be separated from the ship's 96MW engines by a few hundred metres of calm water. The previous diesel powered ferries were only a tenth of the tonnage of the proposed cruise ships, yet their engines could be smelled and heard from the pier. The applicant needs to rewrite the EIS to model the noise effect on users of the East and West piers.

Water Pollution

Section 5.5 of the applicant's EIS is concerned with the landside drainage and construction water impacts. There is no reference to the impact on water quality of the operation of super large 247 cruise ships in the harbour. Instead the author merely states that the operation will comply with MARPOL guidelines. The author immediately deduces that compliance with MARPOL guidelines will mean that

the operation of the cruise ship facility will be “long-term imperceptible with a neutral impact on [water] quality”. There are no grounds given for arriving at this conclusion.

The MARPOL convention for the prevention of pollution from ships permits the release of sewage 3 nautical miles from shore. In other words, the MARPOL convention would permit every cruise ship to empty its sewage load within Dublin Bay near the Burford Bank.

The MARPOL convention simply does not refer to the following forms of water pollution:

- Grey water from laundries and showers
- Oily bilge water
- Ballast water

Compliance with the MARPOL convention is not a guarantee of good water quality and it does not excuse the applicant from modelling the effect of 247 additional cruise ships emptying their sewage, ballast water, grey water and bilge water in Dublin Bay.

There is no modelling in the EIS of the effect of a sewage or fuel leak on water quality in the bay. There is no modelling in the EIS of the number of shoreline amenity users (swimmers, divers, sailors, anglers) who would be affected by an unexpected massive pollution incident.

There is no modelling in the EIS of the probability of such an event taking place given the predicted high volume of ship movements in the bay.

The applicant should rewrite the EIS chapter on water pollution to model the predicted effects of normal operation of the cruise ships on water quality and the effect of an unexpected sewage or fuel leak.

Impact on Marine Life

The applicant wishes to remove 1 million tonnes of seafloor by dredging and then proposes dumping that spoil in Dublin Bay. The EIS found 83 species of invertebrate marine life on the sea floor. There is no assessment of whether any of these species are endangered. It is merely assumed by the EIS that all are locally plentiful and that removing 1 million tonnes of habitat is a low-impact

event. The applicant should rewrite this chapter of the EIS to quantify the effects on each species.

The impact on fish, mammals and birds is also considered by the EIS. However, there is no account taken of the impact of sewage disposal three nautical miles from shore as permitted by the MARPOL convention. The applicant should model this effect.

What is the probability of an oil spill or sewage spill and what would the effect be on marine life? This has not been quantified in the EIS.

What will the effect be on crustaceans of dumping 1 million tonnes of spoil in the bay, making the waters murky for months?

Ballast water is taken on by large ships at one location to improve vessel stability and then discharged at another location. This can have a significant effect on marine life. Exotic and invasive plants, animals and viruses may be included in ballast water and The International Maritime Organization's Ballast Water Management convention is not yet in force.

There is no assessment of the effect of ballast water discharges on marine life in this EIS.

Impact of annual dredging

Each year, a huge section of the seafloor in the Harbour and the Bay will be removed including the removal of every living member of the 83 species identified by the EIS in the dredging zone.

There is no reference in the EIS to this except to say that the impact will be less than the initial dredging. What will be the tonnage of spoil removed each year? Will the annual dumping of dredged spoil in the bay lead to a permanently murky bay?

Impact on visual amenity

The proposal envisages the arrival of 247 cruise ships per year to Dún Laoghaire Harbour. These vessels will be up to 60m high and up to 330m in length. The applicant has chosen photomontages taken from Killiney and Merrion Gates that minimize the bulky appearance of these cruise ships. However it is still clear

that such large cruise ships would dwarf everything else in the harbour. The vessels are out of scale for this historic stone harbour and would seriously injure the visual amenity of the East Pier as enjoyed by 1.2 million visitors per year. The amenity value of the East Pier is linked with the beautiful views across the harbour and summer evening sunsets and dramatic skies. These views would be replaced with white floating apartment blocks presenting a massive wall.

In relative size, the applicant's photomontages show that the ships would be taller than even the tallest existing seafront structures – the new Lexicon library and the town hall.

Photomontages should be prepared by the applicant to show the views from busy amenity locations such as Seapoint, the Southern section of the East Pier, the Lexicon Library and the yacht clubs.

Impact on public sporting and leisure amenity

The harbour is a massive public amenity in Dun Laoghaire. Its use is equivalent to that of a park of similar size. There are rowing clubs, divers, anglers and swimmers. It is the most important location in the country for children learning to sail. The presence of a 300m long, 60m high wall, dividing the harbor in two, would be a massive wind-break which would preclude safe sailing and racing for children. It is national and local policy to promote sports and healthy exercise through the provision of public amenities such as this harbor. Removing this amenity would be contrary to public policy.

Impact on approved swimming pool ("Urban Beach")

The recent approved 'Urban Beach' is a floating heated swimming pool in a barge to be moored next to the East Pier. This project has recently approved planning permission from An Bórd Pleanála. The applicant's EIS makes no reference to the effect of Cruise ships on this facility. Will the swell from cruise ships wash into this swimming pool? What will be the effect of noise, air and water pollution on users of this future amenity? These effects should be quantified and analysed in the applicant's EIS.

UNESCO biosphere

UNESCO has recently designated Dublin Bay as a biosphere with the goal of promoting the protection of wildlife and habitats. The applicant makes no reference to this international designation in the EIS. The EIS should be rewritten to show how the project would impact on the goals of the biosphere.

Oral hearing

As the project would have such a huge effect on the public in Dún Laoghaire, we formally request that an oral hearing be arranged for this case.