

Submission on Ringsend Wastewater Treatment Plant Upgrade Project

Fingal Public Participation Network - Background:

In 2014, in accordance with the Local Government Reform/Citizen engagement policies of the Department of the Environment, Community and Local Government, Fingal Co. Council established its new framework for public engagement and participation, now called “The Fingal Public Participation Network (FPPN)”. This enables groups and organisations working on a community and voluntary basis to take an active formal role in the policy making and oversight activities of the Local Authority’s areas of responsibility. The FPPN is the main link through which the local authority connects with the community, voluntary and environmental sectors without prejudice to other consultation processes.

The functions of the FPPN are spread across decision making and strategic policy bodies of the Council, including Strategic Policy Committees (SPCs) to advise and to assist the Council in the formulation and development of policy. This unites groups with common interests in “Linkage Groups”, to give relevant sectoral interests an opportunity for full involvement in the policy-making process from early stages. Community groups and organisations registered with the FPPN, through Electoral Colleges / Linkage Groups, have elected representatives to represent the FPPN and are accountable to the FPPN membership - they are not representing their own organisations. Specifically the role of each representative is to:

- Bring issues of relevance from the College/Linkage that chose them to the decision-making committees
- Give feedback to the College/Linkage and/or Plenary as appropriate on the outcome of the policy meetings and the issue being raised

Fingal PPN Water and Environmental Services SPC

The main policy issues of interest to the Water and Environmental Services SPC of the Fingal PPN include:

- Regional Waste Management Plan
- Water Framework Directive and River Basin Management Plan
- Recommended Minimum Criteria for Environmental Inspections (RMCEI) Plans (annual)
- Litter Management Plan
- Report on the Annual Service Plan and Service Level Agreement with Irish Water
- Irish Water’s Capital Investment Plan and the delivery of Water Services Infrastructure in Fingal.
- Dublin Waste to Energy Project
- Landfill Remediation

Fingal PPN and the Ringsend Wastewater Treatment Plant Upgrade Project

The Fingal PPN Water and Environment Linkage Group met on Tuesday 15th March 2016 to consider what issues should be a priority at this time. The Irish Water proposal to use an advanced, nutrient-reduction treatment technology known as Aerobic Granular Sludge (AGS) in the Ringsend waste water treatment plant was discussed. While welcoming any improvement in waste water treatment which also delivers significant savings on this project, concern was expressed at possible impact on sea water quality and marine life which may result. This proposal means that not only will treated wastewater continue to be discharged from its current location in the heart of Dublin Bay, from where it is distributed throughout the Bay and along the Fingal shoreline by natural tidal processes, but the discharge volume will significantly increase.

Discharging increased volumes of treated wastewater at the existing location must not result in any adverse impact on sea water quality and marine life within the Dublin Bay Biosphere. This is not just an engineering issue - marine biologists and environmental experts must be involved to ensure that the potential for irreversible environmental impact is minimized. In its EIS NIS Scoping Document, Irish Water states that the water quality parameters proposed to be assessed are based on a mixture of the parameters set out in the current Wastewater Discharge Authorisation issued by the EPA, together with those parameters relevant to the receiving water legislation, and consisting of:

- Biochemical Oxygen Demand (BOD);
- Suspended Solids (SS);
- Ammonia (NH₃/NH₄⁺);
- Dissolved Inorganic Nitrogen (DIN);
- Molybdate Reactive Phosphate (MRP); and
- E.Coliforms

The Linkage Group meeting agreed that a written submission should be made to Irish Water on issues which we believe should be considered in the Environmental and Natura Impact Statements for Ringsend Wastewater Treatment Plant Upgrade. Since that meeting, four specific areas of concern have been identified for addressing as part of this project:

(a) Pharmaceutical Products

Pharmaceuticals have recently become the object of considerable attention and concern due to their possible toxicity and potential to cause adverse effects in aquatic organisms and the potential for direct human exposure via ingestion of contaminated seafood. Pharmaceuticals primarily enter the aquatic environment via treated municipal wastewater released by wastewater treatment plants. Human actions, termed as 'involuntary' (pharmaceutical excretion through the body or washing of topical medicines down the drain) and 'purposeful' (disposal of unused or out of date medicines) are primarily responsible for the release of pharmaceuticals into the environment. Human pharmaceuticals are excreted into the sewage system as a mixture of the parent compound and its metabolites.

(b) Priority Hazardous Substances

Priority hazardous substances include certain pesticides (atrazine, simazine, tributyltin), solvents (dichloromethane, toluene, xylene), metals (arsenic, chromium, copper, lead, nickel, zinc) and certain other ions (cyanide and fluoride). Wastewater treatment plants are major potential point sources of hazard substances, because they combine direct inputs from domestic, industrial and commercial effluent with diffuse inputs from surface runoff of land-deposited substances.

(c) Pathogenic Viruses

Norovirus is a leading cause of gastroenteritis in the community and is found in high concentrations in municipal wastewater. Bivalve molluscan shellfish such as oysters are filter-feeders and can become contaminated with human pathogens including Norovirus when grown in areas impacted by municipal wastewater discharges. Wastewater treatment is a critical control point which must be used to reduce the extent of pathogen discharge into the aquatic environment of Dublin Bay.

(d) Net Acidity

There is a requirement to monitor and control the net acidity of the outfall, especially with the future possibility of Shannon water being transported as a supply to the Dublin system – there may be differences in the relative pH levels between the waters of these two geographic areas. Acidic waters pose hazards that extend beyond having low pH - these include the capacity to acidify environments and the toxicity associated with dissolved metals, mostly iron and aluminium. Lowering the pH of flowing water can directly and immediately affect organisms (including algae, macro-invertebrates and aquatic plants) living in the water and on the seabed.

Reference documents:

- Pharmaceuticals in the Irish Aquatic Environment: The Assessment and Potential Human Impact of Exposure to Pharmaceuticals on Marine and Freshwater Bivalves - EPA Research Programme 2014–2020
<https://www.epa.ie/pubs/reports/research/water/Research%20Report%20143%20web.pdf>
- Pharmaceuticals in the Aquatic Environment: A Short Summary of Current Knowledge and the Potential Impacts on Aquatic Biota and Humans - EPA Research Programme 2014-2020
<http://www.epa.ie/pubs/reports/research/water/Research%20142%20Report%20FINAL.pdf>
- Monitoring of Priority Substances in Waste Water Effluents - EPA STRIVE Programme 2007–2013
<http://www.epa.ie/pubs/reports/research/water/strive117-monitoringofprioritysubstancesinwastewatereffluents.html>
- Norovirus in wastewater and shellfisheries: EPA Science, Technology, Research and Innovation for the Environment (STRIVE) Programme 2007–2013.
<http://www.epa.ie/pubs/reports/research/water/strive109-norovirusinwastewaterandshellfish.html>
- Acidic water discharge criteria for saline aquatic ecosystems in the WA Wheatbelt (2013) - Western Australia Department of Water
https://water.wa.gov.au/_data/assets/pdf_file/0004/3991/104449-Acid-water-discharge-criteria-for-saline-ecosystems-WA.pdf