
Dear Sir or Madam,

The Eastern Regional Fisheries Board (ERFB) is a Statutory Body with a remit encompassing the management, conservation, protection, development and improvement of the fisheries within its Region.

Under section 8(a) (1) (i) of the Fisheries (Amendment) Act, 1999; 'A Regional Board shall in the performance of its duties, have regard to the need for the sustainable development of the inland fisheries resource (including the conservation of fish and other species of fauna and flora habitats and the biodiversity of inland water ecosystems) and as far as possible ensure that its activities are carried out so as to protect the national heritage, within the meaning of the Heritage Act, 1995.'

Ballymore Eustace WWTP discharges all of its effluent under normal working conditions to the main channel of the River Liffey. The River Liffey represents a highly significant salmonid catchment. The River Liffey and several of its tributaries are exceptional in the area in supporting Atlantic salmon (Salmo salar, listed under Annex II and V of the EU Habitats Directive) and Sea trout (Salmo trutta) in addition to resident Brown trout and other fish populations. This highlights the sensitivity of local watercourses and the Liffey catchment in general. The river is regarded as a very important fishery. Fish populations in this system are protected through routine ERFB fisheries and water quality management measures.
Fishery habitat and water quality are regarded as particularly good for all salmonid life stages throughout much of the Liffey system and must be protected at all times.

**Background**

The ERFB has written to Kildare Co. Co on more than one occasion in the past regarding unsatisfactory discharges of effluent from Ballymore Eustace WWTP to the River Liffey. Luxuriant growths of sewage fungus and filamentous green algae have been recorded by Board staff where the effluent is discharged to the river and further downstream of the mixing zone.

**EPA Biological Quality of Surface Waters Data**

It must be highlighted that a note of caution was recorded in the EPA’s ecological assessment of rivers report for 2007 where a Q3-4 was again recorded for the station at Ballymore Eustace Bridge (just upstream of the discharge point for Ballymore Eustace WWTP).

Q3-4 relates to a degraded biofauna resulting in limited spawning and associated recruitment of salmonids. Research carried out by the Central Fisheries Board demonstrated significantly lower juvenile salmon abundance at Q3 & Q3-4 sites compared to Q4 sites (T. Champ, Senior Research Officer, Central Fisheries Board, pers. comm.). Further research carried out by the Central Fisheries Board "Programmes of Measures and Standards – Freshwater Morphology, Irish Fisheries Recovery Dataset Provision, May 2007" found that Q values of Q3-4 or less will impede salmon parr production, while Q values of Q3 or less will limit brown trout populations.

**Application monitoring data**

Data provided for effluent discharging to the River Liffey show that currently there is effectively no treatment of effluent at Ballymore Eustace WWTP. In fact, it is frequently recorded that values for effluent are higher than those recorded for the inlet stream (for parameters such as BOD, COD, TP, Ortho-P, Total Ammonium). Such a scenario is totally unacceptable. Data from February 2007 to January 2009 for effluent quality show mean BOD at 181 mg/l, mean NH3 at 26.8mg/l, mean TP at 8mg/l, Ortho-P at 13.2 mg/l and 4.21 mg/lP. These values are typical of untreated municipal sewage effluent. The plant is discharging this effluent at an average rate of 511m3/day. The urgency of finding a resolution to this completely unsustainable scenario cannot be overstated.

Data provided for the upstream (ASW1-Pu) monitoring site record widely fluctuating nutrient conditions in the river. Mean Ortho-P levels are recorded as 0.105. While mean NH3 levels are recorded as 0.414. As units of measurement
are not presented clearly in the table entitled ‘Ballymore Eustace Wastewater Treatment Works Sampling Data 2007-2009’ clarification is requested on this issue. These data appear inconsistent with data recorded in Table F.1(i)(a). An expanded, clear physico-chemical dataset is required in order to allow an informed assessment of current impact and the proposed new scheme.

The Ballymore Eustace Sewerage Scheme - Design Report appears to employ EPA physico-chemical data (Table 5.5) for use in assimilative capacity calculations in Table 5.7; however a confusion of Ortho-P and Total P figures appears to occur in this table (and in footnote 4). These calculations should be updated in the context of the recent EUROPEAN COMMUNITIES ENVIRONMENTAL OBJECTIVES (SURFACE WATERS) REGULATIONS, 2009.

Planning and water quality
It is noteworthy and of great concern that a total p.e. of 1567 (existing and already granted at planning) is calculated for the Ballymore Eustace WWTP catchment. The existing plant has a design capacity of 500 p.e., however it is doubtful given the condition of the plant that that it is capable of treating any effluent to any extent regardless of the loading rate. This situation is totally unacceptable and requires urgent attention to facilitate progression of the new scheme. It will be incumbent on the Local Authority once the new scheme is in place to ensure that connections are not made to the sewerage system in excess of the stated design capacity of the new plant. Any such connections would be likely to result in a deterioration of final effluent quality a scenario in direct conflict with the provisions of Part II (5) of the EUROPEAN COMMUNITIES ENVIRONMENTAL OBJECTIVES (SURFACE WATERS) REGULATIONS, 2009 which states ‘A public authority shall not, in the performance of its functions, undertake those functions in a manner that knowingly causes or allows deterioration in chemical status or ecological status (or ecological potential as the case may be) of a body of surface water.

The issue of problematical P levels in Blessington WWTP effluent (a short distance upstream of Ballymore Eustace on the Liffey system) has been mentioned in a previous application (Wicklow App, Table E.4.1). It is imperative that P loading to the aquatic system is addressed immediately and absolutely minimised in both instances. There is significant potential for cumulative negative impacts of both discharges on the R. Liffey. A tertiary level of treatment with P removal will probably be required to ensure the sustainability of the Ballymore Eustace discharge into the future (potentially reduced low flows as a result of climate change, cumulative impacts of this and other discharges further downstream etc).
The issue of climate change should be comprehensively considered and integrated into the final licence. Whilst forecasting data is currently debatable, the consensus is that summer base flows in surface waters within the region will reduce significantly in the short term. The issuing of the licence will afford an opportunity to address the key issue of ecological sustainability inherently associated with this scenario. A new and dynamic approach will be required to ensure the sustainability of both current and future practices regarding effluent discharge at this location, not to mention catchment management above this location – potable water abstractions etc. The licence must address the need to meet WFD objectives for all surface waters potentially impacted in the Ballymore Eustace Agglomeration.

The ERFB, in addition to all other relevant agencies should be listed in a standard emergency contact/notification protocol for implementation in these circumstances.

It is respectfully highlighted that the continuing moderately polluted status of the River Liffey at Ballymore Eustace Bridge is wholly unacceptable and contrary to national legislation. The Liffey is located within the Eastern River Basin District under national Water Framework Directive implementation - the fundamental objective of the Water Framework Directive aims at maintaining "high status" of waters where it exists, preventing any deterioration in the existing status of waters and achieving at least "good status" in relation to all waters by 2015. Any licensing of the plant must be consistent with the requirements of fisheries and other relevant legislation, in particular with a focus on water quality targets for the River Liffey. The final licence should be informed by fisheries and other relevant legislation. If we can be of any further assistance, please do not hesitate to contact us.

Yours faithfully,

Pat Donnelly
Chief Executive Officer