05 January 2009

Re: Waste License Discharge Application by Wicklow County Council for Carnew WWTP

Dear Sir

With reference to the above application please note that Carnew WWTP discharges to the Coves Brook which represents the upper reaches of a tributary of the Mine River. The Mine River system is an important salmonid tributary of the Derry (and Slaney Rivers). The Slaney System is a designated river under the European Communities (Quality of Salmonid Waters) regulations 1978 and is an important Spring Salmon & sea trout fishery. Wexford Harbour, the River Slaney main channel and many of its tributaries are candidate Special Areas for Conservation (SAC), under the European Habitats Directive (Implemented into law by the Natural Habitats Regulations 1997). The river supports several species listed in Annex II of the Directive including Salmon, River Lamprey, Brook Lamprey, Sea Lamprey, Freshwater Pearl Mussel and Otter.

This system is part of the South Eastern River Basin District Management System, a project in support of the catchment based national strategy to implement the Water Framework Directive. One of the objectives of the WFD is to achieve Good Ecological Status on all waters by 2015.

The ERFB have serious concerns relating to the sustainability of the discharge from the upgraded plant, given the limited catchment area (approx. 4.7km²) of the Coves Brook at the discharge point it is subject to minimal flows during prolonged dry spells. A very significant P.E. contributing to this plant which currently stands at 2938 P.E. with pending developments in Carnew to contribute a further 726 P.E. in the near future.

The Eastern Regional Fisheries Board have serious concerns relating to the availability of assimilative capacity in the Covesbrook for this discharge as proposed. The following are the concerns of the Board:

- We note that the Carnew Waste Water treatment Plant is already significantly overloaded and that Wicklow County Council have no immediate plans for an upgrade of the plant.
- The Board have reviewed the catchment area of the Covesbrook at the discharge point, which we believe is less than 4.7km² and subject to minimal flows during prolonged dry spells.
- Using a P.E. of 3664 the discharge from this plant will be approx. 7.6l/sec. Given the tiny catchment area of the receiving water, the 95percentile flow of this watercourse is likely to be a similar volume. There is no tertiary treatment (nutrient removal) at
this plant. Even with the incorporation of a high spec. tertiary treatment unit at this plant, given the limited dilution in the Coves Brook it is unlikely that adequate assimilative would exist in this watercourse for the discharge from Carnew WWTP. We believe that the only sustainable option is likely to be the transfer of the discharge to a watercourse where adequate dilution exists.

- The Board have been unable to carry out an assimilative capacity calculation as 95 percentile and dry weather flows have not been supplied by the applicant, we do not believe that the background nutrient concentrations are representative.
- The Board does not believe that the applicant has demonstrated that the Covesbrook Stream will achieve “Good Ecological Status” downstream of the plant or that adequate assimilative capacity exists in this watercourse or in the Mine River downstream for this discharge from this plant.
- Please note that the EPA Report “Climate Change – Scenarios & Impacts for Ireland states, “the greatest change, an annual reduction in effective runoff of approximately 25% of the baseline flow, was observed for the Slaney”. The report also states that some of the greatest reductions in predicted run-off are predicted in the south-east of the country”.

While the Mine River is not designated for salmon under the Habitats Directive it is an important Salmon spawning tributary of the Slaney. The Report of the Standing Scientific Committee of the National Salmon Commission “status of Irish Salmon Stocks in 2006 and precautionary catch advice for 2007” states that in applying the Habitats Directive consideration must be given to all of the populations and not just specifically to the 26 SAC designated Rivers. It is imperative that the discharge from this plant ensures Q4 conditions and that given the numerous other licensed discharges throughout this system this discharge does not contribute to unsatisfactory biological conditions downstream.

- A biological quality rating of Q3 or Q3-4 is highly unsatisfactory from a fisheries perspective. Q3-4 relates to a seriously degraded biofauna resulting in limited spawning / 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 (Trevor Champ, Senior Research Officer, Central Fisheries Board, pers com.). 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.

- 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.
- The EPA Report “The interim Report on the Biological Survey of River Quality, Results of the 2007 Investigations” states that signs of enrichment were evident at both locations sampled with enhanced instream plant and algal growth coupled with excessive siltation observed and that agriculture and sewage are suspected as the cause. The Board believes that the high flows evident throughout 2007 favoured higher biological results and that with the future likelihood of prolonged dry weather / drought with associated lower flows and assimilative capacity it (given the luxuriant growth of algae and plant life) it is unlikely that the satisfactory Biological Conditions in the Mine River system will be maintained.
The applicant states "The works although overloaded in theory according to design figures, is producing excellent effluent results and poses little environmental risk to the receiving water habitat". As no 95 percentile or Dry Weather flows have been submitted and given the significant discharge volume and limited catchment area the Board question this assertion. A biological quality assessment upstream and downstream of the discharge would give a good reflection of long term water quality trends at this site.

The ERFB have serious concerns regarding the sustainability of this discharge, we do not believe that the applicant has demonstrated that assimilative capacity for this discharge exists at the proposed discharge point and request that that the applicant submits data detailing assimilative capacity calculations. The Board have concerns that at current and future loading rates at this plant the receiving waters are unlikely to fulfil the requirements of the Water Framework Directive, Quality of Salmonid Waters Regulations and the Phosphorus Regulations. Assimilative capacity calculations for the discharges from this plant should take into account the limited catchment area of the receiving watercourse and the predicted lower base flows in this system resulting from global warming.

Yours faithfully

Pat Doherty
Chief Executive Officer