Dear Sir/Madam,

We refer to the above-mentioned application for a waste water discharge licence at Ardee WWTP, Ardee, Co Louth. While The Board welcomes the future licensing of discharges from this WWTP and the accompanying upgrade, I have a few observations to make in relation to some sections of the EIS, notably those ones which detail possible effects on the receiving watercourse, The River Dee.

Accurate, detailed assimilative capacity calculations must be central to predicting the likely effect a point discharge will have on a receiving watercourse. It is for this reason that The Board requests the assimilative capacity calculations, provided in section 7.5.2 “Surface Water” of the EIS are revised for the following reasons:

- Page 6 of attachment E.4 of the application states that “the figure of 0.18m³/s for the 95%ile flow has been utilised in the determination of the assimilative capacity of the Dee”. However, the calculations in the EIS use a figure of 0.338m³/s for the 95%ile flow. The lower figure was taken from the EPA’s hydrometric register. As the EPA deals more specifically with low-flows than OPW-records (the source of the higher figure), the precautionary principle should be taken when calculating the assimilative capacity of the Dee and the lower figure used in any calculations.

- The section provides an average flow of 2.6l/s of final treated effluent to be discharged to The Dee. This estimation seems very small (perhaps by a factor of 10) for a WWTP with a design capacity of 12500pe. If this is incorrect it would obviously greatly underestimate the effect of the discharge on the receiving watercourse.

- The section also assesses the increase in total phosphorus. Firstly, it would be preferable to examine ortho-phosphate increases as it is this form which is utilised...
most readily by aquatic plants and hence the form used in the phosphorus regulations. It should also be noted that the assimilative capacity calculations used 0.02mg/l P as the background concentration of phosphorus in the Dee. While this may have been obtained from a once off sampling episode, it is not a true reflection of the river. The EPA has recorded median values of 0.04mg/l-P ortho-phosphate upstream of the site. This value would be more indicative of true conditions.

The section calculating assimilative capacity neglected to examine the likely change of ammonia concentrations in the Dee due to the discharge. This is a very important chemical from a fisheries perspective as it is toxic to fish, especially so in alkaline waters such as the Dee.

The plant discharges to the River Dee. The Dee contains valuable salmonid habitat with stocks of Salmon, Sea Trout and Brown Trout. As table 5.6 of the EIS highlights, the water quality of the Dee drops from fair to doubtful, from upstream to downstream of the WWTP respectively. Therefore, it is important that any increased discharges from the plant in the future will not exacerbate this chronic problem of organic enrichment in the Dee.

We trust you will take note of our observations. Please keep us informed of your progress with this application.

Regards,

Diarmuid Ryan
Fisheries Environmental Officer