

## Ballyragget (Glanbia) Effluent Treatment Plant



### Plant Description:

- Upgrade of existing industrial effluent treatment plant.
- Supply and delivery of 74 membrane units.
- Effluent quality to be high for discharge to Salmonoid river.
- The contract agreement provided for the supply and delivery of 74 membrane units with additional services to be paid over and above the contract price.
- Additional services were provided in the nature of design assistance, inspections during installation, assistance to start-up, commissioning and membrane cleaning.

<b>Current Status:</b>	Plant in operation since August 1999
<b>Client:</b>	Avonmore Waterford Group (Glanbia)
<b>Contract award:</b>	December 1998
<b>Consent:</b>	10:5 BOD:SS
<b>Brief Description:</b>	Membrane bioreactor system used to upgrade existing industrial effluent treatment plant

### MBR Atıksu Arıtma Sistemleri Ltd.

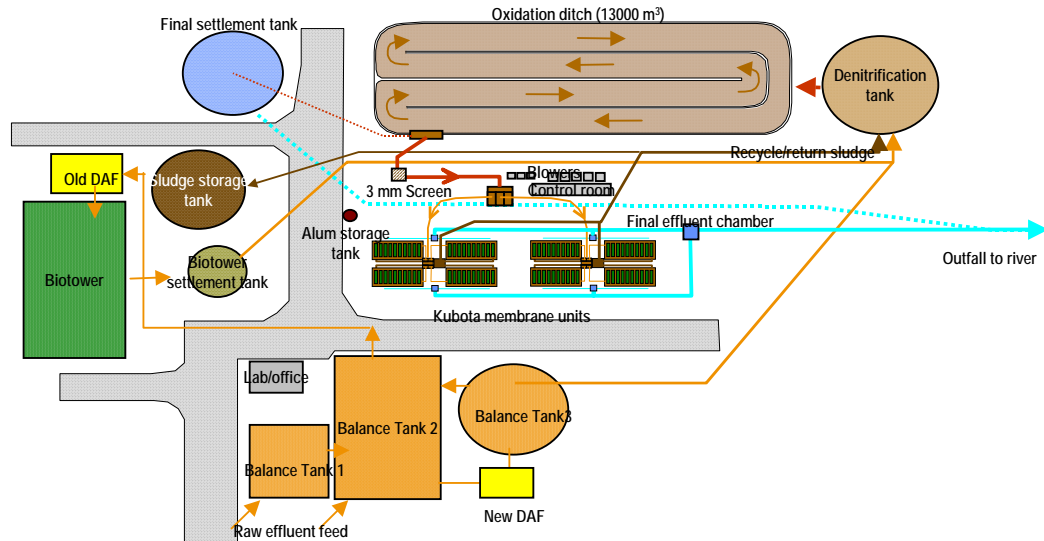
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### Process Description:

The existing dairy effluent treatment plant in Kilkenny, Ireland has been upgraded by the installation of a submerged membrane plant. The overall effluent treatment plant is designed to treat approximately 9,000m<sup>3</sup>/d. The MBR Technology plant has been initially designed to treat up to 7,100m<sup>3</sup>/d of effluent taken from the existing oxidation ditch. This allows the MLSS and loading on the oxidation ditch to be increased while retaining the existing settlement tanks operating at a much reduced up-flow rate.

The plant design incorporates 74 membrane treatment units within a modular arrangement of eight steel aeration tanks operated in two groups of four tanks at a time. There are no buildings or tank covers and plant control is achieved by allowing the level to vary within the aeration tanks in proportion to the incoming flow. Each steel tank is 10 x 3 x 4m high and the plan area of the membrane plant is approximately 50 x 10m. Construction began in February 1999 and plant commissioning was initiated in June 1999.

### Design Data

Membrane aeration tank volume	900m <sup>3</sup>
MLSS	12000-18000mg/l
No. of membrane units	74 x E150
Membrane surface area	8880m <sup>2</sup>
Maximum overall plant loading	
16t/d BOD	

### Plant Data

Flow to Full Treatment	7,100m <sup>3</sup> /d
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