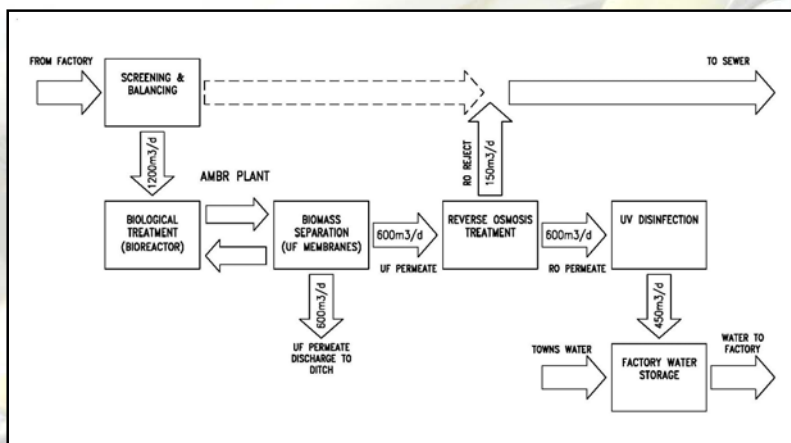




AQUABIO AMBR/RO/UV TECHNOLOGY ENABLES HIGH QUALITY WASTEWATER TREATMENT AND POTABLE WATER REUSE AT GEEST

Aquabio Limited has designed, built and commissioned another turnkey wastewater treatment and reuse plant in the UK food and drinks sector. The plant at Geest, a major salads producer in Lincolnshire, enables the reuse of up to 45% of the wastewater. The treatment plant is based on pre-treatment and aerated flow balancing followed by an advanced membrane bioreactor (AMBR), reverse osmosis (RO) and ultraviolet (UV) disinfection. A total of 1,400m³/day can be produced by the factory with the total volume being pumped forward to the AMBR. Following the RO and UV disinfection stages up to 450m³/day can be returned back to the incoming mains water tank for 'blending' prior to entering the factory as salad washing and process water. The plant treats and influent COD_{Total} to the balancing tank of up to 480 kg/day depending on factory production. In order to effectively separate the biomass 3 No. banks of specialised ultrafiltration modules are used, fed by a recirculation system from a single bioreactor tank. The operation is fully automated with PLC control and data logging of key process parameters (e.g. flows, dissolved oxygen, pH, etc.) A JETOX aeration and mixing system is incorporated to achieve the necessarily high rates of oxygen mass transfer into the concentrated biomass.



The intensive aerobic environment created in the bioreactor combined with the high relative sludge age means that a high quality final effluent can be achieved in a much smaller 'footprint'. The ultrafiltration biomass separation system also provides a permeate suitable for feeding directly into the RO/UV post treatment stage. The AMBR treated effluent is suitable and reliable for watercourse discharge and RO treated water for factory reuse is blended with town's water and is fully compliant with requirements of Water Supply (Water Quality) Regulations 2000 – 'wholesome' water



Reverse Osmosis/UV post treatment for potable reuse

For further information about Aquabio Membrane Bioreactor systems and other products and processes, please contact us at Aquabio Limited, Worcester, UK, either by e-mail or fax.

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