

## Shock Load Capability - Two Extreme Cases

Advanced Aeration demonstrated its superior ability when an excessively high polluting load entered the works. The polluting load entered over three days in April 2005, peaking to PE loads of 10,343 for BOD, 24,692 for COD and 30,861 for TSS within a plant designed for 3,140 PE.

During and after the pollution incident, the process remained well inside the final effluent consent.

An increase to sludge waste production was noticeable; however, sludge waste remained exceptionally low, in fact lower than that produced from conventional systems designed for 3,000 PE.

### PORTGLENONE WWTW IMPROVEMENTS DRD WATER SERVICE - NORTHERN IRELAND Population : 3,143 PE



### MELBOURN WWTW IMPROVEMENTS ANGLIAN WATER SERVICES Population: 6,535 PE-9,000 PE (Commercial Load 2,46 PE)



During the latter part of 2004, it had been reported that the volume of sludge waste production had increased. However, on closer investigation, it was established that the loading to the works had substantially increased from a rise in commercial activity.

In population equivalent terms, the maximum load to the plant had risen from 9,000 PE to 15,000 PE. Nonetheless, the plant remained well in final effluent consent limits of 25 mg/l BOD: 13 mg/l TSS: 04 mg/l NH3-N in spite of the additional load.

Moreover, the increase in sludge wasting remained very impressive with an average production of 0.2 kg TSS/kg BOD d – well below any other system