

Temporary treatment systems for large construction site in Stratford, East London

- Filter refurbishment program for 2000 site workers/staff
- Site Contractor: Natta Building Company
- Peak flow to treatment: 10.5l/s
- Designed consent standard: 20 mg/l BOD, 30 mg/l TSS & 10 mg/l NH4
- Maximum incoming BOD: 380 mg/l
- Maximum incoming NH4: 50 mg/l
- Units supplied:
 - 4 off 300pe GRP units
 - 1 off 750pe steel unit
 - 2 off HB50 Lamella settling tanks (primary and final tanks)

The above units were purchased by the contractor due to the lengthy construction period; the portable units provided a complete waste water treatment process capable of achieving the above consent standard.

Raw sewage influent will be pumped to the inlet of the lamella plate primary settlement tank (LPPST) where it is anticipated 30% of the BOD load will settle out. After primary settlement the outlet flow will leave the LPPST via multiple outlet connections which effectively split the flow into equal streams. The LPPST is equipped with baffles to prevent any floating scum entering the biological phase of the treatment. Sludge is periodically transferred to a separate sludge storage tank utilising an actuated valve on the sludge outlet point.



After primary settlement the flows will split (under full loading conditions) and flow under gravity to one of the SAF bio-treatment streams consisting of multiple T300 SAF biological treatment tanks, and the two streams re-combine to flow into one single T750 unit. These tanks are of the submerged bed aerated filter type (SAF) and are each split into several chambers each filled with high voidage plastic media. Whilst passing through these chambers both carbonaceous and nitrifying processes take place. Air to oxidise the influent and to scour excess biomass from the filter media is introduced continuously below each chamber by a series of diffusers. Each diffuser is capable of being removed for maintenance without the necessity to shut down the plant.

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