



# Case Study

## 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)**



WPL SAF & Lamella Plate Units



WPL SAF Units

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.

## **About WPL Ltd**

WPL Ltd provides innovative and reliable wastewater treatment, rainwater harvesting and grease management systems for domestic, commercial and industrial markets as well as holding a prominent position as a supplier to the water utilities. As an internationally recognised leader in the design, manufacture and supply of both standardised, and bespoke environmental solutions, WPL is dedicated to ensure the provision of high quality products and services.

## **Environmental Policy**

WPL is ISO14001 accredited.

WPL rigorously fulfils its vision of protecting the environment by delivering reliable wastewater solutions. A strong focus on quality and compliance ensures that all wastewater treatment systems are designed to work within the guidelines of the British Water Code of Practice and exceed all present and proposed discharge consent standards enforced by the Environment Agency, SEPA and other European regulatory authorities.