



LONDON BRIDGE STATION
REDEVELOPMENT PROJECT

LONDON BRIDGE BEST PRACTICE

Concrete Washout

Overview

As part of the London Bridge redevelopment works, a large amount of concrete will be poured. Given the City Centre logistics, the lack of space on the site and the strict environmental requirements from the EA and the local water board (Thames Water), a bespoke concrete washout facility needed to be developed. The facility needed to be environmentally friendly, easy to use and cheap to run.

To enable the washout to be discharged, a license from Thames Water was required. The cost of discharging depends upon the grade of washout water produced. This includes the size of the solids and the pH of the water. With a higher grade of water to discharge, the cheaper the cost is. A solution was required which would allow us to treat the water to a high grade whilst reducing the cost to pump away.

The Solution: Mobile Concrete Washout Unit

Working with Watermaiden, a bespoke concrete washout unit was developed. The requirements given were:

- Trailer mounted and able to be moved by a forklift/dumper/transit
- Low tech
- Environmentally friendly

In order to achieve these requirements Costain took the standard Silt Doctor static washout unit and reduced it down to a lower tech version and mounted the whole unit on a trailer. This meant it could be moved around site using either a forklift or dumper. The trailer was also designed as a road legal unit allowing it to be moved on and off site, and to other sites, when required.

The entire unit was bespoke made for Costain including the size of the trailer, the size of the washout containers and the centre platform.



The washout process involves pumping the concrete washout water from the initial treatment tank, through a hydrocyclone (removing solids) into a second treatment tank where the pH is lowered and any remaining solids removed. The treated washout water can then be either pumped into the sewers or recycled on site e.g. damping down, wheelwashing. The remaining solids are removed using an excavator to be taken off site.

As a result of the treatment in the second tank, the grade of water being discharges in high enough to allow for discharge cost savings to be made.



Benefits:

- Trailer Mounted enabling easy movement around site
- Low tech/Minimal working parts hence low maintenance
- Cheap to run and manage
- Treated water can be recycled and used for dampening down across site

Objectives and Targets:

- Minimising the costs for washout water discharging into the sewers
- London Bridge Sustainability Delivery Statement – water and waste
- CEEQUAL – water and waste management