



# LONDON BRIDGE BEST PRACTICE

LONDON BRIDGE STATION  
REDEVELOPMENT PROJECT

## Managing Dust - DustBoss

### Overview

A major part of the demolition works to be carried out on the London Bridge Redevelopment Scheme was the large scale demolition of the arches as part of the concourse construction.

The demolition was undertaken by a number of 45 tonne excavators with breaker attachments.

Due to the dry nature of the bricks, airborne dust could potentially have a serious impact on the health of surrounding residents (including pedestrians on St Thomas Street and patients in Guys Hospital), and construction workers, if not correctly managed. Therefore a robust dust suppression technique was required.

Dust is defined as any particulate matter (either suspended or deposited) up to 75µm.

Under the Health and Safety Work Act, 1974, emissions of airborne pollutants should be minimised. The Building Act, 1984, ensures the safety of those near building works. Further to this, the Environmental Protection Act 1990, emissions of dust and fumes can be recognised as a statutory nuisance if prejudicial to health.

The threshold for Total Suspended Particulates (TSP) is 350µm m<sup>-3</sup>/hr. When this is exceeded, a text message is sent to the Project Environmental Manager and Site Supervisor, and a site evaluation undertaken. If readings per hour are about 500µm m<sup>-3</sup>, the London Borough of Southwark will be notified and works could be stopped.

### The Solution



Costain have implemented the use of DustBoss to mitigate the effects of dust and emissions. These machines are specifically designed for effective dust control and dramatically help to reduce the level of airborne dust particles associated with the demolition of the arches.



The unit produces a fine spray where the water droplets catch airborne dust particles and then drives them to the ground, creating a fine mist, and allowing workers and residents to adhere to the toughest air quality standards.

A total of three DustBoss machines were used during the first phase of demolition to great success. During the period whilst the dust boss was in use the threshold at Guys Hospital, which is located adjacent to the works for Total Suspended particulates was not exceeded.

### Benefits

- Allowed demolition of the arches to continue while reducing the emissions of dust and air pollution
- Minimised the disruption of the demolition on surrounding stakeholders and construction workers

### Objectives & Targets

- CEEQUAL – nuisance to neighbours , community relations
- London Bridge Sustainable Delivery Statement – land & pollution
- London Bridge Objective 19 - apply BPM to minimise impact from noise & vibration and air pollutants and monitor performance