Dust and Fume Control at the Shard

Ventilation, fume and dust control at the UK's tallest building

Febuary 2020

Client:

mace

Location:
Central London

Featured Product Range:

- Dustex® Dust Control Solutions
- Ventex® Ventilation Systems
- Ravex® Fume Control Solutions

Keeping harmful dusts and gasses at bay during top-down construction.

In 2006 plans for the redevelopment of Southwark Towers were approved, and by 2007 demolition work was underway so that the construction of the Shard could begin in 2009.

The Challenge

Alongside the challenge of meeting tight deadlines set by global clients, complex top-down construction methods also needed to be implemented in order to support such a tall structure. This method of construction was also required due to the extremely limited space in central London where the Shard project was based. As a result, the project's basement measured 30 meters deep, so it was vital that the air quality was managed effectively in order to avoid the build-up of harmful dusts and gasses and to protect the workers on site.

Case Study Key Facts

- The Shard, designed by Renzo Piano, is the tallest building in the UK at 1,016 ft.
- Construction on The Shard began in March 2009 and was completed on 30 March 2012.
- The total construction cost of the project is estimated to be £435 million.
- RVT Group were involved from the earliest stages of the project.
- The project involved top-down construction method.
- The project's basement measured 30 metres deep.
- RVT's Dustex®, Ravex® and Ventex® equipment were used during this project to prevent a build up up dangerous dusts and gasses.
- Air quality in the basement constantly monitored to ensure that RVT's solutions were meeting strict HSE Legislation requirements.

The Solution

RVT were involved from the earliest stages of project to ensure the right equipment was on site, at the right time, right where it was needed. We provided Dustex® dust control solutions during the breaking out of piles in lower basement areas and our Ravex® equipment provided exhaust fume control for diesel excavators. Our large Ventex® axial fans were installed to maintain air quality at agreed levels. These were then supplemented with high volume centrifugal fans for dust and fume extraction throughout the 4-storey basement excavation.

Throughout the project, the air quality was constantly monitored to ensure that our ventilation, dust control and fume control solutions were meeting strict HSE Legislation requirements.