

Sector: **Construction**

Project: **The Shard, London**

Europe's tallest building took **complex health and safety challenges to new depths**



Understanding the Challenge

In central London, the space available for major construction projects is extremely limited. In addition, global clients need their building to be finished and generating revenue as quickly as possible. The result is many buildings have to be built downwards as well as up, and often simultaneously, which means complex 'top down basement construction' methods are used.

As the tallest building in Europe, the challenge of constructing The Shard and the adjacent 'Baby Shard' put the principal national contractor under the spotlight of not only the wider construction sector, but also the public gaze too. Delivering on time with zero health and safety incidents was of critical importance to the company's workforce and its global reputation.

Top down basement construction presented unique complex health and safety challenges such as carrying out excavations 30 metres beneath the ground floor slab as multiple basement levels were constructed. To achieve this safely required absolute confidence in their contractors providing adequate ventilation to avoid build up of harmful gases.

Creating the **Right Solution**

RVT Group's experience and expertise provided the principal contractor with all the confidence needed that a safe working environment would be maintained throughout the basement construction process:

- ✔ Involved from the earliest stages in project scheduling to ensure the right equipment was on site, at the right time, right where it was needed.
- ✔ Specialist VENTEX™ ventilation systems were installed to maintain air quality at agreed levels. Large axial fans were supplemented with high volume centrifugal fans for dust and fume extraction throughout the 4 storey basement excavation.
- ✔ DUSTEX™ Dust Control Solutions were utilised during breaking out of piles in lower basement areas.
- ✔ Exhaust fumes from excavators were controlled at source using innovative RAVEX™ 'add on' exhaust systems.
- ✔ Constant monitoring of air quality to ensure RVT Group's Ventilation Control and Exhaust Fume Control Solutions were meeting strict HSE Legislation requirements.

Providing Real Benefits

We are proud to have helped deliver a complex project to demanding deadlines, helping to maintain the reputation of one of the world's most successful construction companies. RVT Group provided the principal contractor with the absolute confidence that one of their greatest health and safety challenges, and the reputation of the company, was always in safe hands.



DUST CONTROL SOLUTIONS



DUSTEX™ Dust Control Solutions utilised during breaking out of piles in lower basement areas.



VENTILATION SOLUTIONS



Large VENTEX axial fans were supplemented with high volume centrifugal fans for dust and fume extraction throughout the 4 storey basement excavation.



EXHAUST FUME CONTROL SOLUTIONS



Exhaust fumes from excavators were controlled at source using innovative RAVEX™ 'add on' exhaust systems.

World-class solutions for world-class success

We're focused on delivering solutions that overcome our customers' challenges, and firmly believe that a team with a real can-do attitude can achieve anything.

With proven success on some of the world's most prestigious projects, we ensure our customers keep working efficiently and effectively and get the job done safely wherever they are.

Contact us to discuss out how RVT Group can help you overcome your next challenge in the Construction Sector on **+44 (0) 844 324 0601**



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