



# Health hazard control solutions for Civils and Infrastructure projects

RVT provides contractors with specialist hazard control equipment to keep workers safe on site



# Supporting large-scale Civil Engineering and Infrastructure projects

Civil Engineering companies working on major capital projects are constantly under pressure from local authorities to ensure that local residents, businesses and schools are effectively protected from excessive noise, dust and fumes.

Protecting site workers from dangerous hazards on site and upholding current best practice is also a top priority. We understand the varying challenges these projects can create – from providing safe air quality within confined spaces to suppressing dust and noise created on site.

RVT Group are on board to provide you with fully approved health hazard control solutions that will protect your workforce and nearby public. We work closely with your company to design suitable bespoke solutions that meet your specific needs.

- ✓ Ventilation
- ✓ Noise Control
- ✓ Dust and Fume Control
- ✓ Monitoring Solutions



# Understanding your challenges

## Managing Air Quality in Enclosed Spaces

Providing clean air whilst teams operate in enclosed or confined spaces can be especially challenging, especially if works involve welding or concreting. Without the correct measures in place, you could be exposing workers to high concentrations of hazardous dust and fumes which could be fatal, or at the very least hazardous to their long-term health. To adequately protect workers, contaminants need to be filtered and/or extracted to atmosphere using suitable LEV systems.

As specialists in air quality control, RVT Group have the experience and expertise in ventilation system design to provide you with bespoke ventilation systems. Ventex ventilation designs have provided critical support for numerous CSO Shaft and tunnel construction projects for Thames Tideway, shafts, station boxes and tunnels for Crossrail and top-down construction methods for buildings such as Heathrow terminal 2B and the Luton DART station.

## Managing Air Quality in Enclosed Spaces

Many civil engineering projects stipulate modern plant is used, with engines incorporating high levels of emission control. However, exhaust fumes quickly build up in restricted and confined spaces and it is estimated that up to 500,000 workers in the UK are exposed to dangerous levels of exhaust fumes each year, which results in 800 new cases of cancer and 650 deaths. Health & safety legislation requires diesel engine exhaust emissions (DEEEs) to be controlled whenever and wherever they could create a health hazard.

RVT can provide a range of ventilation, extraction and filtration systems to manage engine emissions.



# Understanding your challenges

## Managing Airborne Dust

Applications such as demolition, construction and land remediation can produce huge amounts of hazardous airborne dust that should be controlled. Failure to install adequate dust control will leave workers exposed to health problems such as heart disease, lung disease, respiratory problems, asbestosis, silicosis and cancer. Using suitable filtration and/or water suppression systems not only protects the health of workers and those nearby but can also prevent damage to local property and the environment.

## Protecting Site Operatives, Local Residents & Businesses from Excessive Noise

Besides ensuring site workers are protected from excessive noise, contractors must also ensure that the impact of their activities on those living and working nearby is kept to a minimum. Failure to do so could leave you open to claims for hearing loss, tinnitus, disturbed sleep, mental health issues, impaired memory, reduced quality of life and loss of earning. RVT Group are specialists in noise control and offer a variety of acoustic curtains, quilts and enclosures in our Soundex® range. These acoustic barriers can either enclose the construction work at source or line the perimeter of the site.

## Adhering to Strict Guidelines issued by Local Authorities

Local authorities often impose strict guidelines on construction sites, especially in built-up areas. Failure to keep noise, dust or vibrations within the pre-defined limits could attract attention from the HSE and local authorities, resulting in delays or site closure. To eliminate the risk of unforeseen breaches, you may wish to audit noise, dust, vibration and/or gas levels, using RVT's range of Monitex® Monitoring Solutions with instant access to cloud-based reporting.



During the construction of the new Thames Tideway sewer a series of access shafts were constructed, many in residential areas.

The depth of the shafts (up to 60m deep) meant adequate ventilation was vital to ensure workers kept safe and well. RVT provided a number of ventilation systems to support the shaft and tunnel excavation.

Dust control, welding fume control and acoustic barriers were also supplied to various contractors throughout the duration of the project.

RVT ventilation solution for the Carnwath Rd shaft



Client:



Tideway



# Providing a solution

## Ventex Ventilation

The Ventex® range comprises of both axial and centrifugal fans, with up to 120,000m<sup>3</sup>/h capacity. The Ventex® range of ventilation equipment will suit a variety of major civil engineering requirements, including confined space working and shaft, tunnel and top-down construction works.

## Soundex Noise Control

RVT's Soundex acoustic solutions not only offer high sound attenuation, but are also made from a durable, fire resistant, weatherproof material, with seamless Velcro connections.

## Dustex Dust Control

The Dustex® range can manage a wide variety of dust-creating activities, from localised concrete breaking, drilling and cutting up to intense spray-concrete lining and gritblasting. The range encompasses HEPA filtration equipment (from small portable systems to large units weighing several tons), vacuums and other on-tool extraction equipment, and a variety of dust screens and tents.

## Ravex Fume Control

Our Ravex fume control solutions cater for a range of hazardous fumes, including welding fumes, solvent fumes and diesel exhaust fumes.

## Monitex Monitoring Equipment

RVT's Monitex range includes both hand-held and area monitors for dust, noise and gas. We also offer vibration monitors, enabling you to monitor the structural integrity of a building.

# Superior equipment tailored to your project

Here are some exclusive RVT products used by contractors when working in a sensitive environment. To view more products visit [www.rvtgroup.co.uk/hire-equipment](http://www.rvtgroup.co.uk/hire-equipment)



## Ventex Centrifugal Fan 600S

Ideal for forced air ventilation or extraction for confined spaces, such as basements and tunnels.



## Soundex Quilt

Excellent for general noise control with a BSEN rated attenuation of 28.2dB. Velcro side connection enables a seamless noise barrier.



## Monitex Personal and Environmental Monitoring

RVT offer gas, dust, noise and vibration monitors, allowing you to check that exposure limits are not being breached.



## Ravex Mobile Welding Fume Filter

This model can be used universally for all types of welding stations and can be equipped with an extraction arm to capture fumes at source.



## Ravex Diesel Filter Kit HD90

Designed to be used with large mobile plant machinery to remove 95% of particulate from diesel engines.



## Dustex Wandafilta Plus

Extract dust at source and capture particles during demolition and concrete breaking with this high-quality filter system.



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# Case Study: Bespoke Noise and Air Control Provided at Waterloo Station

## Overview

The £800 million Waterloo and South West upgrade improved passenger facilities and increased station capacity by 30%. The project included stripping out the old international station, the removal of lifts, travellers and escalators, the reconfiguration and extension of platforms, and the removal of old termination points of the rail line by hydrodemolition which produces very high levels of noise pollution.

## Challenge

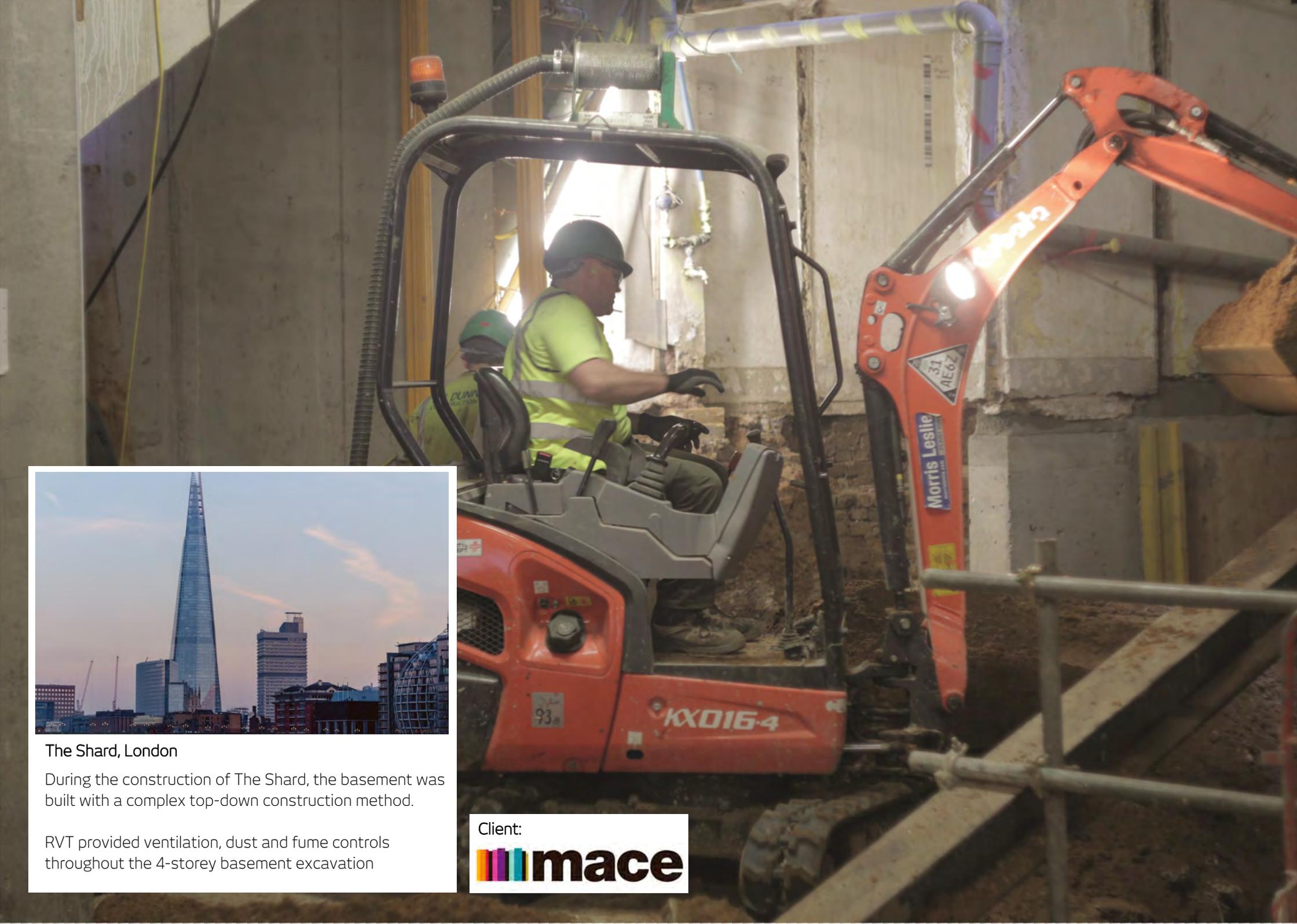
The station needed to function as normal throughout the work. This meant the noise, fumes, smoke and dust created had to be minimised to protect both workers and nearby commuters.

## Solution

A number of control measures were provided. Soundex Acoustic Quilts provided an effective barrier between work and the main public concourse. Further Soundex Quilts were used to create a bespoke enclosure to surround Hydrodemolition activity Ravex extraction kits captured and extracted fumes from the hot cutting of steelwork, preventing this migrating into the main station Ventex 450S Centrifugal Fans were provided with bespoke capture hoods to capture and extract fumes from the cutting up of old lift shafts.

Client:

**SKANSKA**



### The Shard, London

During the construction of The Shard, the basement was built with a complex top-down construction method.

RVT provided ventilation, dust and fume controls throughout the 4-storey basement excavation

Client:



# Peace of mind and quality assured

By choosing to work with RVT Group, you are choosing to work with a sustainable and reliable supply chain partner, who will deliver superior equipment, exceptional expertise and outstanding service.

- ✓ Hazard control solutions that are fully compliant with legislation
- ✓ Best practice advice from highly experienced and qualified consultants
- ✓ High quality, robust and reliable equipment
- ✓ Next day delivery and installation service available
- ✓ Responsive customer service and access to technical support
- ✓ Your project remains on track and within budget
- ✓ Most importantly, people remain safe and healthy

RVT Group is an ethical company that genuinely cares for people's lives, and it is our vision to achieve a world where the impact of site work on life and health is effectively zero.

If you would like to discuss a project, please call us on 0808 178 3286.

For product information or best practice papers, please visit [www.rvtgroup.co.uk](http://www.rvtgroup.co.uk).

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## Testimonials

"A very supportive supplier, who works to get to know individual site/project needs." – **Kier Construction**

"RVT is a very well run business, easy to deal with, act on all hire/sale requests asap and deliver in a timely manor keeping our sites going." - **Toureen Contractors Ltd**



## Contact us

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