

Temporary Noise and Dust Solutions

Supplied During Hospital Ward Refurbishment

August 2020



Client:
Skanska

SKANSKA

Location:
Coventry

Featured Product Range:



Soundex® Temporary
Noise Solutions



Dustex® Temporary
Dust Solutions

Controlling dust and noise from construction activity in a medical environment

When the University Hospital Coventry & Warwickshire (UHCW) needed essential refurbishment work, they called upon Skanska, one of the UK's leading contractors, to carry out the work carefully and effectively. For the project to take place safely, Skanska needed an effective solution for the attenuation of the noise of drilling and sawing, whilst the Clinical Team on the other side of the stud walls continued to treat patients. Skanska came to RVT seeking health hazard solutions for the five month long project, which consisted of an internal refurbishment of the hospital ward, where they were looking to remove a floor screed and break out reinforced concrete.

Skanska had a duty to protect site workers, plus all patients and staff based at the hospital while the work took place. Skanska was proactive in ensuring that they were doing everything they could to ensure safe levels of dust and noise, and came to RVT for specialist advice on the most effective solutions.

Case Study Key Facts

- The hospital, which was opened in 2006, is one of the most modern healthcare facilities in Europe
- UHCW NHS Trust is one of the UK's largest teaching trusts
- Coventry and Warwickshire hospitals serve a population of over one million people
- It was vital to protect patients, staff and visitors from dust and noise during the refurbishment
- The Soundex Enclosure reduced exposure to noise by up to 32.3 dB
- Due to the DustMaster Pro's 100% reliable seal, there was zero dust migration
- RVT's health hazard control solutions helped the project comply with COSHH regulations, and ensured that patients were protected from airborne hazards such as Aspergillus spores.

The Challenge

The area Skanska was working in was directly next to an Interventional Radiation Scanning facility. The Construction Director wanted to explore all options for health hazard control to effectively stop their project impacting the surrounding live areas within the hospital. The works consisted of floor sawing the concrete, and then using handheld breakers to break up the concrete further. The hospital was very sensitive to noise and dust and needed the assurance that these hazards were going to be controlled effectively.

The Solution

RVT attended the site and discussed the scope of the project with Skanska's Construction Director. An RVT Technical Expert reviewed the areas where the work was going to take place, giving a full understanding of the challenges that were faced, paying attention to the close interaction with the surrounding areas of the hospital.

Following the site survey, RVT provided a Soundex Multi-Purpose Acoustic Enclosure, supplemented with a DustMaster Pro self-contained filtration unit, complete with a capture hood and intake duct. This configuration enclosed the screed breaking works, and with the addition of the DustMaster Pro Unit, provided a localised dust and noise control solution.

The dust was filtered through 3 levels up to HEPA standards before being re-circulated into the work area. The walls of the work area were then lined using Soundex Acoustic Curtains, helping to reduce the noise travelling through the walls to the live adjoining areas. The whole work site was then maintained under a negative pressure, using the DustMaster Pro unit, extracting out of a window aperture, ensuring the entire work area was controlled, preventing any airborne contaminants migrating to the live areas.

Capture, Contain, Control.



This is proven methodology, devised by the RVT Group, to ensure effective control of Noise and Dust health hazards on site.

Capture the hazard

Capture the hazard as close to the source as possible

Contain the hazard

Ensure work processes are carried out in screen off or segregated areas using screens, enclosures or dedicated work zones

Control the hazard

Ensure the hazard cannot escape or spread to other areas by using negative or positive pressure

[Click here or visit our website to view all health hazard solutions >>](#)

RVT Solutions

Dustex DustMaster Pro

- Upgraded high performance mixed flow fan 2500m³/ph air flow
- 100% reliable seal, making it ideal for sensitive environments
- Compatible with H13 & H14 HEPA filters



Soundex Multi-Purpose Enclosure

- Up to 26.4 dB noise reduction
- Integrated dust/fume extraction port
- Quick erection, portable and easy to move around site without wasting time



Soundex Acoustic Curtain

- Up to 32.9dB reduction in noise
- Velcro connections to ensure optimum acoustic performance
- Fire resistant, weatherproof and certified to be hung from scaffolding BS57955



Skanska elected to employ the RVT Acoustic Curtains to line the existing walls, which have allowed us to proceed without disturbing the Hospital. To remove the hazard of dust escaping past our primary barriers, a Dustex 300M & Wandafilta Plus Kit was used to provide overall Negative Pressure within the Construction Zone, together with a Climex ACS 22000 Portable Water Cooler Split Air conditioner to provide comfort cooling for the operatives.

- Senior Project Manager, Skanska