

Keeping dust away from patients at the QMC in Nottingham

June 2017

About the Queen's Medical Centre

- Founded in 1977
- It was the first purpose-built teaching hospital in the UK
- In 2006, the QMC merged with Nottingham City Hospital to form the Nottingham University Hospitals NHS Trust
- Until February 2012, QMC was the largest hospital in the UK
- Over 2,000 patients pass through the doors every day
- 14,500 staff work at QMC and its sister hospital in Nottingham

The challenge

Some refurbishment areas were directly alongside, and accessed through, wards in which patients were recovering from operations. They, as well as staff and visitors, needed protection from dust generated during the works.

Dust extraction in a sensitive environment



Image credit BBC

QMC – Queen's Medical Centre – in Nottingham is home to an Emergency Department, major trauma centre and the Nottingham Children's Hospital, as well as The University of Nottingham's School of Nursing and Medical School.

Contractors Interserve have been carrying out a range of work at the hospital as part of a five-year capital investment programme plan by Nottingham University Hospitals NHS Trust under the NHS's ProCure21+ framework. Interserve's part in the plan covers works at the QMC, City Campus and Ropewalk House, ranging from small refurbishment and maintenance projects, to the construction of new projects such as a new two-storey Cystic Fibrosis Unit with associated landscaping.

This element of the works involved the refurbishment of multiple wet rooms and toilets at numerous locations through two of the QMC's trauma and orthopaedic wards.

Key benefits of the RVT solution

- Negative pressure created, so no airlock required between working wards and the refurbishment area
- The system made use of the building's existing extraction points
- Cost effective
- Quick to install

The challenge: to prevent dust affecting patients, staff and visitors

The particular challenge posed here was that access to the refurbishment works could only be gained from adjacent wards. These would need to continue functioning normally while the work proceeded. They contained post-operative patients, and it was vital that dust was not allowed to escape into the wards, even while workers were entering and leaving the site area.



The RVT solution

The key to preventing dust escaping into the active wards was to create a negative pressure within the site area. A temporary extraction system was installed which utilised the existing ceiling air extraction points within the work zone. As well as extracting the dust itself, the negative pressure created by the system meant no airlock between the active wards and the site was required. Workers were able to enter and leave without any emission or leakage into wards where patient treatment continued.

There was an initial, unexpected issue from the extractor fans' vibration creating structural noise transfer to offices on the floor below. This was quickly resolved by RVT providing acoustic matting, which deadened the noise completely.



"The dust control solution RVT provided worked very well – it did exactly the job we needed. We were very happy with the level of service, too."

Richard Robinson,
Site Manager,
Interserve Construction