

CASE STUDY

PROUD TO HAVE SUPPLIED THE
NHS FOR OVER 40 YEARS



When Aneurin Bevan set up the NHS in 1948, his "brave and novel undertaking", as he called it, became the first universal health system to be available to all, free at the point of delivery.

Medical Air Technology (MAT) is proud to have supplied the NHS for over 40 years, providing specialist airflow solutions for operating theatres and recovery, critical care and sterile services. We are particularly known for our ECO-flow ultraclean ventilation (UCV) canopies, which create the ultraclean environment required for orthopaedic surgery, as detailed in HTM 03-01 Specialist ventilation for healthcare buildings (2021).

However, we don't just work in operating theatres – we also design and install aseptic suites, cleanrooms and containment laboratories for research and drug manufacturing environments, creating clean or contained environments using the same airflow expertise found in our UCV systems.

Our facilities management side of the business, MAT FM, offers service and maintenance of all the healthcare and life science facilities we deliver, ensuring equipment operates to its design brief, in line with all relevant guidelines.

We operate a continuous programme of research and development to ensure we always incorporate the most advanced technology and research into our products. During our time serving the NHS, we have developed three generations of the ECO-flow ultraclean ventilation canopy, dramatically developed our profile in the life sciences sector, and grown from a handful of employees to 40+, working out of large, modern offices in Greater Manchester. And our reputation has grown in line with our company.

A look back...

Over the last 40 years, we have become used to navigating our way through a huge variety of challenges. A common one is live surgery continuing close to areas where our installation team needs to work. Another is severely limited access due to hospital design. However, we have also had to handle more unusual problems, such as working around nesting seagulls and peregrine falcons that can't be disturbed!

COVID, of course, presented another set of challenges, necessitating a new way of working, in line with frequently updating government advice, to ensure the safety of our staff and, in the case of our installations team, everyone else on site. Considered essential workers, we were busier than ever throughout the pandemic, and we continue to support research in this area with the construction of cleanrooms for ongoing research into coronavirus.

Our projects are too numerous to mention, but we wanted to highlight some of the most unusual or challenging ones here, as we look back briefly at our 40 year history with our wonderful, ever-evolving National Health Service.



Wansbeck General Hospital

Wansbeck General became the first hospital to have our ECO-flow Stealth flush-to-ceiling UCV canopy, installed as part of a £5.5m turnkey operating theatre refurbishment. Remote fans in the ECO-flow Stealth enable it to achieve noise levels of just 49dBA - 53dBA. It also has unique perimeter LED lighting that changes to indicate the status of the canopy, aiding ease of operation and maintenance and improving patient safety.

UCLH NHS Foundation Trust

MAT installed eight operating theatres in the purpose-built surgical centre within the new proton beam therapy unit at UCLH NHS Foundation Trust's Grafton Way Building. The eight operating theatres are situated on Basement Level 1 of the building, which is also home to several other clinical specialities. One of only two NHS proton beam centres in the UK, much of the actual treatment facility is located beneath the Grafton Way Building, in a huge underground cavern that could easily swallow the Royal Albert Hall.

Royal Devon and Exeter NHS Foundation Trust

All work on this CL3 laboratory was carried out and completed over the course of the pandemic. This presented some challenges with regards to material shortages and delays of vital components, but delays were kept to an absolute minimum. One unusual problem encountered was nesting seagulls, which had chosen to set up home on the roof where the new mechanical plant was to be located. The birds were very aggressive towards anyone attempting to access the roof, so works had to be postponed until the new fledglings had left the area. However, everything went very well:

"We would recommend this team for any laboratory development. They were brilliant - knowledgeable, accurate and efficient. We couldn't be more pleased with how MAT managed the build, and ultimately delivered the finished product."

Matthew Allen, Laboratory Manager

University Hospital Lewisham

This demanding programme upgrading Theatres 3 and 4 at the Riverside Treatment Centre allowed for just five weeks to be spent on each theatre, with surgery carrying on as normal in the remaining theatres while work was underway. Space constraints meant access to the theatres was only available via an outside wall, so MAT engineers had to remove an area of sufficient size to allow the equipment to be taken in and out and install temporary access doors.

Fairfield General Hospital, Bury

It was recognised early on at Fairfield General Hospital that noise generation was going to be a major challenge, as the works were immediately adjacent to the existing fully operational orthopaedic theatres and 10-bed ICU. Seven-days-a-week working with extended hours was necessary in order to ensure that noisy operations were undertaken outside critical times and we were able to celebrate a very successful project:

"This extensive planning resulted in NO requests to stop work throughout the whole of the contract period - an amazing achievement by MAT!"

David Shepherd, Principal Project Manager

Queen Elizabeth Hospital, Birmingham

In order to access the operating theatres, which were located at the end of the corridor on the ground floor, a long temporary covered weatherproof walkway was erected over a grassed area at the end of the recovery ward, creating an alternative route for contractors and equipment. In addition, access to theatres on the second floor was restricted, so MAT erected an external scaffold and temporarily removed highly specialised and expensive external glazed curtain wall cladding panels to install a weatherproof access route.

Looking ahead to the next 40 years

In his book 'In Place of Fear', Aneurin Bevan said: "Society becomes more wholesome, more serene, and spiritually healthier, if it knows that its citizens have at the back of their consciousness the knowledge that not only themselves, but all their fellows, have access, when ill, to the best that medical skill can provide."

The healthcare world is developing at an incredible rate, with medical and research advancements making a level of care and treatment that Bevan could never have dreamed of available to us all. We are proud to continue to support the beliefs he held so passionately, and we look forward to serving the NHS for another 40 years and beyond.



Need solutions? Let's work together

At Medical Air Technology, we aim high - we are committed to being the automatic choice for every healthcare and life sciences facility that needs safe, clean, productive environments.