

## NHS Trust in Berkshire

### Medical Gas Survey



## Challenge

A large NHS trust in Berkshire wanted to gain control of the medical gas infrastructure at its hospital and ensure that vital medical gas systems were compliant with all the necessary guidance and safety standards. To achieve this, they needed a medical gas survey carried out, which would allow them to update their isometric and 'as fitted' medical gas CAD drawings.

## Solution

The trust appointed Sircle to support them with this project due to our long-term relationship and the fact we had already demonstrated our ability to deliver a medical gas survey for them successfully at another site.

We assigned one of our experienced medical gas specialists, who met with the trust to agree on the project's scope, schedule, and deliverables. The scope included capturing pipework data for nine medical gas services: Vacuum (VAC), Oxygen (O2), Medical Air (MA4), Surgical Air (SA7), Entonox, Nitrous Oxide (N2O), AGSS, Dental Air, and Dental Suction.

Once agreed, our team of surveyors attended the site. Using the existing 'as fitted' medical gas surveys, they surveyed the areas in scope, confirming/capturing the location of the medical gas pipework. In some areas, details and additional diagrams were added to clarify the particularly complex pipe arrangements. In total, we surveyed an area measuring 52,660m<sup>2</sup>.

During the survey, we captured data such as the position of the medical gas services, pipe diameter, the direction of flow, locations of line valves, pressure reducing sets, pressure switches, AVSUs, and alarm panels. We also tested 550 keys in the trust's key cabinet, sorting and retagging each key so the trust had reliable access during future projects.

After completing the medical gas survey, the data was handed to our in-house technician to update the existing 'as fitted' medical gas CAD drawings, with each medical gas shown on a separate but continuous layer.

We also provided isometric representations and the 2D as-fitted drawings; these included volumetric flow rates specific

to the type of wards and pressure losses with a primary loss route highlighted. This work, which was verified by one of our trusted medical gas consultants, allowed the Trust to decide if the plant and pipe system suited their needs.

Once updated, the CAD drawings were saved in the Trust's preferred version of AutoCAD and issued to them electronically in CAD and PDF format.

Using the valve references captured during the survey, we also updated the existing valve schedule, which we supplied to the Trust in a separate excel spreadsheet format.

In addition, we produced and installed Traffolyte tags for AVSU boxes and flexible plastic tags for line valves. These tags denoted the valve key number and what area the valve/AVSU served.



## Outcome

The trust now has the accurate medical drawings it needs to ensure the safety of its staff and patients, and to remain compliant with HTM 02-01.

## Insight for the built environment

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Scanning  
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### Project Management

Project Management  
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