CASE STUDY

The Project

Following previous work we completed at The Karri Clinic in Hull, we were referred to the newly opened Kinvara Private Hospital in Rotherham to investigate issues with the existing specialist HTM 03-01 spec ventilation system serving 2 operating theatres complete with Howorth EXFLOW90 Ultra Clean Ventilation Canopies.

Issues included inadequate cooling, general AHU condition issues (dust, debris, failed lights, lack of U Traps) and substandard air balance with regards to pressure differentials between rooms.

Investigation found the these issues to be created by a previously undersized retrofit of the DX Cooling to the AHU plant, faulty pressure stabilisers, redundant ductwork legs left uncapped all of which had occurred during previous occupancy. A large portion of the system was almost 20 years old and as defined by HTM 03-01 constitutes end of life, which contributed towards the issues of general condition.

Value: £120,000

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It was evident that changes to the system during previous occupancy had not been documented and as such we carried out an in-depth survey to provide updated records including existing drawings of the ventilation lay-out.

Due to concerns regarding the integrity of the existing ductwork, full pressure testing was carried out to verify that compliant levels of air flow and balance could be achieved following a replacement of the main plant and pressure stabilisers.

These works provided a wholistic view of the existing system and its' condition enabling us to consult with the client in providing a solution. Which included:

- Replacement of the air handling plant (3.5m³/s). Space constraints within the plant room required that some permitted HTM 03-01 derogations were made to ensure the new equipment would fit, documenting these decisions for future compliance purposes. The new equipment was subsequently delivered in kit form and rebuilt in situ.
- Replacement of the DX Cooling to the AHU plant including 3no. 25kW Daikin ERQ Units to the AHU (situated outside in an area directly adjacent to the plant room)
- Replacement of the 10 pressure stabilisers
- Replacement controls sensors and recommission BMS
- Air balancing and commissioning of the system to HTM 03-01 standard
- Third party HTM 03-01 verification and validation the system

The client required the project to completed in a tight window over the Christmas holiday period ready for reopening early in the new year.

"Thank you for the hard work you have put in, you made it a seamless experience for us and I received great feedback. Also my thanks for the times you went above and beyond even ensuring the hospital was secured after-hours!... Well done to you and the rest of the team who were all top notch"
- Hospital Director

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