

# Royal Liverpool University Hospital

## Background

The new Royal Liverpool University Hospital is being built at a cost of about £335m, next to the current hospital and will open in 2017. Once completed the existing facility will be demolished to make way for building of the Liverpool BioCampus. Carillion are the main contractor with the architects being NBBJ in a Joint Venture with HKS. The new hospital has been designed with patients in mind and will be the largest hospital in the country to provide all single en-suite bedrooms creating improving patient privacy and further improving infection control. The new hospital will have 18 operating theatres, 23 wards as well as a 40 bed Critical Care Unit. The Emergency Department will include a CT scanner and lifts for major trauma patients that go straight to theatres.



## Challenge

SRL's brief was to provide a full acoustic design, site support and commissioning testing for the new hospital. The design of the building includes an interstitial plant deck on the third floor where all the major plant is housed with rooms above and below. There was also the challenge of designing a building that met the acoustic requirements of the guidance in HTM08-01, which SRL helped to write. The hospital needed to be delivered with good levels of acoustic privacy between all of the rooms whilst still meeting the clinical and operational requirements.

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## Solution

Working with the M&E consultants we reviewed the design to help find the quietest plant. We also looked at a louvre design to provide a solution that met both the airflow and acoustic requirements. Glazing design was also reviewed as there was the potential for noise break-in into the rooms above the plant deck louvres. Internal partition construction has been optimised to achieve the required privacy whilst minimising cost and maximising area. Hybrid constructions were developed for some key walls to allow modular installation of M&E services.