

Case study 3: St Helens & Whiston Hospitals, NG Bailey

Benefits

Time: opened six months ahead of schedule, an achievement supported by early design freeze

Cost: £120m M&E package delivered within budget

Sustainability: no impact on the operation of contiguous existing hospital services

Client: St Helens and Knowsley Teaching Hospitals NHS Trust

The project

St Helens and Knowsley Teaching Hospitals NHS Trust provides a full range of patient and emergency services to the local communities across the North West.

In 2006, the Trust, one of the top performing NHS Trusts in the country, awarded a £350m PFI scheme to the New Hospitals (Innisfree/Taylor Woodrow – VINCI Construction UK) to rebuild St Helens and Whiston hospitals as flagship, state-of-the-art, healthcare facilities. NG Bailey had been awarded the £120m M&E contract.

The four-year Whiston redevelopment required a fresh approach to partnership, collaboration and on-site sequence, allowing the project team to stretch the boundaries of off-site construction.

The challenge for NG Bailey was to deliver its largest ever project, with little on-site storage, working on the same site as the existing hospital.

Following a recommendation from NG Bailey, it was agreed that a large percentage of the project would be completed through the use of off-site construction, putting it at the centre of one of the UK's biggest and most exciting modular M&E installations.

Following in-depth consultation at the design phase with all parties, detailed data sheets were compiled for each room covering lighting levels, air conditioning and specialist extraction systems. An early design freeze was put in place and NG Bailey used its 53,500sq ft factory to manufacture and store each part. This careful planning allowed 90 per cent of the high level engineering services to be prefabricated, with 65 per cent of the installation completed on the first site visit. Each of the electrical and mechanical elements brought their own challenges, including the sheer size of the prefabricated ventilation plants that needed to be transported to the site.

The project won the Off-site Construction Award for the best project in the healthcare sector and during the build not a single clinic or operation was cancelled. Most importantly, and unlike many construction projects of this scale, the hospital opened in April 2010, six months ahead of schedule and within budget.

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