

# Christie Hospital NHS Foundation Trust Oak Road Development, Lean Construction



## Case Study



### Lean Thinking

The site for the new Oak Road development sits directly adjacent to the main hospital building and is on a very constricted site. This, coupled with a completion date in 2010, has meant that Lean approaches to working have been required throughout the delivery of the development.

In order to achieve successful delivery of the scheme a number of lean approaches have been embraced by the site team. These have included:

**Use of taller hoarding** to reduce the noise and dust impact of the demolition and the subsequent construction work.

**Speedy demolition** of the old private patients unit was undertaken with such care that the Trust was hardly aware of the demolition taking place. (See the Christie Website: <http://www.christiewebcams.co.uk/index.asp>)

**Just in Time deliveries** - with minimal storage space, all deliveries are made at the exact time that materials are required. All deliveries are well controlled, ensuring no deliveries arrive without prior authorisation.

**Slab down first** - the ground floor of the building was put in prior to work commencing on the structure, giving

all operatives a clean, safe base to work from.

**Proprietary Metal Framework System** - installed as part of the Structural Framework speeds up installation of the programme critical external weather proofing allowing the building to be watertight sooner, whilst also reducing deliveries to site and minimising dust.

**Use of local labour** - employed to do the ground works for the scheme bringing local knowledge and experience.

**3D modelling of services** - allowed all clash detection to take place before the services are installed.

**Off site fabrication of services** - allows for easier installation of the services on site, reduces the time involved.

**Kingspan roof system** - a simple composite roof system that speeds up installation on site, reduces deliveries and storage requirements.

**Partition walls fully boarded lining** - adds flexibility into the project by allowing fixtures and fittings to be fitted in any location.

**BREEAM Excellent** - whilst a highly serviced building which will require mechanical ventilation, the Trust will be realising energy savings through use of waste heat from the existing plant.

**Lean Management** - the large site is being managed by 4 senior personnel. Working closely with the supply chain to ensure self managing systems which has allowed work on site to progress swiftly.

### Benefits

Benefits to the Trust and Site team have included:

- Programme / cost benefits to Trust through the use of cost effective, time saving solutions when designing and constructing the project
- Less dust / noise disturbing patients in the adjacent building through the use of large hoarding
- Reduced deliveries to site causing minimal disturbance to the Trust & public
- A safer environment, not only for patients and staff, but construction operatives.
- A well controlled tidy site, ensuring high Health & Safety standards.

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