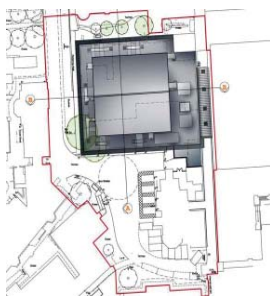


Saving lives for the future

The new £21.3 million Critical Care Unit at Northern General Hospital (NGH), Sheffield, will be the largest of its kind in Europe. Designed with the help of Professor Roger Ulrich, Ph.D., an expert on critical care delivery; the unit will be the first ProCure21 scheme to get NHS Bank funding.



Northern General Hospital is part of Sheffield Teaching Hospital NHS Foundation Trust (STH), the largest Foundation Trust in the country. The hospital takes about 70 per cent of adult emergency medical admissions in Sheffield and has speciality care for burns, spinal injuries and cardiac conditions.

The existing Critical Care Unit, with 17 beds has provided an excellent level of care but will be inadequate to cope with the future projected workload. Although an interim solution (a Post Operative Surgical Unit or POSU) opened in August 2005 to provide an extra seven beds, lack of beds is leading to over-occupancy.

Sheffield, like elsewhere in the country, faces higher patient expectations and the prospect of caring for an ageing population — the number of patients aged over 75 admitted into the hospital's acute beds had trebled over six years.

The Trust knew that they had to get new facilities and so started planning in October 2005. That December the SHA approved an outline business case for a new critical care unit and HBG Construction who are successfully working on five other schemes at the Trust were appointed under the ProCure21 initiative. The construction of enabling works commenced August 2006 and the critical care unit construction commenced in January 2007. Due to the amount of planning gone into the full business case the new CCU will have a relatively short construction phase and be delivered just 12 months later in January 2008.

The plan is for a 36-bed two-storey unit, with 20 of the 36 rooms being single accommodation. Each level has 18 beds, Intensive care is on the ground floor, while high dependency beds and POSU beds are on the second floor. As the scheme is a new build on the site of the existing physiotherapy department, enabling works were necessary to move physiotherapy to the north west of the NGH site.

Funding

The Trust's financial solution for the Critical Care Unit reflects growing opinion that commercial banks will play a greater role in funding Foundation Trusts. Total capital cost of the project is £21.3 million. Via traditional funding, South Yorkshire Strategic Health Authority (SYSHA) provided £3 million — on the basis of non-repayable public dividend capital. This left £18.3 million to be found. The Trust applied to borrow this sum on a loan basis through the Foundation Trust Financing Facility (FTFF) or NHS Bank as it's more commonly known.

Established by the NHS, the FTFF gives loans to Foundation Trusts at National Loan Fund Rates, effectively the best rates available. The FTFF is independent from the Strategic Health Authorities and some Trusts therefore believe it offers them more financial flexibility and cuts down on red tape.

The Trust's Assistant Director of Finance, Rob Wilson, said, "We took the view that the income generated by our new facilities would cover all our operating costs as well as repay the loan.

"We took the loan over 25 years, but will draw it down over the one-year duration of the project. We only start paying interest six months after the first drawdown."

The Trust had to prepare a robust business case and show its additional projected income when applying for the loan. ProCure21 enabled the Trust to include a Guaranteed Maximum Price for the CCU that was agreed with the PSCP.

ProCure21 was able to provide far more guarantees of delivery and cost certainty than would have been possible under traditional tender. The Trust are using ProCure21 on 5 other schemes so it was only logical progression that ProCure21 was to be used on the CCU. The surety of delivery ensured a robust business case and provided the Trust with a more certain delivery date and therefore funding level.



Achievements and Benefits

- The Trust benefits from a purpose built Critical Care Unit built to the latest standards with an enhanced oxygen supply network and electrical service and a modular therapy services department, with modern gymnasium and better patient facilities.
- The project board gave much consideration to the needs of users by integrating the most up to date research — from the Case for Better Buildings 2004 and enhanced environments for the delivery of critical care services. Professor Roger Ulrich, Ph.D., an expert on the delivery of critical care facilities, was engaged to inform the design decision-making process.
- The Trust were able to employ a local architect already on the PSCP supply-chain who had extensive experience of the Trust and designing this kind of facility.
- The design encompasses the latest construction methods including modular building elements. These ensure factory quality finishes provide efficiency savings in terms of cost and construction time.
- Easier access for ambulances and service vehicles.



- The project is consistent with the good clinical links to Accident & Emergency, main theatres, Anaesthesia and Diagnostic Imaging.
- The project used the ProCure21 Design and Risk Tool (DART) - helping to identify the client and contractor risks; apportioning them correctly, managing them out as much as possible. This provided further strength to the business case demonstrating that risk was being managed proactively and that it had been considered in the Guaranteed Maximum Price.

“We’re confident that through ProCure21’s emphasis on detailed front end design and consultation, together with robust costings, successful delivery will be achieved.”

John Simpson
STH Project Director

Principles and Objectives

The Trust wanted a state of the art facility that looked to the future. It needed a resilient design for the planned life of the building (60 years).

It was important that the development enabled new technologies to be adopted easily, and that it was flexible enough to respond to future changes in service configuration. The Trust required new or improved ward accommodation to overcome deficiencies of the previous unit, and sufficient bed numbers to deal with projected levels of demand allowing for foreseeable increases in the next five years.

Major Issues

- The existing unit had to remain functioning with as little disruption as possible during the building programme. Prevention of infection was fundamental to patient care in a unit where a high standard of hygiene is promoted at all times.
- There was a requirement on STH to maintain financial balance and demonstrate value for money.
- The project had to be compatible with other priority schemes, including expansion of Renal Services and Cardiothoracic Services.
- There was a need to meet access and other targets set out in the NHS Plan and current building and health and safety standards.
- Essential support had to be maintained between services on different sites.



Successful Initiatives

- A greater proportion of glazing in the design, enhances the patient experience and recovery by improving their view to the outside world and the light quality. The layout of each single room and bed bay also gives staff the ability to observe patients freely within the unit while the latest glass technology ensures patient dignity is not compromised.
- The new unit has been designed to reduce noise, with carefully considered choice of construction materials. The lack of services in the ceiling voids enables use of non-demountable ceilings, which helps control noise.
- By designing services on the outside of the building, the individual patient areas can be maintained with very limited downtime, without compromising cleanliness of the patient area or disrupting treatment.
- Provision for an IT Clinical Information System

Summary

Cramped conditions at the existing Critical Care Unit at NGH were impacting on patient recovery. The infection control team recommended that that a new unit was given serious consideration.

ProCure21 provided Sheffield Teaching Foundation Hospital NHS Trust with a quick incredibly robust procurement method which will see them deliver a landmark CCU using borrowed capital from the NHS bank. Not only will this scheme ensure the best care for patients in Sheffield but also provide an exemplar scheme for other Foundation Trusts to follow.

“In our experience, the key to any project delivered though ProCure21 is to provide the client with a robust, risk free project cost. We believe that ‘extra layer’ of comfort helped the trust in their decision to adopt the FTFF funding option”

*David Slack
HBG Health Director*

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