



THE LEARNING NETWORK FOR
SUSTAINABLE HEALTHCARE BUILDINGS

Gateway Surgical Centre

Detailed case study

Context

The Gateway Surgical Centre (GSC) at Newham University Hospital NHS Trust is a £18.5m standalone NHS Treatment Centre for planned day case and short stay surgery - the first of its kind in north east London. The 65-bed centre has a gross floor area of 5400m² and the capacity to deliver up to 9500 planned operations per year. It uses the latest technology and streamlined pathways of care to improve the patient experience in the Trust.

The GSC was constructed through ProCure21 in just 53 weeks with partner Laing O'Rourke. This procurement method allowed the team to collapse the construction period whilst ensuring quality and innovation was embedded in the scheme. Its four floors are designed to offer flexibility and functionality, including consultation and treatment rooms on the ground floor, ward space on the first and second floors and theatres with adjacent day care unit on the fourth floor. A number of processes were redesigned around the patient journey. This process redesign made best use of the design and demonstrated innovation in response to the requirements of the local population.

The Gateway Surgical Centre has three operating theatres and two treatment rooms to manage elective procedures for Orthopaedics, Urology, Gynaecology and General Surgery.

The Vision

Three years ago, the Newham University Hospital team realised that they needed to segregate the planned surgical activity from the emergency flows. To achieve this, the team prepared a business case for a NHS Treatment Centre to perform day case and short stay surgical procedures.

From conception, the Trust's vision was to provide a world-class facility not just in terms of clinical practice but also in building design, sustainability and the patient environment. The resultant building is a landmark structure recognised across the Borough, and wider, as a centre of excellence.



“Newham University Hospital Trust is enormously proud of the Gateway Surgical Centre, which from concept to first patient treated took 18 months and we believe it to be the fastest construction programme in the NHS. The building is extremely innovative and we were determined to demonstrate the NHS at its best, including a sustainable future. This was recently acknowledged in the form of the HSJ Good Corporate Citizenship national award”.

Hugh Steward,
Director of Patient Support and
Environment

Implementation – key success factors

Stakeholder consultation

Newham is one of the youngest and most diverse communities in England. To reflect this, the community was consulted on the type of facility they would like to see provided: patients were included on project groups before and after the building was completed. Jane Chapman from the Centre also ran stall during community events. The stakeholder consultation resulted in the vision of a health village in Newham. This vision was considered in the design and construction of the Gateway Surgical Centre and has provided a useful precursor for similar developments on the site.

Design process

Partnership working with Laing O'Rourke and key stakeholders meant that sustainability and other requirements were incorporated early into an effective design. Project Director Hugh Steward was an essential driver as the Trust design champion, reflecting a passion for making healthcare buildings feel good for both patients and staff.

Staff involvement

Staff were involved in designing and planning new ways of working, and a trial of modern admission and care pathways has been successful.

Sustainability Results

Patient wellbeing

- Wireless technology supports the use of bedside electronic patient records and easier access to systems for patients and staff.
- Art is used to guide the users through the building; much of this art was commissioned by local schools
- The building incorporates a public space and café for use by staff, visitors and patients
- 50% of all rooms are single rooms to provide enhanced privacy, cultural sensitivity and care of acutely ill patients

Environmental features

- Natural light is maximised throughout the building with floor to ceiling windows
- Rain water is harvested into underground storage tanks and is re-use to flush toilets within the centre
- Solar panels and wind turbines provide power for external car park lighting
- Maximum use of natural ventilation reduces the need for air conditioning throughout the building.
- A pneumatic tube has been installed between the GSC and the main acute hospital site allowing for pathology and pharmacy specimens to be transported in just 2 minutes - removing the need for shuttle vehicle service between the two buildings.
- Heat recovery is achieved through a run around coil throughout the ventilation system
- Excavation waste was re-used on site to minimise cost. This reduced transport to landfill and supported on-site construction. It also provides future land space for housing and/or clinical developments
- Over 2000 plants and trees have been planted around the centre
- The development reflects the requirements and principles of the Newham Green Travel Plan



“...very impressed. The centre has state-of-the-art facilities. Centres like this are the future of the NHS. The staff have been fantastic, the personal care I have received has been excellent.”

From an anonymous patient survey form

Costs

Total building costs were £18.5m (£3429/m²). Construction costs excluding fees and land costs were £12.1m, this equals £2241/m².

The lamp columns with wind and solar components cost £6,681 each and were supplied with back up AC battery packs linked to LV power in the event of insufficient wind or solar power.

The overall cost of the 22,000 litre rainwater harvest system was £58,000.



“In comparison with our previous facility, the centre allows for far greater staff flexibility. We work on both the inpatient ward and in the day-care ward and, as a result, learn different skills. Patients benefit also: they get the best care they can because staffing levels are centred around the number of patients coming in.”

Samsher Somauroo,
Charge Nurse

Business Benefits

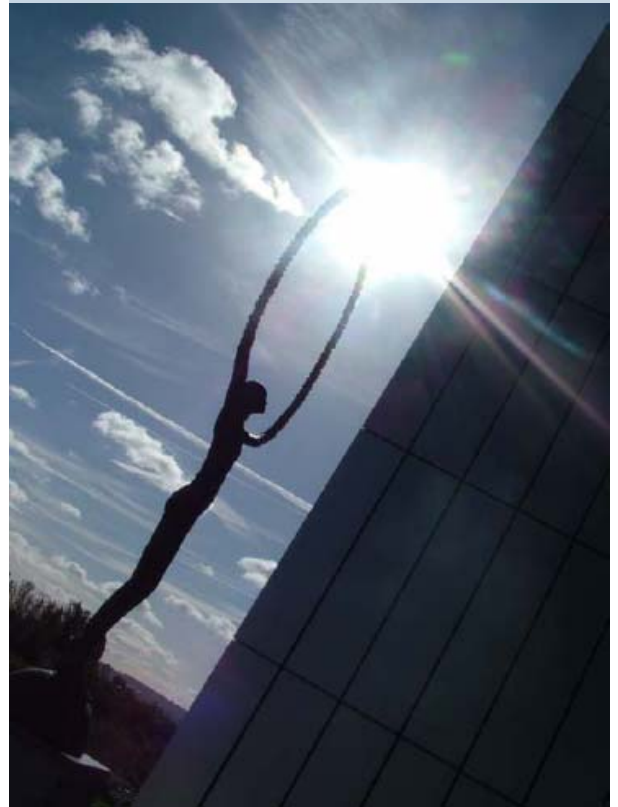
- This project has positively enhanced the Trust profile within the community: 98% of patients rated their care good or excellent.
- The careful design of the patient journey has paid off in terms of significantly reduced length of stay, flexibility, and increased day case rates. Some knee replacement patients, for example, recovered and were discharged in less than three days. That's less than half the national average.
- On an ongoing basis, staff is partly recruited from the local community and staff turnover is expected to be lower than before.
- The Trust is shortly planning to conduct a staff survey, which should give further information about the benefits to the Trust of increased staff satisfaction.

Summary

Newham University Hospital Healthcare Trust wanted a building that meets the needs of the local community and that will become a landmark for the future. The £18.5m Gateway Surgical Centre opened its doors after only 53 weeks of construction in 2005. Building costs were £18.5m (£3429/m²) and construction costs excluding fees and land costs were £12.1m (£2241/m²).

Patient wellbeing is increased through clever building design: waiting times are below the national average, 50% of all rooms are single rooms and the building incorporates a public space and café for use by staff, visitors and patients.

The features a number of environmental features, especially in regards to energy saving. Natural light is maximised throughout the building with floor to ceiling windows, solar panels and wind turbines provide power for external car park lighting. Internal temperature also requires little energy: maximum use of natural ventilation reduces the need for air conditioning throughout the building and heat recovery is achieved through a run around coil throughout the ventilation system.



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For further information on
sustainable building principles
please visit the SHINE website
www.shine-network.org.uk