

ProCure21+

REPEATABLE ROOMS AND
STANDARDISED COMPONENTS

Case study

York Teaching Hospitals NHS Foundation Trust
Scarborough Hospital



Repeatable Rooms and Standardised Components achieves clinical and cost efficiencies at Scarborough Hospital

Trust saves over £90,000 and achieves "tangible design and operational benefits" using Department of Health evidence-based repeatable room arrangements

A £4m surgical ward new-build project at Scarborough Hospital has incorporated two Repeatable Room designs and several Standardised Components from the ProCure21+ Standardisation programme, saving over £90,000 and allowing a further facility to be built as part of the original capital project. Time and programme savings have also been significant, according to Trust capital projects programme director James

Hayward: "We had calculated on savings in the planning and construction phases as a direct result of using the Standardisation rooms and components," he says, "but we were very pleased to find that the benefits were tangible in the design phase, and now in the operational phase of the building's life as well."

In 2009, Scarborough Hospital was underperforming. A series of inspections by regulatory and patient safety bodies had highlighted the need to improve the patient environment; an estates strategy was formulated, secured by £5m from the Strategic Health Authority, and a development control plan was put into effect. As part of this, the hospital built a new set of wards, one of which was Maple Ward, an acute 28-bed 1200m² surgical ward, completed in 2010. Hayward explains: "That new build allowed us to close down one Nightingale ward that was no longer fit for purpose. When we designed the new ward, we made sure that the

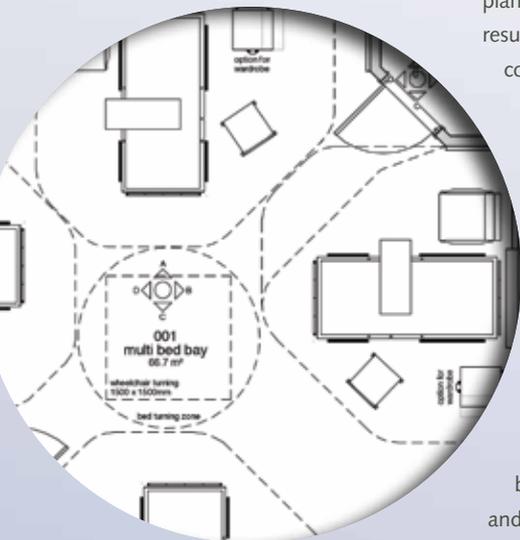
foundation and structure was built to support a second storey at some future point."

Scarborough Hospital was then acquired by York Teaching Hospitals NHS Foundation Trust in July 2012. As part of the due diligence associated with the acquisition process, scrutiny of the estates maintenance revealed massive backlog maintenance and a corresponding requirement for investment. Backed by the York Trust, a £20m funding package was secured



from the Department of Health, allowing the continuation of the estates strategy at Scarborough. "The strategy was to eliminate further Nightingale wards and to focus all our surgical activity on the Scarborough site. Therefore we needed another surgical ward – as well as needing to eliminate another Nightingale ward," says Hayward. "So we accelerated the original plan to build on top of Maple Ward."

Innovation was part of the project brief from the outset. The Trust pulled together a planning team including the architects and its ProCure21+ Principal Supply Chain Partner Kier Health, to deliver on a brief that focused strongly on the innovation required to deliver a minimum of 50% single rooms, together with a building that would remain efficient and effective for many years. The Repeatable Rooms and Standardised Components programme was chosen as a means of delivering an efficient, cost-effective and speedy construction phase, and major operational benefits.



▽ The Repeatable Room design for a single-bed room with outboard en-suite, as used at Scarborough Hospital



EVIDENCE-BASED AND TESTED

The Repeatable Rooms and Standardised Components initiative is part of the Department of Health's Cost Reduction Programme for capital schemes within the NHS. The initiative began in 2013 following a Department of Health conference at which 95% of NHS Trusts present voted to develop a set of evidence-based room designs that could be repeated across a new-build or refurbishment project.

The development process was "short but very intensive" according to programme director David Kershaw: "We began in 2013 by conducting a thorough review of the evidence-base to determine best design practice for a number of acute rooms, including a single-bed room with en-suite, a consult/exam room and a multi-bed bay that could be repeated to form a ward.

An evidence matrix was drawn up, showing correlates between design parameters and patient/staff experience."

Following this, patient group representatives were invited to share their experience, and exemplars of good design from all procurement routes, including internationally, were added to the evidence matrix. Room designs were drawn up and subjected to expert panel reviews including representatives from the NHS, the construction industry, Royal Colleges and patient representative organisations, with feedback incorporated in the designs. In a rigorous test series, real-life processes were carried out in full-scale mock-ups of the room designs. BIM models were federated and costed before the

room designs and components were rolled out in early 2014. The process was then repeated for Mental Health environments, leading to two repeatable room designs for functional and organic mental health users. Development is now well advanced for repeatable high- and low-acuity treatment rooms and a chair-centric space for Emergency Departments.

NEW WARD CAPACITY

The Scarborough programme delivered 17 single rooms and four four-bed multi-bed bays, with two treatment rooms designed and built to the same size and configuration as the single rooms: "If activity and demand patterns change, we can convert one of them back into a single room," says Hayward. Standardised components used were doors, windows, interstitial blinds, doorframes and M&E components such as lighting and ventilation.

While the Trust had anticipated some of the eventual operational-phase benefits of incorporating the Standardisation programme – including infection control benefits, efficiency of footprint and the resulting clinical efficiencies – the planning team were surprised at how quickly the benefits were realised during the planning and design stage. "For instance, we saved 60 clinical hours because we were able

to present one room for approval to the clinical team and then deliver 17 of them with no further need for consultation," says Hayward. "The designs were proven and backed by evidence and that was a conclusive argument in their favour. Plus, the rooms were already available as fully loaded BIM models, so we could walk clinicians through a virtual space and they could understand easily what it would look like and how it would work."

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Capital projects programme director
YTH NHS Foundation Trust

There were also cost savings at the design stage: "Because we were implementing a set of approved layouts with defined clinical benefits, it expedited agreement of the 1:200 design, allowing us to achieve clinical sign-off with only



one iteration required at that stage," explains Kier Health's ProCure21+ framework manager Robbie Blackhurst. "That resulted in a 7% cost saving, which was taken straight off the bottom line."

One very specific benefit of using Standardised Components at Scarborough was the longer warranties offered by suppliers under the ProCure21+ programme. "That has associated benefits not just for a replacement programme, but also for planned maintenance activity schedules," remarks James Hayward, adding: "We were also able to save over £60,000 on capital expenditure on the components, over and above normal market prices."



The tangible cost-savings realised as a result of the Repeatable Rooms and Standardised Components programme at Scarborough – as well as the VAT savings realised via use of the ProCure21+ framework – allowed the Trust to incorporate another £200,000 project to the redevelopment scheme overall. "We wouldn't otherwise

have been able to make that happen, so obviously we're delighted to have got such excellent value for money via ProCure21+ and the Standardisation programme," says Hayward.

EFFICIENCY IMPROVEMENTS

The Trust is currently conducting tests to determine efficiency improvements in the new Lilac ward: nurses are wearing pedometers in

both floors of Lilac Ward, with the data from the traditional design of ward on the ground floor being compared with the data from the Repeatable Rooms ward on the second floor. "It's early days so we can't quote any findings yet, but even at this stage it looks as if there's quite a reduction in walking distances and therefore activity duration and response times over the traditional layout," says Hayward. Schedules of estates staff are also being scrutinised for improvements in maintenance and cleaning activity: "We haven't evaluated those yet, but the intuitive feel of the estates team is that they're spending less time in the new Lilac ward than in other wards for domestic services and maintenance."

Patients and staff are pleased with the new ward: "It was scored 10/10 by clinical staff for quality of product in our KPI survey," says Robbie Blackhurst of Kier. James Hayward adds: "It's such high quality that patients think they're in a private healthcare facility. And the staff love it because from an operational and efficiency perspective it works extremely well. The Trust was determined to take the Repeatable Rooms and Standardised Components initiative from concept to reality in a new-build project," he continues, "and it has been so successful that we're looking at doing the same for a future Emergency Department and a new endoscopy department. The ingredients for success have been a good PSCP and design team, engaged clinical users, and strong Trust leadership – forming the basis for an outstanding partnership." ●

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