

# New south Glasgow hospitals set the benchmark

NHS Greater Glasgow and Clyde's The Queen Elizabeth University Hospital and Royal Hospital for Children have some of the most modern and best-designed healthcare facilities in the world

The stunning, world-class new south Glasgow hospitals have set new standards and enabled a culture change for nursing staff, as Fiona McCluskey, senior nurse advisor, told *Hospital Bulletin*: "My role was to provide expert clinical and nursing advice to the project team. The team included project managers, planners and there were some healthcare planners initially, but they were not required when I came into post."

"It was to be a two-year secondment but was made permanent due to the value of the project."

And valuable it certainly was, at £856 million the Scottish government funded scheme was a huge undertaking with strict timeframes.

"There are 1,109 beds in the adult hospital and 256 in in the children's. The adult general wards are 100% single occupancy rooms. It's the first single occupancy hospital in Scotland and the largest in the UK," explained Fiona. "We have 9,000 rooms across the hospitals, so while we were pouring concrete at one end we were finishing at the other. The contractors had to meet very tight deadlines, which required elements such as the bedhead services units to be assembled off-site to enable a speedy installation"

"I started in post in 2009 at the bidder evaluation stage and was involved with everything from exemplar design through to the completion of the project just a few months ago."

"When looking at the exemplar design we built mock rooms off-site to ensure everybody's needs were met. We showed



*Fiona McCluskey, senior nurse advisor on the south Glasgow hospitals project, and Static Systems' project manager Graeme Harvey*

clinicians, nursing staff and patients around and took their views. We talked about the layout of bedhead services at an early stage. The standardised ward and bedroom layout involved a generic ward user group, which I chaired. A lot of the decisions on what the clinicians and nurses were looking for were made there - such as doors, vision panels, windows, patient hoists and the strategy for nurse call.

"With single occupancy rooms, patient safety became a main priority and the nurse call system is a key part of that."

"It was a Group 1 installation by the main contractor, Brookfield Multiplex, but we developed the criteria of what we wanted, so they had to meet or surpass that specification."

Fiona said: "With the bedhead services, it was decided that no medical air would be required into the wards - it's only used in high dependency and intensive care. The change in practice was a clinical decision."

"It took quite a while to gain approval as it was such a change from the Scottish HTM. I wrote a paper demonstrating why things needed to change to meet clinical need - the changes in nursing care delivery to meet the needs of

100% single occupancy patient accommodation."

"The bedhead services modules have oxygen, vacuum, nurse call, light, 240v mains and IT ports. We spent a lot of time on IT ports. We initially wanted six ports and settled on four."

Enabling faster on site installation to meet the strict timeframes, Static Systems

supplied of which 1,100 were standard for the two hospitals' acute adult and children's beds.

Following discussions with M&E contractor Mercury Engineering Services it was agreed that there would be time-saving benefits in providing each bed with a discrete trunking and its own riser. On occasions where these are installed in wards it helps to create an impression of private bed space.

Fiona said: "We also had to agree whether the bedhead services were vertical or horizontal. In all the general wards they're horizontal, while in coronary care they're vertical, and different again in intensive care and high dependency due to the amount of equipment and services."

"A number of hospitals in the Greater Glasgow area have bedhead services and nurse call systems from Static Systems, so it was a system the nursing staff were very familiar with," explained Fiona. "In terms of the layout of bedhead services, in 2010 we visited the Royal London, another Static Systems site, where they had a similar system to the one we were



looking at. Here in Glasgow we have the main screen for the nurse call system at the nurse base rather than mounted on the wall, we also wanted touch-down bases around the wards so the nurses always had information to hand."

"In our wards we have one main staff base, which is a reception point and six touch-down bases. There are approximately four beds per touch-down base and 28 single bedded rooms per ward in the adult hospital and 24 per ward in the children's hospital. We had to design everything to take account of how the nursing staff would be working in a 100%

bedhead services units are designed to be delivered fully assembled with all services installed, tested, certified in line with current standards and, where required, fitted with modular wired connections to provide a quality, time and cost-effective solution.

In total 1,895 units were

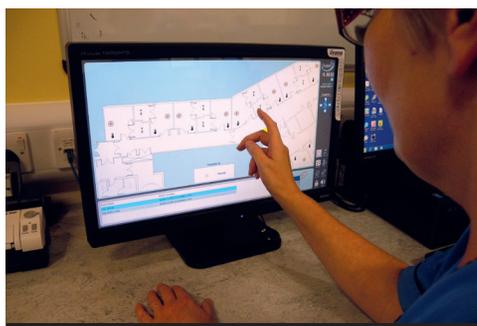


single occupancy environment. It was a culture change for nursing staff so we had to keep everything else they worked with as simple as possible to support them in their roles.

“We were quite specific about the handset,” said Fiona. “We wanted just a basic unit that operated the system. There are lots of patients with cognitive problems so we wanted the handsets to be as simple to use as possible.

“The main staff base has a Static Systems’ touchscreen data station. This logs all the nurse call data and interfaces with other systems, such as video door entry. In the touch-down bases we have our own Health Board supplied computer screen which is used for clinical systems and the nurse call.

“So when a patient presses the handset to call the nurses hear the



*At the nurses base a data station shows the ward layout and patient calls, together with various pop-ups*

coming from. With the single occupancy rooms, the wards are quite large and the nurses do a lot of walking. So having the touchdown bases means they’re never far away from all the information they need. The nurses also carry DEC wireless handsets to communicate with each other.”

Fiona said: “We also had an input into the sound of the nurse call system and the level of sound. There are day and night levels. We leave it to the individual wards to choose the setting they prefer. Patient-to-staff has a different tone to staff-to-staff. We didn’t want a facility for staff to speak to patients over

the system, as we felt that is too impersonal. We want staff to go to the patient’s room as soon as possible whenever there’s a call.

“At a later stage we added some features to support the nursing staff in delivering a developed model of care. We developed pop-ups in our own PCs so the information comes up at all locations in the ward.”

The hospital has an extensive pneumatic tube system. The Static Systems data station alerts when a delivery has arrived. Also as fire alarm repeater panels are not installed, a global repeat of the fire messages goes to the Static Systems panels and a pop-up appears.

“The system is easy to clean. We had a full time infection control nurse embedded in the project team. Static’s system met all the infection control issues,” said Fiona. “You can immerse the handset in liquid. It’s easy to clean the whole of the bedhead services fascia, the lead and the handset with the chlorine based solution if necessary.”

The trunking is either fitted tight to the wall corner or there is a 50mm gap to enable easy cleaning.

“We were doing checks early on during the installation to

ensure things met our requirements and asking the contractors to make changes if necessary,” Fiona said. “We moved one hospital in at a time. During the early migration period there were still some tweaks being done to the system right up until the last minute. In fact we were still working on the development of the nurse call even

though some patients were in the same zones.”

So how are staff finding the system? “No news is good news,” said Fiona. “I’ve hardly had any comments.

“The only real feedback I had was on the sound alert when the drugs cupboard was opened. That was specified as part of the Scottish HTM but when all the wards raised complaints about it sounding so regularly we dealt with that at an early stage and removed it. There’s now just a visual indication. This was another change from the HTM.”

Staff nurse Sandra Lyon said: “The nurse call system’s efficient. It’s simple for patients to use and having the touch-down bases makes us more aware where the calls are from, which is important on a bigger ward. We show the

Static Systems. It was a good relationship and helped to deliver a patient-focussed system that meets clinical needs.

“In the design of the schemes we took on board some ideas from other hospitals and adopted others to meet our needs. Now, after the opening there’s been a high level of interest. We’ve facilitated visits from across the UK, Denmark, Canada, the USA and Australia.”

Graeme Harvey, a project manager with Static Systems, was involved with the project



*Staff nurse Sandra Lyon*

for over three years. “When I started the project I had a girlfriend and ended it with her as my wife and we now have a son,” said Graeme. “When the project began we were happy to give the team our specialist input and design experience. Their driver was the clinical and nursing perspective and working in a 100% single room hospital and providing a system which supported the nursing

team in delivering patient care in a modern clinical environment.

“The overall project was on such a tight timeframe that we modular-built as much of the equipment as we could off-site, at our manufacturing centre, to minimise installation time within each

construction zone to allow us to meet key programme dates.”

Graeme added: “To deliver the project as planned, we had eight installation engineers. There were also three commissioning engineers, two of whom were on-site for a year.

“The project was very much partnership, contractually we were working with Brookfield Multiplex and its M&E contractor, Mercury Engineering Services, but on a day-to-day basis we were engaging with the NHS project team to ensure the system met their clinical needs.”

For more information, call Static Systems Group 01902 895 551 or visit [www.staticsystems.co.uk](http://www.staticsystems.co.uk)

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*One of the touch-down bases*

alert, a light goes on in the area and above the patient’s room, it’s shown on the data screen at the nurses’ base and a pop-up appears at the touch-down bases.”

As Fiona explained: “Each of the nursing staff badges has a chip in it for clinical fast access to the computers, it saves them having to log on all the time.”

These developments are an example of how the project team asked Static Systems to interface exactly how they wanted them to. “We could not incorporate everything we wanted but we’re very close, without making it fully bespoke,” said Fiona. “It needs to be easily maintained for the future.”

The NHS and Static Systems are continuing to work together with more design development underway around the pop-up screens.

“As we’re a 100% single occupancy we were asking for the system to suit the way nurses would be working,” said Fiona. “You have to ensure that the system is patient centric and the patients are able to use it in the right way. We wanted the system to be as easy as possible for the patients and the nursing staff.

“You can go to a touch-down base and see where the call is



patients how to use the handset as part of the admission procedure. They like the handset’s torch facility. Nurses find that very useful too.”

With the NHS for 34 years, Fiona is now assistant chief nurse within the nursing and midwifery professional governance regulatory function, NHS Greater Glasgow and Clyde, however she maintains a watching brief on the impressive new hospitals to ensure the process and equipment that she was so heavily involved in for six years continue to help the team deliver the very best patient care.

Fiona added: “Certainly, we had some initial conversations with Brookfield Multiplex on the nurse call system but latterly we worked directly with