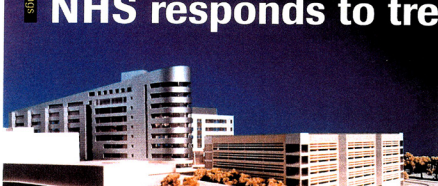
One of Britain's biggest property estates, the NHS, is spending billions on renewing and reinventing itself for the 21st century. Opportunities for architects range from mega hospitals to one-stop health shops.

By Eleanor Young

NHS responds to treatment



Oncology wing, St James' University Hospital, Leeds
Architect Ahrlam Dyer
Client Catalyst Healthcare
User Leeds Teaching Hospitals NHS Trust
Type of provision Regional cancer centre providing specialist cancer research and treatment
Area 66,520m
Contract value £156m
Contract PFI
Contract period Three years
Completion date 2004
Brief Develop an old car park into Europe's largest cancer research hospital
Architect John Cooper 'We have to marry high-tech equipment with non-clinical spaces that are as supporting as they can be – all on a restricted site'

The PFI client's view Mike Davies chief executive, Catalyst Healthcare

"The cost of bidding and winning is so great we need proven architects"

We have three hospitals built and occupied and £800m+ capital investment planned on a further five projects – including Leeds where we are preferred bidder.

We only use architects with intermediate experience in healthcare. That has been the case since I joined in 1995. The cost of bidding and winning is so great that we need proven architects who must understand health as well as architecture. We can make a building look good afterwards in an architectural sense, but if it isn't functional there are problems.

We have used UK practices but for the sort of mega hospitals we are building, you need a huge resource that is beyond UK practices' capacities. For a £300m job we need 70-80 architects at peak times, all on that project. We use about six practices regularly. At Birmingham we have a lead architect and a mental health specialist.

We tend to employ expert external health consultants to work with architects. It is all part of the creative tension. We need their skill to understand clinical changes and how they impact on architecture.

With the NHS Plan's demand for so many new hospitals and a Treasury commitment, people want to spend and there is great pressure for speed. That means grouping projects and inevitably larger developers have to take them. The market has segregated around local improvement finance trusts (LIFTs); it is progressive, not a big bang approach.

We haven't tacked smaller projects yet. Our strength, with the construction capabilities of our partner Bovis Lendlease, is on major projects and they have to take priority. But when the rush of big projects drops off we will look more widely. In the long term we are likely to be involved with LIFT.

The National Health Service is on the mend, according to the government's report on the fabric of the NHS in September. It has a long way to go before New Labour came to power in 1997 half of the NHS estate was older than the service, which was set up in 1948.

New Labour wrote its prescription in the NHS Plan, published in July 2000. Now one of the biggest property estates in the country has become one of the biggest spenders – to the tune of £3.1bn this year alone.

By 2010, the plan promises more than 100 new hospitals and 500 new one-stop primary care centres as well as 7,000 extra beds.

Of course it is not as simple as it sounds. The government wants modernisation in return for investment and has outlined a new set of priorities, which will create new building types.

It also has to fund this massive expansion and much of this is being done through public private partnerships with new forms of procurement and a different set of clients for architects to grapple with. But it is worth the effort: there is a lot of work up for grabs.

Who is getting the work?

Big projects have resulted in expanding specialist health practices. Initiatives like Improvement Finance Trusts (LIFTs), offering a secure revenue stream, mean practices can afford to expand. Architect Panton Sargent's latest LIFT contract is for work over the next 21 years at a rate of about seven schemes a year.

Among the specialists emerging are Nightingale Associates and Anshen Dyer. Both practices market themselves as healthcare architects and healthcare provides the bulk of their work. Commercial practices are also involved in the sector: more than £7m of BDP's turnover is from health buildings, while they will make up 25% of Sheppard Robson's next year.

Anshen Dyer director John Cooper admits that the big PFI jobs seem to be going to seven or eight large specialist practices.

'You need 100-200 people to deal with the scale of programmes we are seeing,' he says. But he believes now is the time for hospital design to 'enter the mainstream'. 'It would be very sad if the work went to specialised larger firms – we need first rate practices to be involved, the consortia gene pool needs repletion,' he says.

Cooper says a good health building requires a mix of skills – detailed health planning and a vision for a bold diagrammatic form that can take in those planning subtleties. So do practices need health planners if they are to win hospital projects? Yes, says Cooper, many of whose architects are trained health planners. But they don't have to be members of your own practice. Developer Catalyst employs external health planners to add a little 'creative tension'.

Some architects are philosophical about being sidelined on health projects. Joanna van Heyningen admits van Heyningen and Haward do not expect to land hospital work. 'We look for what we can get, and they are more things with a social or planning bias,' she says.

Other practices are frustrated by this specialisation of healthcare architecture. A recent CABE forum on why high-profile ▸

Children and Young People's Centre, Lewisham
Architect van Heyningen and Haward Architects
Client Lewisham Primary Care Trust
Users Child health services, education and social services, child and adolescent mental health services
Type of provision Treatment and care for children ages 5-19; offices
Area 4400m
Contract value £72m
Completion date Autumn 2005
Brief Design a home for one-stop care from a variety of services
Architect Joanna van Heyningen 'We tried to provide somewhere legible, welcoming and calm. The circulation runs round the inside of the C-plan so you can see where you are going and colours will clearly mark out different departments'

The NHS client's view
Janet Davies, project director, Lambeth, Southwark and Lewisham LIFT

"Architects are just part of the supply chain"

I trained as a nurse and gradually made my way up. The health service is always reorganising so I have had 10 different jobs. My work as a project director on schemes was always an extra.

We started planning for a children's centre in Lewisham in 1998. If I hadn't carried it through on different jobs the centre probably wouldn't have happened. We had to make our small project viable and thought if it was bigger it might be eligible for PFI funding.

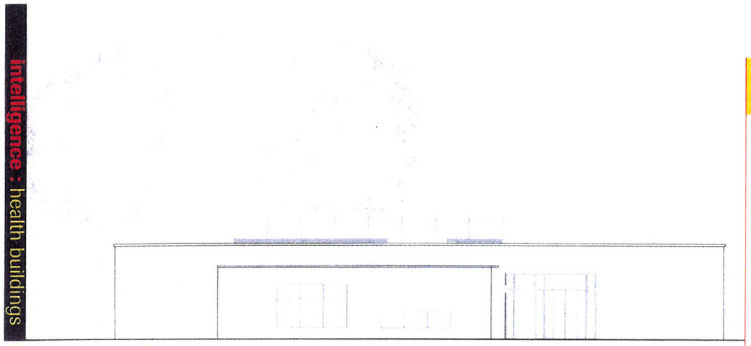
Lewisham was taken on by CABE enablers because it was such an innovative mix of services. It was a good learning experience and CABE redesigned the NHS design quality toolkit so it could be used by user groups such as parents.

Since April I have been project director on this south London LIFT project. LIFT is very good for us. We have been very poor with our maintenance – it is always impossible to choose to spend scarce resources on the building when you have to fund speech therapy and a hundred other medical things.

The aim of LIFT is to procure a partner. That is not all based on design, but going through the CABE competition was a useful process. We have been evaluating bids since early July – it is a very prescribed process looking at affordability, for financial backing and hard facility maintenance services. We have to remember that architects are just part of the supply chain. But if we are not keen on the design we would attempt to remedy that.

There is a very tight timescale for submitting planning – preferred bidders will have one month from the announcement to submitting the first scheme for full planning. The pace of London planning is a major stumbling block. Yet there is a huge imperative from government to get something built – only one LIFT building so far has reached financial close.

STATISTICS Value of NHS estate **£24bn** Diagnostic and treatment centres (by 2004) **20** GP surgeries to be modernised **3000** One-stop primary care centres (by 2004) **500** Women saying improvements to environment where they gave birth would have made the experience more relaxing and enjoyable **75%** Hospital beds occupied by people aged 65-plus **65%** Average hospital space dedicated to nursing areas **30%** Reduction in treatment times with purpose-designed hospitals rather than older counterparts for mental health patients **14%** For general non-operative patients **21%**
Sources: NHS Estates, NHS Plan 2000, Richard Lindheim Trust, National Beds Inquiry, Professor Nevill Stoffard Trust



designers were not working in the sector left participants resolved to educate the healthcare world on the benefits of learning on the job.

But there are opportunities for smaller practices. Health work provides the bread and butter for Guy Greenfield's five-person London practice. It was only after years of refurbishing doctors' surgeries that he completed his first new-build project – a sparkling white surgery in Hammersmith that was shortlisted for the 2001 Stirling Prize. Since then he has avoided LIFT projects but has carried on working with doctor-developers as well as taking on a 22,000m² building to house a number of GP practices near Heathrow.

Architects can also target smaller jobs, particularly refurbishments. Softroom recently completed a diagnostic scanning centre within Ravenscourt Park Hospital while Barbara Weiss Architects is building a birthing unit for Central Middlesex Hospital – the practice's first healthcare building. The first experience of healthcare can come from other contracts where surgeries or healthcare facilities are included. Stoke Woolenscroft's residential conversion of an old school will include a surgery for three GPs.

Some architects are teaming up with more experienced health designers to bid for jobs. Weiss is working with YRM and Buschow Henley is bidding for a LIFT project with Penoyre & Prasad.

New forms

Architects are having to deal with a new range of priorities and buildings types for the NHS. The key words are specialisation, intervention and integration.

There is a move towards more specialist centres where expertise can be concentrated: for example, Leeds' oncology wing acts as a regional centre for cancer care.

Early intervention policies have arisen out of the new emphasis on preventive medicine. Walk-in centres are part of this approach: there are 42 based in central locations from Liverpool to Luton.

There is also a huge renewal programme for doctors' surgeries, which traditionally have been underfunded because practices had to find their own capital investment. Often doctors had to take out mortgages to pay for building work (an estimated 63% of GP surgeries are owner-occupied). The plan is for 3000 surgeries to be upgraded under LIFT schemes. These are not just straightforward modernisations, but often strategic plans for local primary care supply.

The third factor, integration, is perhaps the most challenging one for architects. It cuts across health hierarchies and government departments. Secondary care functions once housed in hospitals are moving to primary care premises. Community health care centres might house not only the local GP practice but also x-ray units, testing facilities, pharmacists and social workers.

This will require cooperation between services and architects may be the prime coordinators, as van Heyningen and Haward has found. The practice is designing the first building to house both social and medical services in Lewisham, south-east London.

In other cases one client will take the lead but consultation with users is still likely to form an increasingly large part of the workload. At West Bromwich, Panton Sargent has a primary care trust acting as client for a number of the bodies. The practice had to allow time for each user to comment – the consultation period stretched to five months – and it ended up drawing each of the 400 rooms.

The desire to reduce waiting lists is also driving development of diagnostic and treatment centres for non-emergency operations which require only a short stay.

So far such centres have been run by the NHS, but a new wave of 25 units has just been announced, to be run by private companies. The first in Redhill, Surrey will be managed by BUPA. Other initiatives focus on improving accident and emergency wards and modernisation of maternity units.

Funding

Most investment will be funded from the public sector. In fact 75% of projects are still paid for from the public purse. Some money will come from sales of old NHS property (predicted to raise £600m) and some from the fund-raising efforts of hospitals such as London's Great Ormond Street, which is planning to raise money for its £23m development.

But a significant slice of the investment is expected to come from the private sector, which is engaged to build 104 of the 114 planned hospital projects. Private finance initiative (PFI) contracts are expected to lever in £7bn of private capital by 2010, primarily for major projects. This is where Labour's capital investment really started and has seen most results. Now there are hospital renewal programmes in most major cities.

Funding for primary care services has lagged behind, leaving hospital services that are meant to be moving into the community with nowhere to go. To get things moving, 42 local improvement finance trusts (LIFTs) have been set up.

This government initiative packages local surgeries and primary care facilities as 20-year improvement contracts with private consortia. They have a major new-build element, renewing local surgeries and hospitals, particularly in inner city areas. A fourth wave is expected shortly. A typical example is in east London where the first LIFT consortium, Global Solutions and Babcock and Brown, is working with architects Hunter and Partners on a £55m contract that will provide a £5m one-stop shop, a £2.5m GP surgery and a £12m specialist hospital.

The other procurement strategy that has just kicked off is ProCure21. This a contract based

Birthing unit, Central Middlesex Hospital, London

Architect Barbara Weiss Architects
Consultant architect YRM
Client North West London Hospitals NHS Trust
Type of provision Midwife led ante-natal and delivery unit
Area 950m²
Contract value £2m
Contract JCT 98 without quantities
Completion date December 2003
Brief A relaxed environment for women to give birth
Architect Barbara Weiss 'We created an introverted domestic environment and wrapped the building around a garden with birthing rooms looking onto it (each with its own Alvar Aalto table).'

The first-timer's view
Barbara Weiss principal, Barbara Weiss Architects

"Health buildings are no different from any other: you still learn on the job"

We have been designing high-quality domestic architecture for about 15 years, though we have also worked for Imperial College, the Tate, banks and developers. But we were very keen to widen our work.

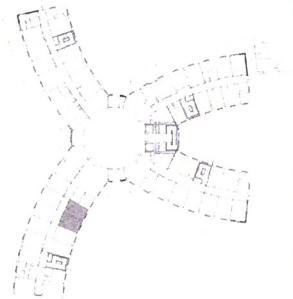
At the Central Middlesex Hospital the in-house architecture department had shut down and two wards needed refurbishment. At £1.5m it was too big for us really and was advertised in *OJEC*, but we applied, teaming up with YRM which has experience in this area. We heard we were the preferred team but lost out on the fees.

The hospital suggested we go for another project – a £14m refurbishment of the 1970s maternity wards and a smaller new-build birthing centre. We worked closely with YRM as it was a very complex job, and won the competition. We have concentrated on the new build which was midwife-led and really needed a residential feel – plus the involvement of women designers. It has been a huge learning curve.

Immediately after the win our M&E consultants on that job asked if we were interested in a maternity unit at the Whittington Hospital. We are now almost established in this sector – particularly as the birthing centre is a pioneer project.

We couldn't have applied for *OJEC* notices at the start – nobody would have considered us with no experience and I would have been nervous. We are still looking for big practices to collaborate with.

There is a myth that you need health experience to work in health. Health buildings are no different from any other – you always learn on the job.



Primary Care Centre West Bromwich

Architect Panton Sargent
Client Prime Developments Ltd, AWG contractors
Users Wednesbury & West Bromwich PCT, Sandwell Council and four GP practices
Type of provision GP surgeries; audiology; chiropody; speech therapy; community nurses; social inclusion unit; office wing; car parking
Area 7000m²
Contract value £8.7m
Contract Architects appointment based on SFA 99, then design and build
Completion date Spring 2005
Brief Transform a derelict site to a local health hub
Architect Mathew Tebbit 'We tried to give each of the 12 users their own space with four wings that are broken at the core by a glazed rotunda which orientates the 600 people who will pass through every day.'

The specialist's view Peter Sargent director, Panton Sargent

"Health makes up only 35% of fees. It is not a high earner"

Barry Panton and I set up an architectural partnership seven or eight years ago. Panton was invited onto a local NHS Trust board where they were commissioning a PFI building and so came to understand the move of secondary care services into primary care facilities.

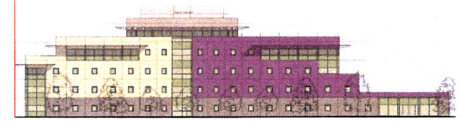
We got involved in a project designing a Droitwich GP's practice. Then we moved on to Newcastle which was a pathfinder area for primary care development. Through our work there we won a job bringing together GP surgeries, dental and chiropody surgeries and general healthcare facilities.

We brought the Droitwich developer on board but it didn't seem very interested. So we formed our own development arm, Prime Developments.

We really did this to guarantee ourselves a stream of work. We won five or six other Newcastle schemes shortly after. Since then we have been bidding for LIFT projects. We won one in Birmingham and Solihull – it is a 20-year contract with three schemes now and three planned, each worth £2-3m. We are bidding for seven LIFT contracts. West Bromwich is our latest, an £8.5m scheme won in design competition.

Prime now has six directors, and 26 staff. It has a turnover of £30m, all on health. Health makes up about 50% of the volume of our work in the practice, though only 35% of fees. It is not a high earner. The district valuer from the valuation office controls rents. Their sole interest is in best value. So you have a heavy medical specification and quite a light rental – our skill is in making it balance.

After financial close we hand over to contractors – so the practice is novated to a design and build contractor. It is the only way to transfer risk.



on the partnership ideals of Egan and sets up main suppliers in framework agreements with NHS Estates for projects around the country. It is expected to reduce programme time and improve standards. With designers on board from an early stage it may also improve the quality of design. Schemes worth £600m worth have now signed up to ProCure21 and the 12 national partners chosen include contractors like Wates Construction and Taylor Woodrow.

Small projects are still likely to be procured by traditional means, using JCT contracts. More often the project will go to design and build.

Clients new and old

Of course these changes mean new – often private – clients for architects. Many of the PFI contractors are known quantities. There is a relatively small number on the really big projects – the weaker players have been weeded out by the expense of mounting a PFI bid. There are only half a dozen – including Catalyst, Skanska and Bouygues – that take on the £200m-plus jobs. Mike Davies, chief executive of Catalyst, admits that the size of the projects has inevitably meant larger developers take the lead. But smaller developers are now involved with the lower value contracts like LIFT projects. Panton Sergeant set up its own development company to bid for them – a model that other architects could follow.

Even more independent of the NHS will be the private providers of diagnostic and treatment centres. These are likely to be healthcare companies such as BUPA, and less well known healthcare providers like Mercury Health and Care UK.

But the NHS as a client lives on. As part of its modernisation 'earned autonomy' has become increasingly important and trusts are taking greater control of their own commissions. Catalyst has seen this happen during the lifetime of some of its projects and is keen to guard against the disruption it causes by encouraging the trusts to buy into its scheme at an early stage. NHS Estates remains an advisory rather than a commissioning body.

Design champions seem to have made little impact on health buildings so far, despite the high profile recruitment of the Prince of Wales in that role for the Department of Health. With research increasingly showing how good design can assist recovery, getting patients out of healthcare buildings and off waiting lists, the government must put design high on the agenda and ensure a wide variety of practices are helping to make the best of its investment. ■

Finding out more

NHS Estates
www.nhsestates.gov.uk

NHS Plan
http://www.nhs.uk/nationalplan/summary.htm

Centre for Healthcare Architecture and Design
http://195.92.246.148/nhsestates/chad/chad_content/home/home.asp

Architects for Health
www.architectsforhealth.com

Health costs	£/m²of gross internal floor area
Primary healthcare	
Doctors' surgery	£1200-900
Doctors' surgery/medical centre	£1450-1150
Hospitals	
Diagnostic and treatment centres	£2000-2300
Acute services hospitals	£1500-1800
Radiotherapy and oncology units	£1750-2000
Community hospitals	£1400-1600

Rates are at third quarter 2003 levels based on an Outer London location. The rates should be applied to the gross internal floor area. The range of costs in the table are based on normal design and specification criteria and are not minimum and maximum cost thresholds. The rates exclude demolitions, site preparation, furniture fittings and equipment, external works and services, contingencies, professional fess and VAT. Costs supplied by Davis Langdon Everest