

BRILLIANT BUILDINGS

REVITALISING HEALTHCARE



Prescription for a changing society

A guide to help reshape the model for delivering health and wellbeing

CARING ABOUT EVERY DETAIL



The challenges facing healthcare are profound. In today's tech-driven society, estate teams have to deliver systemic workplace changes to support the future of the NHS – and communicate this to multiple stakeholders.

The change that's coming is manifest: moving primary care out into communities; making acute care more specialist; harnessing the benefits of digital; using design and materials technology to improve infection control and ease of maintenance.

Collaboration and knowledge-sharing among NHS trusts will be essential. Brilliant Buildings: Revitalising Healthcare intends to be part of this process by sharing the experiences of Willmott Dixon and its customers in healthcare environments.

Whether it is creating a world-class facility in Hampstead, north London to help find a cure for cancer (page 4), extolling the benefits of community-based health provision in Dulwich, south-east London (page 6) or modernising a maternity ward in Swansea without disturbance (page 7), you will find useful information from industry peers to assist in delivering modern healthcare.

This is personal

Getting this right affects us all. Negotiating the challenges of making assets operational – from decisions about configuration and funding, to dealing with public opinion and knowing how people might work in new environments – is something we all benefit from.

By using our knowledge and expertise, we want to make the design and construction of a new asset, or the rethinking of an existing one, the least painful part of a complicated process. This includes adapting the best bits of design into a tailor-made solution that allows end-users to get on with other details that will influence how they deliver services.

Success requires real understanding of what is required, attention to detail, flexibility and empathy. This is what drives Willmott Dixon's vision for being a true partner in creating healthcare that can meet tomorrow's needs.

Anastasia Chrysafi, national account manager – health, Willmott Dixon



For further information on our range of healthcare projects, please visit our website: www.willmott Dixon.co.uk

Pictures of health

From world-class research centres to homes for autistic people, we are at the vanguard of the UK's changing approach to healthcare delivery



1 Singleton Hospital maternity ward, Swansea

We are refurbishing the maternity ward at Singleton Hospital, part of a wider package of works that also includes the creation of a special-care baby unit, a transitional care unit and other wards.



2 University Hospital Llandough, Cardiff

We are creating a spinal rehabilitation unit – one of only 12 spinal units in the UK – as well as refurbishing and extending existing wards to replace outdated facilities currently housed at Rookwood Hospital.



3 Central Sterile Services department, Liverpool

This facility on the Broadgreen Hospital site is a step change for the Royal Liverpool and Broadgreen University Hospitals NHS Trust as it enables its sterile services to be maintained in-house, rather than outsourced.



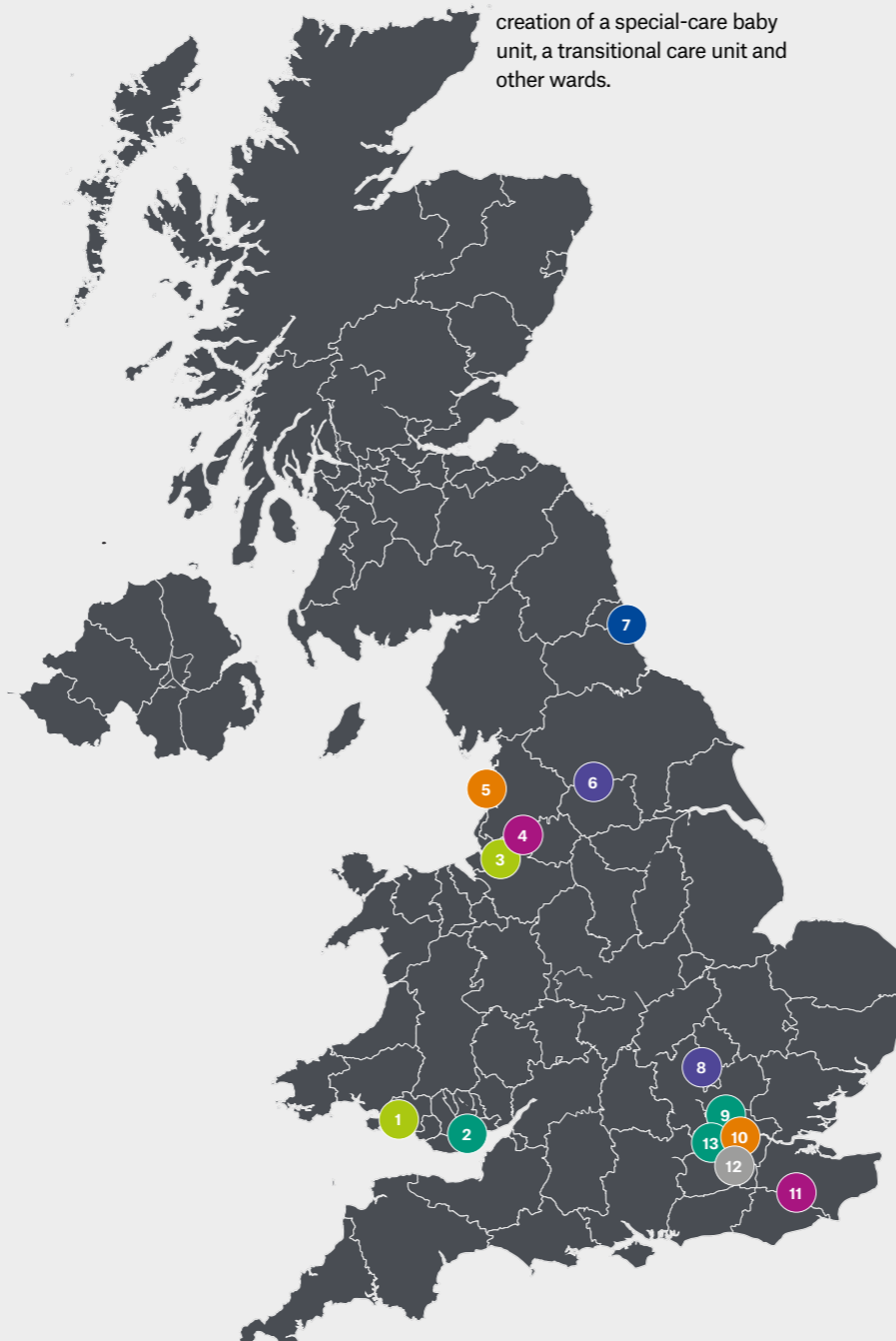
4 Hyndelle Lodge and Ullswater Road, Wigan

Our health specialists are creating 64 affordable homes to suit people with autism, learning and physical disabilities – part of Wigan Council's plan to help people live independently by meeting their health needs.



5 Blackpool Victoria Hospital

We worked closely with the NHS trust to create a three-storey main entrance and multi-storey car park. The entrance provides links to lay-by parking for buses, taxis and ambulances, and direct access to the car park.



6 Airedale Hospital, West Yorkshire

This logistically challenging, multi-phased project, delivered in a live clinical environment, saw our team refurbish the endoscopy, maternity and A&E departments, as well as improve support facilities and wards.



7 Sunderland Royal Hospital A&E department

We updated an ageing A&E department by delivering a refurbishment and new-build programme. The project also improved access by linking a new-build with a 1960s building.



8 Brooklands Health Centre, Milton Keynes

This three-storey health centre to serve Milton Keynes' eastern expansion includes a primary care medical centre, dentist and cafe with the capacity to cater for up to 22,500 patients a year.



9 Pears Building, London

We worked with the Royal Free Charity to build a world-class research centre at the UCL Institute for Immunity and Transplantation. The centre houses scientists, clinicians and specialists in conditions such as cancer and diabetes.



10 St Mary's Hospital, London

The refurbishment and extension of the Paediatric Intensive Care Unit (PICU) drastically reduced infection rates and moved Imperial College Healthcare NHS Trust from being the 25th rated ICU to the first in the country.



11 Benenden Hospital redevelopment, Kent

The expanded and improved facilities at this flagship independent hospital add new theatres, single en-suite rooms, an ophthalmic suite, outpatient department, procedure rooms and recovery areas.



12 Tessa Jowell Centre, south London

Completed in spring 2020, this new community facility houses a GP surgery, mental health and children's services, blood testing, kidney dialysis, physiotherapy and other clinical services.



13 Department of Health and Social Care head office, London

Willmott Dixon Interiors created a new office environment for the Department of Health and Social Care, delivering its vision of agile, flexible working space.

1. GET THE BUSINESS CASE RIGHT

The biggest mistakes in developing buildings and deciding on capital spending are nearly always made at the start of the process, says Ian Greggor, director of estates and facilities for Berkshire Healthcare NHS Foundation Trust.

"It's not quite knowing what you are really trying to achieve," he says. "What outcomes – financial, operation and clinical – do you want from making the investment? What benefits are you going to accrue?"

Too often, says Greggor, the customer will call in the architect to start working on designs, when they should be investing more time on the brief.

If there is a clear vision, effective business cases will explain how the new or adapted building can deliver it, who the stakeholders are and what the procurement options might be. They will also show a realistic grasp of the costs, potential risks and timescales.

Don't just think about capital costs

Operating costs are also hugely important, says Greggor: "People get too concerned about the capital cost and not concerned enough about the ongoing costs. Ongoing costs is where the money is spent."

"It may be a cliché, but early contractor involvement can be the difference to achieving

a successful outcome," says Anastasia Chrysafi, national account manager – health at Willmott Dixon. "It gives better visibility on critical factors like whether the location is right, potential disruption, the impact of asbestos, plus special concerns such as preventing MRSA and legionnaires' disease. That all helps to get the cost and programme right." In many cases, using a framework allows contractors to invest in feasibility studies that substantiate the business case.

One big challenge in terms of the business case is the time it takes to secure funding, especially with large or complex projects. "Business case approval can be laborious," says Chrysafi. "Quite often construction prices go up because approval has taken years, which then is a source of contention, or the contractor can no longer commit."

If funding decisions take time, it is possible the model of care will have changed too. A rigorous value-engineering exercise, to deliver new requirements within the original funding envelope, is essential to avoid healthcare projects no longer being fit for purpose.

True value-engineering is not cost-cutting. It is about delivering the same or better value for less. For instance, on the £48m Pears Building – a cancer research centre on the Royal Free Hospital campus in London – Willmott Dixon was able to cut £2.5m from the cost of the build, £1m of which came out of the mechanical and electrical works. "The solution we came up with is far more cost-efficient, but it does just as good a job as the original design," says Willmott Dixon's construction manager for the project, Matthew Adams.

"THE SOLUTION WE CAME UP WITH IS FAR MORE COST-EFFICIENT, BUT IT DOES JUST AS GOOD A JOB AS THE ORIGINAL DESIGN."



MATTHEW ADAMS,
WILLMOTT DIXON



Pears Building, Royal Free Hospital Campus, London

Key facts

Advancing the understanding of conditions including cancer and diabetes

— State-of-the-art research labs in 6,000m² of floor space

— BREEAM Excellent

— £48.9m project value



2. CHOOSING A FRAMEWORK



University Hospital Llandough, Cardiff

Key facts

— 26-bed spinal cord injury rehabilitation unit

— Purpose-built hydrotherapy unit

— 50 new beds in 3,000m² of floor space, including refurbishment and extensions

— £15.5m project value

Most procurement is through a framework. Compared to the traditional OJEU (Official Journal of the European Union) process, frameworks bring time and cost efficiencies – some allow a contractor to be in place within as little as 48 hours.

Frameworks also offer a guaranteed level of confidence, says Greggor: "Frameworks are very helpful. I want to have the confidence that I can hand a project over to someone who can provide the whole solution."

There are many to choose from, with 20 widely used, and more that are unique to a funding authority, NHS trust, or a group of hospitals. The most popular include P22 (soon to be replaced by P2020), Pagabo, Procurement Hub, Scape and Southern Construction Framework.

When assessing the appropriate framework, factors that guide choices include the cost of work being procured, the speed at which a contractor is needed, the form of contract offered through the framework, and past experience.

Flexibility to meet specific needs

In procuring the £16.5m Rockwood relocation project, which involves moving services from Rockwood Hospital to University Hospital Llandough and Cardiff Royal Infirmary, Cardiff & Vale University Health Board initially planned to use the Welsh Government's Build for Wales framework. However, once the full business case was approved, the contractor that had been engaged was no longer able to deliver the project.

Cardiff & Vale University Health Board turned to another framework. "We had the funding but no contractor. We needed to take it to the marketplace quicker," explains Jeremy Holifield, head of capital planning at Cardiff & Vale University Health Board.

There can be frustrations when procuring through the same framework many times, says Holifield. Having interviewed the same four contractors repeatedly, NHS Wales found that the offerings were similar in quality. "It's very difficult to differentiate between them with respect to the quality of the proposals, which means that we sometimes end up appointing on cost," says Holifield. Being aware of this, and finding ways to inject fresh thinking into the process, can help to unlock this potential situation.

"FRAMEWORKS ARE VERY HELPFUL. I WANT TO HAVE THE CONFIDENCE TO HAND A PROJECT OVER TO SOMEONE WHO CAN PROVIDE THE WHOLE SOLUTION."



IAN GREGGOR, BERKSHIRE
HEALTHCARE NHS
FOUNDATION TRUST

3. ENGAGING WITH STAKEHOLDERS



Brooklands Health Centre, Milton Keynes

Key facts

Facility includes a dentist, pharmacy, cafe and on-site parking

- Caters for up to 22,500 patients a year
- Three-storey new build
- £7.7m project value

difficulties were avoided by involving local people in the build, says Peter Leadbetter, the hospital's project engineering manager. "We could have had problems with the residents, regarding building so close to their gardens, but it has been great. Willmott Dixon led that engagement with them. We have even had grandchildren on a photoshoot sitting in a construction vehicle, and people have thought 'what a great company'."

Contractors need to take the lead when it comes to engaging with stakeholders at the critical design stage, as this will have a huge impact on outcomes. For the Tessa Jowell Centre in Dulwich, south London – a new £16.8m healthcare hub bringing together primary and community health services – workshops with 23 stakeholder groups at project inception helped to identify what people expected from their new facility.

During construction, communication has been maintained with progression workshops, site visits, formal progress reports and informal, weekly bullet-point summaries that go out to up to 28 stakeholders.

Being tech-savvy

"We completed two rooms eight months before the end of the job, complete with furniture and lighting, so that we could tease out any problems or improvements," says Steve Harnett,

construction manager at Willmott Dixon. Using augmented reality software to superimpose finishings and furnishings was another means of communicating the finished spaces to visitors to the site, he adds.

At Brooklands Health Centre in Milton Keynes, engaging with stakeholders defined the project's success, according to Maria Demmon, Milton Keynes Council's project leader. "Willmott Dixon showed a great deal of understanding around the different stakeholders that are involved with this scheme. It's not just Milton Keynes Council; we're dealing with the health centre's practice group and various tenanted areas in the lower ground floor, many of which have come in later in the day."

Know thy neighbours

At the Royal Liverpool University Hospital's new Central Sterile Services department,

4. WORKING IN LIVE ENVIRONMENTS

"This project was like nothing I had done before," says Willmott Dixon operations manager Rhodri Bowen. "It was hugely rewarding and quite emotional." He is talking about the refurbishment of the maternity ward at Singleton Hospital in Swansea, part of a wider package of works which also includes the creation of a special-care baby unit, a transitional care unit and updates of other wards.

"A new-born baby does not have a mature immune system; if we get it wrong with respect to dust or cleanliness, we could impact on the health of a new-born," says Bowen. More than 2,000 babies were delivered as Bowen and his team worked at the site. One of them was his own baby boy.

Early meetings with the midwives, sisters and the head of midwifery for the trust helped Bowen and his team to understand how they could carry out the four-phase renovation without disrupting the ward's crucial daily business. Any waste was treated as if it were asbestos, bagged and covered to be removed. Clean clothes and boots were compulsory and cleaning regimes were strict.

Security was an issue too. Numbered baby-blue high-vis vests, which had to be signed

out and back in each day, gave the nurses confidence that there were no strangers on the wards. Bowen also supplied the nursing team with photos of every person working on site.

Avoiding disruption is business-critical

For Bowen, one of the most important elements of the job is explaining to those affected exactly what is involved. "Don't fall into the trap of giving people drawings but not explaining what the work is going to mean with respect to noise and how we might be using the lifts. It's important to really go into detail and explain it."

On the Singleton project – and many others – it was sometimes important to be flexible

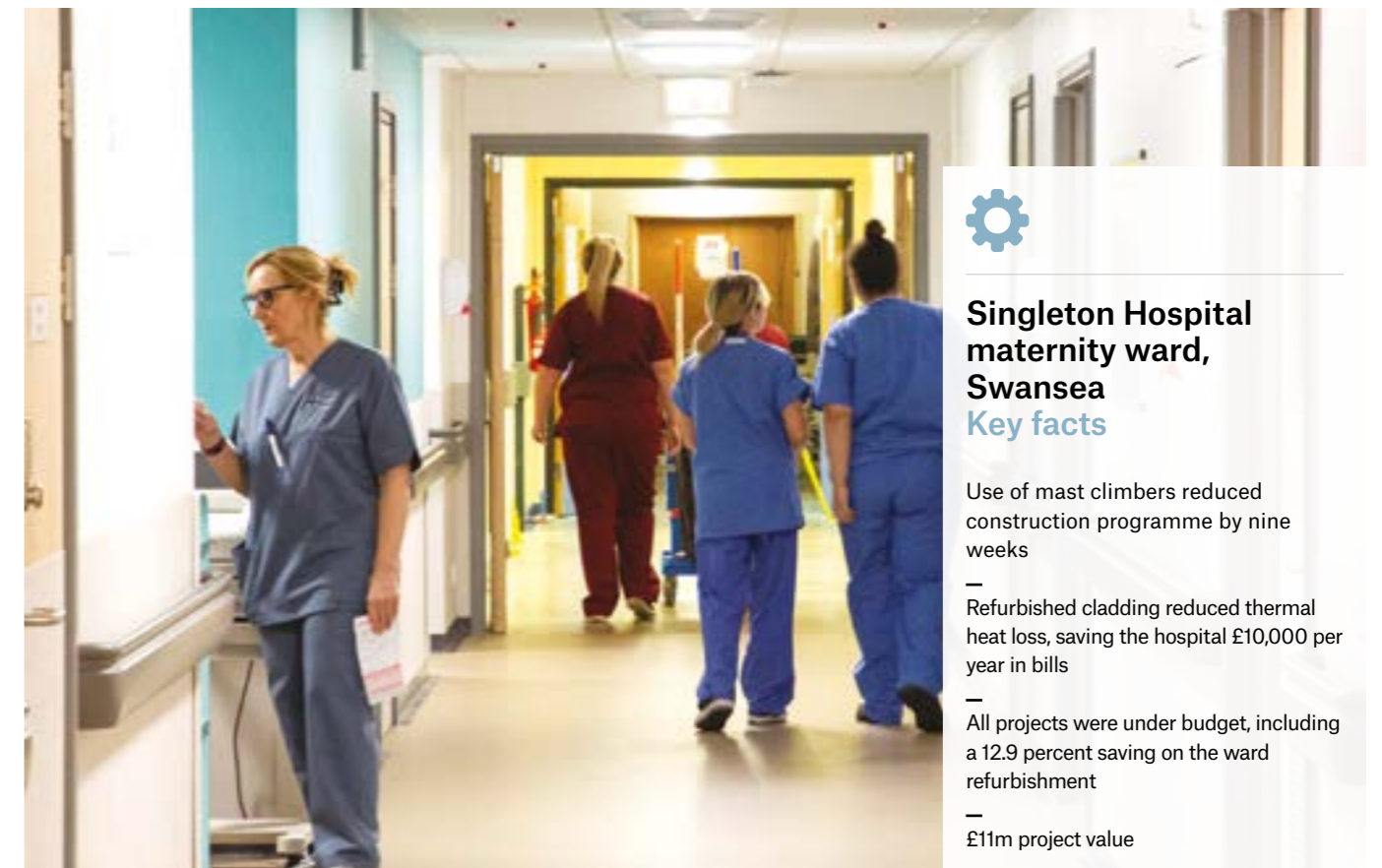
and occasionally to down tools. "Everyone understood that there were some occasions when we just couldn't afford to make any noise at all. The supply chain was totally on board with that. We all understood that we had to prioritise the work of the ward."

For contractors working within live hospital environments, the need to get the quality, build and design right first time is paramount – something that is clear in the NHS mandate GIRFT (Get It Right First Time). A defect-free handover is essential, as going back into a live and possibly critical environment to correct work is very impractical. Willmott Dixon tackled this challenge with its Perfect Product process to achieve defect-free handovers.

"EVERYONE UNDERSTOOD THAT THERE WERE SOME OCCASIONS WHEN WE JUST COULDN'T AFFORD TO MAKE ANY NOISE AT ALL. THE SUPPLY CHAIN WAS TOTALLY ON BOARD WITH THAT."



RHODRI BOWEN,
WILLMOTT DIXON



Singleton Hospital maternity ward, Swansea

Key facts

Use of mast climbers reduced construction programme by nine weeks

— Refurbished cladding reduced thermal heat loss, saving the hospital £10,000 per year in bills

— All projects were under budget, including a 12.9 percent saving on the ward refurbishment

— £11m project value

5. A PRE-DESIGN FOR LIFE

With some 400 integrated health and care hubs to be built in the next decade, sharing lessons learnt on previous projects is the only way to improve the quality and function of these buildings.

“We have tended to think that we need to design everything from scratch, and that’s simply not true,” says Berkshire Healthcare NHS Foundation Trust’s Ian Greggor. “Having a template design can be a better approach. We just don’t need to reinvent the wheel each time. This approach can bring in new, contemporary best practice much faster than we would hear about it.”

cura for all

Following the success of its pre-designed school solution – which typically cuts 9-12 months from programmes and realises around 30 percent cost savings compared

to traditional solutions – Willmott Dixon has developed a pre-designed, integrated health and care hub, cura. The cura model is a solution to issues such as: managing out-of-hours working; ideal sizes for multi-use rooms; how to provide social space; and how to create a welcoming entrance.

For Stephanie Brada, a healthcare planner who has been working on the development of cura, one of the biggest benefits is quality of build. “When you are replacing out-of-date premises and providing a new building in healthcare, you are trying, above all, to give people quality,” she says.

Instilling confidence

The other key benefit is certainty of both cost and programme. “A key issue that concerns GPs is knowing what the operating costs will be – cura addresses this,” says Chrysafi.

Another positive impact of the streamlined cura process is that it frees up stakeholders – the clinicians and others who will be using the building – to get down to the nitty-gritty of the design much faster, says Brada. “Once people gain confidence that they will get quality and that you will stick to your side of the programme, it’s quite interesting to see that clients then have confidence to work very fast through the detail,” she says.

It is not a one-size-fits-all solution. These buildings can be wrapped in a variety of skins to suit local taste and planning conditions and they are flexible to accommodate change. “Future-proofing – that’s what cura’s all about,” says Chrysafi. “You could add another floor, tag on a module, adapt the internal layout. It could also be adapted to housing or office space – it has been designed with that in mind.”



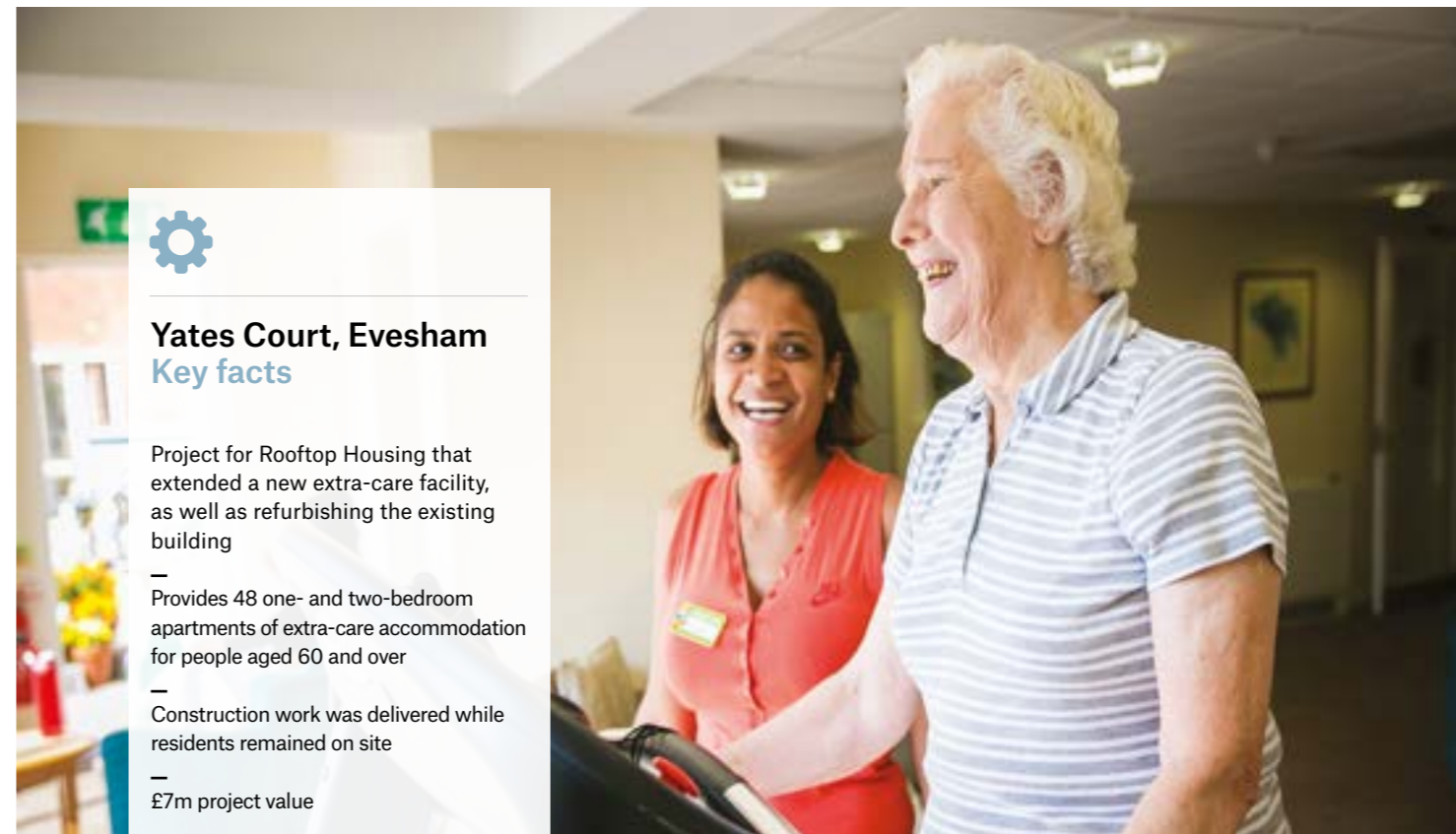
Our bespoke pre-designed products

cura (pictured) – a pre-designed community healthcare hub, which answers the government’s drive to maximise off-site manufacture and deliver facilities 50 percent faster and 30 percent more economically

– Patient Hotel – a pre-designed “on-site” hotel providing a bridge between hospital and home that helps reduce delayed transfers of care while also providing external revenue to NHS trusts



6. THE CHANGING ROLE OF CARE HOMES



Yates Court, Evesham Key facts

Project for Rooftop Housing that extended a new extra-care facility, as well as refurbishing the existing building

- Provides 48 one- and two-bedroom apartments of extra-care accommodation for people aged 60 and over
- Construction work was delivered while residents remained on site
- £7m project value

Although the proportion of our population classed as elderly is increasing – there will be 2.8 million people in the UK over 85 by 2031 – the number of elderly people in residential homes is decreasing.* Budget constraints are forcing local authorities to provide care for people in their own homes, as they simply cannot afford to pay for care home places.

Care homes that rely largely on public funding are struggling to survive financially, as authorities are generally paying below the

market rate. The picture for private and hybrid care homes is more positive, however.

Social care reform

The government promised to reform social care in the Queen’s speech, but details are yet to emerge. Meanwhile, the NHS Long-Term Plan wants to see better links between primary care networks and care homes, which vanguard projects have demonstrated reduce visits to GPs and A&E. Digital interfaces, such as providing care workers with expert medical

advice or transferring healthcare data from residents automatically to service providers, offer opportunities here.

Despite the challenging backdrop, the development of new care homes continues. Data indicates that the UK will need at least 75,000 additional elderly beds by 2030 and demand will outstrip supply by 2022.*

Willmott Dixon is delivering around £100m-worth of care home projects each year. One is the £13.5m Springfields scheme in Ashby de la Zouch, Leicestershire, which includes 65 one- and two-bed homes, with a hair salon, bistro and residents’ lounge.

Designing for dementia support

There is a growing demand for specialist homes, such as those catering for people with dementia. In Surbiton, south-west London, a £9m, 80-bed facility for Kingston Council is showing what can be done. Chrysafi says: “There have been numerous case studies and positive outcomes over the years on design for dementia through the use of colour, for instance, to highlight doorways and handrails, and how images linked to people’s past can be used for signage.”

* All figures from ‘Care homes for the elderly: Where are we now?’, published by Grant Thornton, 2018

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ANASTASIA CHRYSAFI,
WILLMOTT DIXON

7. THE BIG PICTURE - WHERE IS HEALTHCARE GOING NEXT?

It is over a year since the NHS published its Long-Term Plan, with its ambitious vision of what our future healthcare system might be.

We are already seeing the emergence of an integrated service model, bringing together GPs, NHS service providers, charities and others into a hub. Central Bedfordshire Council is one of the forerunners, but is facing challenges delivering such a big change, says Simon Forbes, senior construction project manager at the council.

"One of the biggest challenges has been engaging with people from the NHS who want to provide the services out of the hub, trying to get them to think about moving into a new facility where they will be paying a service charge, and also how they are going to work in a different way," he says.

Forbes argues for a more national approach: "There needs to be a more joined-up approach to the hubs. At the moment, it feels like we are striving on our own in country-wide silos."

The hubs offer a great opportunity for the increased focus on adult and child mental health that the government has promised, says Willmott Dixon's Stephanie Brada. "We foresee a large proportion of a hub being used for mental health services," she says.

"Locating mental health services alongside everything else is a kind of 'normaliser': you all walk through the same door and you could be going to any service in the building."

For estate managers, the challenge of where to renew, where to build new, and where to sell assets to raise capital is a challenge today and will be tomorrow. Public opinion can impact on property decisions, explains Berkshire Healthcare NHS Foundation Trust's Ian Greggor. "Many of our properties are on large estates which are not densely developed. But when we sell land, people get worried that we are privatising."

Contractors that offer development services – bringing in the know-how to work with estates teams to realise value in existing assets in order to fund new ones – are an important aspect of future collaboration.

As funding challenges persist, the sector is working on new solutions. Digital developments could bring transformational improvements to efficiency. From digitalisation of records, to telehealth, to mechanisation and automated devices such as delivery robots or lifting aids, there are endless possibilities.

Another example is Willmott Dixon's Patient Hotel concept, where beds can be booked by the hospital and privately by patients, family members or visiting professors. Privately developed, perhaps on land leased from a hospital estate, this could help to alleviate the problem of bed-blocking.

One future trend that many would like to see is faster project funding approval, particularly on larger schemes. Address that and the rate of change can really gather pace.

"HUBS WILL OFFER A GREAT OPPORTUNITY FOR THE INCREASED FOCUS ON ADULT AND CHILD MENTAL HEALTH THAT THE GOVERNMENT HAS PROMISED."



STEPHANIE BRADA,
WILLMOTT DIXON



"One of the key issues that concerns GPs is knowing what the operating costs will be – cura addresses this. Future-proofing is what cura is all about."

Anastasia Chrysafi, national account manager – health, Willmott Dixon



"I really feel part of the team. I feel that we are delivering this as a team. It's not necessarily Willmott Dixon delivering my client needs. It's us delivering this project as one, and this has been the approach from the beginning of the design phase through to completion of the project."

Maria Demmon, project leader, Milton Keynes Council



"Understand why you are thinking about doing something – what are the drivers for change, why isn't the status quo acceptable any more and what are the things you absolutely have to achieve to make the project worthwhile."

Ian Greggor, director of estates and facilities, Berkshire Healthcare NHS Foundation Trust

8 TIPS FOR SUCCESS

1

Listen and learn

"We spend an enormous amount of time listening to stakeholders early on, looking at what we might be doing, explaining the implications so there are no fears, and detailing everything, so everyone knows what they are getting and when."

Anastasia Chrysafi, national account manager – health, Willmott Dixon

2

Don't rush to site

"Preparation is important – don't race to get onto site before you are ready. You need to have a contractor in place long before you start."

Matthew Adams, construction manager working on the Pears Building, London

3

Streamline processes

"Trying to get clinicians to lots and lots of meetings is a forlorn hope – and not the best use of their time. You need a good-quality, streamlined process before you get to site."

Stephanie Brada, healthcare planner, Willmott Dixon

4

M&E is key

"We upskilled our guys to understand the mechanical and electrical (M&E) package in depth. It accounted for 38 percent of the project. If we don't understand what they are doing, we cannot make a difference."

Steve Harnett, construction manager working on the Tessa Jowell Centre, London

5

Deal with asbestos extremely carefully

"If asbestos is to be left in situ, it's vital to account for how it will be dealt with and managed while works are progressing around it. This ensures the programme is accurate and not compromised."

Rhodri Bowen, operations manager working at Singleton Hospital, Swansea

6

Show and tell

"We worked using a 'no surprise' culture, so any issues we had with the project, or with products that we didn't believe best suited our needs, we raised with the customer and discussed. This ensured a great relationship and a higher-quality product."

Lewis Blake, Willmott Dixon Interiors construction manager working on the Nursing and Midwifery Council head office, London

7

Plan A, Plan B

"The complexities of live environments mean you always have to plan thoroughly and have back-up plans for even the most unlikely of eventualities."

Tom Millard, construction manager working at University Hospital Llandough, Cardiff

8

Quality is non-negotiable

"Managing the quality of the project is so important. It starts with getting the design quality right and then on site it's about attention to detail, a strict regime of checking and review, and ensuring each member of the supply chain has 100 percent completed their works to the specification."

Matthew Littlewood, construction manager working at the Central Sterile Services department, Royal Liverpool University Hospital



WILLMOTT DIXON

SINCE 1852

**BRILLIANT
BUILDINGS**

Willmott Dixon is a privately-owned contracting and interior fit-out group. Founded in 1852, we are family-run and dedicated to leaving a positive legacy in our communities and environment. Being a large company means we can create a huge and lasting positive impact on our society. This is not only done through what we build and maintain; it's achieved through the fantastic efforts of our people who make a major contribution to enhancing their local communities.

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**If you want to find out how Willmott Dixon can help your health estate plans,
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