DESIGN FOR HEALTH & SOCIAL CARE



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Design for health and social care supplement

CONTENTS

- 4 Industry news
- 7 COMMENT: Taking care with refurbishments
- 9 COMMENT: Fire safety in hospitals
- 12 SHOW PREVIEW: Design in Mental Health

PROJECTS

14 Great white hope

A new cancer treatment unit at Chesterfield Hospital balances rigorous design for operational efficiency with a concern for patients' holistic needs to create a highly supportive environment. Sébastien Reed reports

19 Opening the book on ageing

In redeveloping a retirement housing scheme to provide a distinctly hotel-style alternative for residents, Ashford Borough Council also decided to apply an open book approach to encourage collaboration. Jack Wooler reports

FEATURES

24 Freeing up mental health restrictions, electronically Martin Lees of Safehinge Primera discusses what the moves to reduce "restrictive practices" in mental health wards mean for door hardware, and how electronic locksets form a key part of the solution

25 Modern glazing for mental health

ADF reports on some of the drivers which are leading to innovation in glazing mental health units, to address a particular range of challenges

27 Navigation made easy, with dementia-friendly flooring As age-related impairments make it more difficult for people to navigate a building, Mark Jackson of Forbo Flooring Systems examines how innovative flooring approaches can make life easier for those suffering with dementia

30 How reducing water usage can mean fewer germs

Paul Musgrove from CONTI+ considers the benefits of automated systems for water management, and how improved management of water flow can reduce infection risks as well as reducing water usage



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FROM THE EDITOR



esigning buildings for the healthcare sector has to be one of the most demanding and yet satisfying disciplines for an architect to tackle. With the often conflicting demands of cash-strapped NHS management, skewed local politics and clinical specialties to balance, it's no wonder that buildings for healthcare have often tended to appear more functional than caring.

However over the past couple of decades healthcare architects have continued to develop their particular and refined set of specialist skills to provide more and more patient-focused, as well as clinically efficient facilities. Just because a building needs to house hi-tech (and often heavy-duty) equipment, it doesn't mean that it can't offer people-centred, and even uplifting characteristics, with copious natural light and health-supporting elements.

Funding for specialties such as cancer care has seen a boost in recent years, acknowledging both the challenges facing the UK population generally, and its ageing tendencies. No doubt this has helped projects such as the NGS Macmillan cancer care unit at Chesterfield Royal Hospital get off the ground, which received £2.5m of its £10m build cost through fundraising by Macmillan, including £1.5m from the National Garden Scheme whose name is also over the door.

The core issue is that as the NHS becomes ever more strapped for cash (and it is estimated to have a £12bn funding gap between now and 2020), we are likely see more innovative partnerships of this type entered into, in order to initiate future projects. Hikes in income tax are vote-losers (as, often, are building large NHS centres of excellence which mean closing local, less-efficient hospitals), so funding has to be sought where it can be found.

That said, some of the results of such partnerships can include highly tailored design which puts patients first, and the new NGS Macmillan unit in Chesterfield, which is presented on page 14, is a good example, helping to alleviate the challenges of chemotherapy.

We also report in this special supplement on an interesting open-book contract approach which has delivered a facility sensitive to increased numbers of residents with dementia in Ashford.

We hope you enjoy the read, and this snapshot of good practice in design and product specification for the healthcare sector.

James Parker Editor



ON THE COVER...

The new NGS Macmillan unit at Chesterfield Hospital combines cutting-edge cancer care with a sensitivelydesigned environment for patients. For the full report on this project, go to page 15

Cover Image © Mark Hadden

RESEARCH

John McAslan + Partners' Lancaster uni Health Innovation Campus starts on site

Construction of a research campus at Lancaster University which will study disease prevention, designed by John McAslan + Partners, has started on site.

The $8,000 \text{ m}^2$ Health Innovation Campus (HIC) forms Phase 1 of the development, and construction completion is scheduled for Autumn 2019.

Designed with a target of BREEAM Outstanding, this is the latest of four projects to emerge from the practice's longstanding relationship with Lancaster University which has also delivered the Postgraduate Statistics Centre, the Charles Carter Building and the Engineering Building, as well as a multi-project masterplan for the university campus.

Hannah Lawson, director at John McAslan + Partners, said that the key design aim for the new facility was to "maximise flexibility, promote interdisciplinary working and collaboration, and provide exceptional working and learning environments."

Paul Morris, director of facilities at Lancaster University, said that: "The campus masterplan is an exciting development for the university which has the potential to bring together businesses, the NHS, students and academics from a broad range of disciplinary backgrounds."

The scheme will deliver an international centre focused on tackling "the biggest challenge in healthcare today – helping people to live as long and as healthily

SUSTAINABILITY

BREEAM Excellent for Hatfield unit

One Hatfield Hospital in Hertfordshire has been recognised for its commitment to sustainable design; the new £40m



as possible," said the architects. While the majority of university health research centres are dedicated to finding new cures for diseases, HIC will concentrate on research which will prevent people from becoming ill in the first instance.

It is hoped the facility will create new jobs by supporting 300 Lancashire-based small and medium enterprises to develop new and innovative digital and technological solutions, and will have a wider impact by engaging regionally, nationally and internationally with hundreds of companies. HIC will place particular emphasis on innovations targeted at the "broader determinants of health," the prevention and early

construction has now been certified as a BREEAM Excellent building following a rigorous assessment of design, construction and post-construction stages.

Architects Manning Elliot provided the design for the project. The accommodation provides a suite of consulting rooms, treatment and operating rooms, endoscopy suite, 30 single patient ensuite bedrooms, ambulatory care services and imaging suite with MRI. diagnosis of illness, and access to care.

Alongside the focus on digital innovation, this will include the design, development and evaluation of healthy places to live and work, improving quality and value in health innovation systems, and the development of new materials to improve health.

Professor Neil Johnson, Dean of Lancaster University's Faculty of Health and Medicine, comments: "This facility is an ambitious and exciting development for the University, for the city and the wider region. It will deliver significant economic benefits as well as solutions to help us all live longer and healthier lives."

This is the second One Healthcare hospital to be constructed that meets BREEAM Excellent. The rating system "sets the bar for sustainable, productive and healthy environments that enhance the wellbeing of the patients, visitors, nurses and consultants".

CEO of One Healthcare, Adrian Stevensen commented: "An important aspiration for One Healthcare has been to achieve BREEAM Excellent at both One Ashford and One Hatfield hospitals."

EDUCATION

'Design school' expands knowledge on designing for dementia

What is thought to be the world's first 'design school' specialising in environments for people with dementia, and featuring experts in dementia design, took place in Birmingham's Crowne Plaza Hotel on 13 March.

Hosted by the Dementia Centre, HammondCare, the event saw people with dementia and a supporter work together with design experts, to learn the skills needed to become more involved in the process of designing dementiainclusive environments.

The event is the first in a series of design schools, which it is hoped will result in a "rich bank of knowledge about dementiainclusive design" that can be used by architects, planners, developers and service providers to create better buildings and spaces for people living with dementia.

Dementia-friendly design can significantly improve the quality of life for people living with the condition, improving decision making, reducing accidents, lessening anxiety and helping them live more independent lives.

The design school was co-hosted by associate professor Colm Cunningham, director of the Dementia Centre, and Agnes Houston MBE, who has been living with dementia since 2006 and has campaigned for the cause.

Director of the Dementia Centre, HammondCare, associate professor Colm Cunningham commented: "I felt there was a real need to increase the involvement of people with dementia in design. People living with dementia have in many cases learned to live with environmental barriers and have developed personal solutions to these challenges that people who do not have dementia could learn from."

He continued: "Our design school will give people living with dementia the unique opportunity to work together with design experts and contribute their ideas and knowledge to the creation Our design school will give people living with dementia the unique opportunity to work together with design experts and contribute their ideas and knowledge to the creation of dementiafriendly environments

Colm Cunningham

of dementia-friendly environments. This school places the person living with dementia at the centre of design, whether that be a home, a hospital, a shopping centre, a public space or a product."

HEALTHY NEW TOWNS

IBI Group reappointed to NHS Healthy New Towns

IBI Group has announced its continued involvement in the Healthy New Towns programme working with the King's Fund, who have been appointed by NHS England to help produce an official NHS guidance publication, which will be released in spring 2019.

IBI will be contributing to the Estates and Digital workstreams aspect of the Healthy New Towns guidance document and will be supporting The King's Fund (an independent charity "working to improve health and healthcare in England"), and the Town and Country Planning Association (TCPA).

The NHS England Healthy New Towns scheme was set up to "rethink how we live, and how healthcare services can be delivered", and looks at ways to improve health through the built environment. The new publication will provide evidence-based guidance on how to create healthy neighbourhoods, towns and cities, particularly in places of population growth and new development.

IBI director Mario Bozzo, added: "At IBI, we are bridging the gap between design and technology, especially in healthcare. This is a great opportunity to work alongside the NHS, as it continues to explore how digital solutions can support a more effective delivery of healthcare."

In other healthcare news for IBI, the

practice has appointed Maarit Heinonen-Smith from PRP Architects, as the firm's UK retirement living and senior care lead.

Heinonen-Smith has built what IBI said is an "impressive portfolio designing and delivering innovative housing and care solutions for people over 55, having worked as the lead architect on many of their flagship projects".

Heinonen-Smith expressed her happiness about joining the firm, commenting: "I am passionate about designing and delivering inspiring residential architecture which allows for flexibility, individuality and changing needs, as well as promoting the health and wellbeing of the residents."

COMMENT

Taking care with refurbishments

Rod Wooldridge of building firm Jenner gives his view on the success factors for delivering refurbishments that work for contractor, architect and client, with a particular focus on GP surgeries and medical centres

e have undertaken many contracts within the healthcare sector; predominantly design and build projects to create new GP surgeries and medical centres. In addition, we have carried out major refurbishments and extensions to existing medical premises, procured on a traditional basis, with our early involvement greatly assisting the efficiency of project delivery.

I have worked for Jenner for several years, realising a varied project portfolio in this time. In 2017 I was awarded the title of 'LABC Non-Residential Site Agent of the Year' for the Hayesbank Surgery project in Ashford, Kent. This £1.1m NHS scheme comprised major refurbishment works and an extension to an existing GP surgery with 17,000 patients on its register. The surgery and adjacent pharmacy remained open throughout the project.

There are many specific challenges on healthcare refurbishment projects, with the overarching requirement being to carry out the work safely and considerately around the staff and patients at the centre, and to meet the client's objectives. Early collaboration with architects, and close working relationships throughout, are significant in the achievement of any refurbishment project.

With all projects, it is essential to undertake comprehensive, pre-construction work to ensure an uncomplicated construction phase. To achieve this, architects should meet regularly with the client and end users at the tender stage to ensure the accuracy of information within the pre-construction services pack. The



AWARD-WINNER

Hayesbank Surgery in Ashford - the surgery and adjacent pharmacy remained open throughout the major refurbishment project



Architects should meet regularly with the client and end users at the tender stage to ensure the accuracy of information within the pre-construction services pack

Rod Wooldridge, Jenner Contractors

provision of detailed surveys and accurate, in-depth project information is fundamental to ensure a seamless construction. Likewise, it's always important to understand the level of 'out-ofhours' working that will be required so that we can make adequate provision in our pricing.

Good quality surveys

M&E and structural surveys are integral to the smooth delivery of a project from the tender stage onwards. For some projects it is useful to undertake intrusive 'opening up' surveys to provide as-built information in certain areas of the building. This level of detail also helps us determine suitable subcontractors to appoint to the project, capable of carrying out the work. We request that R&D asbestos surveys are undertaken as soon as possible so that we can programme in the specialist removal of any asbestos, avoiding delays when on site. Full drawing sets (design and working drawings) and specifications, are a necessity.

Materials

It is critical that architects consider buildability and availability of materials, particularly specialist furnishings. One key example of this on healthcare projects is specialist door sets, which have long lead-in times. Furniture layouts are very important, and room data sheet meetings, held with the client and end-users, confirm room layouts are delivered exactly as agreed.

Phasing

Careful phasing of the work is imperative. This should be considered well in advance of site works commencing, and with consultation from the design team and premises staff. It is important to hold a pre-start meeting with the end-users to discuss the programme and the main issues. Construction programmes should allow for lead-in and sub-phase handovers, and phasing plans should show where temporary partitions are to be sited.

Communication & collaboration

Regular meetings with staff, end-users, employer's agents, the client and architects, from the pre-construction phase and throughout the project, are crucial. We hold initial meetings on site with all project stakeholders to introduce our team, discuss the work and address any issues. Flexibility is key when working in live environments and I always aim to meet at least weekly with practice managers throughout the project to ensure they are satisfied with how the work is progressing, and to provide an outline of the work planned for the following week.

Preparatory work

It is vital to undertake as much preparation as possible before working in staff and patient areas. This includes meeting end-users, architects and the client's team to discuss health and safety, security, access and schedules of work. Due to the invasive nature of some work, we often need to arrange for out-of-hours working. Ideally, this will have been identified and included in our tender sums.

We always put the needs of the patients and staff first and co-ordinate our activity to minimise the impact on their daily routines. In live environments we have to maintain services (including electricity, fire alarm, security systems, telephones, heating, hot water and air conditioning), and often duplicate some. This requires close co-ordination and communication.

Robust health & safety planning

This is essential to ensure the safety of staff, patients and our construction teams. Plans will have been approved well in advance, and I am responsible for ensuring that the controls are implemented correctly and that the procedures are followed. I make sure all site personnel are fully inducted and attend toolbox talks, monitoring their performance and adherence to health and safety controls throughout the project, and taking action if needed. Meticulous organisation is key to ensure this approach is effective.



Ideally our site compound will be adequate in size with sufficient space for all plant and materials (including spares), easily accessible but stored securely. Our compound is segregated from our areas of work and inaccessible to staff and patients. As with all our refurbishment works, we implement systems to control dust, fumes, noise and vibration. We use portable partitions that are fire proof, sound deadening and secure.

Despite extensive planning and efficient contract management processes, every project requires a high level of flexibility and co-ordination, especially in occupied premises, such as healthcare schemes. Post-contract review meetings allow us to examine our performance at every stage of the works, identifying successes and where improvements can be made. Lessons learned are shared and incorporated into future contract management processes, ensuring we continually improve the service we provide to our clients and supply chain partners.

Rod Wooldridge is site manager at Jenner Contractors

COMMENT

Compartmentation streets

Richard Sutton of Horbury Property Services looks at fire safety in healthcare environments, and why it is of critical importance that fire compartmentation is properly inspected

In summer 2017, the Government ordered more than 17,000 care homes, private hospitals and hospices to carry out checks on the fire safety of their buildings. A number of hospital trusts were found to have serious breaches, whilst some had failings in basic fire standards and others were warned that a failure to properly compartmentalise areas was putting patients at intolerable risk if fire broke out (source: *Health Service Journal*).

Fire safety continues to be a concern, particularly in hospitals that have had refurbishment work carried out, with managers now starting to question whether the buildings are as safe as they should be.

Government guidance on the issue of fire safety risk in healthcare states: "Where the building has recently been constructed or significantly altered, the fire detection and warning arrangements, escape routes and facilities for the fire and rescue service should have been designed, constructed and installed in line with current Building Regulations, by following Health Technical Memorandum 05-02. In such cases, it is likely that these measures will be satisfactory as long as they are being properly maintained and no significant increase in risk has been introduced."

Health Technical Memorandum 05-02: refers the building designer to Part B of Schedule 1 of the Building Regulations, which details the requirements to provide for fire safety.

Fire compartmentation

Building Regulations' Approved Document B requires that the building be sub-divided into a number of discreet compartments or cells. As the dividing walls are filled with specialist materials, this prevents the passage of fire from one cell to another for a given period of time. This compartmentation offers essential protection, especially in larger buildings, such as hospitals or care homes, which rely on it to ensure the safety of occupants.

It is essential that fire compartmentation is installed correctly and regularly inspected to ensure it has not been breached. This is best done as part of a fire risk assessment, which is required under the Regulatory Reform (Fire Safety) Order 2005.

The fire risk assessment must be carried out by a Responsible person and must be detailed and rigorous, covering many aspects, one of which is ensuring the integrity of fire compartmentation, including fire doors.

Compartmentation – when it has not been breached and has been properly installed – should be able to contain large fires and limit the amount of damage to a building and its contents.

As hospitals are occupied by many vulnerable and immobile people who may find it very hard (if not impossible) to be



PROTECTION

Compartmentation offers essential protection, especially in larger buildings such as hospitals or care homes

It is essential that fire compartmentation is installed correctly and regularly inspected in order to ensure that this has not been breached

evacuated quickly in the event of a fire, special consideration needs to be given to fire prevention – and fire compartmentation, to ensure it is meeting patients' needs.



Identifying breaches

Fire risk assessment, in the majority of cases, does not extend to inspecting the integrity of the fire compartments. Fire compartmentation can be easily ignored as high risk areas are often hidden above false ceilings, ducts and risers. Even the most competent person may not have the skills and expertise to ensure the integrity of the compartmentation, meaning the risk of fire spreading can go unknown for months, if not years, often until it is too late.

Inspections of fire compartmentation should include checking whether any damage has been caused by services that have been added since the building was completed, such as cabling or IT systems, or other building work to the walls, floors or ceilings. This could compromise the integrity of the fire compartment.

Fire doors are an important part of ensuring fire compartmentation is maintained too, but they are often not subject to sufficiently rigorous or regular inspections. Again, this could lead to a breach of fire compartmentation, for example, if the fire seals are broken, the door closers are not working properly or the ironmongery has become worn or the glazing detached. They should be inspected every six months.

Stay-put policy

In many hospitals and multi-occupancy buildings, there is a Stay Put policy in place, as these buildings are designed to retain a fire within a compartment. The greatest risk of death is, obviously, to those in the room in which the fire starts.

In a healthcare environment there is a very clear need for a person-centred approach, which is tailor-made for each patient who is vulnerable. The most significant influences on fire risk in healthcare are advanced age, disability, dementia and mental health problems. 30 minutes' fire protection, for example, which is offered by a standard fire door, would, in most cases, be

Research shows that in general, compartmentation and fire protection of escape routes are successful in terms of containing fire

insufficient in a healthcare environment.

Research shows that in general, compartmentation and fire protection of escape routes are successful in containing fire. In the last 10 years there have been very few cases where residents of a hospital have died as a result of a fire in another room. However, since the tragic events at Grenfell Tower, many healthcare providers are looking into increasing fire detection methods and even introducing sprinklers within a building in order to keep the fire risk to a minimum.

Assessing the risks

Firecode: HTM 05-02 provides specific guidance on fire safety in the design of new healthcare premises and major new extensions to existing healthcare premises. The standards on which it is based recognise that fire safety in healthcare is dependent on the interaction between physical fire precautions, the dependency of the patient, fire hazards and the availability of trained staff to evacuate patients safely in a fire emergency. While getting this right at specification stage is essential, as outlined, ongoing inspection and maintenance of fire compartmentation is vital.

What is widely accepted is that when fire compartmentation is regularly inspected and well maintained, there is no better form of fire protection.

Richard Sutton is the general manager at Horbury Property Services



Design in Mental Health

Previewing the leading UK event focusing on the design of mental health facilities



besign in Mental Health is the only UK event to focus on the design of mental health facilities with a clear focus on creating calm therapeutic environments for patients and staff.

Both conference and exhibition are well attended by NHS trusts and private healthcare providers alongside architects and contractors who design and build the facilities that they manage every day.

The 2018 conference features over 40 speakers, with specialist content. It's the professional gathering for all concerned with the built environment in mental health. Conference sessions include the following:

Post-Implementation Review

The building has been delivered, but is it delivering the benefits? Post-implementation reviews can allow the stakeholders to reflect on the actual benefits realised by service users, staff and visitors. Has the project delivered all of the expected benefits? Have any additional benefits been identified? Where has it failed to achieve the expected benefits? What lessons have been learned?

Personal Space

Research suggests that perceiving a sense of environmental control can contribute positively to a sense of well-being. However, opportunities for service users to exert control over their everyday environments within mental health settings are limited.

Sonic Space

Further research is required to examine the effects of noise within mental healthcare settings. Existing research shows that noise levels can impact on the health and behaviour of service users and staff, which in turn highlights the importance of appropriate acoustic design.

Aesthetic Space

Although research to evaluate the impact of art interventions specifically within mental healthcare settings is limited, the findings of existing studies suggest that environmental enhancements can positively impact the health and well-being of users and staff.

Therapeutic Space

Whilst spatial tensions exist between the mitigation of risk and the creation of de-institutionalised environments, the literature suggests that facilitating a balance between achieving the required levels of safety and creating homely non-sterile spaces should be a key consideration in mental healthcare design.

The exhibition is a unique marketplace where manufacturers and providers can meet decision-makers and specifiers, make new contacts, generate leads and new product ideas, and identify current and emerging opportunities in the mental health sector.

The annual Design in Mental Health Awards Dinner takes place on the 15 May 2018, the first night of Design in Mental Health in the Imperial Suite at the National Conference Centre. The Awards Dinner will celebrate the best projects, products and personnel in the industry while providing the opportunity for guests to network and continue the discussions of the day.

The Design in Mental Health Network

Good design can help to heal, but transforming mental-health facilities needs collaboration and teamwork. That's our network's purpose. Back in 2005, health professionals and designers started to work together. We encouraged service user involvement and soon our network began to grow. Now we're a positive force for change with membership open to anyone with an interest in our work - from architects to nursing staff, from building contractors to serviceusers. We offer access to shared ideas and a forum for discussion. We provide access to cutting-edge research and education and encourage stakeholders to become active in creating better healthcare environments.

For more information about the Design in Mental Health Network please go to www.dimhn.org

For more information and to register for the event go to www.designinmentalhealth.com



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BUILDING PROJECTIS

NGS MACMILLAN UNIT Chesterfield

Great white hope

A new cancer treatment unit at Chesterfield Hospital balances rigorous design for operational efficiency with a concern for patients' holistic needs, to create a highly supportive environment. Sébastien Reed reports

ooking out across the Derbyshire landscape, a uniformly-white unit for cancer patients glows like a glacier, contrasting with the brick structures of the Chesterfield Royal Hospital. The new £10m NGS Macmillan unit combines a variety of treatment, testing and care services spread over 2,140 m² and two floors, with the general aim of providing first-class, cuttingedge cancer care to individuals in the wider Chesterfield area.

The building's conjoined name is derived from its highest contributing financial stakeholders: Macmillan Cancer Support contributed a third of total funding for the project; and the National Garden Scheme who were a significant contributor, following an overwhelmingly successful appeal for funding.

Design lead on the project was Guy Barlow, director of architects The Manser Practice. He says the facility's design put the interests of patients and staff first, via a combined approach of honing operational efficiency and maximising patient comfort and freedom.

The architects were chosen to design the unit following a competitive tender, having designed and executed a new ward for the hospital in 2010 which was a "useful precursor" to winning this project, says Barlow. He explains that the hospital "had already seen our understanding of the area, and of what they really wanted."

At the project's inception, a number of potential locations around the hospital site were contemplated, including refurbishments and extensions. However, the chosen plot's ability to accommodate four crucial elements determined the final decision – its adjacencies to appropriate hospital buildings; the scope for creating a drop-off area; proximity to patient and staff car parks; and the attractive views of local countryside.

Consolidation

In addition to a growing need for space, the central problem with the cancer care provision at Royal Chesterfield Hospital stemmed from the fragmentation of its services. As Barlow explains: "The main part of the hospital housed the oncology unit, then at the other end of the hospital, haematology was mixed in with other uses. You also had what you could call a Macmillan Centre (more like a 'Macmillan room') and palliative care, which were in different locations as well."

The pharmacy and phlebotomy were also scattered across disparate parts of the existing hospital buildings, meaning patients had to navigate their way across the site in order to get to the appropriate facility. From a functional perspective, the key part of the outline brief was to unify all of these services to form an effective and expanded cancer care unit.

Professionals from the hospital's oncology, haematology, and palliative departments, plus representatives from Macmillan, formed a consultation group with the architects. Collective dialogue, as opposed to individual consultation, was vital to writing a new operational policy for the unit. The rationale behind this approach was not only to get the most out of the client, but also to identify any adverse spillover from one workstream to the other, as well as providing transparency through

GROUND FLOOR PLAN





checks and balances, and resolving any differences in opinion. The consensus formed here would go on to define the final layout of the unit.

The architects also played a guiding role throughout these talks, as Guy Barlow explains: "The participants were a 'lay' part of the client – they might do one or two projects like this in their lifetime, so it's also important to explain exactly what to expect at each stage, and how best to work with us."

Pathways & timetables

A new approach was developed in collaboration with Macmillan to translate bespoke health planning into physical layout for the new unit. In the existing hospital, care "timetables weren't streamlined," says Barlow. The new unit was the key to close this gap in efficiency.

"They were all working in their own silos, so bringing them together was intrinsically difficult". To remedy this, he adds, "a key thing to start off with is what's termed the patient pathway."

Through further consultation, the activity of patients and staff was logged and analysed, and journeys were mapped out diagrammatically to give a clear picture of what was required from the building, and in turn the architects.

Care pathways were defined and modelled for outpatient consultations and treatments, Macmillan support, outpatient treatment check-in, inpatient treatment check-in, and treatment itself. Using timetables and flowcharts, the design team was able to deduce a schedule of accommodation and footfall channels – all the while maximising the use of the space. Each pathway, says Barlow, "is designed to be a really simple journey."

"By precisely working out how patients moved through their departments, and going through their timetables together, we could get that number from 22 exam rooms down to 15; 30 per cent less. And so that's actually what we built", Barlow says.

A welcoming arrangement

Outpatients use the main entrance at the front of the building while there is a connection to the main hospital building via a glazed footbridge on the first floor at the back of the unit. "The building is based on an L-shaped plan, but curved to the accommodation so you get these sort of 'hands' opening to welcome people into the entrance," Barlow explains. A patient garden and frontal greenery decorate the

A new approach was developed in collaboration with Macmillan to translate bespoke health planning into physical layout for the new unit

unit and make it more welcoming, while providing a dialogue with the neighbouring fields, and giving patients exterior space.

Upon entering at the main entrance through automated sliding glass doors, the user is greeted by the new and enlarged Macmillan Information and Support Centre, combining rooms for complementary and alternative therapies and quiet rooms for reflection. The Macmillan Support 'pathway' ends here.

To the right, a spacious waiting and reception area separates the user from 15 consultation rooms and further quiet rooms stacked along the spine of the building's floor plan. In the centre of the circulation area is one of several 'note pods,' similar to nurses' stations with head-height glazing and views into each consultation room. These allow staff to discuss confidential matters and take phone calls while supervising patients.

To the left, a corridor leads from the waiting area to a lift and stairwell up to the first floor for treatment. Leaving the lift or stairwell at the first floor as an outpatient, or arriving through the aforementioned footbridge as an inpatient, patients can check in at the treatment reception, located in a central lobby.

From here, patients can either join others in a bright and airy, open-plan treatment area or, alternatively, a separate suite of treatment rooms for more private care, along with staff accommodation and amenities located at the western end of the building's upper floor.

"The feeling of a hotel"

Patients were enabled to provide a key guiding voice when it came to the overall feel of the building, in the consultation process. Early on, it was clear what the group wanted. Contrary to the architects' preconceptions that patients would want a "home away from home," it transpired that patients wanted a facility that felt more like a hotel – somewhere "uplifting".

Much of Barlow and team's work was an effort to respond to this challenge of balancing "non-clinical" design with the







VIEWS The building's design optimises views over surrounding countryside for patients



WELCOMING

The building has a curved L-shaped plan which resembles 'hands opening' at the entrance All images O Mark Hadden

Using timetables and flowcharts, the design team was able to deduce a schedule of accommodation and footfall channels

functional requirements of NHS Health Building Notes (HBNs) and Health Technical Memoranda (HTMs). A number of strategies were employed throughout the building to help achieve this.

This intended feeling is evoked almost immediately in the users' journey. For the outpatient, the unit's sleek and functional drop-off area, curved main reception desk and waiting area resemble a hotel entrance and lobby. For the inpatient entering the unit, the glazed footbridge enhances the feeling of arrival, giving the impression of passing an airport gate down the walkway towards the aircraft. Floor-to-ceiling metrewide windows across both levels allow the interior to be saturated with natural light while linking to its green surroundings.

"Artwork is integrated into the fabric of the building both internally and externally to make it feel less clinical," explains Barlow. Artist Rebecca Salter was responsible for steering the artistic direction of the project. The exaggerated use of yellows and greens were avoided in deciding on the building's colour scheme, due to patients' concerns that the reflected light colour would make patients look more ill.

The architects worked with "a limited, simple palette of colours and materials." Ash veneer, glass, and concrete appear throughout the interior, while the exterior of the building is clad in a simple white Corian, referencing the off-white ceramic granite used to segment the facade of the original hospital building.

Colour printing on glass and timber screens, along with the incorporation of decorative motifs into the wayfinding schedule for the building, all contribute to enhancing the building's ambience.

Control

Operational control features throughout the unit further contribute to the wellbeing and comfort of the patient, while ensuring their safety. In HTM guidance, because of the risk of user 'defenestration,' it's normal to have to put a restriction on windows meaning they can only be opened to 100 mm, restricting airflow considerably. The architects used a fritted pattern – inspired by Rebecca Salter's artwork – on parts of the ventilated facade, laser cut into the Corian. The resulting grill obstructs the windows, therefore meeting guidance, while allowing fresh air to flow freely into the building. This also filters sunlight, as do Salter's coloured glazing vinyls, creating a dynamic lighting effect which moves across the interior over the course of the day.

The natural ventilation also gives staff maximum control over airflow and temperature, while brise-soleil fins on the building's exterior regulate sunlight by providing shading, and frame views for those undergoing treatment. "You can control the environment and let light in," Barlow summarises.

Again, following the advice from the patient consultancy group gathered over a variety of physical mock-ups, communal treatment pods each consisting of four inward-facing chairs were purpose-designed to foster a greater sense of intimacy between patients. Partnering this, the ability to turn the treatment chairs to see the views, or enter private rooms to undergo care more discreetly, lend further options for tailoring the experience to support often very unwell users.

Sustainability also takes precedent in The Manser Practice's design, which has secured a BREEAM Very Good rating. Sensors in each room automate the use of LED lighting for optimum efficiency, fullheight windows maximise natural light, and flow restrictors reduce water consumption, all meeting the scrupulous parameters of the HTM guidance.

With the unit now fully functional – it opened in June 2017 – feedback from both patients and staff has been overwhelmingly positive. A former patient said after visiting the unit: "I am speechless and blown away; this building has far outreached all of my expectations."

The architectural community has also shown its appreciation for the unit's design, as The Manser Practice went on to be highly commended for their work at the 2017 Building Better Healthcare Awards, as well as receiving mentions at a number of other events.

Bringing the unit's design assets into alignment with its health support, a Macmillan nurse gave a clinician's point of view, and a strong endorsement. "The building encompasses the concepts of Florence Nightingale's Environmental Theory: Light, Air, Warmth...Clean...and an environment that offers Hope and Advice."

FARROW COURT ASHFORD

Opening the book on ageing

In redeveloping a retirement housing scheme to provide a distinctly hotel-style alternative for residents, Ashford Borough Council also decided to apply an open book approach to encourage collaboration. Jack Wooler reports.

Rarrow Court, now completed to the south of Ashford, is a £17m social housing project that caters for a range of elderly residents. The scheme is at the forefront of current Government policy to integrate housing, health and adult services into communities.

Designed by architecture practice PRP, the development has been constructed around an existing, smaller supported housing scheme for older people, building 104 new homes. The fully dementiafriendly new build is council owned, council run, and council built via contractors Bouygues UK.

It has been conducted using a collaborative 'open book' approach, whereby Ashford Borough Council, consultancy firm Pellings, and Bouygues worked collectively as partners to reach decisions at each stage of the build.

The project is now a flagship scheme in the borough. Hoping to engender a nonclinical feel, in contrast to many dilapidated care homes or lifeless hospitals, Farrow Court is an open, modern apartment development with extensive accessibility features, more akin to a hotel than its institutional counterparts.

The scheme

In June 2013, planning permission was granted, with a 'meet the buyer' event held shortly after to offer local tradesmen and businesses the opportunity to be involved in the construction of the scheme.

The planning process was reportedly stress-free. Previous residents of the old flats on the site were excited about their new home, and locals were keen to see the old building replaced with a modern structure, as well as impressed with the numerous community aspects integrated into the build.

Work began on site in September, and during the programme £3.6m of funding was formally added to the contract so that 12 homes for people with learning disabilities could be built as the last of the project's three phases. In addition, and timed to take place during dementia awareness week, members of council staff attended training sessions to become 'dementia friends'.

On completion of the first phase, the residents moved across from the old, subsequently demolished, building to the new units, allowing the commencement of phase two. This has been built on the site of the old building and forms a separate part of the new unit, with a connecting walkway.

The existing scheme's residents moved into their new homes by November 2015, with work on phase two beginning at the start of 2016. Work completed in November 2017, with the new residents moved in.

Daniel Scarsbrook, planning and development surveyor at Ashford Borough Council, details the demographic shifts that form the backdrop to the scheme: "In 2025, 40 per cent of Ashford's population will be aged over 50. Eight existing outdated council-owned sheltered schemes had been earmarked for development over 15 years, to address the challenge of providing homes that meet the needs and aspirations of the ageing population."

Farrow Court was selected as the first scheme to be redeveloped as the large site offered the opportunity to build at a



OPEN TO CHANGE Farrow Court was designed to be open and modern, in contrast to the reality of many care homes



PHASING

The phasing and demolition was carefully planned to enable residents to move to the new building, and subsequent phases to be built



significantly higher density development than previously existed, meaning residents could then be decanted from another scheme, thus freeing that up for redevelopment.

In addition, the development could be phased, enabling the existing Farrow Court residents to stay in their homes while the first new apartments were built.

High quality environment

Of the 104 new homes, 33 were built as part of phase one for the original tenants, then 71 as part of phase two. These include 12 learning disability units and seven recuperative care units named 'Homebridge', meaning that people can leave hospital and stay in Farrow Court while a care package is arranged or adaptations put in place to enable them to return to their own home. There is also one guest room within Homebridge.

Thought has been put into every detail of the rooms, with large light switches, assisted front doors, wheelchair accessibility throughout, and wetroom ensuites with doors from both the bedroom and hall for quick entry across the apartment. Ovens are set above waist height for ease of access, and both thick and light blinds are installed, providing flexibility and privacy with the light either kept in or out. Balconies are included on every room above ground, with patios on each ground floor apartment.

All the apartments are priced for affordable rent at \pounds 110.24 a week for a one-bed apartment, and \pounds 153.17 for two bed. The homes are of the highest quality for this price range, not just in terms of care standards, but as modern, healthy accommodation.

Along with the new homes, a wealth of communal features have been added to the development. These promote social interaction and a sense of belonging, and an avoidance of isolation, to whatever extent residents require. Among the entertainments on offer are movie nights, game nights and trips out.

There is a large communal lounge with a fitted kitchen in the centre of the facility, with a fitted kitchen and doors leading out



to one of the courtyards.

Landscaped gardens are found throughout the site, with individually named courtyards dotted through the development, each with its own unique style and function, and securely designed to enable residents to enjoy them in safety. One such courtyard holds a community garden for growing vegetables, offering familiar outdoor activity to those moving from properties with land.

Age UK has opened a day centre in the building, allowing residents to meet up with friends and make new ones. A range of activities are held in the centre, where residents are encouraged to join in and build a sense of community, and the charity also sells cooked meals. The centre provides an additional, lively hub to the scheme, full of life and happy residents.

Farrow Court has its own hair salon, run by an external hair and beauty firm, and open six days a week. It's not only for residents, but also friends, family and the local community. A therapy room is used by a regular chiropodist, as well as for beauty treatments. For basic amenities, a grocery shop is to open soon, for the use of all residents and the public, and laundry facilities are available on a pay per use basis.

Design for dementia

The scheme is the first fully dementiafriendly housing scheme in the borough of Ashford. The Alzheimer's Society states that there 850,000 people with dementia in the UK, and that by 2025 there will be one million people, and two million by 2051. 80 per cent of people living in care homes are reported to have a form of dementia or severe memory problems, with over one in six people aged 80 and over suffering from such neurological disorders.

To combat this incipient issue, Farrow Court has been sensitively designed throughout to support residents with dementia. The corridors on each floor are decorated in individual tones for increased contrast, and the graphics used in the signage enable easy recognition. 'Memory shelves' have been installed in front of each apartment, with residents encouraged to place an item that represents themselves in some way. These range from cuddly toys, to flowers and pictures, helping to bring not just a sense of individuality to the homes, but to provide residents with tangible reminders of where they are.

The design combines complimentary building typologies, including the various recreational areas such as the Age UK resource centre. During the design stage, careful consideration was given to Housing our Ageing Population – Panel for Innovation (HAPPI) and the Housing our Ageing Population – Plan for Implementation (HAPPI2) reports, which Farrow Court has been sensitively designed throughout to support residents with dementia



COURTYARDS

The unit contains a variety of internal coutyards, including one with a communal vegetable garden

highlighted a number of standards that housing for the older population should meet. These standards have been incorporated in the design of Farrow Court, ensuring residents are offered a mixture of property sizes and designs, and incorporating communal facilities.

Small breakout areas are spread throughout the scheme in addition to a main lounge, adding to the scheme's open feel. Residents have a say in what these are used for, with a pool table in one, a mini library in another, and another still with comfortable seating and a stereo system (Classic FM is a popular choice).

The well-judged design ensures the development is both roomy and welcoming, while providing the sense of security that residents require. This allows them to live independently, with access to support as and when required.

Daylighting has been employed expertly across the build, with large windows on every corridor and room. The entire building is airy and light, the antithesis of the stereotypical dark, dank and often nightmarish care homes of old.

"Plentiful natural light is very important in sheltered housing," says PRP associate director Andrew Robson. "It positively impacts on residents' moods, reduces solar gain, and illuminates important areas such as circulation routes, stairs and lift landings." Installing windows in the right place can also ensure that residents are able to see the outside world from their seat or wheelchair by utilising "carefully positioned mid-rails (in line with Lifetime Homes guidelines) across floor to ceiling glazing to avoid blocking the line of sight."

Anne-Marie Nicholson, partner at PRP, echoed this sentiment, stressing its particular importance for those with dementia: "If the corridors are endless, relentless, artificially lit, then you don't know what floor you're on, what time of day it is, what the weather's like.

"If you get out of bed in the middle of the night, you don't know if it's dark or light outside."

On the balconies, frameless glazing has been used to maximise daylight into the apartments. The balconies are semi-recessed with surround to provide privacy, but reduced to maximise daylight. On the surrounds of the other windows, timber panels provide a break in the brick facade. This timber theme is continued to the ground floor, across both the patio doors and around the windows.

Ashford Borough Council's chief executive, Tracey Kerly, is extremely proud of what she says is an "innovative development." She adds: "The design is exceptional, delivering a significant difference in quality. The careful attention to detail to exploit the use of natural light and space has created a building that is functional, appropriate for its use, and has a real sense of place."

Collaboration

An 'open book' process was utilised in the build, with all parties assisting in putting together a successful funding bid submission, and collectively guiding research on this specialised project. Each party was also involved in the consultation process, with all available expertise employed to inform what was a robust brief.

As part of the collaboration, greater cost certainty could be achieved from the outset, buildability could be scrutinised, and full buy-in to the design could be achieved. This made realising the required design quality more achievable.

James Green, partner at Pellings, explains how the open-book idea was initiated: "Ashford Borough Council had previously worked with local contractor Denne (now BYUK), including on a large PFI project, and had developed an established relationship at high level.

"Accordingly, there was a willingness to work together on both sides to deliver this high-profile scheme. To appoint Denne directly, the council had to use an OJEUcompliant framework. In turn, to demonstrate value for money for a direct appointment, Denne suggested an open book relationship whereby the prelims and overhead and profit would be fixed and the individual work packages tendered to the market."

He continues: "In this way the council could demonstrate value for money. This approach is fairly rare, especially with local authorities," he concludes. The same arrangement has been carried forward to the next project, which is currently on site at Danemore, Tenterden.

Green reveals what the transparency means in practice for a consultant: "For a normal contract you are often kept at arm's length and not aware of the deeper issues.

"The nature of the relationship – open book plus the historical element – brought greater transparency." He added: "This was amplified by the duration of the project."

He believes the process fostered a greater understanding of the challenges faced by the contractor and how they impacted both costs and programme.

Green continued: "We were able to see the costs for each package and be involved in the selection of each sub contractor."

Daniel Scarsbrook of Ashford Borough Council explains some of the extra benefits



this system produced: "A risk register was produced by Pellings, and risks were allocated accordingly at the start of the project. We were working together to overcome the challenges of the project.

"Generally the approach was more collaborative. With the contractor proactively keeping costs down, they had a vested interest as it could affect the profit share."

James Green adds: "There were cost pressures from the sub-contractor tenders due to the rising market at the time. Accordingly, each package was reviewed in detail by the team, including to consider any cost savings before proceeding.

"It meant we could all work together to make sure the design pre-planning sat within the budget before being submitted for approval."

He says that despite the open-book contract being a novel approach, it was "not particularly challenging," adding that "it was refreshing to work in an open environment without the usual confrontation."

Setting a precedent

The project is notable for a run of success, with simple, speedy planning, a straightforward and successful build, smooth tenant changeover, and both critical and communal acclaim. The scheme, which also appears to be an exemplar of open-book collaboration, was named a joint winner of the Residential-Major category of the 2016 Kent Design and Development Awards.

Providing a hub for the local community and sheltered care facilities, from bingo nights to a public salon and restaurant, the scheme is a thoughtfully-designed gift for not only its residents, but also the local area. It could even be part of a new paradigm of what supported housing can be, far from the depressing care homes of the past, and instead offering a hopeful future.



A wealth of communal features have been added to the development to promote social interaction

Freeing up mental health restrictions, electronically

Martin Lees of Safehinge Primera discusses what the moves to reduce "restrictive practices" in mental health wards mean for door hardware, and how electronic locksets form a key part of the solution

The CQC report found examples where coupling service user independence with appropriate staff training led to a reduction in incidents



The demand for mental health care and support continues to rise, and the pressure on resources is increasing. Service users now spend 341 days, on average, in high dependency rehabilitation wards. Going forward, it's clear that action is required to reduce the time service users are spending in facilities.

The Care Quality Commission report on the State of Care in Mental Health Services 2014-2017 highlighted concerns that care for some patients is overly restrictive, setting an expectation for mental health services to commit to reducing restrictive interventions.

For Paul Jenkins, chief executive of Rethink Mental Illness, "the system has become too focused on managing risk" and "needlessly detaining service users in very expensive settings".

As a result, more and more trusts are now looking for best practice options to minimise restrictive practices, promote effective recovery and consequently reduce the time users are spending in their facilities.

Projects we've worked on recently have installed electronic locksets to offer this greater service user independence, by granting them complete control over their own living space. Unlike mechanical locksets, they enable them to lock and unlock their own door by themselves. Can you imagine staying in a hotel where you had to ask reception to do this for you? If you had an unpleasant neighbour, you may not even feel comfortable leaving your room.

And while the perceived risk of granting this independence has long been considered too great – largely due to self-harm risks with keys and the potential of disruptive and dangerous behaviour, the CQC report found examples where coupling service user independence with appropriate staff training to deal with potentially dangerous behaviour led to a reduction in incidents.

Through balancing good clinical practice with modern technology, trusts can create safe and normalised environments where service users have the necessary independence to help them recover, and staff have the ability and support to deliver highquality care in a therapeutic environment.

Looking for best practice in safety, recovery and practicality, electronic locksets have enabled trusts such as Sussex Partnership NHS Foundation Trust and Humber NHS Foundation Trust to offer harmless wristbands or key fobs to service users – emulating the home environment and helping to restore dignity and aid recovery. They have the added benefit of being an easy retrofit – operated via a wireless network, the discreet system uses minimal cabling.

Like all improvements in mental health care, electronic locksets alone are not the solution. But together with other improvements – like creating a therapeutic environment and providing appropriate staff training – service users can recover quicker and return to their communities.

Sussex Partnership NHS Foundation Trust approached Safehinge Primera as part of a major refurbishment of the Brunswick ward in 2017 – offering in-patient care for service users with dementia.

Because familiarity is key to aiding recovery, they required locksets that would help to normalise the environment and aid service user recovery. That's why they chose to install our electronic lockset, Passport, throughout the facility – providing a comfort to service users by offering control of their own living space as well as meeting the CQC's expectations of reducing restrictive practices.

Martin Lees is access control manager at Safehinge Primera

Modern glazing for mental health

ADF reports on some of the drivers which are leading to innovation in glazing mental health units, in order to address a range of particular challenges

The design of environments employed in the care of mentally ill people provides a number of challenges, not least in terms of the windows.

An article in the publication *Psychiatric Times* goes as far as to say that hospitals accommodating mentally ill patients must be "devoid of means to commit suicide".

It states: "The most common type of hazard was ligature anchor points, that is, protrusions capable of supporting the weight of a person more than 100 lbs. In the United Kingdom, hanging was the method used in 77 per cent of inpatient suicides between 1999 and 2007. The most common ligature points were doors, hooks or handles, and windows."

The specification of fenestration for mental health establishments, however, begs some important questions, which need comprehensive answers from specifiers. Jason Davidson, technical sales director at Crittall Fendor explains: "Depending on the type of building and the specific requirements each patient group might have, natural daylight, ventilation, security, anti-ligature, supervision, window operation and control are all considered."

Unobstructed views onto the exterior spaces are known to aid recovery in some instances and the ability to clean the windows effectively has to be balanced against the need for adequate security. What is key to the optimal specification of a window is accurate knowledge of the precise type of patient group that a hospital – or specific wing of a hospital – serves.

For instance, the potential of escape through a window is not always a main issue as some patients within the hospital can leave at any time. For other patient demographics, escape might be of greater concern.

"For years ventilation had been a problem in hospitals and secure units," says Davidson. "Any openable windows





had to be restrained to stop people either falling out or escaping. Windows were restrained to only allow a 100 mm gap. This obviously restricted the ventilation drastically."

Various options currently exist on the market that have been designed to satisfy these various requirements.

Specifiers should consider an external sliding window system. With regard to maintenance, sliding windows can be cleaned from the inside and outside allowing maintenance to be carried out with more ease than some other models and without disrupting patients.

It is also paramount that the window offers no points at which a ligature – a cord, wire or belt – could be attached by a patient contemplating suicide. The flush frame should offer no such points and the window should be openable for ventilation by means of a slipper clutch – a dial-shaped operating mechanism that similarly provides no protrusions for attaching a ligature. The fixture is so-called because it is engineered to 'slip' repeatedly no matter how often it is turned and therefore cannot be forced to open the window wider than intended.

At a time when budgets are tight, facilities managers responsible for mental health institutions are nevertheless keen to see to what extent their buildings can be future-proofed to meet ongoing requirements for patient care.

"If future proofing is considered then future risks and forward costs can be reduced," argues Davidson. "Manual and electric blinds are being used more and more. This is because they are now safe if used within the double glazed units of a window, there is very little maintenance needed and it gives both patients and staff a lot more control over their environment."

Most important is for building managers to discuss fully with window manufacturers all their requirements at an early stage. "There are advancements being made all of the time which give clients more options," says Davidson. "Getting a full size window demonstration is also very important. Seeing a workable sample of a window type allows for an examination into each benefit and risk a window holds."

Navigation made easy, with dementia-friendly flooring

As age-related impairments make it more difficult for people to navigate a building, Mark Jackson of Forbo Flooring Systems examines how innovative flooring approaches can make life easier for those suffering with dementia



Impairments such as sensory, mobility or cognitive (or sometimes a combination of all three) can have a serious impact on older people and those with dementia. Functioning, behaviour, independence and, ultimately, quality of life can all be compromised, but appropriately designed environments can help keep vulnerable people safe from dangers, such as falls. By understanding the impact of such impairments, designers, specifiers and carers can create interiors that can help people feel much safer and more confident in their surroundings.

Contrast is key, and can be used to help people with sight loss and dementia to

identify key features and rooms. Good use of contrast can also facilitate independent living, for example, by supporting people to find their way around a space and to use certain fixtures.

One of the key ways to incorporate contrast within a building is through the flooring specification. As with every building, when we walk through an area we will subconsciously notice the flooring. In fact, thoughtfully designed flooring can play a huge role in supporting way finding around unfamiliar premises, and can also be used to define various areas and spaces.

It is recommended that a difference of 30 degrees of Light Reflectance Values (LRV) is

DEMENTIA-FRIENDLY

Many sites are now starting to explore flooring design that better supports users with dementia



achieved between the floors and walls, and between doors and walls. However, if this isn't possible, it is essential that optimum contrast is achieved between the two critical planes, such as the floor and wall.

The adjoining flooring must be tonally similar in order to reduce the risk of falls, which means the flooring LRVs should be within eight degrees of each other (although less is better). The transition strips should also match the tones of both flooring surfaces, with an ideal difference of no more than three degrees of LRV. If the contrast between the floor coverings is too great and the transition strip contrasts too much – or if it is a highly reflective trim – then this could be perceived as a step and result in 'high-stepping' and potential falls, or even deter people from passing through.

When it comes to the actual design of the floor coverings, it is vital that a glossy or sparkly floor is avoided, as it could be perceived as a wet surface. Flecked flooring could also convey spots, while logos etched into the floor could be observed as an obstacle. As such, a matt finish with a simple, plain design is preferred.

With this in mind, the design of a building becomes as vital as the bricks and mortar that it's built with. Because of this, Forbo Flooring Systems has partnered with The University of Stirling's Dementia Services Development Centre (DSDC) to review over 1000 floor finishes; assessing their suitability for use in dementia-friendly environments. This includes assessing and rating them in accordance with their dementia design principles.

Many healthcare facilities and sites are now starting to explore dementia-inclusive design - and one example where the flooring has played a large part is Erskine Park, a care home in Bishopston. Spanning three storeys, floor coverings were used in a variety of colours to easily distinguish each floor of the building for the residents, and to help them identify their own floor and apartment. Colours were used to distinguish the floor levels: green tones on the ground floor to represent leafy grass; a shade of orange on the first floor to represent earth; and a blue shade to represent the sky, and help residents recognise that they were on the top floor.

The key is that flooring for these types of environments needs to be simple, as well as being practical and hygienic.

Mark Jackson is key account manager, Care Sector, at Forbo Flooring Systems



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How reducing water usage can mean fewer germs

Paul Musgrove from CONTI+ considers the benefits of automated systems for water management, and how improved management of water flow can reduce infection risks as well as reducing water usage





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These include weekly, monthly and quarterly procedures to safeguard the system, possibly including manual flushing to keep water from stagnating, but at less effective low temperatures in order to avoid scalding patients.

The goal for any water management system is to ensure the water is clean and safe with no or little biofilm present. Remove biofilm and you can provide a water environment without harmful germs and bacteria, which is what we are all aiming for. A big concern for building managers currently is relying on people to deliver part of the maintenance routine, such as medical staff running taps and showers in a medical area, instead of estates teams – putting added pressure on an already demanding daily routine.

Manual systems can be refined using consultants to audit procedures and make recommendations applicable to specific environments. Alternatively building management systems can integrate shower, tap and urinal products with an automated system. A complete solution is also available as a Water Management System, for example the CNX system from CONTI+, specifically designed for complex environments.

Such systems connect all taps, showers, and urinals into one system automating the process of a regular hygienic flush whilst recording all actions in a simple report. Thermostatic flushing at high temperatures can even be run with peace of mind that the inbuilt failsafe security will eliminate any scalding incidents. Human error is removed from the situation along with time consuming manual intervention, all of which has a high cost. Facilities managers can access systems remotely across multiple sites, giving them a complete overview and comprehensive reporting.

Naturally, developing a solution for a new build is much easier than retrofitting in an existing building, however nothing is impossible if the benefits are of real value. The situation needs to be explored by clients/designers and installers to be sure of the solution before proceeding. The client must be sure to understand what the advantages really are, and what reports and functions they will receive. Only by engaging an expert supplier early in the process is this possible.

Key questions for clients are – what do you really need to achieve, do you have a complete and realistic view of how the system is currently operating, how does the current system impact employees' time, and what reporting is required?

A current project we are involved with includes around 10 different people in the client's organisation, working together with us to develop the system. There is a common goal to reduce the spread of germs whilst running a reliable and efficient system which eliminates staff intervention.

In addition to the intensive planning process for implementation, there are also the daily operational considerations to consider. Hospital management needs to decide who should have access, what level of access they need, and needs to ensure that an approved leader is assigned. Although many water management activities are led by compliance needs, many are just simple caretaking processes that an automated system can manage reliably and with ease.

Paul Musgrove is the UK development manager at CONTI+



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Construction Specialties provided a comprehensive wall protection package for the renovation of the King Edward Building, part of the redevelopment at the Bristol Royal Infirmary. The scheme included: impact resistant Acrovyn Sheet and Acrovyn corner

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Altro brings feel-good factor to centre



An integrated package of Altro floors, walls and ceilings has been installed in a brand new flagship Spinal Injury Centre in Dorset, run by disability charity Livability, creating a homely, design-led unit with a high level of aesthetic appeal. The products used: Altro WoodTM Safety, Altro RelianceTM 25, Altro PiscesTM, Altro Whiterock SatinsTM, Altro Whiterock hygienic ceilings, Altro StrongholdTM 30 and Altro FortisTM Titanium. For more information on all

products please contact Altro by calling or visit the website.

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Polyflor flooring brings style and safety



A variety of Polysafe safety flooring and Expona luxury vinyl tiles from commercial vinyl flooring specialist **Polyflor** were recently used to complete the construction of Needham House in Devizes, Wiltshire. Needham House is a housing development

of extra care apartments which allow older people to live independently in their own homes with on-site care and support. Over 2000m² of Polyflor vinyl flooring was installed in the 47 self-contained apartments and communal areas. The Polysafe Wood fx and Polysafe Verona safety flooring ranges are fully HSE Compliant.

0161 767 1111 www.polyflor.com

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Bostik's subfloor preparation products pave the way at Stratford Hospital



Bostik has been selected by commercial flooring contractor, Pinnacle Flooring, to supply a range of subfloor preparation products to the new, £22 million Stratford Hospital development. The project, built in the centre of Stratford upon Avon for South Warwickshire NHS Foundation Trust, includes 5,300m² of space, spread across three floors. This is approximately twice the size of the current hospital. The new building will house specialist cancer and eye units, making state of the art treatment much more accessible to those living in Stratford and surrounding communities. Working with Pinnacle Flooring, Bostik supplied a subfloor preparation package to cover approximately 4,000m² of the new development. Products used included the Bostik Screedmaster One Coat Membrane, Screedmaster Universal Primer and Screedmaster Ultimate levelling compound. Scott Myers, Managing Director from Pinnacle Flooring, commented: "Bostik has a fantastic range of high quality products that covered all aspects of our flooring installation needs for Stratford Hospital. The technical expertise and insight that the Bostik team has offered proved invaluable to the project."

01785 272625 www.bostik-profloor.co.uk

Automatic choice for CLEAN Environments



record's CLEAN hermetically sealing sliding doors prevent the transmission of bacteria via air flow whilst controlling temperature and humidity to provide the highest levels of hygiene required, in healthcare environments. Finished in a high-pressure laminate, which is durable,

easy to clean and available in a variety of finishes, CLEAN door leaves can also be customised for a contrasting design or to help define specific areas within a building. Complete with a range of options to protect from electrons, x-rays, fire and smoke.

www.recorduk.co.uk



Nortech parking systems improve hospital



Access control system specialists Nortech have recently seen Gloucestershire Care Services NHS Trust update and improve Tewkesbury Community Hospital's car park using Nortech's Feemaster system. Nortech's FeeMaster Smart parking management

system is a flexible, simple and cost-effective way of managing car parking access and controlling validity periods using Mifare smart cards. This avoids the need for expensive cabling between components and minimises disruption. The FeeMaster entry station is designed to be used to record the date and time that a vehicle enters a car park.

sales@nortechcontrol.com



Healthier door closing

Powermatic concealed door closers from **Samuel Heath** are becoming increasingly popular with specifiers, estates managers and clinicians throughout the healthcare sector thanks to the many health, safety and hygiene benefits that they deliver. Powermatic door closers are totally concealed when the door is closed and offer few surfaces on which dust and potentially harmful detritus can accumulate. Their low mounting height also simplifies inspection and cleaning procedures. British designed and manufactured, Powermatic door closers are ideal for anti-ligature and anti-barricade applications in mental health facilities. Their concealment also helps to create the less institutionalised, more therapeutic environment valued by clinicians. Finally, the door closers are less likely to be vandalised, significantly enhancing reliability of the closer and fire door, and reducing repair and maintenance costs.

0121 766 4200 www.concealeddoorclosers.com

Yeoman Rainguard helps Heritage Building keep with Tradition

s part of the continuing refurbishment of The Heritage Building (the old original hospital) at The Queen Elizabeth Hospital, Birmingham, new rainwater hoppers and pipes are being installed in stages.

Supplied and manufactured in GRP material by Yeoman Rainguard at their head office facilities in Leeds, the Hoppers and Downpipes have been chosen in a design and colour to be in keeping with the art deco style of the Heritage Building which was erected in the early 1930s.

Replacing the aging system are Yeoman Rainguard's GRP 100mm dia. Standard Clip Downpipes and large Highland Rainwater Hoppers in an Agate Grey colour.

GRP is a durable and impact resistant construction material which being lightweight can assist the installation on very high rise or multi storey buildings such as the Heritage Building.

Once installed this tough rainwater system



will not require maintenance, other than the occasional clear out, and as a through colour material the UV stable hoppers and downpipes will not be pervious to colour bleaching thus eliminating the need for repainting.

Offering 30 plus years of care-free service Yeoman Rainguard GRP rainwater systems are an economical choice adding to the sustainability of the building and reducing future maintenance costs.



"We have dealt with Yeoman Rainguard for many years and as always we are very pleased with the quality of service and rainwater goods supplied for the refurbishment programme of The Heritage Building." Commented Mick Townsend, Project Manager, Estates & Planning, University Hospitals Birmingham NHS Foundation Trust.

0113 279 5854 www.rainguard.co.uk

Allgood completes thoughtful design



Maggie's Centre in Oldham has incorporated Allgood's Holt ironmongery to complete its thoughtful and hopeful design. Handcrafted from European oak, the Holt range seamlessly blends with the hardwood cross-laminated timber (CLT) building and reduces the impact of

neuropathy for the centre's patients. A calm and inviting building, the innovative use of hardwood CLT and glass means that visitors are met with a light, open space and views down to the garden below – the inverse of what is expected from a traditional healthcare facility.

0207 387 9951 www.allgood.co.uk

The therapeutic benefits of carpet



Carpet offers many therapeutic benefits to a healthcare environment. They are naturally sound absorbent and can reduce the conduction of sound impact by 29 dB, which helps to create an acoustically sound environment. Carpets also improve indoor air quality, by

trapping airborne particles, which can cause respiratory distress in the carpet fibre. By choosing a carpet from **danfloor's** healthcare collection, which includes an anti-microbial coating, any harmful bacteria which comes into the carpet fibre is killed with a four log reduction rate of 99.99 per cent, thus helping with infection control.

0333 014 3132 www.danfloor.co.uk

Lifting paediatric services



NHS Property Services has converted a former school into a state of the art Child Development Centre – Snapdragons Centre. Part of the \pounds 3m project has been the installation of six ceiling track hoists in treatment rooms and care facilities, plus a mobile changing bench and height adjustable basin in toilet facilities, all supplied by Britain's leading deliverer of intimate independence, **Closomat**. The hoists mean

that children and young people who are not mobile can be moved easily, safely, and with dignity, without exposing their families, carer and Centre staff to risk of injury through manual handling.

0161 969 1199 www.clos-o-mat.com

NHS awards Innova hoisting contracts



Innova Care Concepts has been awarded two contracts to provide and install patient hoist systems for two sites in the Orkney Islands. With an accumulative value of \pounds 177,000, Innova will work throughout 2018 to fix over 45 ceiling hoist systems in bariatric suites, operating theatres, and

above a Changing Place facility. Innova's unique products and ability to create flexible systems were a key factor in both decisions. The Wetherby-based company will be working with Keppie and Young & Gault Architects on these projects.

0345 034 1450 www.innovacareconcepts.com

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