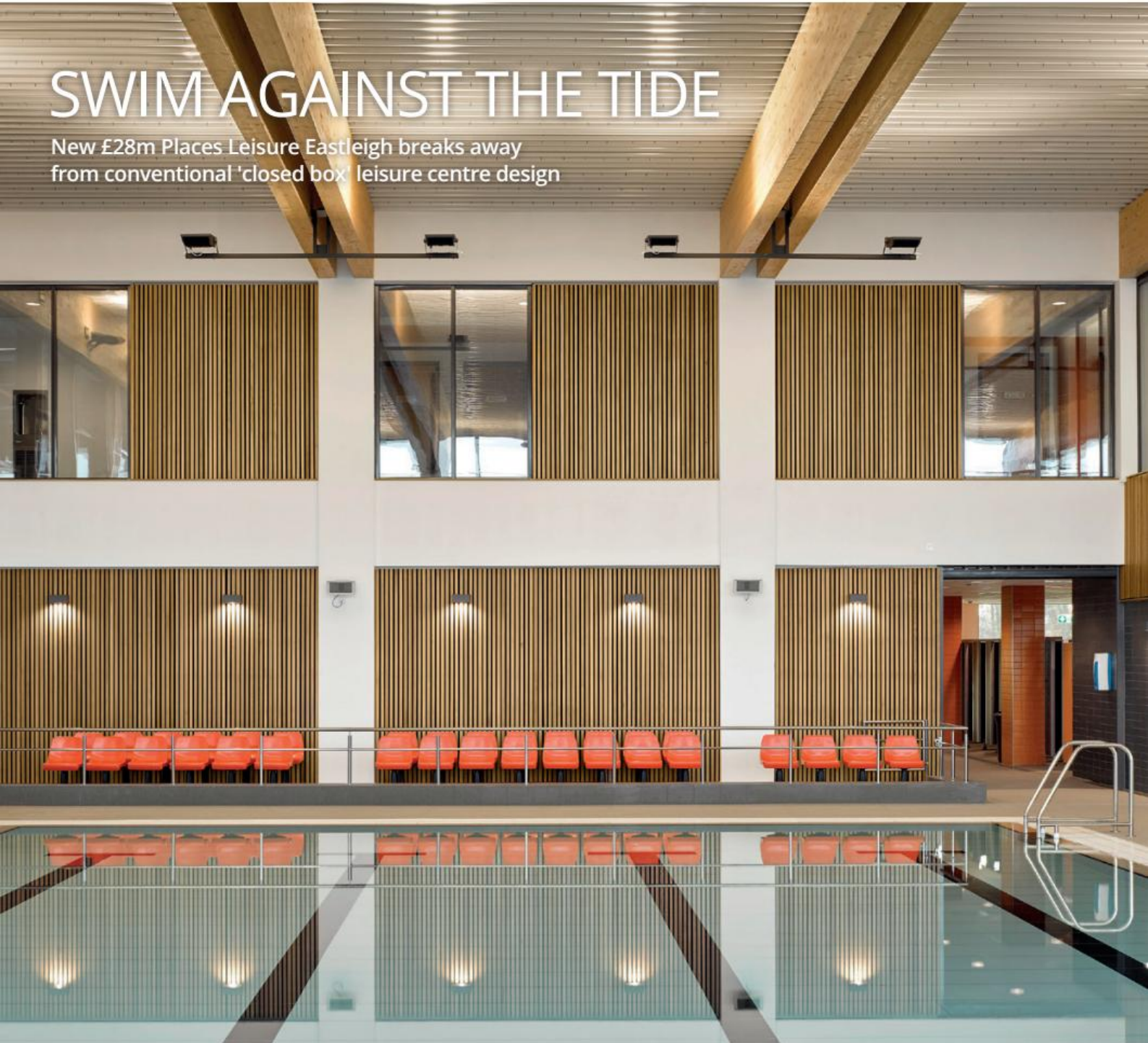


# SWIM AGAINST THE TIDE

New £28m Places Leisure Eastleigh breaks away from conventional 'closed box' leisure centre design



### The Carillion crisis

What the construction giant's compulsory liquidation means for sub-contractors

### Neave Brown – 1929-2018

The social housing extraordinaire that dared to challenge the council's high-rise developments

### A Passivhaus first

The University of Leicester's George Davies Centre exceeds sustainability ambitions



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▲ AHR and Arup have collaborated to design and build a dazzling new leisure centre for the community of Eastleigh. See page 09.

## Welcome to the February issue of PSBJ...

On behalf of the team at PSBJ, I would like to offer our sincere condolences to the family and friends of the late Neave Brown, who sadly passed away on January 9th, 2018. Proclaimed by many as a social housing pioneer, Neave's architectural originality was only sadly recognised in the later years of his life. Talking at one of his last public appearances, The Architecture Foundation's 'An Evening with Neave Brown' on October 27th, 2017, Neave's heartfelt conclusion triggered a standing ovation at a sold-out event of almost 1300 attendees at the Hackney Empire Theatre, East London. "I thought those buildings that I had done after Margaret Thatcher were simply those pieces of the past...I had no idea that they were still being looked at not only as bits of the past but as something which might be relevant to the present and the future. And so, I was dumbfounded by the fact that all this has happened to me, in a sense, at the end of my life," concluded Neave before thanking Chairman Mark Swenarton, Author of recently published book 'Cook's Camden: The Making of Modern Housing'. The event followed a private ceremony in which Neave was named 2018 laureate of the RIBA Royal Gold Medal for Architecture.

Neave's 'street-based' low-rise social housing theories challenged those of the council, which opted for high-rise, imposing buildings in a bid to alleviate the high-density population difficulties. Unfortunately, Neave's work was criticised by many due to the high cost of the build caused by unanticipated difficulties throughout the duration of its construction. Further details on Neave's recently acclaimed projects can be found in this month's issue on page 42.

In other news, the declaration of the compulsory liquidation of construction giant, Carillion, has hit the industry by storm. The collapse of Carillion caused uproar within the construction industry and, equally, from outside the industry with the general public concerned with the recent Government contracts awarded to a company which was, quite clearly, in financial despair. Many projects are to be affected by the fall of Carillion; the Royal Liverpool Hospital (£335m), HS2 (£1.4bn), Aberdeen bypass (£745m) and Midland Metropolitan Hospital (£350m), to name but a few. Alongside construction projects, Carillion was also responsible for running a number of public service projects including maintenance for hospitals and prisons and even providing school meals to a number of educational establishments across the UK.

When the news hit screens on Monday 15th January, it was reported that "firefighters were on standby to deliver school meals to children in at least one area of the country as councils and public bodies scramble to deal with the collapse of...Carillion" (The Guardian). Suffice to say, the winding up of Carillion has had a huge impact for all those working in the public sector, particularly suppliers, sub-contractors and, of course, Carillion employees. If you've been hit by the liquidation of Carillion turn to page 22 where Philip Cake, Manager of Gibson Hewitt, offers his advice for the sub-contractors of Carillion. Gibson Hewitt is offering professional advice to those who have been affected, the first meeting is free.

\*BBC News <http://www.bbc.co.uk/news/business-42717735>

Rebecca

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A round up of the latest industry updates including charity events, awarded contracts, completed projects and much more.

## 09 Upfront

In collaboration with Arup, consultancy firm AHR has delivered a prominent £28m BREEAM-rated 'Excellent' leisure centre to the community of Eastleigh, Hampshire.

## 14 Talking Point

Benn Richards and Stuart Wilson of national law firm, Clarke Willmott, discuss the fall of Carillion and forecast the predicted next steps for the business. Is there a viable business to rescue?

## 16 Housing

How one London housing provider is putting tenants' wellbeing at the centre of its plans with the provision of children's play equipment.

## 18 KBB

Washroom Washroom has supplied a range of colourful bathroom facilities, nurse stations and bedheads to a refurbishment project at North Middlesex University Hospital.



## 20 Technical Focus

GEZE UK has vastly improved the accessibility of London's National Army Museum with a selection of swing door operators providing the establishment with enhanced visitor facilities.

## 22 Legal & Business

In the wake of construction giant Carillion's compulsory liquidation, Gibson Hewitt offers a helping hand to those sub-contracted by what was one of the UK's biggest construction firms.

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Ultra-compact surface material, Dekton, has been specified for the external facade of a two-storey hospital extension in the German town of Erlangen.

## 28 Flood Management

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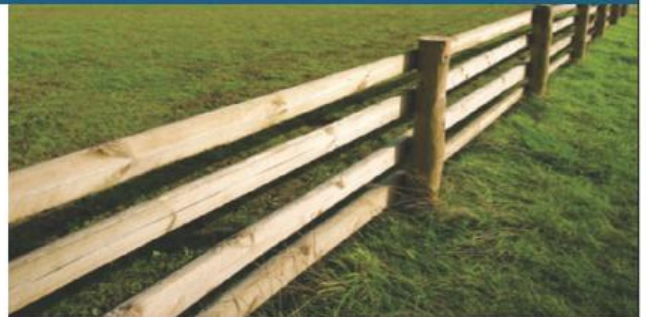
## 30 ecobuild Preview

Under the new ownership of Futurebuild Events, ecobuild 2018 is set to be bigger and better than ever. Returning to London's ExCeL, this year's show promises to be highly valuable to those working in the built environment.

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Elta Group Building Services has provided efficient ventilation to a 120-seat Performance Arts Centre of Excellence (PACE) project in Caterham.



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### 36 kbb Birmingham Preview

Forecasting the latest trends from the kitchen, bedroom and bathroom realm, kbb Birmingham 2018 is set to challenge the issues facing those working in the industry and support KBB businesses to grow in a world of change.

### 38 BIM & Mobile Mapping

Inspected every 12 years, Britannia Bridge in Anglesey is a complex site to assess. Here, Stuart Cadge from 3D geospatial technology provider, GeoSLAM, recites how the team – alongside infrastructure support provider Amey – approached the project.

### 40 Interiors: Lighting & Electricals

In search of an energy-efficient solution for all its lighting and heating provisions, BSix Sixth Form College in Upper Clapton, London, turned to Energys Group for a solution to reduce expenditure on energy and maintenance throughout its establishment.



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### 42 Tribute to Neave Brown

PSBJ pays tribute to late Modernist Architect, Neave Brown. Heralded as a social housing pioneer, social agenda and community spirit were at the heart of all Neave's designs.

### 44 Product Showcase

A dedicated focus of industry news, products and case studies to help specifiers and local authorities make informed decisions.

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# INDUSTRY UPDATES

Each month PSBJ rounds up the latest public sector construction updates, from new contracts to industry awards.



## Morgan Sindall appointed to £1.4m development of Torquay Academy

Construction work is to start on the second phase of significant development works to the teaching facilities at Torquay Academy, Devon, following the appointment of construction and infrastructure company, Morgan Sindall. The £1.4m project on behalf of Torbay Council in partnership with TDA, an award-winning provider of business and property services across the South West, will enable the construction of a new classroom block which includes six new classrooms and three dry changing rooms. Torquay Academy is a non-selective secondary school with a current student capacity of 1400 pupils. During the first phase of construction works in 2017, Morgan Sindall refurbished two classrooms into state-of-the-art science labs.

## Leading NHS suppliers highlighted in shortlist for new HSJ awards

The finalists for the first HSJ Healthcare Partnership Awards have been announced. The awards serve to recognise and celebrate those suppliers who work in partnerships with the NHS to drive efficiency and improve patient care. The awards have 12 categories which embrace most healthcare supply markets. These include clinical support services, medical technology, healthcare analytics, consultancy, legal services and property/estates. The winners will be announced at the Royal College of Physicians on 8th March. Entrants demonstrated outstanding commitment to working in collaboration with the NHS through cutting-edge innovation and service provision. The judges were impressed with the high standard of entries, testifying to the clear achievement of any shortlisted organisation.



## Construction begins on new £12m Primary Care Centre

Work is set to commence on a new multi-million-pound Primary Care Centre in Barrow-in-Furness, Cumbria. The new centre will bring together primary and community care services and will help reduce unnecessary hospital admissions. The facility will be situated on the site of the former Alfred Barrow School following the final go-ahead granted by health commissioners. The new BREEM-rated 'Excellent' facility is a 5000m<sup>2</sup> site developed through a Public Private Partnership Programme (Local Improvement Finance Trust) led by Community Health Partnerships (CHP), working with its local joint venture partner eLIFT Cumbria. ESH Construction started construction of the new centre in January 2018 with completion planned for spring 2019.

## The Official Receiver appointed liquidator of Carillion

The Official Receiver has been appointed liquidator of Carillion and certain other companies in the group. The Official Receiver is seeking to maintain operational continuity and is continuing to trade these companies. Special Managers have been appointed by the High Court to help manage the affairs, business and property of the companies, in accordance with the powers and duties contained in the order appointing them. The Special Managers act as agents of the companies, without personal liability.

## ECA and the BESA meet with liquidator PwC

Leading engineering services trade bodies ECA and BESA have pressed Carillion liquidator, PwC, to provide greater certainty to private sector contractors over the outstanding cash owed by the fallen construction giant. PwC's David Kelly confirmed they and Carillion will provide suppliers with 'commitment letters' that guarantee payment for work undertaken and materials supplied during the liquidation process. However, Mr Kelly advised that work completed before Monday 15th January 2018 will be treated as 'unsecured debt', and at the back of the queue for payment.

## Reward Finance opens its doors to Carillion suppliers

Reward Finance Group has pledged financial support to help Carillion suppliers whose businesses may be put under threat due to short-term cash flow problems caused by the construction giant's collapse. Cabinet Office Minister, David Lidington, has warned that those companies who have been subcontracted to work on private sector deals had Government support withdrawn on 17th January. This could affect up to 30,000 firms which are owed money by Carillion. According to the head of the Federation of Small Businesses, Mike Cherry, Carillion had already extended its payment terms to 120 days and, now that it has gone bust, its creditors will be "at the back of the queue for payment". More bad news comes from trade body Build UK which points out that "in the past when other big contractors have failed, around 18% of businesses who were creditors did not survive the next five years". According to Rudi Klein, head of Specialist Engineering Contractor – an umbrella group representing suppliers to the construction industry, the supply chain is going to bear the biggest loss – leading to a large number of companies experiencing substantial financial distress. Commenting on the situation, Director of Reward Finance, Nick Smith said: "Many of Carillion's suppliers will be having sleepless nights following the announcement and will be drawing up survival plans to protect the company and employees. Most would not have expected or planned for a bad debt from an organisation such as Carillion, which would have been seen as rock solid especially as it had so many high-profile Government contracts."



## Neave Brown 1929-2018

The RIBA has reacted to the death of Neave Brown, the celebrated Modernist Architect. RIBA President, Ben Derbyshire, presented Neave Brown with the 2018 Royal Gold Medal for Architecture, on behalf of HRH The Queen, in October 2017. Brown was perhaps best known for his visionary Alexandra Road estate built by London's Camden Council in the 1970s. He believed every home should have its own front door opening directly onto the routes and streets that make up a city, as well as its own private external space, open to the sky in the form of a roof garden or terrace; each of these qualities was incorporated at Alexandra Road.

## Practical support for those affected by Carillion liquidation

The Government understands that many businesses that were contracted to Carillion will be concerned about their ability to pay their tax. As part of its ongoing commitment to delivering support for businesses, HMRC will provide practical advice and guidance to those affected through its Business Payment Support Service (BPSS). The BPSS connects businesses with HMRC staff who can offer practical help and advice on a wide range of tax problems, providing a fast and sympathetic route to agreeing the best way forward and addressing immediate concerns with practical solutions.

# TWEETS

Up-to-the-minute, public sector-related news from the world of construction.



## Neave Brown tributes

"Architecture has lost a giant' @RIBA President @ben\_derbyshire on the sad passing of Neave Brown"

@RIBA

"We are very sad to hear that Neave Brown has died. Neave's iconic designs for #Camden Council housing, including Alexandra & Ainsworth Estate, are a vital part of #Camden history & present, part of a legacy of building new council homes for our families. RIP Neave."

@camdentalking

"Very sad to hear of the death yesterday of the wonderful Neave Brown. Architect of our estate and champion of social housing. Our thoughts are with his family. @RIBA @Grindrod."

@AA\_Estate



## Carillion liquidation

"The Scottish Government began working on contingency plans last summer for the collapse of Carillion" @Independent

"This is going to run and run. Civil service role overseeing Carillion was unfilled between August and November last year as Carillion spiralled towards bankruptcy and collapse."

@DavidLammy

"The Mayor of Liverpool @mayor\_anderson writes to the Health Secretary to seek reassurances about the future of the new Royal #Liverpool hospital. It comes as the firm building it, Carillion, goes into liquidation after running up debts of over £1bn."

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Eastleigh  
**Location:**  
Eastleigh, Hampshire  
**Consultancy Firm:**  
AHR  
**Client:**  
Eastleigh Borough  
Council



# STRIKING, SUSTAINABLE LEISURE CENTRE FOR EASTLEIGH COMMUNITY

AHR has worked in collaboration with Arup and Interserve to create a striking new £28m sustainable leisure centre for Eastleigh Borough Council.

**P**laces Leisure Eastleigh – operated by Places for People Leisure – opened in November 2017, replacing the borough’s existing leisure building.

The 9400m<sup>2</sup> BREEAM-rated ‘Excellent’ building is one of the largest in the region and was

designed and constructed in under three years.

The design for the centre evolved over time in close collaboration with Eastleigh Borough Council, operator, Sport England, and user groups from the existing centre to ensure the new leisure centre would meet

the needs of the borough for the next 40 years.

AHR put the importance of natural daylight as a key priority in creating healthy and appealing spaces. The new building makes the most of its parkland surroundings through highly glazed double-height spaces.

▲ Robust hard-wearing materials including dark grey zinc and masonry contrast with bright orange aluminium to provide a strong brand identity which will require minimal long-term maintenance

Several design options were analysed to break away from the conventional leisure centre ‘closed box’ design.

Careful orientation of glazing to create north light within the swimming pool and sports hall, combined with stretching the building ‘spine’, has achieved exceptional levels of daylight and parkland views throughout the occupied spaces.

A limited palette of colours and materials were chosen to embed the building within the landscape. Robust hard-wearing materials including dark grey zinc and masonry contrast with bright orange aluminium to provide a strong brand identity which will require minimal long-term maintenance.

A bespoke artwork and signage strategy which consists of large-scale wall graphics and plywood signage panels was developed to showcase the breadth of sporting and community activity within the centre.

Karle Burford, AHR Director, said: “We wanted to design a centre that would meet the council’s objective in promoting a healthy borough and offer the people of Eastleigh a new health and fitness venue with improved facilities, benefiting the whole community.”



▲ The design incorporates a wide range of fitness facilities and a pool area, providing natural light and views across the parkland



▲ The building demonstrates that high-quality design, with exceptional daylight and openness, can be achieved in tight timescales



▲ Research was undertaken in the design stage to ensure that the proposed new venue reflected the current usage pattern of the leisure centre

“Key to the design was for the building to respond to the sensitive natural surroundings and maximise its integration to the parkland. Our design incorporates a wide range of fitness facilities and a pool area, providing natural light and views across the parkland and brook.”

The new facilities include a gym, fitness studios, 25m eight-lane swimming pool, 15 badminton courts, tennis courts, squash courts and all-weather pitches as well as a cafe and soft play area.

Adam Spall, AHR Regional Director, said: “Our architecture, landscape and interior design teams have worked in collaboration with Arup to create a building that has an emphasis on being bright and spacious.

“This building demonstrates that high-quality design, with exceptional daylight and openness, can be achieved in tight timescales and within the Sport England affordable leisure centre model.”

Eastleigh Borough Council first started looking at the possibility of a new leisure centre development when the costs of essential maintenance and upgrading the existing centre – Fleming Park Leisure Centre – became financially unsound.



▲ Sustainability was another major consideration for the site, with the council requesting a building that would meet a 2011 BREEAM 'Excellent' rating



▲ The council's ambitious objective was to provide visitors with a long-term, state-of-the-art facility

Fleming Park Leisure Centre was a 1970s building that over the years had been extended in a piecemeal fashion with the most recent 'add-on' being 10 years old. Internally, the building was looking very tired, while the facade looked of its era.

The council's ambitious objective was to provide visitors with a long-term, state-of-the-art facility that would increase participation for all ages, better link with open space and

support individual and team development in sports and fitness.

Research was also undertaken in the design stage to ensure that the proposed new venue reflected the current usage pattern of the leisure centre, and also took into account the predicted increase in users over the coming years.

As part of the design, the cycle network surrounding the new venue was enhanced by creating a new east-west

shared path to the north of the building. This ensured that cyclists would be able to reach the main entrance and covered cycle parking from all four directions.

Sustainability was another major consideration for the site, with the council requesting a building that would meet a 2011 BREEAM 'Excellent' rating. This was achieved through energy-efficient measures including solar photovoltaic (PV) panels, a new combined

heat and power (CHP) system and natural ventilation.

A robust engagement plan kept key stakeholders including the Fleming Park Consultative Group – consisting of councillors, Places for People, Sport England and building users, such as tennis and swimming clubs – informed throughout the planning, design and construction phases. This included public exhibitions and online updates via the council website.





▲ The new facilities include a gym, fitness studios and 25m eight-lane swimming pool, to name but a few



▲ Places Leisure Eastleigh is sustainably designed, is in complete harmony with its parkland setting and packs far more into the same footprint than its predecessor



▲ The 9400m<sup>2</sup> BREEAM-rated 'Excellent' building is one of the largest in the region

## Surpassing a predecessor

Eastleigh Borough Council Leader, Cllr Keith House, said: "As well as offering excellent facilities, Places Leisure Eastleigh will be our flagship for promoting wellbeing and healthier lifestyles for our communities. I know that people across our borough and further afield will be hugely impressed by this superb new venue.

"Places Leisure Eastleigh is sustainably designed, is in complete harmony with its parkland setting and packs far more into the same footprint than its predecessor, which was an important consideration in the scheme. It is a tribute to AHR and our other partners in the project that such an impressive facility was delivered on time and on budget."

This project further expands upon AHR's experience in the health and leisure sector, which includes several leisure centres around the UK such as Huddersfield Leisure Centre and Hough End Leisure Centre in Manchester.

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Carillion has worked on high-profile projects, including the Battersea Power station redevelopment



**Benn Richards** is a Partner in the restructuring and insolvency team specialising in both contentious and non-contentious insolvency. His work includes acting for insolvency practitioners, creditors, debtors, companies, directors and other stakeholders. Benn also advises creditors and stakeholders on insolvency and transnational risk.



**Stuart Wilson** is a Partner in the construction team specialising in all aspects of non-contentious construction including building contracts, consultant appointments, development agreements and facility agreements. His expertise includes working with commercial and residential developers, institutional investors, banks, registered providers and contractors on a wide variety of projects.



## CARILLION – CLUTCHING AT STRAWS?

Although the news that Carillion has been wound up by the court is not unexpected, given the recent coverage in the press, the full impact of its liquidation will come as a surprise to key creditors, stakeholders and employees.

**H**ere Benn Richards, Partner in the restructuring and insolvency team and Stuart Wilson, Partner in the construction team, at national law firm Clarke Willmott discuss the news and the expected next steps.

### The legal position

Benn Richards said: "Carillion (including the PLC and certain subsidiaries) has been wound up by the court (on petitions presented by Carillion's own directors). The High Court has appointed the Official Receiver to act as liquidator and a group of licensed insolvency practitioners from PWC to act as special managers.

"Although it is too early to say, the possibility of the liquidation being converted into administration cannot be ruled out, especially if it transpires that there is a willing purchaser for the business/assets of Carillion. However, the fact that Carillion has been wound up, as opposed to entering administration, could be evidence that there is no sustainable business to save. Nevertheless, it is highly likely that the special managers will be seeking to identify and sell any parts of Carillion's business or assets that have any value.

"In the short term, the function and role of the Official Receiver (alongside the special managers) will be to realise assets and to ensure there is a continuity of service while the longer term options are considered."

### Impact of the liquidation and remedies available

Stuart Wilson said: "The impact of the liquidation of Carillion will be wide-reaching, particularly given it has a number of high-profile Government contracts, including the HS2 High-Speed Rail Line, maintenance contracts for a number of schools and



▲ Carillion and Kier were working as a joint venture to deliver the M6 Smart Motorways scheme on behalf of Highways England

prisons, maintenance services for National Rail and maintaining over 50,000 homes for the Ministry of Defence. The starting point for key suppliers and stakeholders will be to consider the rights they have against Carillion, and to what extent (if any) those rights can be exercised or used to secure an improved position.

"The obvious first step will be to consider whether specific contracts can be terminated, meaning that the contractual counterparty is free to find an alternative provider for the service Carillion was providing. Although this may help to minimise further losses, it is likely that in significant cost will be expended in obtaining new contracts.

"For more significant contracts, there may be a wide-ranging reach of remedies available to the contractual counterparty. These could include rights allowing the contractual counterparty to step into

Carillion's shoes in any relevant sub-contracts in order to direct and control the service. This may not be as straightforward as it seems as the sub-contractor will need to be paid for all services it has previously carried out, even where Carillion has already been paid itself but failed to pass the monies through the supply chain.

"The Official Receiver may also exercise a right to cause Carillion to perform its existing contractual obligations, with this remedy likely to be most relevant for Government contracts where the services being supplied are essential. Those contracts may be performed by the Official Receiver using Carillion's funds to pay for those works. The alternative would be that the contractual counterparty funds the Official Receiver to perform the contracts; the funding being provided on a "quistclose"/ specific purpose trust basis, where the funds are ring-fenced and are only to be used for



▲ It is highly likely that the special managers will be seeking to identify and sell any parts of Carillion's business or assets that have any value

the purpose of performing the contract. However, such arrangements will be costly and contrary to the Official Receiver's likely intention that Carillion should not be caused to trade for a prolonged period of time."

Benn Richards continued: "It is reported that the sums owed by Carillion to its creditors could total billions of pounds and the contractual counterparties, banks, the crown, employees (including their claims they will

have for their pension rights and redundancy payments) will need to consider the steps required to limit their losses. It is perhaps the suppliers to Carillion who are likely to find themselves under the most immediate financial pressure, both being owed significant sums from Carillion, as well as losing their major supplier and source of revenue." 

 [www.clarkewillmott.com](http://www.clarkewillmott.com)



▲ Outside spaces are very valuable in for building strong communities

## CREATING STRONGER COMMUNITIES

With over 55,000 homes, Peabody is one of the largest housing providers in London and the South East. It delivers services to 111,000 residents, 8000 care and support customers and the wider communities in which it works.



▲ The provision of shared play spaces can be a great tool for fostering better communication, breaking down barriers and building relationships

**P**eabody focuses on those who need help the most, working with people and communities to build resilience and promote wellbeing. It creates and invests in great places where people want to live.

Elizabeth Connelly is a Project Manager working within Peabody's six-strong landscape regeneration team. She believes that the surrounding green spaces are of critical importance and as such the provision of play is a key element.

"Our outside spaces are very valuable in for building strong communities. Our tenants may have very different identities in terms of culture and language, and the provision of shared play spaces can be a great tool for fostering better communication, breaking down barriers and building relationships. Play value is always the aim across all our

play spaces, creating multi-level play opportunities to appeal to children across a wide range of ages and abilities. Durability is another consideration so we can meet budgets for building and maintaining the play areas.

"As a child growing up in a rural setting, my play was climbing trees, building dens, sliding down banks and paddling in streams. As such, I have been hardwired to the benefits of natural play. However, for many of the children in our properties, access to the countryside is a rarity or even non-existent. This means that they are unaware of the benefits of the natural world and the positive impact it can have on general wellbeing and mental health. So within our play areas, we aim to provide various levels of challenge and a variety of play experiences in order to compensate for the lack of access to the natural world."





▲ Uninspired play spaces and equipment or settings that are too prescriptive will obviously not become the favourite places for play for children

Many experts assert that it is of vital importance for children to access the natural world from an early age – as this benefits their development, relaxation and positively impacts on their adult life. One hypothesis, Biophilia, explores the connections that human beings seek with the living world. This theory argues that children need engagement with the natural world from a young age in order to unlock the benefits throughout their life; stress relief, a greater sense of place and inner calmness. Children deprived of access to nature are more likely to become adults who are unable to recognise the value of time within the countryside. Not only is this a shame for the individual but it is

also potentially problematic for society as emerging generations need to take the mantle of custodians of the environment – and for them to successfully do this they need to understand why protection of our green assets is of vital importance.

Pioneer of natural play movement, Timberplay, has worked with Peabody on a number of its installations. Vince Hallam, Managing Director, comments on how effective play can be in providing the vital links to the natural world: “The joy of play is that it is non-directed, children independently choose to play in their own way with whatever environment they are exposed to. Uninspired



▲ Timberplay has worked with Peabody on a number of its installations

play spaces and equipment or settings that are too prescriptive will obviously not become the favourite places for play for children as there is little appeal to children to keep them returning and finding new ways to interact with the space. The imaginative way in which Peabody approaches its space design, maximising play value within relatively small pockets of space, is a great service to its tenants. Within a budget, Peabody does its very best to include a wide variety of play experiences – many of which will be found in the natural world. The experience of climbing a tree, for example, requires constant

▲ It is of vital importance for children to access the natural world from an early age

focus and concentration in order to successfully meet the challenges. We try and include comparable levels of challenge in our climbing structures, a child has to really engage in order to successfully ascend, traverse and descend and can find an appropriate level of challenge for their age and ability.”

The landscape regeneration team at Peabody are currently working on the development of seven sites and over the last year have opened eight new areas. These include a toddler play area and a climbing wall in the central space of the Walworth Road estate. By using small spaces and repurposing these for play, Peabody has developed unique pocket play opportunities which will appeal to children from toddler to teen.

One of the key moments within the design and installation of a Peabody play area is the opening event. Throughout the process, the design team work closely with Peabody residents to create the play space they want. The opening event is a celebration of that process and a real way to mark the completion of the site, passing ownership onto the local community. Feedback from residents on these projects has been overwhelmingly positive. 🏡

[www.timberplay.com](http://www.timberplay.com)



*SGL is extremely durable and provides a hygienic easy-to-clean surface, making it ideal for the healthcare sector*

**W**ashroom Washroom provided colourful new washroom facilities, nurse call stations and bedhead units on levels five, six, seven and eight as well as tower building level one, podium one, the cardiology floor and HIV clinic as part of the extensive project.

### A welcoming environment

Bedhead units, which provide storage around each bed as well as outlets needed for electrical medical equipment for patients, were installed by Washroom Washroom in both multiple and single bed areas. The units, manufactured in solid grade laminate (SGL) in a range of colours, including purple, green and red, were designed to coordinate with other fixtures and fittings, with each floor kitted out in a different shade to create a striking and truly customised design.

### Hygienic and practical solutions

SGL is also extremely durable and provides a hygienic easy-to-clean surface, making it ideal for the healthcare sector. WC cubicle doors were also manufactured in SGL in a range of colours and installed by Washroom Washroom, providing a colourful yet practical washroom solution.

The project also saw the company install bespoke integrated duct panelling systems in SGL for multiple areas within the hospital, including single clinical washbasins in wards, single en-suite handbasins, WCs in en-suite areas as well as pantry and utility areas. The integrated duct panelling system, which can be used to create an attractive smooth finish, is ideal for use in hospitals as it is easy to clean and allows ease of access for maintenance and repairs.

### First impressions count

As part of the refurbishment, Washroom Washroom's in-house joinery division installed new reception desks, which were designed to create a professional first impression to visitors of the hospital, in addition to a number of nurse call stations.

# SPLASH OF COLOUR FOR MIDDLESEX UNIVERSITY HOSPITAL

**Project:**  
North Middlesex  
University Hospital  
**Location:**  
Middlesex  
**Washroom  
manufacturer:**  
Washroom  
Washroom

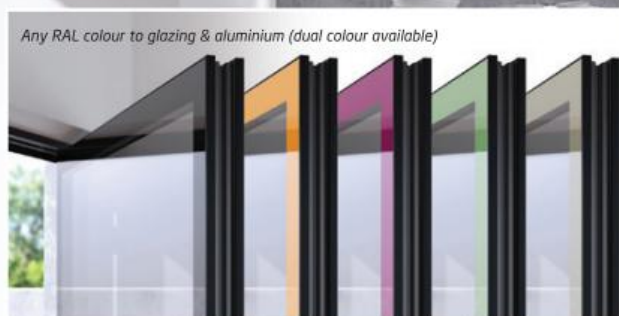
Leading washroom manufacturer, Washroom Washroom, has injected a splash of colour into North Middlesex University Hospital as part of an extensive refurbishment.



▲ Bedhead units, which provide storage around each bed as well as outlets needed for electrical medical equipment for patients, were installed by Washroom Washroom in both multiple and single-bed areas



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*Jack of one trade, master of one*



# A UNIFORM REFURBISHMENT FOR GEZE UK

GEZE UK has responded to the call “to be the best” as part of a three-year, multi-million-pound make-over of the National Army Museum in London – making it more accessible and providing enhanced visitor facilities.

▲ Included in the refit were five pairs of TSA 160 NT automatic swing door operators



▲ It is hoped that the £23.75m redevelopment – part-funded by the National Lottery – will open doors to new audiences enabled by GEZE products fitted around the building

**T**he reconfiguration of its 1970 and 1980s interior has transformed the museum in Chelsea. Its five themed galleries, laid out over four floors, now centres around a light and airy atrium.

In addition to the permanent galleries, the museum includes temporary exhibition space, a study centre and education spaces, a cafe, shop and Play Base for children up to the age of eight. It is hoped that the £23.75m redevelopment – part-funded by the National Lottery – will open doors to new audiences enabled by GEZE products fitted around the building.

Included in the refit were five pairs of TSA 160 NT automatic swing door operators. These were fitted to the corridor and entrance to the museum’s boardroom and the corridor as well as two doors to Play Base.

The TSA 160 NTs are electronically controlled, hydraulic swing door mechanisms which are ideal for heavy doors in high traffic areas, increasing accessibility. They are extremely reliable and require little maintenance.

There are also 10 TS 550 E Floor springs and 60 Boxer integrated door closers fitted to manual doors throughout the building – from study areas and corridors to behind-the-scenes facilities.

GEZE’s architectural ironmongery was specified by Interior Hardware, of Aldridge, in the West Midlands.

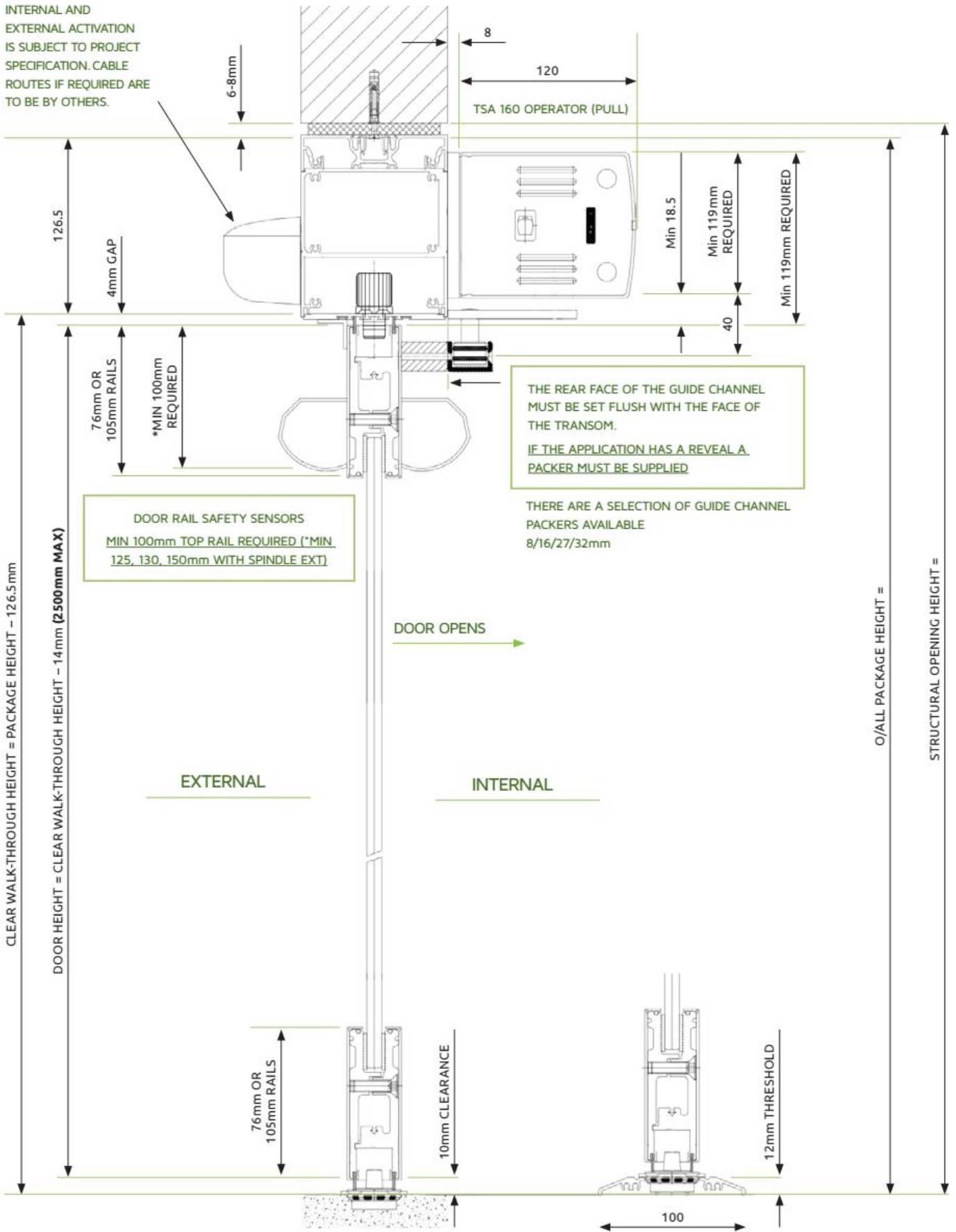
The museum was reconfigured to a design by architect practice BDP with exhibition fit-out by design agency Event to create a more welcoming, accessible and flexible environment, enabling the National Army Museum to manage increasing visitor figures, predicted to reach 400,000 by 2026.

It is intended to act as a bridge between the British Army and wider society – encouraging greater public engagement and understanding of defence and security, both past and present. The new building now houses 2500 objects – from the 17th century to present day. These include artefacts such as Lawrence of Arabia’s original desert robes, Florence Nightingale’s medals and the uniform worn by Her Majesty, The Queen, when, as Princess Elizabeth, she held the honorary commission of Brigadier in the Women’s Royal Army Corps from 1949 to 1952.

Andy Howland, GEZE UK’s Sales and Marketing Director, said that he was delighted that GEZE products were used in the landmark building: “It is immensely satisfying to know that GEZE products are integrated into a building

which houses an archive of such national importance. The redevelopment of the National Army Museum has led to a ‘must-see’ visitor attraction, ready to meet the needs of its many audiences for years to come.”

Mike O’Connor, the National Army Museum’s Director, stated: “The architect’s vision of opening up the building and making areas more accessible has been furthered by the installation of various GEZE products to the highly trafficked areas and doors at the museum as part of the redevelopment. These additions, have made transiting areas much easier for our visitors.”





# THE CARILLION COLLAPSE – DON'T FORGET ABOUT THE SUB-CONTRACTORS

It has been announced that Carillion has been placed into Compulsory Liquidation also known as a Compulsory Winding Up (CWU). Normally, the insolvency of a giant corporation such as this is via an administration so what is different here? Here Philip Cake, Manager at Gibson Hewitt, elaborates.

**W**hen compared to the high-profile failures of retailers such as BHS or football clubs, the unusual factor here is the Government is the ultimate client for the majority of Carillion's projects. This is going to cause upheaval, uncertainty and embarrassment for a lot of civil servants and politicians.

Administrations and most other insolvency processes are run by an Insolvency Practitioner (IP), who is a private sector accountant. A CWU is the only corporate insolvency process where a civil servant, called the Official Receiver (OR), is in charge of the process. In this instance, the OR will be assisted by private sector accountants from PWC but ultimate control over decisions relating to Carillion will remain with the OR.

## Why?

Whitehall will want to minimise the repercussions on key public sector contracts. Questions have already been raised whether it was prudent to give Carillion so many massive contracts essentially putting all its eggs

in one (rather unsafe) basket. With this in mind, it might also be in the Government's interest to conduct the statutory investigation into Carillion's failure in-house and thereby limit any public criticism aimed at the Government.

## Who is going to be most affected?

Setting aside the future delivery of high-profile projects such as HS2, the media has focused on Carillion's 20,000 or more employees and its pension fund deficit. Whilst this may seem like a large number of staff, this is only the tip of the iceberg for those who will be affected.

Carillion's business model involved winning and managing contracts under the Carillion "brand". The delivery of projects was, however, undertaken by a vast army of independent sub-contractors.

## What does the liquidation mean for the sub-contractors?

The sub-contractors are private sector companies which have

been working on behalf of Carillion. These sub-contractors have been undertaking property maintenance projects ranging from prisons to Ministry of Defence homes and projects as diverse as providing school meals to redeveloping Battersea Power Station.

These private companies will now be asking themselves the following questions:

- 1) *Will our outstanding invoices be paid?*
- 2) *What is happening to our contract?*
- 3) *Should we carry on working?*

The answers will vary from project to project.

Uninterrupted continuity of service will be more vital on contracts such as prison maintenance than those in construction. The OR's priority will now be to engage with the sub-contractors and inform them whether the OR has elected to honour the sub-contractor's contracts. Potentially, they might also seek to renegotiate terms at the same time.



*Philip Cake joined Gibson Hewitt in 2001 and qualified as a chartered accountant with the ICAEW in 2004. He subsequently studied for the Joint Insolvency Examination Board (JIEB) exams achieving a first-time pass in 2006 and was granted FCA status by the ICAEW in 2014. He has been the Manager of the insolvency department at Gibson Hewitt since 2006 working in all areas of personal and corporate insolvency.*

## What should sub-contractors do now?

1) *As a priority, sub-contractors should speak with the OR to establish whether the liquidator will honour their contracts. As this is a CWU rather than an administration, there is no guarantee the OR will automatically pay for future work.*


2) *Review all outstanding invoices payable by Carillion and prepare an updated cash flow forecast based on the assumption that none of these invoices are paid.*

*If the non-payment of outstanding invoices is going to affect the viability of the sub-contractor, they should seek immediate advice from an independent IP, such as Gibson Hewitt.*

3) *Prepare profit and loss accounts on two bases as follows:*

- i) *The Carillion contracts continue*
- ii) *The Carillion contracts are terminated.*

This exercise will highlight any overdependence on Carillion contracts. If the business is forecast to trade at a loss in either scenario, the sub-contractor should seek early advice from an independent IP, such as Gibson Hewitt.

Are you a sub-contractor of Carillion or do you know anyone who is likely to be affected? Anyone in need of advice can contact Gibson Hewitt. The first meeting is free. 

[www.gibsonhewitt.co.uk](http://www.gibsonhewitt.co.uk)

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# A PASSIVHAUS FIRST FOR THE UNIVERSITY OF LEICESTER

The University of Leicester has officially opened the George Davies Centre, its new cutting-edge medical teaching and research building, named in honour of the Fashion Retailer George Davies and opened by Sir David Attenborough OM and Michael Attenborough CBE.

**I**t represents the largest investment in medical teaching and applied research by a UK university in the last decade. George Davies is the Founder of high-street brands Next (based in Leicestershire), George at Asda and Per Una for Marks & Spencer. He joined the Attenboroughs, other philanthropic donors, senior management of the university, representatives from local healthcare organisations and staff and students of the College of Life Sciences in celebrating this landmark building.

Acting as a hub to bring together, for the first time, the university's leading academics, researchers, clinicians and students, the George Davies Centre will completely transform medical teaching and improve the lives of many patients in the region and beyond. Housing the university's medical school, the school of psychology and department of health sciences, it will provide an environment for cultivating applied research that will be at the forefront of improved patient safety and the fight against chronic disease.

The centre was made possible through the generosity of many donors, a number of whom are recognised throughout the building through the naming of lecture theatres and rooms. These include the Samworth Foundation, Naresh and Bina Popat, the Leicestershire & Rutland Masonic Charity Association, the Thakrar Family/HKS Motors, the Edith Murphy Foundation, Bhikhu and Saroj Hindocha, Bridget Towle, Next PLC, the Garfield Weston Foundation and the Masonic Charitable Foundation.

**Project:**  
George Davies  
Centre  
**Location:**  
University of  
Leicester  
**Construction  
company:**  
Willmott Dixon

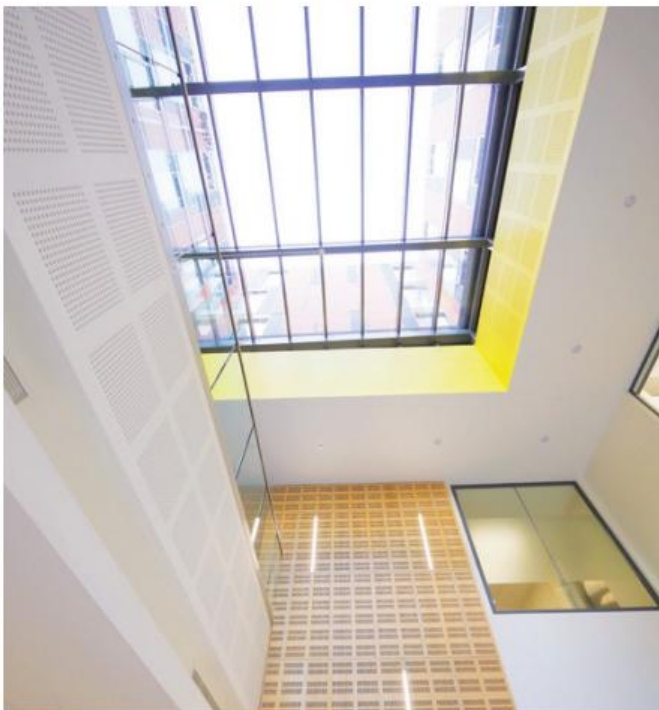
*The George Davies  
Centre represents  
the largest  
investment in  
medical teaching  
and applied research  
by a UK university in  
the last decade*

Other donors are recognised through their gifts to the Wladyslaw Sluckin Memorial Fund Appeal, the Sir Robert and Lady Burgess Teaching Fund and contributions made by University of Leicester alumni and medics.

The building's completion coincides with the introduction of Leicester Medical School's innovative new curriculum, which puts patients at the heart of healthcare education.

The centre will provide a space for public engagement, including a mental health campaign display linked to a public engagement campaign. There will also be a display celebrating women in science and medicine as part of the university's role as a HeForShe IMPACT Champion.





▲ Housing the university's medical school, the school of psychology and department of health sciences, it will provide an environment for cultivating applied research



▲ Acting as a hub to bring together, for the first time, the university's leading academics, researchers, clinicians and students, the George Davies Centre will completely transform medical teaching

▲ The £42m building is a state-of-the-art, multi-award-winning building that is the largest non-residential building in the UK to meet the Passivhaus certification for sustainability and energy performance

The £42m building, which incorporated investment from the University of Leicester and an ambitious fundraising appeal, is a state-of-the-art, multi-award-winning building that is the largest non-residential building in the UK to meet the Passivhaus certification for sustainability and energy performance.

Professor Paul Boyle, President and Vice Chancellor of the University of Leicester, said: "The George Davies Centre is a landmark in both building design and in the development of medical education and research here at the University of Leicester. As we invite George Davies, Sir David Attenborough and Michael Attenborough to officially open the building, I am delighted to be able to celebrate those who have played a part in accomplishing both of these goals.

"This ground-breaking building has been made possible by the generous support of our donors, who I would like to thank personally. In making a commitment to this project they have also played a vital role in nurturing future generations of clinicians and researchers working at the cutting-edge."

Professor Philip Baker, Pro Vice Chancellor and Head of the College of Life Sciences, said: "We are delighted to celebrate

the official opening of the new George Davies Centre. Designed to bring together the university's leading academics, researchers, clinicians and students it provides teaching rooms, offices, lecture theatres, dry lab research facilities and support spaces.

"The new facility delivers a new 'rapid response' curriculum for training tomorrow's doctors along with being the home of our psychology and health sciences students. The centre will become a central hub speeding the translation of research to real-world improvements for patient treatment so it is especially fitting to name the building after George Davies, whose generous donation has enabled a new limb salvage clinic to be opened and the university to invest in new research."

Bill Friar, Director of Development and Alumni Relations at the University of Leicester, said: "The University of Leicester was established nearly 100 years ago through gifts, large and small, made by the local community to honour loved ones who served and in many cases died in World War I. The university is a living memorial to their sacrifice, and has as its mission a commitment to improving the lives of future generations." 

**Project:**  
Erlangen  
University Hospital  
**Location:**  
Germany  
**Facade  
manufacturer:**  
Dekton

*The two-floor  
addition connects  
directly to the east  
side of the existing  
building and offers a  
new and attractive  
entrance to visitors  
and patients*



## HARMONIOUS COLOUR SCHEME FOR GERMAN HOSPITAL EXTENSION

The ultra-compact surface Dekton in the colour 'Edora' has been selected for use on the exterior facades on the recently completed Erlangen University Hospital in Germany.

**T**he original building was expanded due to a need for additional space, with the two-floor addition designed sensitively to fit in with the existing architecture. Above all, a uniform colour palette was required for the facade, in addition to meeting the

high functional requirements as expected from exterior cladding. Thanks to its excellent aesthetic qualities and numerous advantages as a material, Dekton was chosen for the building's panels, enabling the project to sit harmoniously next to existing structures.

A particularly important aesthetic consideration the Architect, Sabine Rosseutscher (ByAK), faced was the medieval city wall remains, which run just past the building. Due to the project being in such close proximity to this respected

historical feature, there was a need to source an external material that would integrate well into the surrounding environment, whilst also blending perfectly with the main building and meet the advisory board's aesthetic specifications.

In total, 550m<sup>2</sup> of ultra-compact Dekton by Cosentino surfaces were applied to the facade in the colour Edora from the Natural Collection. Its colour palette of warm and neutral greys in addition to its uniform texture results in a modern, pure and natural look.

The two-floor addition connects directly to the east side of the existing building and offers a new and attractive entrance to visitors and patients. The combination of pearl beige window frames, pastel blue ventilation flaps and bright bronze protective window films create a harmonious colour scheme, giving the addition a timeless elegance.

In addition to its aesthetic value, the large-format Dekton slabs also offer practical benefits when used for building cladding. The design of the facade, which is suspended and ventilated from behind, comprises a 240mm-thick concrete wall, a 160mm-thick layer of thermal insulation, rear space for ventilation and a sub-structure, to which the facade panels are anchored. Thanks to the material's exceptional qualities, the facade slabs fit perfectly on the hidden aluminium supports of the sub-structure made by Keil Befestigungstechnik GmbH, allowing the weight of the design's cladding to be safely transferred to the concrete walls.

What's more, ultra-compact Dekton surfaces, as a CE-certified cladding material, offer a range of additional technical qualities besides their outstanding dimensional and colour stability, such as impressive protection against water penetration and fire. The surfaces have high resistance to ultraviolet rays, frost and thawing, as well as high scratch and stain resistance, ideal for creating beautiful lasting designs. Due to the high density of the material, Dekton surfaces are relatively light, and thanks to the large-format slabs (3200 x 1440mm) available; they may be mounted with relative ease and speed. The consistent thickness (12mm) of the material will also allow the creation of a completely uniform surface. 

[www.dekton.co.uk](http://www.dekton.co.uk)



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*A 'water-exclusion strategy' house is built so that water cannot get into the building and cause damage. A 'water-entry strategy' means constructing the house so that although water may enter, the impact is lessened.*

## IN THE DRINK!

While recent winters have been relatively dry, that's no reason to become complacent about flooding – especially in prone areas. So, when new homes are being built in areas at risk, building in line with 'water-entry' or 'water-exclusion' strategies must be taken into consideration. Hudson Lambert, Director at Safeguard Europe, reports.

**I**t could be thought that, flood-wise, the winter of 2016 was something of a let-off, being relatively warm and dry, given the events of 2015 and 2014. As was 2017, although – it being only February now – there is still time for 2018 to become very wet. 2014 saw Somerset and the Surrey and Thames river valleys under water; while the following year it was Cumbria, north Lancashire and Northumbria that got hit worst.

Despite these winters' reprieves (2017 to 2018 is only 'so far'), the reality is

that extreme weather events are increasing – look at the Caribbean and southern United States recently – and, according to the Environment Agency, there are over five million homes in England and Wales that are at risk of flooding.

It has been the case that design solutions for flooding were described as either 'flood resistant' or 'flood resilience'.

However, use of these terms had become muddled and occasionally used interchangeably. Consequently, less mistakable terms are



▲ Despite these winters' reprieves, the reality is that extreme weather events are increasing

now being employed, namely: 'water-exclusion strategy' (i.e. resistance), and 'water-entry strategy' (i.e. resilience).

A 'water-exclusion strategy' house is built so that water cannot get into the building and cause damage. A 'water-entry strategy' means constructing the house so that although water may enter, the impact is lessened, structural integrity is maintained and drying and cleaning is made easier.

The likely depth of flooding will impact on the choice design. For low water depths, a 'water exclusion strategy' typically is recommended. A 'water-entry strategy' is needed for higher water levels: a difference in water level of over 0.6m between inside and outside can cause significant structural damage to standard masonry buildings.

In practice, a pragmatic combination of both is taken because it is often either prohibitively expensive or impractical to provide a completely flood-resistant building – especially in cases where flood protection is being retrofitted to existing buildings.

## Designing in flood resistance

In a new-build situation, the best way to stop water penetrating is to ensure that all concrete used is waterproof and to seal all construction joints with specifically designed proprietary tapes. Services coming in through walls and floors should be designed to be watertight.

As a second line of defence, and if budget and circumstances allow, a cavity drainage membrane can help with the management of flood water. A cavity drainage membrane, such as Oldroyd, directs the water down the walls into a perimeter drain with the water running to a sump where it can be evacuated using a pump. This type of approach is also popular as a retrofit measure to existing buildings, used in combination with measures to upgrade the resistance of the existing masonry such as tanking and repointing.

## Designing in flood resilience

When designing for flood resilience, the goal is to make it as easy as possible to clean the interior of a house after a flood. Floors and walls should be finished with an easily cleanable surface such as tiles. If the floor surface isn't water compatible it should be easy to take up and replace.

Water compatible doors and woodwork should be considered. Electrical circuits and sockets should be situated above the expected water level and in a kitchen, appliances can be raised up off the floor.

Apart from floorcoverings and joinery, it is interior decoration that can take the biggest hammering – especially where walls are finished with gypsum or lime-based plasters. A new report from the University of Portsmouth – 'The Effect of Moisture on Plaster Performance' – supports the use of damp-resistant plasters instead. This cost-effective system utilises breathable, moisture-resistant plasters to allow the fabric of a flooded building to dry out whilst providing a durable finish that will be resilient to future flooding. Moisture-resistant screeds have also been developed using similar technology.

After a flood, you can – for all practical purposes – simply hose down and sterilise the wall. The make-up of these plasters means they have large pores and a high pore volume. This allows salts to form within the plaster rather than on the surface; and the high pore volume results in high water vapour diffusion (breathability) and higher thermal resistance, reducing the risk of condensation.

## Vital details

When considering the right combination of measures and products, it may be necessary to get specialist advice from a consultant or from the technical team of a supplier such as Safeguard. As with any system designed to protect from or manage water, it is vital to get the detail right at the design and installation stages.

[www.safeguardeurope.com](http://www.safeguardeurope.com)

FIG. 1

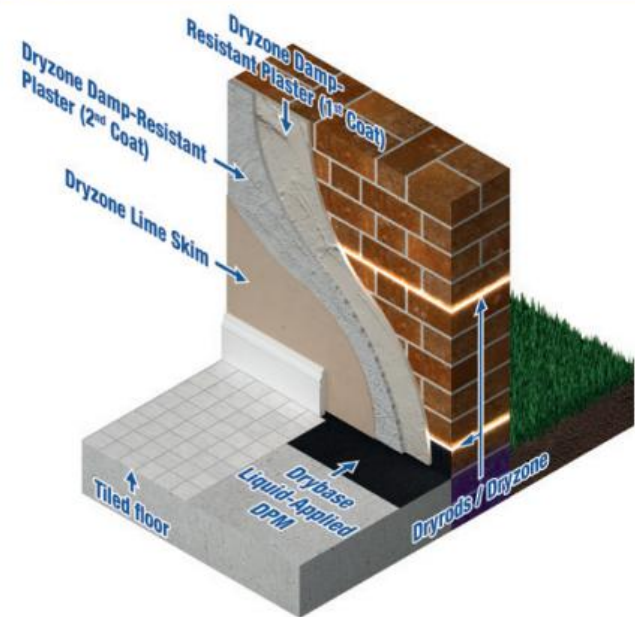


FIG. 2

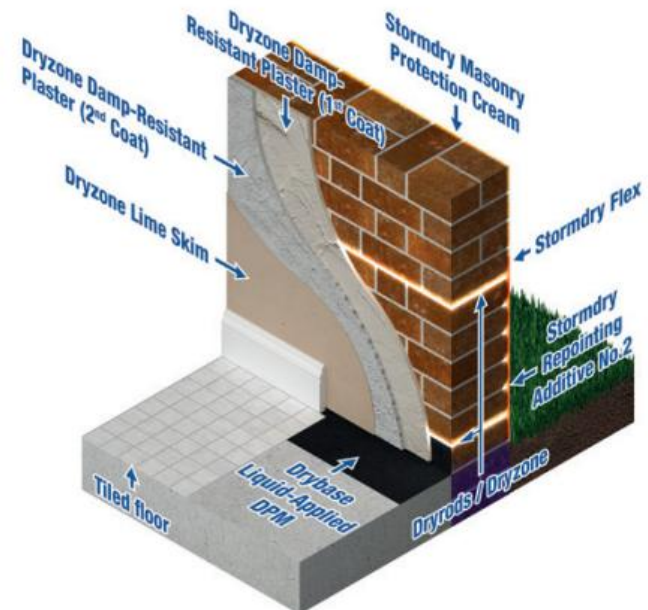
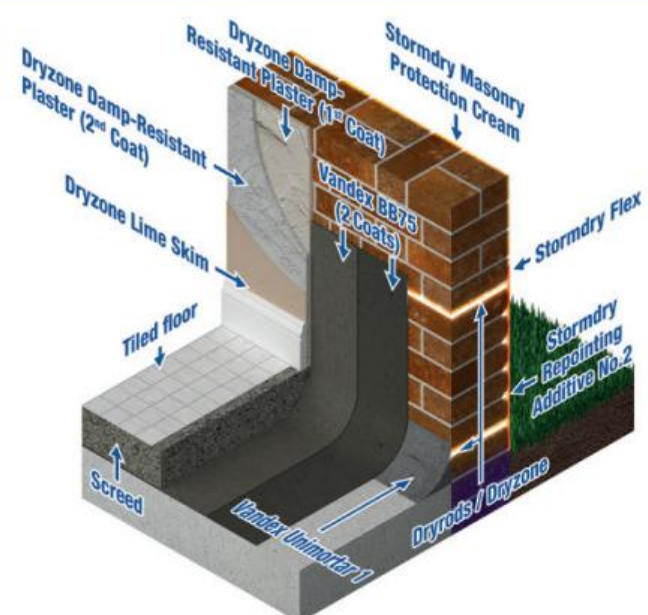


FIG. 3





▲ ecobuild is working with a number of strategic partners who are contributing to the overall strategy and shape of the event to ensure it is wholly reflective of the industry's needs

# ECOBUILD 2018: THE EVENT SHAPED BY THE INDUSTRY

ecobuild is returning to ExCeL, London, from 6 to 8th March and, under the new ownership of Futurebuild Events, things are set to be very different. The event is being designed and built around the industry, bringing to life the latest technology, freshest thinking and most innovative materials.

**T**he event is not only being shaped by comprehensive industry feedback but also with direct input from leading industry influencers. These include Lynne Sullivan, Nathan Baker, Julie Hirigoyen, Darren Richards and Peter Murray, who are all members of the ecobuild Steering Group, which is helping to set the agenda for the event.

Martin Hurn, Managing Director of Futurebuild Events, explains: "New, independent ownership offers a unique opportunity to completely overhaul the event. We believe that to be as relevant and valuable as possible, we need to understand and act on what built environment professionals want to see at ecobuild. We see our role as to facilitate the agenda, rather than dictate it."



▲ ecobuild is returning to ExCeL, London, from 6 to 8th March

## The CPD-accredited conference programme

This year's conference takes its lead from global environmental targets, with sessions reflecting the concerns of the built environment industry and formulating practical recommendations for action. Some of the big issues represented by the UN Sustainable Development Goals, the New Urban Agenda and the Paris Agreement will provide the focus. Speakers include experts in their field, including Jane Duncan, Paula Caballero, John Elkington and Bill Dunster.

## ecobuild sustainability showcases

Surrounding the conference arena will be the ecobuild sustainability showcases, home to the some of the most innovative solutions to the issues facing the built environment. The showcases will truly put sustainability at the heart of the event.

They will feature two full-scale builds, including the zero net carbon home from ZEDfactory – designed to minimise fossil fuels and annual energy bills. It offers a complete response to the housing crisis.

The Edible Bus Stop returns with The Hive, a pocket park highlighting biodiversity, biophilia, health and wellbeing. Another highlight is the WasteZone, curated by Architect, academic and activist Duncan Baker-Brown, which will allow visitors to discover waste's potential.

## The futurebuild districts

The conference arena and sustainability showcases are surrounded by the futurebuild districts, each of which will act as an immersive and stimulating area where people, brands and companies will be able to network and develop profitable relationships. These include:

- District Energy
- Building Performance
- Infrastructure
- Timber
- Concrete
- Offsite
- Green & Blue Infrastructure
- Energy & HVAC.

The dedicated focus of each district will encourage valuable relationship building and discussion around the big issues shaping the agenda in the built environment.

## Key partnerships

ecobuild is working with a number of strategic partners who are contributing to the overall strategy and shape of the event to ensure it is wholly reflective of the industry's needs. Notable partners include the Considerate Constructors Scheme, the RIBA, CIAT, NLA, Bioregional, CIBSE, The Edible Bus Stop and the Edge. The event will also host the BREEM Awards and the Offsite Construction Awards.

[www.ecobuild.co.uk/register](http://www.ecobuild.co.uk/register)

# ecobuild

06-08 March 2018 / ExCeL, London



## Don't miss Inta's innovation on show at ecobuild

Inta will once again showcase a selection of its premier products at this year's ecobuild, including its extended range of revolutionary HIPER HIUs, maintenance-free ActivFlo water conditioners and the state-of-the-art Zilmet expansion vessels. With more integrated features than any other heating interface unit on the market, Inta's latest collection of single- and twin-plated HIPER HIUs has been designed in collaboration with installers to ensure that fitting, servicing and maintenance can be done with ease. Installed in shared residential buildings, the HIPER HIU distributes heating and domestic hot water from a central plant system to individual properties.

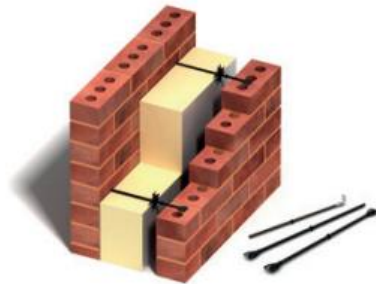
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 ☎ 01889 272180

## Uponor showcases district heating solutions at ecobuild



Uponor will be showcasing its range of pre-insulated Ecoflex pipes and its Wehotherm range of steel pipes at this year's ecobuild. Visitors to stand G184 will be able to see a project overview highlighting the way in which Uponor's steel and pre-insulated non-steel pipes can be used in combination to deliver a complete district heating solution. A number of case studies will be available to showcase the solutions in action, demonstrating their performance across a varied range of ground and temperature conditions. Delegates will also be able to examine product samples, including examples of Ecoflex pre-insulated flexible pipe connected directly to Wehotherm steel pipe using Uponor's innovative Q&E (Quick & Easy) fittings.

🌐 [www.uponor.co.uk](http://www.uponor.co.uk)    ✉ [enquiries.uk@uponor.com](mailto:enquiries.uk@uponor.com)    ☎ 01923 927020



## Ancon to launch new products at ecobuild 2018

Ancon will be launching its latest fixing innovations at ecobuild on stand C62. Ancon's stand will focus on structural fixings that are opening up new possibilities in zero- and ultra-low-energy construction by minimising thermal bridging, including its insulated balcony connectors and ultra-low thermal conductivity cavity wall ties. It will also showcase a brick-faced support system that allows designers to achieve exciting masonry facade aesthetics. Heading up the displays will be Ancon's unique, BBA-approved, multi-award-winning Teplo wall tie range. Manufactured from pultruded basalt fibres set in a resin matrix (0.7W/mK), a material over 60 times more thermally efficient than steel (50W/mK), Teplo ties are widely specified in Passivhaus or similar low-energy developments.

🌐 [www.ancon.co.uk](http://www.ancon.co.uk)    ✉ [info@ancon.co.uk](mailto:info@ancon.co.uk)    ☎ 0114 275 5224



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# JUBILEE HALL – REINVENTING FITNESS SINCE 1978

40 years on, the Phoenix Project aims to restore a Covent Garden gym to its iconic status as a Central London community asset by Phil Rumbelow.

▲ The next six months will see the realisation of an ambition to create London's greenest gym

Originally built by the Duke of Bedford in 1897 to house flowers, Covent Garden's Jubilee Hall was saved from developers by a group of local activists in the 1970s, and first opened its doors as a community sports centre in January 1978.

### Key partnerships

Within six months of opening, the centre was a roaring success, being used by more than 1000 people per week for team sports, martial arts, trampolining and even roller-discos. But times and tastes have changed. Jubilee Hall, now principally equipped as a gym, competes with private sector chains at all price points, as well as revamped public leisure centres and boutique studios offering the latest classes. Outdoor running and cycling continue to grow in popularity and provide a cheap alternative to gyms, whilst free exercise sessions are even available from local sports retailers. New technology also brings competition of a different sort, with health, fitness and nutrition apps as well as wearable tech enabling consumers to get 'expert' advice and to track their activity.

With a gradual decline in membership and income, the Jubilee Hall Trust Board undertook a strategic review and agreed to investigate proposals for a substantial re-investment into the gym in Covent Garden. This investment would seek to maximise the Grade II Listed building's attributes including its unique location and natural light and to improve the facilities and equipment to create a 'wow' factor.

### The key requirements of the project were threefold:

- To increase membership, usage and income, to make Jubilee Hall a long-term sustainable and successful business
- To generate sufficient additional surpluses to enable the charity to deliver inclusive programmes based both in the gyms, and outside, with a particular emphasis on key target groups, such as women, the over 60s and those living in the most deprived communities
- To restore Jubilee Hall gym, Covent Garden, to its place as a thriving and iconic Central London community asset, which enables more people to get more active, more often.



▲ Within six months of opening, the centre was a roaring success, being used by more than 1000 people per week





▲ The investment would seek to maximise the Grade II Listed building's attributes including its unique location and natural light



▲ The team at Jubilee Hall wanted their equipment investment to attract new members as well as retain existing ones

The investment would need to be not just in the physical infrastructure (e.g. building, facilities and equipment, re-configuration and adaptation of spaces) but also in intangible infrastructure (e.g. digital solutions, technology), as well as in changes to staffing and training, programming, private hirers and re-branding, pricing and marketing.

As Operations Director, Jon Giles, explains: "We started by considering the customer journey, and that means from their first interaction with us – probably via our website or social media – to when they enter the building, train with us and then leave. We recognised that our digital services needed to be upgraded, and introduced our own Jubilee Hall Trust app to improve customer communication and to simplify class bookings, and have also been re-developing our website to ensure that it is mobile responsive.

"Last July, we introduced virtual classes in our spinning studio and, since then, we have delivered an average of 100 pre-programmed virtual classes per month, whilst almost as many have been user-activated on demand. Importantly, these have been in addition to 'live' classes, not as a replacement

for them. An added member benefit is the Wellbeats app, which gives access to more than 250 other virtual classes, which they can stream to their own devices such as smartphones, tablets or TVs. This enables them to maintain their exercise regime wherever they are."

It was also important that members started to see the facility as more than just a gym. To that end, the charity converted some under-used offices into a four-room wellness centre in a quiet part of the club and partnered with Breathe London to operate them. Breathe has already worked with the charity since 2004, and brings together more than 25 independent and entrepreneurial therapists, offering a wide range of mind and body services, from sports massage and physiotherapy to smoking cessation and hypnotherapy.

However, for all these changes, the centre of the club is still the 110-station gym, and some of this equipment needed upgrading. Since October last year, the 18,000ft<sup>2</sup> space has boasted more than 80 pieces of the very latest Precor strength equipment, two Queenax functional training units and 25 Precor Spinner Rally bikes.

The install was carried out over just four days, with minimal

disruption to customers, and re-establishes the facility as one of the best-equipped fitness spaces in Central London.

Darren Frost, Sales Representative from Precor, said: "The team at Jubilee Hall wanted their equipment investment to attract new members as well as retain existing ones by addressing current industry trends – including functional training and small group exercise – so we supplied a strength and functional equipment blend, to appeal to a broad spectrum of users across the community.

"The unique Queenax functional systems provide the perfect solution, as they maximise the training space within the Covent Garden facility creating multi-use areas, as well as driving exerciser engagement. In addition to this, the broad range of Discovery selectorised and plate-loaded strength equipment will appeal to first-time users and seasoned strength trainers alike."

Jubilee Hall Club Manager, Oliver Deen, said: "We have always had one of London's most extraordinary exercise spaces, with a triple-height ceiling and glass roof, but now we also have the latest in high-quality equipment to complete the experience."

Whilst much has been achieved over the last six months, there is still more to do. The main building infrastructure programme at the heart of the Phoenix Project, is about to start. The next six months will see the realisation of an ambition to create London's greenest gym.

Chief Executive, Phil Rumbelow, concludes: "Over 100 years ago, Jubilee Hall was a flower market warehouse, so we intend to hark back to that heritage and to create an iconic workout space that nobody else can copy. Imagine training in the Temperate House at Kew or inside the Eden Project! And, of course, our ambition to be green will include using new systems and cutting-edge technology to improve recycling and save power, and even for our gym users to generate enough to put it back into the grid.

"Most importantly, we want to restore Jubilee Hall as an accessible asset for the local community who originally saved it. We plan to offer a number of free memberships for the most disadvantaged residents, and continue to be the only leisure centre in the country with completely free access on Sundays."

**Project:**  
Caterham School  
**Location:**  
Caterham, Surrey  
**Ventilation specialist:**  
Elta Group Building Services (EGBS)

# VENTILATION TAKES CENTRE STAGE AT PERFORMING ARTS CENTRE

*The unusual theatre consists of a simple performance space – usually a large square room with black walls and a flat floor*

When Caterham School in Surrey announced an extension to its facilities as part of the new Performing Arts Centre of Excellence (PACE) project, the concept of an experimental 'black box' theatre formed the cornerstone of the proposal.

**T**he unusual theatre consists of a simple performance space – usually a large square room with black walls and a flat floor. It provides a modern and experimental performance area for the students as well as an additional rehearsal room.

## The challenge

The school expressed a need for comfort cooling especially given that at times; numbers in the room could reach up to 120

people. However, the expansive space would also need to be efficiently heated in time of low occupancy such as during rehearsals or lessons.

The difficulty of designing a system which would not only deliver cooling on busy show nights but also provide heating when necessary was made even more problematic given the heat created and retained by the bright lights and heavy drapery in use. The requirement of the space also meant that when

the theatre was in 'blackout' mode, with the curtains and blinds down, the use of natural ventilation was heavily restricted.

## The solution

To help combat the problem, building services and control specialist, Kestrel Mechanical, enlisted the help of ventilation specialist Elta Group Building Services (EGBS). EGBS suggested that ventilation could be supplied by allowing hot and cool air to mechanically flow into the



*▲ The school expressed a need for comfort cooling especially given that at times numbers in the room could reach up to 120 people*



▲ The expansive space would also need to be efficiently heated in time of low occupancy such as during rehearsals or lessons

building via an integral heat pump air handling unit (AHU), and a Komfovent Verso-RHP-20 was installed. This would help to deliver volume flow rates per person set out in 'Building Bulletin 101: ventilation for school buildings' while complying with CIBSE guidelines and exceeding the Government's revised heat exchange efficiencies through the use of an integral thermal wheel.

As a retrofit to an existing flat roof which already housed an old AHU, the installation had clear space limitations. The Verso's integral compressors eliminated the need for external heat pumps, external fridge pipework and electrical supplies making it the ideal solution for the project. Guy Hammer, Senior Technical Specification Manager at Elta Group Building Services, worked closely with Kestrel to ensure the siting of the unit on the roof allowed the external and internal ducting to fit with the existing structure.

The time pressures of working at a busy school site also meant ease of installation was key. The unit came supplied with everything pre-wired, only requiring connection to the mains electrical supply in order to be ready for use.

### The verdict

Since the installation, the school has been enjoying the multiple benefits of the system which boasts an 81% efficient heat exchanger and heat pump, which runs at 60% efficiency.

Phil Radley, Mechanical Design and Build Project Engineer at Kestrel Mechanical Services, commented: "By working closely with Guy we ensured the unit was handled correctly and the design criteria set out was achieved post-construction so the school could achieve the best results both in terms of efficiency and payback period. One example of this is the 'night-time purge' or 'free cooling' mode which benefits the school by helping to reduce and limit the need to run the unit in cooling mode, helping us to save energy.

"The unit has been well received from everyone involved, including my director. The full commissioning service was a real benefit to this project as limiting downtime was key and it was great to see Elta Group Building Services getting involved on site."

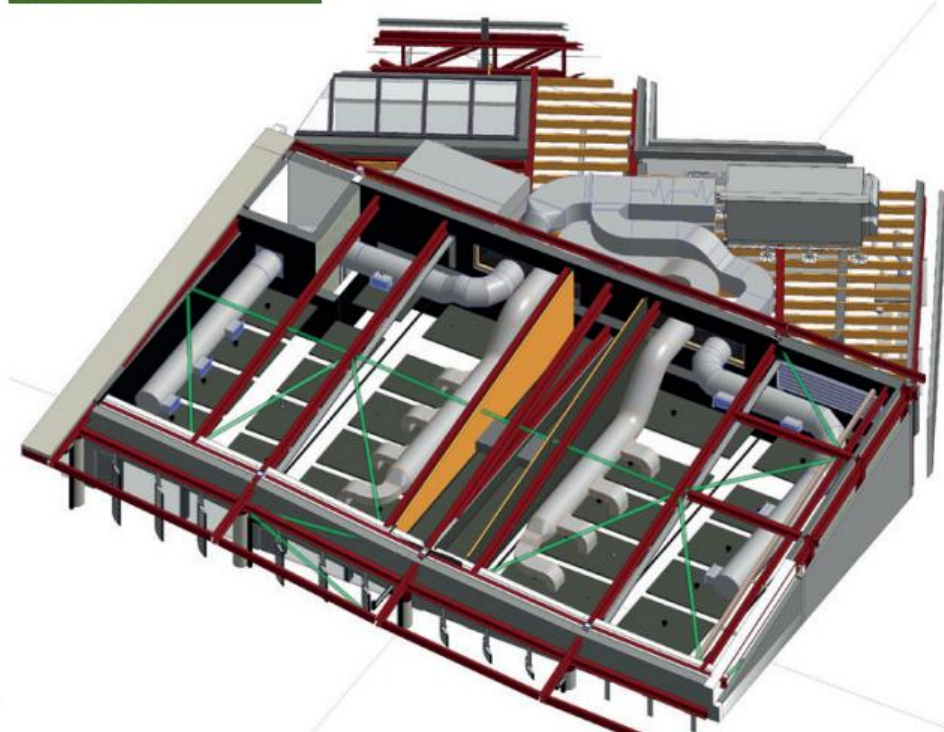
Guy Hammer added: "This project is an excellent example of how necessary and versatile good ventilation is. Schools often have issues with air flow and it is vital to ensure the correct airflow into a space in order for students to achieve optimum productivity.

"This project went very smoothly and we are delighted to have been involved. Following the success of this project, we are looking forward to working with Kestrel Mechanicals in the future."

The project was finished and commissioned in August 2016, with film and theatre Actor and Director Simon Callow CBE officially opening the Performing Arts Caterham School's new Centre for Performing Arts in October. 🏠

🏠 [www.egbuildingservices.co.uk](http://www.egbuildingservices.co.uk)

### 3D REVIT VIEW





# A WORLD OF INNOVATION FOR A WORLD OF CHANGE

Celebrating an impressive 32 years, kbb Birmingham – one of the UK's largest and most established kitchen, bedroom and bathroom events – returns to the NEC, Birmingham, from 4 to 7th March 2018.

**F**ollowing the success of last year's theme, Future, kbb continues to forecast forthcoming trends and challenges facing the UK KBB community, identified by partner, AMA research. Bringing you a world of innovation for a world of change, kbb Birmingham will manifest four challenges and trends in each feature across the four days, providing innovation, inspiration and insight to help businesses grow in a world of change.

## The four trends are:

**1. Society:** Evolving customer behaviours alter the meaning of lifestyle design, e.g. DIY-conscious early adopters outsource cutting-edge design and smart space innovations fuelling the installer skills shortage.

**2. Smart technology:** Be it future or fad, 'smart' is creating new possibilities for those on both sides of the debate, e.g. virtual reality transforms showroom buying behaviours and voice recognition

modifies our use of space, whilst reactionaries revert to traditional kitchen and bathroom design.

### 3. Disruption as opportunity:

'Disruptors' change the construction landscape, heralding new design opportunities, e.g. uncertainty surrounding Brexit stimulates house price stagnation driving forward a growing refurbishment market fuelled by mature, equity-rich homeowners undertaking big-ticket kitchen and bathroom projects.

**4. Materiality:** UK consumers demand higher quality products and materials, e.g. worktops continue to dominate the kitchen furniture market driving innovation and diversification in the surfaces sector.

The Innovation Awards, in partnership with Blum, aim to discover and celebrate brands that are producing products, methods and ideas that align with the theme's four trends, to help shape the future of the industry.

The award entries will be judged by an esteemed panel of judges including kbb's Brand Director, Joel Butler, and the winners will be announced at the show for visitors to be able to cast an innovative eye on the winning products.



Dansani Luna bathroom

◀ Bora extractor fan

kbb Birmingham 2018 sees the return of great British companies along with new international exhibitors including Smeg, Sensio, Perrin & Rowe, Villeroy & Boch, Crosswater, Karonia, Caple, Carron Bathrooms, Franke, Nolte, BLANCO, Samsung, Dansani, Blum, Hettich, Novy, Roper Rhodes and Impey.

Joel Butler commented: "I'm really looking forward to another successful year at kbb Birmingham, and particularly how the community will explore and learn from this year's theme. We're welcoming a range of new and returning exhibitors, all of which will showcase a high calibre of products, methods and ideas. I would recommend visitors try and spend more than one day at the show."

Join the conversation with 16,000 industry buyers from 4 to 7th March, at NEC, Birmingham. Visit the website to register for your ticket and for more information on what you can find there, plus details of how to get there and where to stay. 🏠

🏠 [www.kbb.co.uk](http://www.kbb.co.uk)



4-7/3/2018  
NEC Birmingham

# Showerwall relaunches at kbb with new branding and an exciting range update

Showerwall, the waterproof bathroom wall panelling system, will unveil an exciting range update and new brand identity at this year's kbb Birmingham on stand C60, hall 20, signalling the design strides this laminate surfacing material has made.

Reflecting the industrial trend and the desire for earthy materials in the bathroom, the 100m<sup>2</sup> stand will showcase Showerwall's newest decors and texture innovations including concrete, brick and woodgrain designs. In addition, a new acrylic collection will offer standard or bespoke digital print options.

The range revamp aims to open up the design flexibility of laminate wall panelling

to an even wider range of customers for domestic and commercial projects. It is ideal for use in shower enclosures, around baths, behind basins and to create statement feature walls.

Showerwall is a 100% waterproof system, available in a choice of panel sizes that are fast and easy to install and come with a 15-year guarantee.

There will be a new retailer merchandising package including a consumer lifestyle brochure, swatches and display stands. Showerwall is available ex-stock nationwide from Ideal Bathrooms, IDS, Q4 and Formula 1.

[www.showerwall.co.uk](http://www.showerwall.co.uk)  
[info@showerwall.co.uk](mailto:info@showerwall.co.uk)  
 0845 604 7334

## Rotpunkt pleased to announce attendance at kbb Birmingham

Exhibiting on stand N110, Rotpunkt has seized this invaluable opportunity to launch a range of brand-new products, sizes, materials and finishes with the philosophy of 'inner beauty' and the hope to inspire and breathe new life and interest into 'what's behind the kitchen door'. Attendees will see a blend of both display and concealed storage, welcoming adjoining sideboards, cantilever breakfast bars, a collection of high-line wall cabinets, glass options, base units and drawers as well as new island unit solutions, all supported by a host of complementary matt black fixtures and fittings.

[www.rotpunktuk.com](http://www.rotpunktuk.com)

[info@rotpunktuk.com](mailto:info@rotpunktuk.com)



## Back to nature for CRL Stone at kbb 2018

Stand F85 at kbb Birmingham 2018 will have a distinctive natural feel, as CRL Stone launches a range of new colours into its CRL Quartz and Ceralsio collections. Visitors to the stand will be among the first to see 11 new colours in the manufacturer's popular Ceralsio ceramics and CRL Quartz ranges, all influenced by striking natural materials including marble and granite. The Ceralsio collection is enhanced with Ceralsio Statuario which has a distinctive grey veining on a crisp white background, Carrara Vagli with a grey and gold vein that emulates the look of marble from the Tuscany quarries, Pietra Grey with subtle white veining and Ossido which replicates the industrial look of oxidised steel.

[www.crlstone.co.uk](http://www.crlstone.co.uk)  
[contact@crlstone.co.uk](mailto:contact@crlstone.co.uk)  
 01706 863600



## Daval to exhibit at kbb Birmingham 2018

Daval is pleased to announce its attendance at kbb Birmingham 2018: the UK's largest gathering of the world's best kitchen, bedroom and bathroom brands. Taking place from 4 to 7th March at NEC, Birmingham, Daval – from stand K160 – will display three true-to-life interior schemes, made-up two kitchens and one bedroom suite. The largest true-to-life display will consist of a contemporary handleless kitchen concept, which welcomes Mayfair/Finsbury and Langham by Daval. In contrast, the second kitchen display will show Daval's Bramham in-frame kitchen with classic styling

to answer the massive growth in popularity for this range. It will demonstrate the beauty of more traditional styling and present handcrafted features.

[www.daval-furniture.co.uk](http://www.daval-furniture.co.uk)   [enquiries@daval-furniture.co.uk](mailto:enquiries@daval-furniture.co.uk)   01484 848500

**Project:** Britannia Bridge  
**Location:** Anglesey, Wales  
**Technology solutions:** GeoSLAM

# WELSH MONUMENT INSPIRES A UNIQUE SCANNING PROJECT

For those living in densely populated urban areas such as London, Manchester or Birmingham, it seems inconceivable that the closure of a single access point could cause large-scale disruption and delays. But there are infrastructures across the UK that act as the sole gateway to certain locations, and so their maintenance is essential.

▲ Amey was tasked with establishing whether there was any movement in the structure of the piers and employed a unique application of a GeoSLAM handheld scanner to help

**H**ere, Stuart Cadge, from GeoSLAM, recounts the unique surveying project of Britannia Bridge, Anglesey, alongside infrastructure support service provider Amey.

An island off the northwest coast of Wales, Anglesey (or Ynys Môn) comprises 276 miles<sup>2</sup> of ancient monuments, rolling hills and sandy coastlines. By far the largest island of Wales, Anglesey is the seventh-largest island in the British Isles and a popular tourist destination.

Britannia Bridge is of particular importance to tourists, residents, freight and businesses, being the sole rail link for passengers travelling between Anglesey and the mainland UK across the Menai Strait. It is, therefore, crucial to regularly assess the structural integrity and longevity of such structures, in order to keep this vital transport artery open.

Battered by the strong Menai Strait current on a daily basis, the

bridge has the added pressure of significant projected increases in congestion from seasonal and peak periods over the next 20 years. Amey was tasked with establishing whether there was any movement in the structure of the piers and employed a unique application of a GeoSLAM handheld scanner to help.

## Anticipating challenges

Inspection of the Britannia Bridge is carried out every 12 years and proves a complex and challenging site to assess. First opened in 1850, the original structure was gutted by fire in 1972, but was rebuilt as a single-tier steel truss arch bridge with a second tier added to cater for increased road traffic.

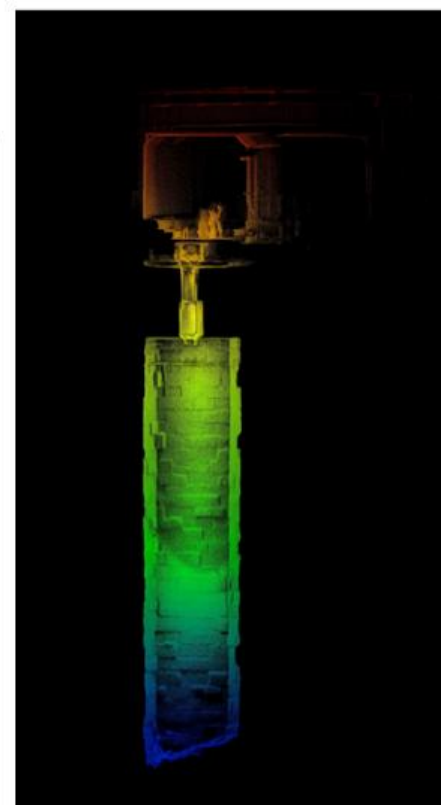
In the preliminary stages of the project back in August 2016, Amey used a large team of abseiling surveyors to assess the external steelwork in close detail. However, an internal evaluation is just as important (if not more

so) as it can throw up a number of issues not visible to the eye.

The bridge retains its original stone columns, with just a small hatch providing access to the hollow interior masonry. It quickly became apparent that the voids within the structure would be simply impossible to survey with traditional methods – including a terrestrial scanner.

With the need to obtain sufficient data without compromising on accuracy of the results, physically collecting data by measuring the space with traditional tools such as laser Distos or tape measures would also not be suitable – as they would prove to be hazardous and time-consuming.

The final challenge was that of the elements. Even on a typical Welsh summer's day, the chosen technology would need to be resistant to strong winds and pouring rain; drone-operated scanners would be unreliable too.



▲ The scanner allows complex three-dimensional geometry to be captured, including multiple levels and stairways, without the need for GPS



▲ Amey chose the ZEB-REVO, a handheld, lightweight, mobile indoor mapping tool



▲ Developed by GeoSLAM, the device can record over 43,000 measurement points per second

## The chosen technology

Amey chose the ZEB-REVO, a handheld, lightweight, mobile indoor mapping tool which is approximately one-third of the cost of a high-resolution static scanner. Developed by GeoSLAM, a UK-based company specialising in 3D geospatial technology solutions, the device can record over 43,000 measurement points per second.

Using 3D Simultaneous Localisation and Mapping (SLAM) technology, the ZEB-REVO is designed primarily for enclosed mobile mapping with complex and multi-level environments in mind. The scanner allows complex three-dimensional geometry to be captured, including multiple levels and stairways, without the need for GPS. As well as mapping rail infrastructure assets, the ZEB-REVO is used in a huge range of other surveying projects, including; generating building footprints, estate agency valuations, mapping heritage buildings and scanning to BIM. Without requiring comprehensive training to use the device, the team at Amey was able to 'pick up and go' with the ZEB-REVO tool, saving

additional prep time for any members of staff previously unfamiliar with the technology.

What made this particular application unusual was the way in which the ZEB-REVO was exposed to the internal columns of Britannia Bridge. Too dangerous to send individuals down into the 25m+ voids themselves, and limited by a very restricted access hatch, GeoSLAM and Amey worked together to create bespoke technology to lower the scanner down into the core of the structure to check for any damage caused by the ferocious tides.

## The day arrives

The ZEB-REVO was to be used in just two individual scans, one at Angelsey pier in the north, and the other at the Carnarvon pier in the south, providing detailed scan dimensional data to confirm what was seen by inspectors in previous assessments at both sites.

Methodology confirmed, the bespoke lowering device was built to securely combine the ZEB-REVO scanner head and datalogger together. Facing directly down, the scanner head was targeted in the direction

of travel towards the bottom of each pier. A rope was then threaded through the eyelet at the top of the lowering device and securely attached to a tripod positioned above the narrow access hatch.

Technology in place, the ZEB-REVO was initialised at the manhole opening to each pier. During start-up, the device needs to be kept completely still in order for the inertial measurement unit (IMU) to ascertain its position. After just 35 seconds, the now-initialised tool was gradually lowered down into each pier to scan the entire internal structure. Through existing bridge drawings, the Amey team knew the approximate depth of each internal column and, with an indoor range of 30m, depth was no issue.

After sufficient data had been collected, the ZEB-REVO was drawn back up to the surface of the bridge and returned to its starting position for de-initialisation. Each survey took no longer than 10 minutes to complete, and data was processed on site using GeoSLAM Desktop software. In the depths of a remote Welsh village, the processing was not hindered by the lack of internet access – as it is simply not required.

## What the scan revealed

In total, the inspection project took five days and required an average of 20 staff on site at any time. Of this, the ZEB-REVO scans took just 20 minutes to undertake, and a further 30 minutes to process – vastly less time than other traditional methods of scanning would have taken. With an average accuracy level of 15mm+/-, the challenge of such a narrow structure did not limit the ZEB-REVO's effectiveness either.

As well as completely removing the risk of personal injury within the internal structures, the use of the ZEB-REVO provided some enlightening results. The 3D scans generated by GeoSLAM Desktop allowed Amey to undertake a more comprehensive evaluation of the physical internal 'health' of the piers – infinitely more accurate than a 2D scan, where

it would not be possible to see stones sticking out or crevices in as much detail. The team at Amey was also able to assess what debris had sunk or drifted to the bottom of the voids – particularly crucial given the lengthy 12-year gap between each assessment.

Ultimately, the inspection indicated that both piers are currently in good working order, with minimal movement detected. However, the examination reports also helped to plan for the future of the bridge, contributing to Amey's wider assessment of Britannia Bridge's structural integrity and understanding the maintenance needs required on a short- and long-term basis.

## Planning for the future

An asset such as Britannia Bridge provides invaluable service to the people and businesses wishing to visit and operate between an island and the mainland. Construction of bridges such as this one are incredible feats of engineering, but the robust and hard-wearing design of them is never risk-free from the daily wear-and-tear caused by the elements.

Added to that, it's important to recognise that national organisations such as Network Rail are constantly under pressure to maintain infrastructure while keeping budgets under control. So, regular analysis of these assets and planning for their inevitable maintenance is vital, both from a health and safety and economic perspective.

Able to scan prior to a build, throughout construction and during routine assessments of as-built locations, the application of the ZEB-REVO was tailored to the brief and is testament to the strong partnership between Amey and GeoSLAM. Ultimately, it goes to show that with strong collaboration, open communication and expert know-how, technology can be manipulated to provide a bespoke service that fulfils a complex brief, keeps personnel safe and saves time and money. 

[www.amey.co.uk](http://www.amey.co.uk)  
[www.geoslam.com](http://www.geoslam.com)

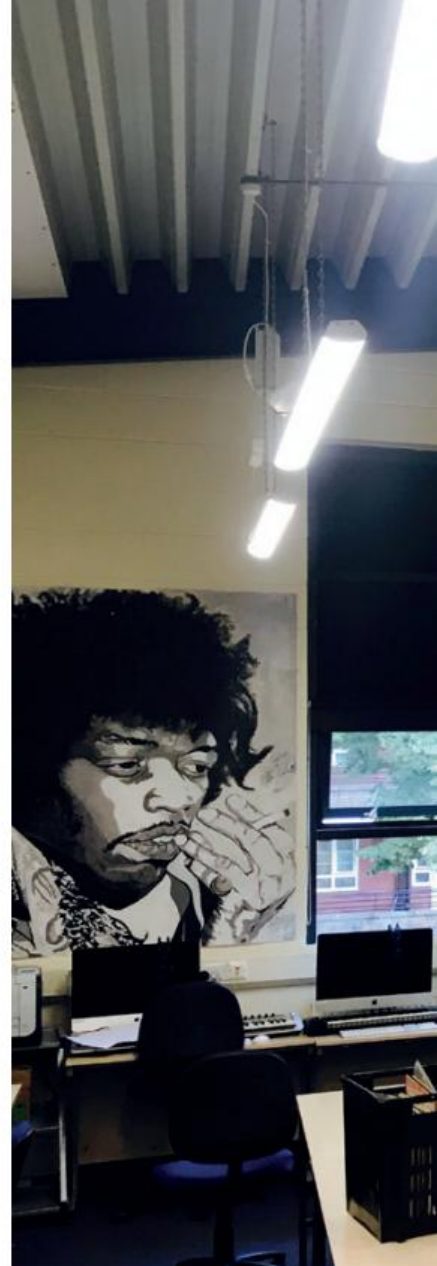


*The lighting component of the project was particularly extensive and involved the latest LED solutions from the Energys range*

**Project:** BSix Sixth Form College  
**Location:** Upper Clapton, London  
**Energy-efficient technologies:** Energys Group

# HEATING AND LIGHTING EFFICIENCIES FOR LONDON'S BSIX SIXTH FORM COLLEGE

The implementation of LED lighting and dynamic boiler control technology at the East London college is expected to deliver annual energy savings of around £25,000.



**L**ocated in the East London borough of Hackney, the BSix Sixth Form College has consistently won approval locally and nationally for its educational excellence and emphasis on skills development. It has also maintained a focus on innovation and the quality of its facilities, and it was in this context that the college recently undertook a multi-project initiative to overhaul its lighting and boiler optimisation provision.

Bob Herring, Premises Manager of BSix College, explains that the desire to "reduce expenditure on energy and maintenance" was a primary driver of the upgrade. "We realised that with the latest boiler control and LED lighting systems we could achieve a dramatic reduction in our energy costs, as well as further minimising our carbon footprint and improving the environmental ambience of the college," he said.

The viability of such a large-scale project was given a critical boost by the securing of energy-efficient funding, via the Salix scheme, for at least part of the proposed upgrade. This was just one area in which next-generation lighting technology specialist Energys Group was able to provide invaluable assistance, having been appointed to the project after Herring received a recommendation regarding Energys' similarly extensive programme of work at the nearby Hackney Community College.

"We wanted to achieve a greener, more carbon-efficient college, and thanks to the collaboration with Energys that has been possible – and all in a mere three weeks of work that was carried out in a way that had very minimal impact on the day-to-day activities of the school," says Mr Herring.

## Optimisation and efficiency

The lighting component of the project was particularly extensive and involved the latest LED solutions from the Energys range. Down-lighters, hi-bay lights, tubes, floodlights, wall lights, emergency lights and more were installed as part of an overhaul that included the upgrading of both lamps and fittings to the latest LED technology. In total, nearly 1000 lights were modernised during a project that spanned classrooms, communal areas, corridors, staircases, the gym, the library, the car park and other primary spaces.

The total value of the new lighting was £83,830 but thanks to substantial projected annual cost savings of £19,731 the return on investment is expected to be as little as 4.2 years. Rounding out the positive impact on the college and its

activities, the headline statistics also included projected annual energy and CO<sub>2</sub> savings of, respectively, 164425 kWh and 80.57 tonnes per year.

"Movement sensors have also been implemented in some areas of the school, further increasing our ability to use lighting only when and where it is required," notes Mr Herring, adding that the overall end-result of the upgrade has been to "achieve much more consistent lighting across the campus".

The college has also called on Energys' long track record of installing boiler optimisation technology. A total of four of the company's Dynamic Burner Management Unit (DBMU) boiler optimisers have been installed in the college's plant rooms in a move that will improve the efficiency of the boilers without affecting the temperature of the building.





Once again, the benefits of the new installation are likely to be dramatic and long-lasting. Annual energy and cost savings of £3258 and 155885 kWh, respectively, have been forecast, while the return period on the total investment of £6960 is expected to be just 2.14 years. Significantly boosting the college's ongoing carbon reduction initiatives, the CO<sub>2</sub> saving resulting from the boiler optimisation exercise will be around 28.66 tonnes per year.

The final primary component of the project was the application of 'valve-wrap' insulation to internal heating pipes in multiple plant rooms. Another measure designed to minimise heat loss from the heating infrastructure, the valve-wrap project cost £8400 and has a projected ROI of 4.98 years. Annual cost and energy savings are expected to be in the region of £1685 and 80622 kWh, whilst the college

stands to reduce its carbon footprint by an impressive 14.84 tonnes per year as a result of this aspect of the project.

Backed by five-year warranties, the college is also set to benefit from substantial peace of mind about the long-term support and maintenance requirements – or relative lack thereof – surrounding the new installations. Completed and signed-off in just three weeks of on-site work, primarily conducted out of school hours, the end result has been described by Mr Herring as "a dramatic improvement to the quality and efficiency of our lighting and heating technology. In particular, staff and students have commented positively on the quality of the new lighting, so we are really delighted by the impact of the investment and our cooperation with Energys".

[www.energysgroup.com](http://www.energysgroup.com)

▲ Down-lighters, hi-bay lights, tubes, floodlights, wall lights, emergency lights and more were installed



▲ The desire to "reduce expenditure on energy and maintenance" was a primary driver of the upgrade



Community was at the very heart of all Neave's designs

Image ©Carath Gardner

## NEAVE BROWN – SOCIAL HOUSING EXTRAORDINAIRE

**"The architecture community has lost a giant. Neave was a pioneer: he showed us how intellectual rigour, sensitive urbanism, his supreme design skill and determination could deliver wellbeing to the local community he served so well in Camden," – RIBA President, Ben Derbyshire.**

### Words of wisdom

"It is hoped that the project will be recognised for its normality rather than its conspicuous newness" – Neave Brown on the Alexandra and Ainsworth estate

"Build low, to fill the site, to geometrically define open space, to integrate. And to return to housing the traditional quality of continuous background stuff, anonymous, cellular, repetitive, that has always been its virtue." – Neave Brown on social housing innovations

"High buildings should only be used for the very rich...because they're the only ones that can be done with proper lifts, proper services, proper control, proper entrances and the proper environment" – Neave Brown in the wake of Grenfell Tower

"I didn't think I was designing social housing, but just housing. Good London housing." – Neave Brown in an interview with The Independent.

The entire industry was deeply saddened by the news of the passing of Modernist Architect Neave Brown on 9th January. A pioneer in social housing, Neave transformed the face of post-war social housing in the 1960s and 70s reinventing the traditional high-rise infrastructure of social housing across the UK, only recognised for his creativity and architectural ingenuity sadly long after his retirement and 40 years after the delivery of his remarkable schemes.

He was named 2018 laureate of the RIBA Gold Medal at a private ceremony on 2nd October, 2017. Three weeks later a sold-out audience of circa 1300 people congregated in the hall of Hackney Empire Theatre, East London, for one of Neave's final public appearances, The Architecture Foundation's presentation 'An Evening with Neave Brown', where he concluded his presentation with: "I thought the buildings that I had done after Margaret Thatcher were simply those pieces of the past...I had no idea they were still being looked at as not only bits of

the past but as something which might be relevant to the present and the future. And so, I was dumbfounded by the fact that all of this has happened to me, in a sense, at the end of my life."

Neave's most notable large-scale scheme, for the London Borough of Camden, was the Alexandra and Ainsworth estate, also referred to as Rowley Way. Designed in 1968, while he was working for Camden Council's architectural department, the site comprises 520 apartments, a school, community centre, youth club and parkland.

During this time, council's responses to the high population density across London was to replace dilapidated terraced housing with high-rise tower blocks, however, Neave's 'street-based' housing regenerated the conventions of social housing providing sought-after accommodation for those seeking public housing.

Winscombe Street – designed by Neave for himself as well as four other families – was the precursor for the designs of the Alexandra and Ainsworth

estate, alongside the scheme at Dunboyne Road estate, formally known as Fleet Road East. The design of Dunboyne Road estate acted as an experimental scheme with 71 homes, a shop and a studio arranged in the form of corresponding terraced rows. Taking architectural elements from his scheme at Winscombe Street, Neave designed each house with a large terrace that overlooked communal gardens.

Community was at the very heart of all Neave's designs

with a palpable connection with the existing city of London that surrounded all his housing schemes. When designing these structures, Neave disregarded the element of social stratification and, as a result, built homes that would appeal to individuals from all social walks of life. His designs spoke an architectural language of true innovation, social agenda and community spirit that will live on in the memory of this social housing innovator.



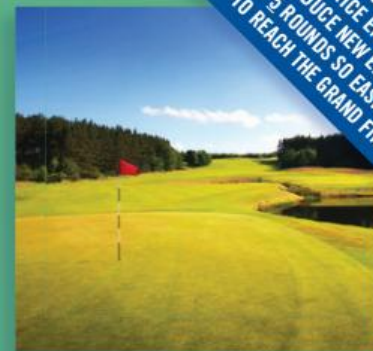
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▲ Alexandra Road Estate, Camden, London: the pedestrian street between blocks A and B looking north-east




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## Spirotech vacuum degassers help Scotland's oldest university

Highly-efficient Spirotech vacuum degassers are helping Scotland's oldest university with its ambition to become carbon-neutral for its energy usage.

The units have been installed in the former 19th century Guardbridge Paper Mill, now transformed into an ultra-modern energy centre serving the North Haugh Campus of the University of St Andrews in Fife.

The degassers remove dissolved gasses in the system's installation fluid by temporarily subjecting a portion of the water to under pressure or vacuum. The released air is then separated and

expelled. By continuously repeating the process, 99.9% of the gases are released and removed.

If left to circulate, the air would adversely affect the system's efficiency, impacting on flow rates and causing corrosion. In turn, this could lead to dirt build-up, maintenance problems and higher energy costs. In the long term; even system breakdown.

The energy centre is at the heart of the £25m University of St Andrews biomass district heating project, which was designed, built and is operated by energy generation and district heating specialist, Vital Energi.

A key element in the university's ambition to be the UK's first carbon-neutral university for its energy usage, the energy centre generates hot water in a 10m-high, 6.5MW boiler.

The water is then distributed through a network to the campus where it provides low-carbon heat and hot water.

The energy centre is capable of pumping hot water through a 10.6km district heating network serving 35 buildings.

Spirotech vacuum degassers are designed for use in large commercial systems with many branches and low flow rates, where 'ordinary' deaerators are not sufficient.

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 0208 451 3344

## Johnson & Starley's confidence grows in wake of ErP

In October 2009, the European Commission (EC) published a framework directive for Energy-related Products (ErP), thereby extending the scope of application to products that use, generate, transfer and measure energy. This includes products under the previous scope (e.g. electrical appliances) as well as other products such as windows and insulation.

The objective is to reduce greenhouse gas emissions and other adverse environmental impacts throughout the lifecycle of a product.

From a product perspective, there are really two main aspects that manufacturers need to consider, namely seasonal efficiency of the appliance and the emissions, notably of nitrogen oxide.

There are essentially two critical dates that need to be recognised:

- For all warm air heaters, the requirements for seasonal efficiency must have been achieved by 1st January 2018
- For all warm air heaters, the requirements for emissions (NOx) must be achieved on 26th September 2018
- For Johnson & Starley air heaters this means that the standard efficiency Hi-Spec and Economaire ranges will not meet the seasonal efficiency requirement at 1st January 2018.

Naturally, housing associations who currently own, or are looking to upgrade their stock, will wonder what the availability of spare parts will be. There is need to worry. Johnson & Starley has always been committed to keeping spare parts for heaters available for as long as possible and will not be making exceptions for these or any of its model ranges. Parts will be available for a minimum of 10 years after production of these two models of heaters has ceased.



So, what will be the Johnson & Starley warm air heater line up from 2018 onwards? The company launched its highly successful range of WarmCair condensing heaters in 2013 which now come with a five-year guarantee. Its market-leading QuanTec range of boilers can connect to the Aquair – a warm air heat emitter range.

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▲ Passivent's Hybrid Plus2 Aircool ventilators in situ

# MULTI-MODE HYBRID VENTILATION WITH ENHANCED THERMAL EFFICIENCY

Passivent has introduced the Hybrid Plus2 Aircool multi-mode ventilation system. Designed to meet the requirements of the forthcoming Building Bulletin 101, 'Guidelines on ventilation, thermal comfort and indoor air quality in schools', and the Facilities Output Specification for Priority Schools Programme Phase 2, the Hybrid Plus2 Aircool is suited to where a single-sided ventilation strategy is required in a building.

The system utilises the controllable insulated dampers from the Aircool range which have been designed for use in external facades, including all forms of wall construction, curtain walling and window profiles. The system is controlled by the Passivent iC8000 controller allowing for up to four individual zones to be managed or it can be integrated into the building's management system. Incorporating a variable speed fan, the unit is energy-efficient and quiet but is able to deliver up to 145l/s of ventilation. Weather resistance and security are provided by the external weather louvre, even when the internal insulated louvre is open. One Hybrid Plus2 Aircool can effectively ventilate a room containing up to 16 occupants; adding a second unit will accommodate up to 32 people per room. Made from robust lightweight ABS, the unique three-part construction can be mounted below the ceiling and its modular design makes it simple and fast to install. The Hybrid Plus2 Aircool can also be mounted within the ceiling void with the inclusion of additional grilles and ducting.

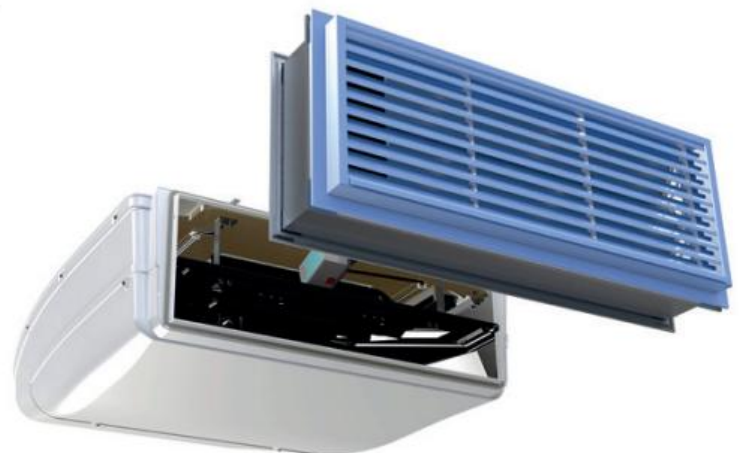
The ventilator can be used across a range of markets including education and commercial offices with higher internal heat gains. In addition to daytime cooling, it can also be used for night cooling to reduce the risk of overheating.

Passivent offers a comprehensive technical design service including assistance with product selection and system design.

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**W**ith a contemporary, streamlined design, the product consists of three main components: the external weather louvre, the through-wall sleeve and the inner mixing unit, making it easy to specify and order, whilst ensuring a complete integrated system is supplied. The Hybrid Plus2 Aircool incorporates three modes of operation to suit varying internal CO<sub>2</sub> and room temperature levels. Mode 1 – mixing mode – is designed for cooler spring, autumn and winter periods when the incoming air is tempered by mixing with warmer internal air before it

enters the room thus minimising the risk of cold draughts. Mode 2 – cooling mode – is used in the warmer summer months when the unit responds to the higher temperatures within the room, extracts the warm stale air and replaces it with cooler fresh air. This mode ensures that CO<sub>2</sub> and temperature are kept at acceptable levels. Mode 3 – passive mode – can be used when two units are incorporated in the same room. This mode does not use any powered fans and allows single-sided ventilation to the room passively when mixing or cooling are not required.



▲ Passivent's Hybrid Plus2 Aircool offers ventilation with improved thermal efficiency

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# Good GOSH – Solinear assists with Great Ormond Street Hospital transformation

One louvre and solar shading specialist, Solinear, has helped refurbish one of the UK's most-loved institutions.

Great Ormond Street Hospital has been serving sick children since it first opened its doors in 1852. In the intervening 165 years, it's grown to become one of the best-known and most respected centres of paediatric medicine in the world.

As part of a multi-million-pound refurbishment of the hospital's main Camden site, Solinear was called on to provide acoustic insulation in what was a challenging but highly rewarding assignment, as Project Manager, Dan Tongue, explains: "We were specified to provide large, sloping level 09 acoustic louvre screens and acoustic treatment panels to help reduce noise from the large amount of plant machinery on the hospital roof.

"That meant working at height – and collaborating closely with the main

contractor's scaffolder and on-site crane teams to install the products.

"We fitted over 1000m<sup>2</sup> of our AQ100 acoustic screens with insulated blanking panels, with a total value of more than £300k.

"One of the biggest challenges we faced was simply storage. On-site storage was very limited, meaning everything we needed had to be transported in by JIT delivery, which provided us with a bit of a logistical headache. But, as always, we found a way around it – and we're delighted to say that the customer is delighted with the results."

Solinear also went on to complete work on the project's second phase, involving the construction of the Premier Inn Clinical Building, set to become part of the hospital's Mittal Children's Medical Centre.



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## Jack Aluminium launches new flat rooflight

Jack Aluminium has added its first aluminium glazing product to suit both commercial and home improvement markets – the TRL90 rooflight. It's a flat, aluminium-framed rooflight that's ideal for retrofitting skylights in commercial buildings or for bringing extra light into modern home extensions. Sales and Marketing Director, Jeff Pearson, explains: "Following the success of our TruEnergy Window, we found the market was also hungry for a rooflight that was simple to fabricate and install but offered superb performance levels. So, our technical team got to work to create the TRL90 Flat rooflight. It offers excellent U-values and is the perfect solution for bringing light into spaces without adding extra height to buildings."

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## Database investment brings benefits to clients

As an increasing number of social housing providers focus on how they can become easier for residents to deal with, more pressure is being put on suppliers to buy into their digital strategies. One company leading the way in this is The Window Company (Contracts), which has invested tens of thousands of pounds in a locally designed customer database which is being continually updated to reflect the changing needs of its individual clients. The SQL/Access database has details of every property where work is planned or has been carried out by The Window Company (Contracts) and is now linked to a bespoke caller ID system which identifies any resident who telephones and instantly brings up their customer record.

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## Abloy UK enhances expertise with appointments

Abloy UK has appointed three new members to its team, Duncan Rigby as Technical Sales and Specification Manager, Geoff Bowers as Systems Integrator Channel Manager for the North and James Harvey as CNI Market Development Manager – Transport. As Technical Sales and Specification Manager, Duncan will be responsible for driving sales through specification, as well as providing technical assistance to the wider team.

Geoff Bowers has been brought into the team to work alongside System Integrator Channel Manager Gary Frost, enabling the duo to manage the rapidly expanding market. James Harvey has over 35 years in the fire, security and systems integration industry, from working as a locksmith to running his own security business.

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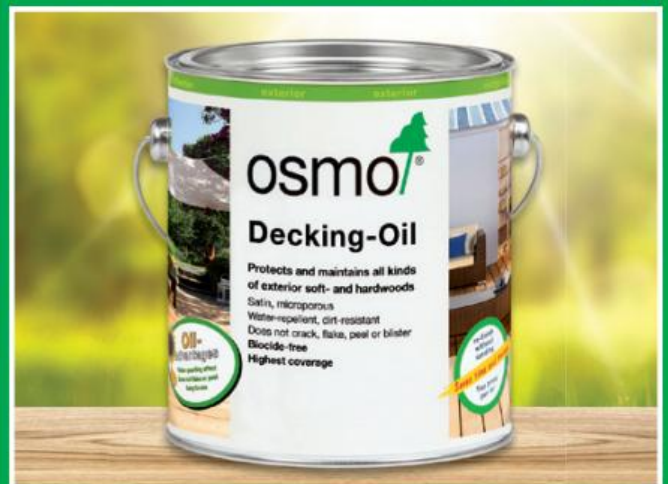
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## Bostik receives top marks for flooring at the University of Huddersfield

A range of subfloor preparation products from Bostik have been chosen by Titan Flooring for the development of a new building at the University of Huddersfield. A number of products from Bostik's range were selected to ensure a superior floor finish across the Oastler Building. These included the Screedmaster one-coat membrane, Universal primer and Screedmaster epoxy primer, along with the Screedmaster Deep, Screedmaster Flow and Screedmaster Smooth levelling compounds and Bostik Laybond Carpet Tile Tackifier. The project provided Titan with some challenging site conditions and Bostik's technical expertise and ability to quickly tackle any issues on site were instrumental in winning the work.



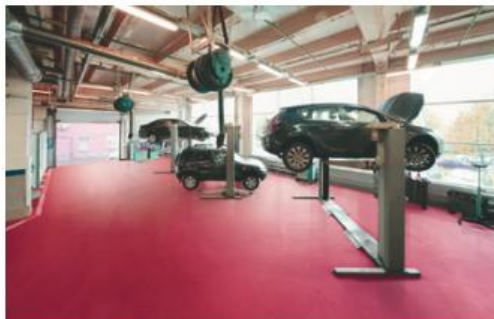
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## Affordable housing development benefits from Magply performance

Off-site timber frame systems are evolving with an increasing market share in the construction industry with speed of build becoming a major factor along with fire risk and weather-damaged products during the construction phase. One supplier addresses all three factors, including an affordable housing development in Essex, utilising Magply boards as an internal lining board to internal and external walls. The project at Buckingham Green, Basildon, has seen T.T.F.C erect a total of six new homes. The two, two-storey and four, three-storey houses have been supplied in panel form by Wexford-based T.T.F.C.

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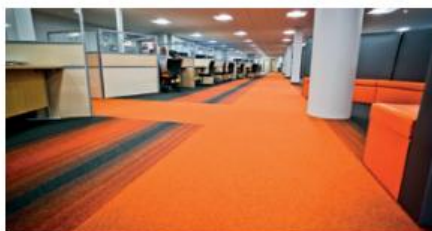


## Just 48 hours from start to finish with Bradite's tough new floor paint system

Bradite has introduced a tough, fast-drying protective coating system for the commercial and industrial sectors that allows contractors to complete a job in just 48 hours from start to finish. Part

one of the system is high-performance two-pack, water-based ES40 Floor Primer designed for use on interior dense, power floated, non-porous concrete, ceramic and terracotta tiled floors. Part two of the system is Bradite's new Rapid PW74 Coating and Floor Finish which, used in combination with ES40 Floor Primer, can provide a traffic-ready floor space in just 48 hours.

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## Shared workspace for Ashfield District Council and the DWP

When a branch of the Department for Work and Pensions (DWP) moved in to share the existing office of Ashfield District Council, the space needed a refurbishment to facilitate an efficient co-working space. The design was crucial to create zones for each organisation. The flooring was a key aspect of this and Interface provided a range of its latest products to create a striking design. The space was redesigned using Interface's modular carpet tiles and its more recently launched luxury vinyl tile (LVT) range. Carpet tiles from Interface's Employ collection feature throughout the office. The office features colourways including Clementine and Sunset, each of which are neutral to the two organisations sharing the space.

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## F. Ball floor preparation products now available for BIM

Market-leading subfloor preparation products and flooring adhesives manufactured by F. Ball and Co. are now available as Building Information Modelling (BIM) objects to download for free from the RIBA NBS National BIM Library. RIBA members can download the objects, in Revit-compatible and IFC formats, in order to specify F. Ball products when designing structures using BIM software. The wide range of products listed features some of the most popular high-performance levelling compounds and flooring adhesives for installing floorcoverings. These include F. Ball's Stopgap fast-track 30 rapid-drying levelling compound and Styccobond F46 pressure-sensitive acrylic adhesive. Also listed are waterproof surface membranes, which are often required for new-builds because of high levels of construction moisture.

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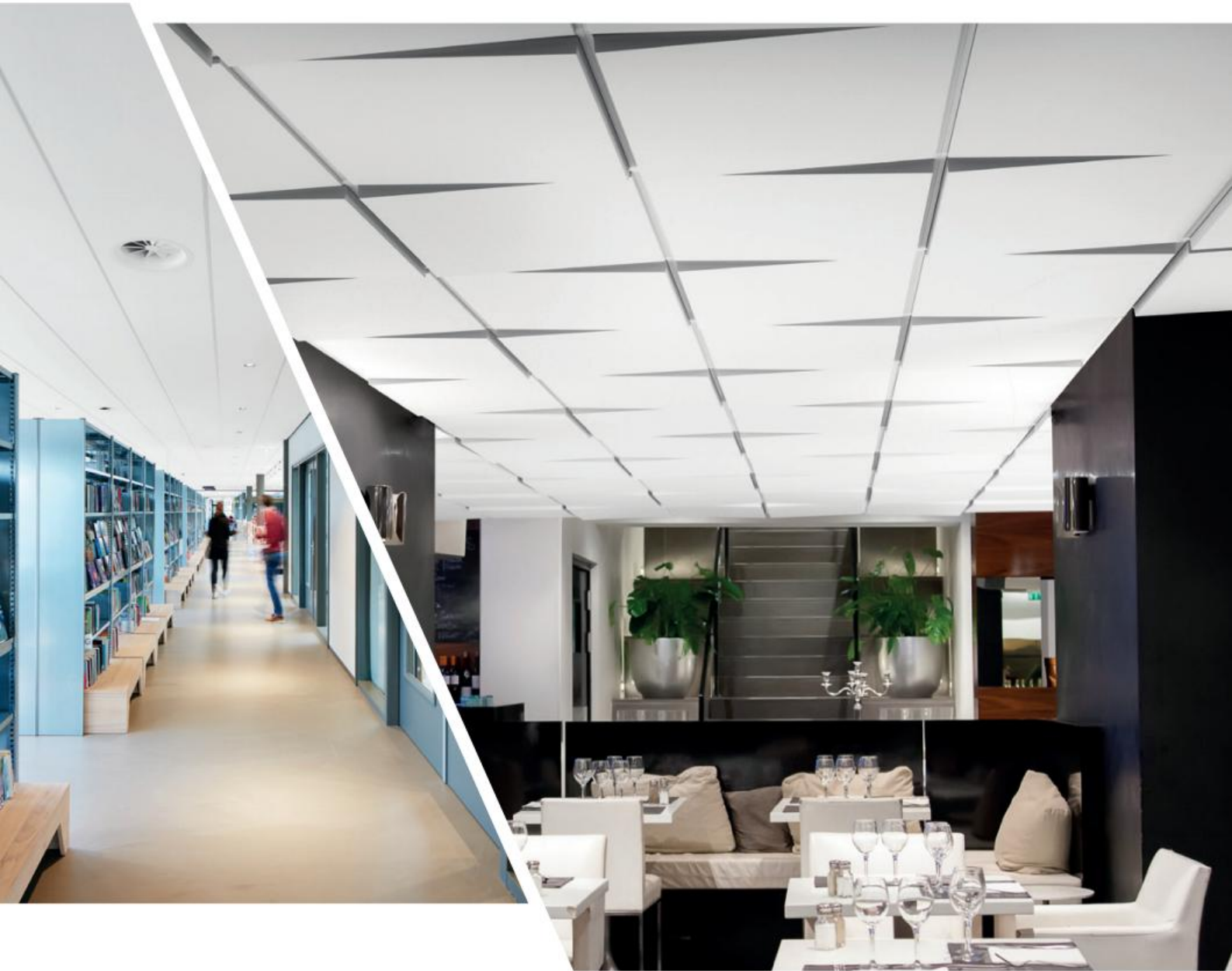


## Remmers repairs Bawdsey Radar Station

Built in 1938 and protected by concrete blast walls, Bawdsey Radar Station was the world's first operational radar station. The walls had decayed steadily since the building was vacated in 1991, leaving the top layer of reinforcement exposed to the elements. Being a heritage site, traditional concrete repair techniques were not allowed. Working in partnership, Remmers and Concrete Renovations Ltd devised a way to repair the walls by using Remmers' restoration materials. Remmers' coloured mortars were used to repair and simulate the colour of the original concrete alongside Remmers' migrating corrosion inhibitor and impregnation cream as part of the 25-year maintenance plan.

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# Time to focus on visual acoustics



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◀ A water feature designed by LUC takes the form of a small stream running through a sunken channel across the park at Cornwall's Heartlands

## How natural stone's texture can take centre stage

The versatility of natural stone can shine through in other ways – its texture having the potential to tell a powerful story. This was put to the test by the London Borough of Hounslow, which in 2014 made plans to celebrate the importance of Brentford Market Place as a popular public space.

Rather than refreshing the scheme entirely with new stone, the decision was taken to use as much of the existing Yorkstone as possible to reflect the marketplace's enduring history. Although initial signs weren't promising, closer inspection of the site found that almost three-quarters of the original stone was still of a good enough standard to be used in the new configuration – a true test of the durability of Yorkstone. In addition, Marshalls supplied Scoutmoor and Moselden Yorkstones in different colours and finishes to add a fresh new touch. The combination of stones old and new gave a variety of texture to the surface.

Marshalls can assist in the creation of amazing spaces by offering the materials and design expertise needed to make them happen.

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# TELLING STORIES WITH NATURAL STONE

'Every stone tells a story' proclaims a poster campaign in the capital's Tube stations to promote the ever-popular Crown Jewels exhibition at the Tower of London. While those particular gems may have dazzled from the finery of assorted monarchs down the centuries, natural stone can be just as eye-catching.

**T**hrough texture, colour and placement, natural stone has the ability to tell its own compelling story, adding impact and interest that enriches a space and allows it to be enjoyed by generations of users.

## How can colour tell a story?

The first and most striking aspect of a new scheme tends to be its colour – but a visually appealing choice of stone can lend much more than aesthetic appeal. In the case of Cornwall's Heartlands, well-thought-out touches actually pay homage to local history.

A community trust used a Lottery grant to transform the area into a 'cultural playground' featuring botanical gardens, a World Heritage exhibition and an adventure playground.

Marshalls supplied all-red Porphyry for this flume, which was chosen for the colour's historical importance – the waters of the nearby Red River having been turned red by their extensive use in the processing of local tin. The zig-zag course of the feature also reflects the industry's gradual realignment of the river to better serve the mine's needs.

Not only does this small but important design decision add a vibrant splash of colour to the park, it also serves as a lasting reminder of the once thriving industry on which the region flourished.

## How can natural stone's blend boost aesthetic appeal?

We've seen what happens when one overriding colour is used to highlight history, but another trick that designers have used throughout time is to combine different colours in one scheme to create a striking design.

In days gone by, different colours of stone may have been used to save money or to make the best use of limited resources, but this design quirk has now been revived to add a touch of timeless glamour to projects. While granite setts were once the stone of choice for use in these blends, designs have since become a little more adventurous and experimental.

That was exactly the effect achieved with the installation of 13 different precision-cut granites at the new Victoria Gate retail development in Leeds. After fact-finding

missions to China, where the stone was sourced, Marshalls was able to come up with the desired cut, look and feel of the stones to be used.

The final result is an undeniably spectacular herringbone design that corresponds and contrasts with Victoria Gate's diamond-pannelled roof and its traditionally-styled storefronts.



▲ All 3000m<sup>2</sup> of polished granites and specialist bespoke granite staircase features were checked for quality of cut, colour blend and durability before being shipped to Yorkshire for the new Victoria Gate retail development in Leeds



## RECYFIX MONOTEC drains car park at Home Bargains store, Prescott Parkway

A new Home Bargains store at Prescott Parkway, Merseyside, opened its doors to customers in spring 2017. The 2415m<sup>2</sup> (25,973ft<sup>2</sup>) store is located just off the Manchester Road, near the M57.

It features a wider range of goods such as health, beauty and household items including a 698m<sup>2</sup> (7,500ft<sup>2</sup>) garden centre. The store's

131-space car park is drained by some 151m of RECYFIX MONOTEC, Hauraton's high capacity channel drainage system.

Hauraton introduced the RECYFIX MONOTEC system in January 2016. The new Home Bargains store joins the numerous installations successfully completed in the United Kingdom.

Two MONOTEC sizes were installed in the Home Bargains car park's red block surface both channel sizes having a nominal grating width of 100mm. The larger channel has an overall height of 380mm and provides a cross-section of 355.5cm<sup>2</sup>. The smaller channel has an overall height of 230mm and provides a cross-section of 190.5cm<sup>2</sup>. The 151m of channel installed has a total water capacity of just over 5078 litres.

All RECYFIX MONOTEC 1m-long channel component is of a sturdy monolithic design where the HEELSAFE grating and the tongue and groove linking system are integral to the channel moulding.

In addition to the car park drainage, two sizes, 100 and 200, of the company's RECYFIX PLUS channels were also installed in the service yard against the retaining wall, the 105m of channel being supplied with HEELSAFE ductile iron gratings for a D400 loading category.

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## Charcon's StoneMaster triumphs at Salisbury Court

Charcon has successfully completed a significant delivery on the new £27m Salisbury Court student accommodation scheme in Edinburgh. Charcon consulted with landscape architect practice, Harrison Stevens, to recommend the best hard landscaping products to complete the aesthetics of the street frontage on St Leonards Street and a private courtyard within the student accommodation area. More than 1100m<sup>2</sup> of StoneMaster, a premium precast concrete flag and block paving product, was supplied by Charcon to provide a high-quality paving solution which complemented the stone clad of the surrounding building. The result was a visually pleasing design that respected the historic context of the neighbourhood, whilst providing a central courtyard for students to congregate and interact safely.



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## Vulcathene at heart of biomedical research in Cambridge

Vulcathene is demonstrating why it is a market-leading chemical drainage system with its specification on more than £700m of biomedical research facilities in Cambridge. Vulcathene chemical drainage is being installed within the new AstraZeneca headquarters, Project Capella, a new biomedical research facility for the University of Cambridge, Project Bellatrix, a new biological support facility for the University of Cambridge and the new global headquarters for life sciences giant Abcam, to name just a few. Available in sizes from 38 to 152mm, Vulcathene is a purpose-designed chemical drainage system available in two easy jointing methods; Mechanical for demountable joints and Enfusion for welded joints, offering complete flexibility for designers and installers of chemical waste systems.

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## Drainage maintenance boost for city's highway system

Lanes Group has completed a three-year programme of maintenance work to survey, clean and repair strategic highway drainage pipes across Portsmouth. Teams from the drainage specialist's Eastleigh depot worked with Colas to carry out surveys, desilting and repairs along 20km of large-diameter highway drains. Colas, which manages highway infrastructure for Portsmouth City

Council via a Private Finance Initiative (PFI), commissioned Lanes to carry out the work as part of a process of incorporating the main drainage pipes along strategic routes into its maintenance programmes. Services delivered over the three-year period included highway drainage line desilting and root cutting, CCTV drainage surveys, drainage system mapping and pipe rehabilitation through the installation of structural point liners.

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## Redland tiles and Innofix Clips top off award-winning development

The award-winning Crossway development in Widnes, Merseyside, employs the revolutionary Innofix Clip developed by Redland and two of its tiles to achieve a weatherproof envelope in the shortest time possible. Designed by Denovo Design of Liverpool for the Halton Housing Trust, the estate comprises 12 plots in a mixed development all roofed in Redland Grovebury double pantiles in colour slate grey and Redland DuoPlain interlocking plain tiles in colour blue to blend in with the surrounding area. "We chose these two specific tiles to meet concerns from the planning department and the Innofix Clip was a definite benefit because all these buildings are timber-framed, so it's imperative to get them weatherproof as soon as possible," comments Architect, Nicola Toomey.



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## One of the UK's largest off-site projects handed over 17 weeks ahead of programme

The McAvoy Group has handed over the £20m Lynch Hill Enterprise Academy in Slough 17 weeks ahead of programme. The project is one of the UK's largest ever modular schools. It demonstrates a number of new innovations which contributed to its early completion and reduced the programme by around six months compared to site-based construction. Constructed by principal contractor McAvoy, the three-storey, 8750m<sup>2</sup> building is an exemplar off-site education project which has a design inspired by the world-leading Harvard Business School. The use of a McAvoy off-site solution reduced the build programme to just 53 weeks and helped to address the issue of restricted access to the brownfield site.

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## Lifting paediatric services to new heights

Youngsters in Kent are experiencing a 'real difference' in the way they can access health services through an integrated approach to how all involved use the facilities. NHS Property Services has converted a former school into a state-of-the-art child development centre – Snapdragons Centre. Part of the £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 Closomat. The hoists mean that children and young people who are not mobile can be moved easily, safely and with dignity. The height-adjustable basin and changing bench ensure that the whole ambit of toileting requirements are addressed.

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## Life is sweeter with Advanced protection

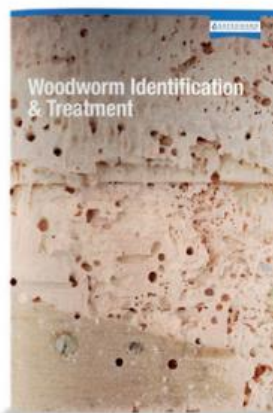
The Chocolate Quarter, one of the UK's most stylish retirement complexes, is now protected by industry-leading fire panels from Advanced. As well as protecting the multi-tenant retirement apartments and care home, the Advanced system also covers a doctor's surgery, offices, spa, retail space and car park. MFS designed, installed and commissioned the Advanced system, which comprises a network of 19 MxPro 5 single-loop, four-loop and repeater panels with Hochiki smoke and heat detectors, multi-sensors and heat detection cable. The installation of MxPro 5 means that the fire system is also linked to the site's DECT using an ESPA interface, which allows live fire system status information to be passed to staff pagers.

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## Impey launches technical specification guide for healthcare installations

Impey has launched a new technical specification guide to aid the planning and installation of accessible showering facilities. UK-based Impey is renowned for the creation of easy-to-install, accessible showering solutions, which can benefit every kind of adaptation surrounding. From multi-functional wetrooms to wheelchair-friendly showering areas, Impey products can be incorporated into any kind of build scenario to create a high-quality, accessible showering environment which can be utilised by all users including those with disabilities or mobility difficulties. Impey's new 44-page guide, The Impey Technical Handbook, is available free of charge to technical officers, specifiers, installers and those involved in the scheduling of adaptable showering spaces to assist with planning, project management, specification and installation.

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## De-bug timber with Safeguard's destructive insect treatment guide

Safeguard Europe – a UK-leading specialist in damp-proofing and waterproofing technology – has produced a superb guide on the problem of larval infestation of timber, how to accurately identify the cause and how to treat it. Safeguard's Woodworm Identification and Treatment volume is packed with detailed colour photography on the likely species to be encountered in Britain – and through all their life stages, from larvae to adult. In addition to allowing the reader to identify woodworm, the guide covers how to check whether a woodworm infestation is still active or has died out, and how to treat minor infestations of common species effectively, and for the long term.

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# Knauf Windliner obtains BBA certificate

Knauf, one of the world's leading manufacturers of lightweight building products and systems, has achieved third-party certification from the British Board of Agrément (BBA) for its Windliner Sheathing Board.

The BBA evaluates manufacturers' products and systems, and awards certificates in recognition of the product's quality and reliability for use in the marketplace. Knauf Windliner has passed all tests, on-site evaluations and quality management checks, reassuring architects and specifiers of its use as an external sheathing board.

Paul Tollervey, Head of Technical for Knauf UK, said: "In gaining a BBA certificate for Knauf Windliner it demonstrates Knauf UK's investment in quality production and its ability to provide clients with a third-party accredited product. This has been a vital ingredient for us to help ensure acceptance with specifiers, building control, local authorities and insurers."

The certificate assessed Knauf Windliner on its strength and stability, confirming its credentials as an external sheathing

material regardless of wind actions and racking loads. It has also been recognised for its reaction to fire, achieving a classification of A2-s1, d0 in accordance with British Standards. This gives no height restriction for its use when specified in a full system and tested in accordance with the BRE performance criteria.

In addition, Knauf Windliner boards have been recognised for their water resistance and weathertightness during the construction phase and prior to completion of the external facade. Finally, its durability was assessed, determining that the boards have an expected service life equal to that of the building in which it has been installed.

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## LEVATO MONO porcelain paver system

Transform any outside space with LEVATO MONO Porcelain paver system from the Deck Tile Co. Ltd. The system offers flexibility and choice for even the most challenging of applications - from roof terraces and balconies with multiple falls to patios and restaurant piazza's where wear resistance is key. With many finishes and formats available, the 20mm pavers combine incredible technical properties with uncompromising aesthetics and thanks to the intuitive height adjustable and slope correcting facility on the support system, it is possible to cover most waterproof membranes or uneven sub-surfaces.

- 20mm porcelain pavers 40x80 45x90 60x60 75x75 80x80 30x120 40x120 60x120
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- Lightweight - 45kgs per m<sup>2</sup>
- High load bearing and impact resistance
- Timber, stone & cementitious effects
- Completely non porous
- Ideal for balconies, roof terraces and piazzas, for both commercial and residential use
- Frost proof
- Height adjustable/slope correcting support system ranging from 9mm up to 550mm

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