

# BUILDINGPRODUCTS

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**Fakro – specialising in  
bespoke roof windows**

## Commercial

Cladding and glazing installed at new mixed-use Canary Wharf Crossrail Station

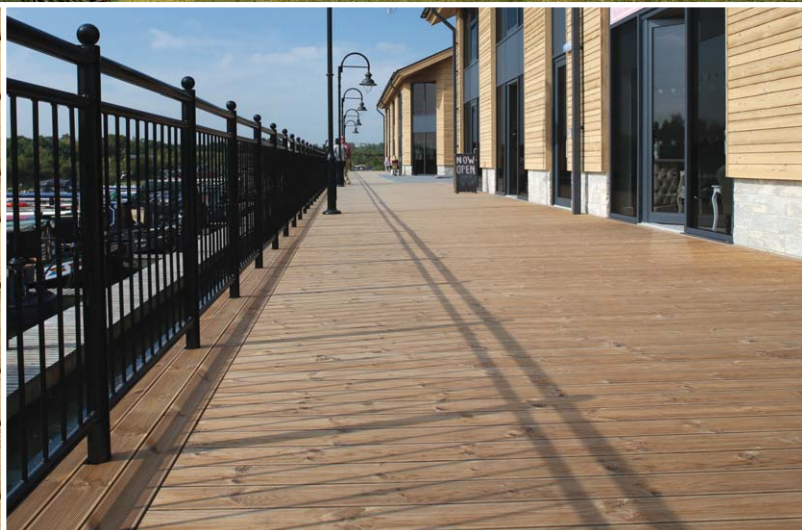
## On the Table: Information Technology

Our panel discusses everything to do with BIM, ahead of the 2016 Level 2 deadline

## External Envelope

Welsh village regeneration scheme gets an injection of colour





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## FROM THE EDITOR



Well, that was fast. In 2013, Prime Minister David Cameron reportedly told Downing Street aides that he wanted to "get rid of all the green crap", i.e. the environmental levies which supposedly push up energy bills and raise taxes, and here we are, just a few months after the election and the Government

has already axed significant parts of its energy efficiency policy.

Its first assault on all things 'green' came with the announcement that it was to shelve the 2016 Zero Carbon Homes target. It's important to recall that this was the target that the industry has been working towards since 2006, when the then Chancellor, Gordon Brown, set out plans for housebuilders to build "zero carbon" homes within 10 years. However, now we face a situation, roughly six months before implementation, where the rug has been firmly pulled out from under a lot of companies. It comes as a stark reminder that the industry is still very much at the mercy of political short-termism.

Another flagship policy that's recently been hauled onto the scrapheap is the Green Deal. What had once been paraded as the "biggest home improvement programme since the second world war" was unquestionably beset by a number of significant problems – it was complex, the loan repayment rates were unattractive and public interest in the scheme was limited. In fairness, much of the construction industry won't have shed a tear at the cancellation of the Green Deal, but there is a significant danger that nothing will replace the void it has left, at least in the short term. An independent review will look at "standards, consumer protection and enforcement of energy efficiency schemes and ensure that the system properly supports and protects consumers", but with no real timescales laid out, it appears that Government-led efficiency schemes have been firmly left in limbo.

**Joseph Dart, Editor**

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# INDUSTRY ADVOCATE



Bev James, managing director, Axon Data Services, looks at 'Big Data', and explains how it is driving supply chain adoption of Smart Data analytics in construction.

It is estimated that better use of Big Data could add up to £216bn to the UK economy during the period 2012-2017, which is equivalent to 22% of the UK net debt, or more than the 2011 defence, NHS and education budgets combined.

With statistics like these, the potential opportunities presented by Big Data analysis are hard to ignore. Tough government targets around cost reduction, time to build and sustainability will only be achieved through greater collaboration, data sharing and cross-project analytics.

## INTELLIGENT INFORMATION

Within construction, the potential for big data is immense. Building contractors, materials manufacturers and FM organisations collect vast amounts of data in contract bids, construction programmes, ERP systems and supply chain/procurement, all of which could yield surprising insights into business performance. The biggest challenge is that data often sits across disparate systems in multiple formats. We believe that in the construction supply chain there are a number of areas where a return on investment could be easily demonstrated.

High data volumes, ever-increasing complexity and weaknesses in data all hinder visibility and provide barriers to meaningful analysis. However, because of their ability to ingest and analyse huge volumes of multi-format data, Smart Data analytics applications can help to provide increased visibility. This results in greater clarity throughout the construction supply chain, making it possible to have both high service levels, reduced risk and at lower cost.

In addition, effective sales and demand planning helps to improve the accuracy of revenue forecasts, align inventory levels with peaks and troughs in demand, and enhance profitability.

Without the processing power within existing systems to rapidly analyse complex scenarios, supply chain staff frequently end up carrying out post-mortem analyses. Smart Data analytics can make a real difference, removing limitations and enabling supply chain 'mapping' and bench marking against KPI's and internal targets.

Smart data applications can unlock data in a real-time environment to provide immediate, predictive

analysis at any point within the supply chain. The depth of data analysis currently available, combined with ever-increasing data storage capacity, provides a fascinating opportunity for the construction supply chain. Whether you're a manufacturer, a distributor, architect, contractor, subcontractor or facilities manager, insights possible by this level of analytics could result in new opportunities and a direct contribution to a business' bottom line.

## BIG DATA KEY TERMS

- **Big Data** describes a massive volume of structured and unstructured data that is difficult to process using traditional database and software techniques. It is high volume, high velocity, and/or high variety information that requires new forms of processing to enable enhanced decision making, insight discovery and process optimisation.
- **Structured Data** is data with a set of rules that uniquely classifies each piece of information within a database. An example is fields on a form – i.e. first name, last name, date of birth. This data has structure, as the first name field is always text and date of birth is a number.
- **Unstructured Data** is not pre-defined and although often text-heavy, could include numbers, percentages and dates. Twitter is a ideal example of unstructured data.
- **Business Intelligence (BI)** is a set of techniques and tools that transform raw data into meaningful, useful information for business analysis purposes.
- **Data Warehouses** are centralised repositories of current and historical data (often structured) integrated from one or more disparate sources. They are used in conjunction with analytical and visualisation tools to report on data usually according to defined parameters.
- **Smart Data** is about value and viewing data in context to solve specific business problems. The focus is on outputs, timely action and the creation of something commercially viable.
- **Smart Data Application** is a tool to help businesses collate, sift and analyse data from disparate systems. The way structured and unstructured data is collected, rationalised, understood, reported and distributed is automated for informed, timely decisions.

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**Printing**  
Headley Brothers, Ashford

Great Britain and Northern Ireland £55.  
Single issue £6. Overseas including Eire £60  
inclusive of surface mail.

Airmail rates available on request.  
Rates subject to increase without notice.  
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Building Products is published by  
Metropolis Business Media Ltd  
© 2015 Metropolis International  
ISSN 0261-8761



Average net circulation: 21,000  
01/07/2013 – 30/06/2014

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# BESPOKE ROOF WINDOW PERFORMANCE

Fakro explains how increasingly complex roof designs are requiring window manufacturers to provide systems which are capable of being installed at varying depths and pitches.

**B**espoke architecture is giving rise increasingly for roof windows which can meet project-specific design requirements. This extends equally to residential and commercial projects and is one aspect of service that marks a clear line between manufacturers.

Specifications can vary from a non-standard size to a particular frame or flashing colour. The added demands of

energy-efficient design standards are also affecting design sophistication, prompting enquiry for airtightness and improved U-values for roofs of considerable complexity. For Fakro, providing a design service to meet such needs has become a key aspect of differentiation, with its R&D team offering solutions which meet diverse needs quickly and, usually, without impacting heavily on cost.

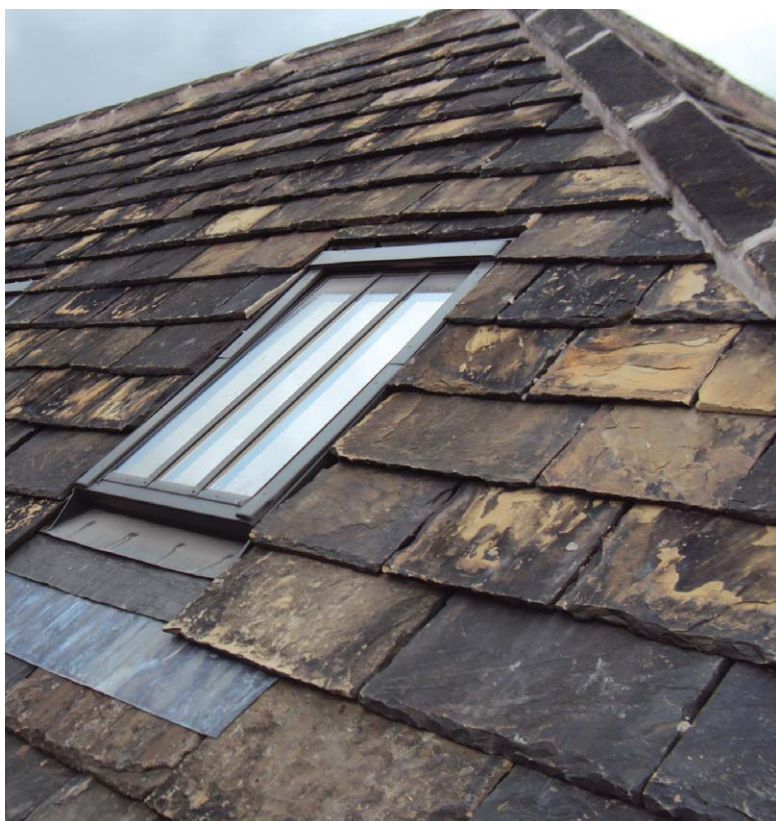
The obtrusive nature of roof windows installed at a standard depth is becoming increasingly unacceptable to planners, particularly with slate roofs in conservation areas or on barn conversions. Fakro offers scope to install at varying depths and any slate roof benefits from the visual aesthetic achieved using a low profile.

## DELIVERING ON SITE

'Taigh Learaige' in Stanley, Perthshire, has a timber roof, but its flatness prompted the need for incorporation of six roof windows in a similarly sympathetic manner. Designed by Dualchas Architects, the unusual use of timber across the roof and walls is accentuated by the fact that there are no visible rainwater goods. Installation of the windows in no way detracts from the smooth lines of the timber and, in fact, many have said the windows provide an attractive feature.

Roof coverings on many buildings in conservation areas have clay roofs with pantiles and deeply profiled tiles, such as a Bold Roll. Here, the complete opposite of a slate is required, windows needing to be higher than the standard option that most manufacturers provide.

Bespoke flashings will invariably be required on green roofs too. For a development of luxury Canadian red cedar cabins at Eagle Brae in the Highlands, designed by architecture firm Maxwell & Co., windows feature individually and in horizontal combination. Though standard







centre pivot windows were used, project architect Steven Caudry commented: "A key element of the project was our client's requirement for green roofing using indigenous wild grasses. As a result, we designed waterproofed timber boxes which would raise the roof windows above the vegetation. It was refreshing to find a company able to offer bespoke flashings which would suit our unique details. Drawings were exchanged with the company's research and development team in Poland and we appreciated Fakro's willingness and flexibility to meet our requirements. It allowed us to achieve a far neater end result than could have been possible using standard flashings."

Bespoke requirements are common with restoration projects in which old rooflights often require replacement. Roofs may also consist of decades-old handmade tiles or diminishing courses of natural or stone slates. Although this would ordinarily be relatively straightforward using the appropriate low profile flashing, variations in slate thickness also have to be overcome. Loop Systems' design for the restoration of the Co-Operative Pioneers' Museum in Rochdale included eight bespoke roof windows with a double mullion bar in RAL 7022 to match the existing stone slates.

### DEVIL'S IN THE DETAIL

Sympathetic detailing is often a condition of building consent and can be difficult to achieve if new openings in a

roof are to respect a building's intrinsic character. The way in which windows are installed is also critical in relation to interior design because their positioning and size will affect provision of light.

Such planning constraints also affect major housebuilders. St Andrew's Park, a Charles Church development on the site of the former RAF Uxbridge, required special flashings for 71 openings of up to 2 x 2.4 m. Here again, the requirement was to ensure windows were of low profile in natural slate roofs. Supporting research information was also required to present to planners and ultimately no other manufacturer was able to meet the design requirements in the required time. Though

only 26 homes were involved, varying sizes, combinations and styles were supplied including L-shaped windows to extend the glazing area into the wall.

In contemporary self-builds, use of energy-saving features, such as a passive stack system, are becoming increasingly popular. Designer and building surveyor Simon Kettle is also a registered energy assessor and used a variety of Fakro windows to maximise natural light and play a critical role in his passive design. He explained: "We used a variety of roof windows including eight white, polyurethane-coated pine in combination, joined at the ridge using a bespoke flashing. Electrical operation, a rain sensor and self-cleaning glass were also key features and the Fakro research and development team worked with me to ensure that demanding aspects of technical performance were achieved. This involved exchange of design drawings and the end result achieved everything I wanted."

As thermal efficiency of construction increases so too are demands for bespoke aspects of roof window performance. Roofing complexity can affect buildings of any size or type but the cost of bespoke detailing and performance need not be prohibitive.



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# DESIGN BRIEF



Jon Palethorpe, commercial director at Technal, looks at current trends in fenestration design and specification, as well as key considerations for the specification of high performance windows.

In the UK, Building Regulations are imposing ever more stringent targets. As a result, developers and building occupiers are becoming more informed about the need for energy efficiency to minimise the demand for mechanical heating, ventilation and cooling, with the aim of reducing running costs and future-proofing their buildings.

The facade of any building is one of the most important factors in determining energy efficiency and window systems are therefore a critical part of the specification process. Effective fenestration design has to achieve the balance between aesthetics, thermal and weather performance, natural ventilation, acoustics, security and cost – and the challenge is that these factors often work against each other.

*"Specifiers are demanding ever bigger doors, but do need to balance aesthetics with ease of operation"*

## THERMAL PERFORMANCE TRENDS

We are seeing much greater demand for levels of thermal performance which exceed current Building Regulations. These require  $U_w$  values for the glass and frame of  $2.2 \text{ W/m}^2\text{K}$ , but we are often now asked to achieve values of  $1.5$  or as low as  $1.2 \text{ W/m}^2\text{K}$ . These performance levels exceed the requirements and, for a relatively small additional cost, the building occupier will gain a much more thermally-efficient system to help reduce future running costs over the life cycle of the building.

The thermal performance of window systems can be enhanced to deliver lower  $U$ -values with the use of:

- Increased thermal breaks
- New materials for thermal strips
- Increased module depths
- Accommodation of larger glazed unit sizes (24 mm was the standard but this has been increased to 28 mm, and up to 52 mm is now common)
- Additional insulating gaskets
- Profile engineering

These features should now be available as standard for aluminium window systems.

## NATURAL VENTILATION

There have been technical advancements in trickle ventilation to allow fresh air to circulate when the window is closed, but with no passage area for sound. This is particularly useful for high rise apartment schemes. The vents can be fitted into the window system or can be installed independently above the window.

Casement windows can also now incorporate hinges for wider opening up to 90 degrees, rather than the previous standard 50 degrees, but specifiers should be aware of the safety considerations for wider openings. There are also parallel opening options to optimise air flow.

## MINIMISING SOLAR GAIN

Solar gain can be an issue with windows and curtain walling, and reducing it is increasingly a requirement, particularly for offices and schools. Building occupiers need the benefit of natural ventilation and high levels of natural light to help maintain comfortable working environments, and fresh air has been proven to contribute to concentration levels, but highly glazed buildings are vulnerable to heat gain.

Glass and building orientation are part of the solution, but if not sufficient, the building designer should look at external solar shading to help reduce the reliance on mechanical cooling.

## WEATHER PERFORMANCE

Airtightness is becoming even more critical in building design and very low levels of air or heat loss are now being demanded that are well in excess of Building Regulations.

The requirements currently permit air leakage rates of up to  $10 \text{ m}^3/\text{hour}$ , but we are increasingly asked to achieve levels of  $3 \text{ m}^3/\text{hour}$  or less, and this is often a requirement on commercial schemes in central London. It is also more common now for specifiers to request an EPDM perimeter seal between the structure of the building and the window system. This can make a considerable difference to reducing heat loss and improving the overall building performance.

For water tightness, it is vital contractors and developers employ well trained glazing fabricators

and installers to ensure correct manufacture of the system and accurate fitting on site.

## WINDOW AND DOOR SIZES

Increasing the mullion and transom sizes will allow architects to achieve larger spans and greater vision areas for maximising natural light and striking aesthetics. The most advanced aluminium window systems will have less visible aluminium for further visual appeal.

Specifiers should always check the maximum recommended weight and sizes as there will be variations between systems suppliers and should ensure that fittings are sufficiently robust to take the loadings of larger window units.

Occupier comfort and usability is also an issue with larger windows or doors. Specifiers are demanding ever bigger doors, but do need to balance aesthetics with ease of operation. A 3 m high door, for example, will be too heavy for children to open in a school environment.

## ENHANCING AESTHETICS

Technical advancements in window design have included the increased use of concealed drainage and fittings – such as hinges, restrictors and closers for an improved finish. Concealed fittings can also be supplied for open-in windows and tilt/turn configurations.

Leading suppliers of facade systems will also offer visual compatibility. This allows the specification of profile module depths, sight lines, accessories and fittings to be consistent across a building envelope and fully integrated, whether for curtain walling, doors or windows.

## BALANCING CONSIDERATIONS

There are multiple considerations that affect window and glazing specification, including size limitations, occupier comfort, impact on running costs, location and orientation of the building, ventilation requirements, security, solar gain, acoustics, maintenance, finish, cost, compliance with disability legislation, current and future Building Regulations, environmental impact, life cycle costing and recyclability.

A good systems company will have a wealth of technical expertise that architects and building designers can draw on to develop the most effective fenestration solution for every project.



A man with a beard and short dark hair, wearing a red polo shirt and grey cargo pants, is smiling and holding a large brown cardboard box in front of his chest. The box has the VELUX logo and 'ROOF WINDOWS' on a red and white label. The text '90 DAYS OF REWARDS' is printed in large white letters on the box. Below the text are five icons: a pizza slice, a t-shirt, a computer monitor, a ticket, and a palm tree.

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# TAILOR MADE SOLUTIONS FOR EFFECTIVE DRAINAGE

Effective drainage has become recognised as an essential part of the design, development and construction of every individual building project. The importance of getting it right is not simply one of compliance with building regulations and current legislation, but is crucial to the livelihood and wellbeing of homes and businesses across the UK and indeed worldwide.

The global issue of climate change, giving rise to unpredictable levels of rainwater, combined with an ever-increasing demand for building development, creates localised challenges of how to manage surface water run-off and provide drainage solutions designed to cope. Designers, developers and contractors alike can't ignore these factors,

which are not going away, but help is at hand with effective, efficient drainage solutions tailor made to suit local conditions.

Water management specialist JDP recognises that the requirements of each individual site and project are unique and has extended its RAINBOX Attenuation Solutions range to provide options to match. The full flexibility of RAINBOX provides developers and contractors with attenuation products that provide Lite, Medium and Heavy load grades and offers bespoke and hybrid solutions to suit almost any application.

JDP's experienced Technical Support department can assist with planning and design, through to supply and installation on site of a RAINBOX system, to ensure

a completely watertight tank from a team of trained specialists. Using cutting edge technology, accurate rainfall data and topography reports can be provided and advice for projects involving surface water management to ensure operational efficiency, effectiveness, legislative compliance and manage increased volumes of surface water.

## Application LITE

- Non-traffic applications
- RAINBOX 3S is the latest addition to the range and is the ideal solution in green areas and non-traffic applications. RAINBOX 3S crates offer a gross volume of 302 l with a net storage volume of 290 l. Maximum





## RAINBOX 2 SYSTEM MANAGES WATER AT FRADLEY PARK BOTTLING PLANT

Originally constructed in 1939, Fradley Airfield is the location for a recent project featuring the RAINBOX attenuation system. Some of the aircraft hangers, originally active throughout WWII, are still in use today for storage and distribution. Much of the site, which was occupied by the Royal Air Force until 1958, has been redeveloped and is now occupied by businesses such as Tesco, DHL and Palletways.

The site is being developed for a

new 60,000 ft<sup>2</sup> Water Bottling Plant for French company CG Roxane Llc and it is estimated that the facility will produce 68,000 Staffordshire-sourced bottles of water an hour.

JDP's Technical Support department provides a full stormwater management service including design advice, take-off and supply. The design team recommended the installation of RAINBOX 2 attenuation tanks. The most recent of these is a 50.4 m long by 7.8 m wide and 0.42 m deep tank,

providing a storage capacity of =65 cubic metres (165,000 litres).

JDP has partnered with GRAF to offer a total system solution from planning and design, through to supply and installation on site. The groundworkers were on a tight time frame to get the tank installed and backfilled as quickly as possible so the installation team wrapped up the RAINBOX, welded the pipe connections and covered the membrane in the protective geotextile, enabling the tank to be fully backfilled within just a few hours.

The quick installation of RAINBOX is possible with its lightweight crates that weigh just 16 kg each, allowing for manual installation with no heavy machinery, and a simple clip system to combine crates together.

To complete the full stormwater system, JDP was able to supply a comprehensive package including its Axedo plastic inspection chambers, UltraRib and Twinwall drainage pipes and fittings, channel drainage, gullies, manhole rings and covers.



installation depth is up to 4.5 m and compressive strength 20 t. With centring studs and connecting clips, and weighing just 11 kg, the 3S crates allow for rapid installation and ensure the build quality of the structure

- Typical applications – green areas, campsites, caravan parks, plot soakaways

### Application MEDIUM

- Traffic applications
- For applications subject to medium traffic, a choice of two systems provides design flexibility to adapt to local site conditions and requirements
- RAINBOX 2 systems allow for multiple inspection networks by using crates with in-built inspection channels on the lowest level of the structure and non-inspectable RAINBOX 2 crates to make up the remainder of the structure. RAINBOX 2 crates have a gross volume of 300 l with a net storage volume of 285 l. Maximum installation depth is 5 m and compressive strength of 40 t
- PSM1A crates are BBA approved and manufactured from 90% recycled material, offering proven performance, significant savings and reduced environmental impact for medium load class and non-inspectable projects. PSM1A crates have a gross volume of 200 l with a net storage volume of 190 l. Maximum installation depth is up to 3.7 m and compressive strength of 40 t
- Typical applications – car parks, housing estates, access roads

### Application HEAVY

- Heavy applications
- RAINBOX Cube system sizes and load bearing can be adjusted to

adapt to the many requirements of heavy traffic applications and difficult site conditions

- RAINBOX Cube crates are BBA approved and have a gross volume of 205 l with a net storage volume of 195 l. Maximum installation depth is 5 m and compressive strength of 60 t. The RAINBOX Cube system allows two crate modules to be stacked one inside the other, halving transport costs and CO<sub>2</sub> emissions. The system is designed to have a high rate of infiltration and barrier free inspection across the whole area allowing the entire system to be monitored
- The crates are lightweight, and offer real benefits in terms of reduced time on site, speed of installation and in reducing transport costs, material costs and reduced maintenance costs when compared with traditional alternatives
- Typical applications – warehouse areas, yard areas, highways and major roads.



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# FIRST CLASS EXTERIOR

The new Canary Wharf Crossrail station, constructed across six storeys, both above and below sea level, is expected to set a new benchmark for mixed-use developments in the capital. Building Products reports on the challenges involved with delivering the scheme's glazing and cladding package.





The new rail station at Canary Wharf is the first, and likely one of the largest, to be constructed as part of the ambitious Crossrail development which aims to dramatically transform and improve travel across London and the South East of England. The creation of the new station on the North Dock of West India Quay, where it is completely surrounded by water, has been an interesting journey for the teams from envelope and major facades specialists Lakesmere Group and McMullen Facades.

This commercial development is heralding a new generation of mixed-use schemes that provide retail, leisure and transport facilities together in one prime location. Developed by Canary Wharf Contractors and designed by Foster + Partners, the striking development is located in the hub of the capital's major business district, within sight of some of Europe's tallest buildings. The new station box itself boasts some impressive credentials, measuring approximately 260 m from end to end – as long as One Canada Square laid on its side.

Situated within an old dock which was drained prior to work commencing, the station is being built 'top down', with the two floors housing the ticket hall and platform levels located 22 m below water level. Above the station are two 'under-water' floors of retail space, with a further two above ground level, before the station is completed by a roof top garden, restaurant and community facility that is partly covered by a striking timber lattice roof.

The design of the new station both complements and contrasts with the surrounding high-rise architecture on Canary Wharf, to create a distinctive new landmark, with the horizontal, almost nautical, shape of the building helping to create the notion that the structure is 'floating' in the dock. Another key feature is the striking glulam grid shell roof that creates dramatic cantilevers at either end of structure, beneath which are the buttresses that accommodate the mechanical requirements of the station.

Although no stranger to working in the transport sector, and with a number of other Crossrail contracts underway, the Lakesmere team quickly discovered that this was not like any other rail project. The new station at Canary Wharf required a bespoke approach to both the design and installation process that would successfully meet the dual requirements of the design architect Foster + Partners and executive architect Adamson Associates, as well as the client Canary Wharf Contractors, whose offices actually overlook the construction site.



## EXTERNAL CHALLENGES

Lakesmere's main scope of work, and therefore its biggest challenge, was the delivery of the high-performance louvres, anodised cladding and feature metalwork to both buttress ends of the station. Not only a key part of the building's overall design, the louvre sections also play a vital role in the performance of the station as they extract and distribute air from the lower platform levels. Creating this functional, yet impressive, focal point required the cohesive design of performance louvres framed in feature stainless steel, and the surrounding large scale pressed louvre blades with backing wall cladding.

Lakesmere was also responsible for the design and installation of the bespoke champagne anodised aluminium cladding to the sloped and side areas of the buttresses.

Owing to the complex geometry of the scheme, it was designed completely in 3D, therefore it was essential that the use of this technology was cascaded down through the supply chain, to avoid any potential clashes, inaccuracies or delays caused by alternating between 2D and 3D models. With a proven track record of working on technically complex packages, Lakesmere utilised Rhino 3D design software and worked closely with its own established supply chain to identify partners that could work to this same high standard.

Logistically, the project was extremely challenging to deliver, owing to its waterside location. Health and safety was paramount, and Lakesmere utilised its logistical planning and management expertise to ensure safe and efficient access throughout the installation process. Many parts of the subframe were prefabricated and brought

to site in 4 m x 7 m sections that were then craned into position and a wooden pontoon deck was also positioned in the dock to provide a temporary work station.

Lakesmere's sister company McMullen Facades also delivered the glazing and cladding package, including the installation of the shop front glazing to the station's four storeys of retail space, as well as the external cladding to the restaurants on the top roof garden level. Meticulous attention to detail to create the high-specification finish and sleek lines that the architects demanded was essential, as was the careful coordination between the McMullen team and other trades.

## ADDITIONAL ELEMENTS

In addition to the high-profile buttress cladding and the work that McMullen delivered to the retail elements, a second phase of works for Lakesmere included the steelwork package for the Platform Edge Door Downstand in the depths of the station on level -5, as well as bespoke GRP panel trackside cladding and platform finishes, running the full 240 m length of the east and westbound platforms. Lakesmere also worked on several of the access routes to the station, designing and installing the internal extruded aluminium cladding and bullnose capping for the elevated walkway and the underside aluminium cladding to the road bridge.

The varied and extensive nature of Lakesmere's scope of works is reflective of the very nature of the new station at Canary Wharf which is more than just a rail station and much more than just a new retail scheme. In creating the new Crossrail station, scheduled to become fully operational in 2017, the team has created a new type of commercial development, already shaping up to be one of London's most iconic destinations.

# ATTACK OF THE CLONES



Dave Hughes, global product manager at Stanley Security Products, looks at methods for ensuring that token cloning doesn't compromise the security of access control systems.

Cloning of tokens used in access control systems is a serious issue faced by many commercial premises, especially where there are high security requirements.

Credentials such as badges, RFID tags or entry tokens can all be used for granting entry to a facility or restricted areas. With token cloning technology easily available, duplicating a token can be undertaken within a few seconds.

Access control systems provide the essential services of authorisation, identification authentication, access approval and accountability. Electronic credentials are stored in the memory of a card or token and, theoretically, it is possible to clone any of them. Technologies used for storing data in tokens are usually based in open standard hardware which is easy to duplicate.

There are several reasons why people clone tokens and cards. Sometimes it is with criminal intent in mind, but most times it is simply to obtain duplicates in case of loss and to avoid paying official fees for replacement devices. This puts companies and individuals at risk if tokens end up in the wrong hands.

## MECHANICAL VS. ELECTRONIC

One question that crops up in response to this is whether it might be better to use mechanical locks and keys in place of electronic access control readers and RFID tags to avoid the whole issue of token cloning altogether.

Whilst key based locks remain the most popular door security by some considerable way, they can also be copied and locks are vulnerable to picking. Cloning a token is more complex than cloning a key, requiring a device to read and reproduce the RFID signal in a blank token.

However, this question really isn't the right one to be asking in the first place. The starting point should be to assess what level of security is required. Where a higher degree of security is needed, electronic solutions are a better

fit because they provide the user with a wide range of added benefits that are particularly useful to larger sites with larger volumes of 'key holders'.

With electronic access a single entry token or access code can grant access to every door in a building, so there's no chance of forgetting the key for a particular door.

An additional benefit of electronic access control is complete history logging. This can be an invaluable tool when investigating vandalism or theft, or for tracking response times or technical activities internally. Furthermore, when an outside contractor or visitor needs access, the door can be opened remotely without any effort.

If a physical key is lost there is no way to block it or be sure that it has not fallen into the wrong hands. The only way of blocking access to the lost key would be replacing the original lock. This is not the case with electronic credentials as revoking access privileges is as easy as telling the system to stop trusting the revoked key.

## SECURE LOCATIONS

An access control point can be a door, turnstile, parking gate, elevator, or other physical barrier, where granting access can be electronically controlled and can contain several elements.

Access control systems can vary from basic solutions that simply read a card number or PIN and forward it to a control panel, to the more secure intelligent readers that comply with strict security legislations, such as AES-128.

Depending on the level of security needed, manufacturers offer different types of access control solutions. If high security is a must, a system that features an AES-128 bit certification might be the best solution.

AES is available in many different encryption packages, and is the first publicly accessible and open cipher approved by the US National Security Agency (NSA) for top secret information

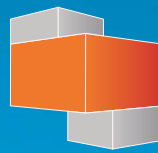


when used in an NSA approved cryptographic module.

The AES-128 encryption is one of the most secure and the only known attack to successfully break it requires about 38 trillion terabytes of data, which is more than all the data stored on all the computers on the planet. AES-128 bit encryption is available from manufacturers such as Stanley Security Products, with affordable readers that can be installed on top of a legacy system to upgrade it to a smart system. Smart readers, such as the Oneprox GS3 HF range, used in conjunction with smart credentials, offer a secure access control solution suitable for any commercial environment.

While one may think that upgrading a system is a costly and time consuming procedure, more often than not there is no need for a complete system upgrade. The new smart readers can be incorporated into the existing system without too much effort or costly procedures.





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## LIDL RENOVATES LISTED METRO SPACE FRAME SITE

**CRITTALL's** W20 steel window frame system has been specified in the renovation of a listed 1960s building into a new Lidl supermarket.

The 57,000 ft<sup>2</sup> building was the first example in the UK of the use of the Mero Space Frame. This German system was designed to support the roof with the minimum number of columns, thus creating a relatively clutter-free space for manufacture.

The company supplied banks of coupled W20 and MW40 section fixed frames, double glazed in long runs. These were interspersed with bespoke insulated pressings both internally and externally to allow a link between upper and lower level windows, roof and internal services.

A narrow metal fascia running at roof level was also installed around the building. This was recreated in steel together with a specially designed fixing system to replace the original aluminium and asbestos sill.

Lidl property director James Mitchell, said: "The Crittall supplied window system has perfectly recaptured the spirit and rhythm of the original building, whilst at the same time bringing it in to the 21st century."

• 0137 653 0800 • [www.crittall-windows.co.uk](http://www.crittall-windows.co.uk)



## NO 'BARR' TO OFFICE SPACE FOR DRINKS MANUFACTURER

**PORTAKABIN HIRE** has provided two modular buildings to soft drinks company AG Barr to be used as office space at its new manufacturing facility in Milton Keynes.

AG Barr has hired two Portakabin Solus buildings to provide flexible office and meeting space on the shop floor for the next three years. Both buildings were delivered in a month or less from contract award, and each has been 'wrapped' in the company's statement drinks branding.

Portakabin Solus buildings are available to hire or buy and provide self-contained office space for up to six people. Each building is delivered complete with data connection points, heating and lighting, and large windows. It is available in a range of sizes up to 36 m<sup>2</sup> and can be linked to create larger complexes or two-storey facilities. The buildings can also feature corporate branding, company logos and graphics on a vinyl wrap, which the company says are easy to install and remove.

• 0845 401 0010 • [www.portanews.co.uk](http://www.portanews.co.uk)

## CURTAIN WALLING HELPS DRIVE SALES AT CAR SHOWROOM

**SENIOR ARCHITECTURAL SYSTEMS'** curtain walling, shop front glazing and commercial door systems have been specified at two new car showrooms.

The Harry Fairbairn Mini dealership in Kirkcaldy features Senior's SMR900 curtain wall, which was specified due to its wind resistance properties. The curtain wall was installed and fabricated by Nortek Aluminium for main contractor Bell Buildings Projects. The showroom also features Senior's commercial SD doors.

Installer and fabricator Crystal Architectural has created a facade using the thermally enhanced SMR800 curtain wall, integrated with Senior's SFG shop front glazing system and SD automatic doors at Inchcape Volkswagen showroom in Stockport.

Senior says its curtain walling and glazing systems have been designed to help specifiers working in this market meet the required environmental requirements by creating high-visibility shop frontages that minimise solar gain.

• 0170 977 2600 • [www.seniorarchitectural.co.uk](http://www.seniorarchitectural.co.uk)



## CREATING AN UPCYCLED LOOK FOR TATTOO STUDIO

**POLYFLOR's** Expona Commercial range of luxury vinyl tiles was recently chosen for the refurbishment of Vida Loca Tattoo studio in Bolton.

Vida Loca Tattoo in Bolton town centre includes a tattoo studio, hair salon, piercing studio and a coffee shop, all under one roof. The owners chose the Dark Recycled Wood design from the Expona Commercial PUR range to fit in with the studio's contemporary style.

To give the look of a random patchwork of upcycled timber, the design includes tiles in three different widths and in various complementary shades creating the effect of a reclaimed wood floor.

The Expona Commercial luxury vinyl tile collection features 55 wood and stone effects design options for use in heavy commercial environments, such as the retail sector. It has a 2.5 mm gauge and 0.55 mm wear layer and is also enhanced with PUR, a polyurethane reinforcement which is cross linked and UV cured.

• 0161 767 1111 • [www.polyflor.com](http://www.polyflor.com)



## RESTRICTING ACCESS AT COUNCIL OFFICES

GEZE UK has supplied a range of automatic and manual door closures for the refurbishment of the Grade-II listed Derby City Council offices.

For the Council Chamber, which features large 2.4 m high wooden doors, and for specific wooden and glass doors in the corridors, GEZE's Slimdrive EMD-F electromechanical swing door operators were specified. Automatic door operators were chosen for the internal doors so that swipe cards could be used to restrict access.

Throughout the rest of the building, doors were fitted with GEZE's manual range of overhead closers. These closers feature an over pressurisation valve, which protects the operators from damage caused by misuse.

• 0154 344 3000 • [www.geze.co.uk](http://www.geze.co.uk)



## SHIFTING FROM THE TRADITIONAL

Grey and black mesh metal ceiling tiles in Axiom knife-edge canopies from **ARMSTRONG** have been specified for an Avanta Serviced Offices' business centre in East London.

The 600 mm x 600 mm mesh metal lay-in board tiles feature an elongated diamond pattern with 62% open area to aid air flow, finished with a polyester powder coating and set within the Axiom knife-edge canopies in matching RAL colours.

Carole Cobban, director of designer Amalgam, said: "This approach was totally new for my client. All the M&E services were exposed – metal trays, AC units and pipework – so a metal mesh ceiling fitted in well with this concept. It was a major shift in aesthetics away from their more traditional approach to serviced office environments, but they were very, very pleased with the end result."

• 0189 525 1122 • [www.armstrong-ceilings.co.uk](http://www.armstrong-ceilings.co.uk)



## F. BALL CONNECTS WITH LINKEDIN AT DUTCH HEADQUARTERS

A range of **F. BALL** products have been used in the refurbishment of LinkedIn's Dutch headquarters in Amsterdam.

After removing the existing floor coverings, contractors used Stopgap P131 general purpose primer to prepare areas of raised access flooring and Stopgap P121 acrylic primer to prepare the remaining anhydrite subfloor. The company says that priming promotes the adhesion of smoothing underlayments when used to smooth non-absorbent surfaces, and also prevents smoothing underlayments drying too quickly on absorbent surfaces. Stopgap 700 Superflex fibre reinforced smoothing underlayment was also used by contractors over the areas of raised access panels. Stopgap 300 HD heavy-duty floor smoothing underlayment was also applied to the remaining anhydrite subfloors.

• 0153 836 1633 • [www.f-ball.co.uk](http://www.f-ball.co.uk)

## ILLUMINATING SAFETY

**TYCO**'s photoluminescent, floor-mounted safety signs have been specified at Matalan's revamped Corby distribution centre.

For the £8,000 supply and install contract, Tyco Fire and Integrated Solutions (TFIS) opted for photoluminescent signs on the floor of the building.

"These are AAA rated, giving a high light output of 25 lux and are very durable. They come with a two-year manufacturer's guarantee, but I expect they will be good for at least five years," said Nick Scrafton, service sales consultant at TFIS.

TFIS also developed a location strategy for the 120 fire extinguishers installed in the refurbishment of the centre.

• 0161 455 4400 • [www.tycofis.co.uk](http://www.tycofis.co.uk)



## INCORPORATING TEXTURE

**D R SERVICES** says it is now able to incorporate materials into its laminated glass walls.

LED lighting can also be used to illuminate the interlayer, reflecting internally off the face of the toughened laminated glass.

Director, Will Jarvis said: "Thanks to the development of the new SGP interlayer we are now able to incorporate almost anything into laminated glass walls. The possibilities include fabrics like silk or different types of metal. We have recently supplied walls featuring copper mesh for a large private house, and cherry wood veneer at a top London restaurant."

"Because the interlayer is waterproof the walls can be used alongside swimming pools or for steam rooms. Frameless walls are available, and it is also possible to utilise the new electrical glass that has come on the market – Geometry. Company logos and other designs can all be drawn on CAD and etched into the glass before it is laminated, while we can fit LED strips down the sides of the panels to make them glow."

• 0127 944 5277 • [www.drservices.co.uk](http://www.drservices.co.uk)

## FORTICRETE SPECIFIED FOR FARMHOUSE INN TRIO

A selection of cast stone, decorative walling, roof tiles and slates from **FORTICRETE** have been specified for the construction of three new Farmhouse Inn restaurants in Edinburgh, Havant and Bristol.

For the construction of Farmhouse Inn Elginhaugh Farm in Lasswade, Edinburgh, project architect Arch-E-Tech Design specified Forticrete's Gemini roof tile in Slate Grey, coupled with its Dry Fix and Ventilation Systems. Anstone Cottage walling stone in Brown Old Weathered was also specified to replicate natural stone. Wet Cast Stone Heads and Cills in Buff were chosen to provide decorative finishing touches to the restaurant's roofs edges and windows.

Jason Thompson at Arch-E-Tech Design, said: "Having specified Forticrete products across many of our developments over the years, we had no reservations that they would deliver yet again."

• 0190 977 5000 • [www.forticrete.com](http://www.forticrete.com)



## 'EXCELLENT' INSULATION FOR ADMIRAL

**KINGSPAN INDUSTRIAL INSULATION's** Kooltherm FM Pipe Insulation has helped the new Cardiff HQ of insurance firm Admiral achieve a BREEAM 'Excellent' rating.

Over 5,000 lm of Kooltherm FM Pipe Insulation was specified for the project. The insulation product is suitable for pipework and equipment operating in a temperature range of between -50°C to +110°C and offers thermal conductivities of 0.025 W/m.K.

The product holds a Euroclass rating of BL-s1,d0 and is approved under FM

Global insurance Approval Class 4924 Pipe Insulation. With the launch of the Kooltherm FireSleeve, Kingspan Industrial Insulation says it can also now offer a complete fire performance approved system with a two hour fire rating.

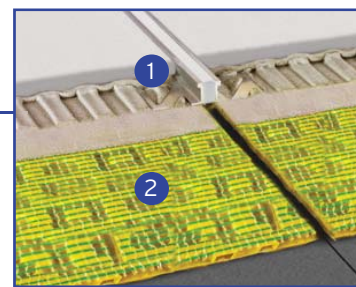
Dave Hodsoll, managing director of installer Linear Insulation, said: "By installing Kingspan Kooltherm FM Pipe Insulation we were able to achieve the required level of performance with a minimum product thickness, helping to save valuable services space.

"The product was easy to install both on and off-site, and its Green Guide A+ rating helped further contribute towards the overall BREEAM rating."

• 0154 438 8601 • [www.kingspaninsulation.co.uk](http://www.kingspaninsulation.co.uk)

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Pictured above:

- 1 Bespoke Movement Joint
- 2 CI+ Anti-Crack Matting







### POLISH-FREE MAINTENANCE FOR RSPB CENTRE

Vinyl flooring from **POLYFLOR**'s Expona Flow range was recently installed in the refurbished visitor centre at RSPB Bempton Cliffs nature reserve near Bridlington, East Yorkshire.

Around 240 m<sup>2</sup> of Expona Flow heavy commercial sheet vinyl flooring in Honey Beige was installed throughout the visitor centre's exhibition area and gift shop. The Expona Flow PUR collection of heavy commercial sheet vinyl floorcoverings includes 50 wood, stone and abstract designs in a 2 m wide sheet format with a 2 mm gauge and a 0.7 mm wear layer.

The range is cross linked and cured with Polyflor PUR polyurethane reinforcement for a polish-free maintenance regime. Polysafe Verona PUR decorative, carborundum-free, safety flooring was also installed in stairwells, corridors and bathroom areas to provide sustainable wet slip-resistance.

• 0161 767 1111 • [www.polyflor.com](http://www.polyflor.com)

### ROLLED-TO-ORDER

**METSEC** recently supplied its 'rolled-to-order' purlins and side rails for a new distribution centre for retailer Next.

The company said it had designed a purlin solution which optimised the use of steel, without compromising on performance, resulting in lower costs.



Kevin Jones, sales director for Metsec's Purlin Division, said: "Here at Metsec, we ensure that our systems are designed to provide optimum levels of structural performance in roof constructions, however it is often the added value we provide to the engineer via our expert staff that they're most appreciative of."

• 0121 601 6000 • [www.metsec.com](http://www.metsec.com)



### STAIRPARTS ON SHOW

**RICHARD BURBIDGE** has provided a bespoke stair rack for Garrards Timber Merchants' new joinery showroom.

The Yorkshire timber merchant will showcase Richard Burbidge's entire range of stairparts.

Greg Jones, business development manager for Richard

Burbidge, said: "The Richard Burbidge stairparts range caters for all customers offering a wide variety of styles and finishes. The products are only aesthetically pleasing but robust and durable, providing unbeatable quality ideal for commercial and domestic application."

• 0169 167 8232 • [www.richardburbidge.com](http://www.richardburbidge.com)



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# OFFSIDE WITH OFF-SITE



Mark Oliver, managing director at H+H, says that, despite a recent surge in Government support for off-site construction methods, the industry should remain wary of plunging in headfirst, especially as recent history has demonstrated that there are still many questions surrounding pre-fabrication that have yet to be addressed.

At the start of the year, the minister for housing and planning Brandon Lewis was very vocal in his support for off-site construction as a means of solving the much discussed housing shortage in the UK. Since the election Mr Lewis has gone a little quiet on this subject, but since he successfully managed to hold on to his position in the new cabinet it would be safe to say that his thoughts remain the same.

The core of his argument is that houses can be built at a much faster pace if off-site modular construction methods were employed.

## LOOKING TO OTHER MARKETS

Other advocates for offsite construction frequently make comparisons between the automotive industry and housebuilding. The suggestion is that an increase in automation, factory production and standardisation will produce the results the country needs when it comes to housing.

It's an interesting comparison though, as the track records of various governments' involvement in this sector are hardly shining examples of success, and on one occasion preceded the complete collapse of motor manufacturing in the UK.

Fortunately, the industry has recovered and vehicles of all shapes and sizes are once again rolling off production lines across the UK. This happened because the right conditions were created to make the UK an attractive option for overseas investment.

If the Government wants to emulate the automotive sector, it should focus on the investment angle rather than the actual manufacturing process. If it were to assist in creating the conditions that would attract investment from the world's leading building products manufacturers like LafargeHolcim, Saint-Gobain or CRH, then we would have a much higher chance of succeeding and securing a stable long term supply of new houses. If the Government creates a sustainable and stable long term demand, innovation would naturally come from within the sector. Short term government intervention and recent evidence of not sticking to policies and schemes is unlikely to succeed.

## HISTORY REPEATING ITSELF

This is not the first time the construction industry has witnessed a push towards off-site construction by a government. During the last housebuilding boom, John Prescott, then Deputy Prime Minister, proclaimed an agenda with a great deal of similarity to the one Brandon Lewis has been advocating.

During his tenure, Prescott was the catalyst behind the development of seven 'Millennium Villages', with the aim of highlighting new building techniques. One of these, Oxley Woods estate in Milton Keynes, utilised flat-packed houses of insulated steel panels overlaid with cedar cladding. Designed by Richard Rogers, the 122 unit estate won many plaudits for its forward thinking design. However, times have changed and now it is the subject of a £5m legal claim brought by the developer against Rogers' firm as a result of water penetration.

These concerns with performance have no doubt contributed to the decline in the use of pre-fabrication techniques for housebuilding. NHBC figures suggest that the market share for new timber frame houses in England dropped to 9% in the second quarter of this year.

## BURNT FINGERS

It is not just the performance that is a cause for concern, there is also the fact that many companies have already had their fingers burnt with off-site construction.

Construction companies, including four of the top 10 housebuilders, that vertically integrated into off-site manufacturing in either steel or timber in the last housebuilding upturn have since either closed their factories or sold them to other businesses which have also eventually closed them. Today, only two of the top 30 housebuilders have vertically integrated off-site businesses.

It was not only the housebuilders that suffered, product manufacturers also invested in off-site construction plants. Tata Steel set up its Corus Living Solutions modular building plant, but subsequently made 180 people redundant in 2010 when it closed along with many independent off-site timber frame businesses.

Even my company, H+H, went down the off-site

route in 2002 by opening a plant to manufacture storey high wall elements and floor panels for use in modular construction. That factory has since been converted to produce aircrete blocks because that is where the demand is.

In addition to the industry cyclicality, which makes investments risky, I think there are a few other issues that challenge off-site construction. The first is the public's view of prefabrication which stems from the period of mass-production in the post war era. The second is that our planners do not embrace standardisation, and the third is a lack of scale.

A recent article in the Financial Times made similar points stating that attempts to transform housebuilding through factory building were being rejected by the public's negative attitude towards prefabricated architecture. According to the article, it is not just the planners that oppose standardisation or mass customisation, housebuilders themselves do not believe that British consumers will buy into the idea of identical factory-built homes. A quote from the corporate affairs director of one of the leading volume builders mentions the lack of scale: "We build thousands of homes a year and at the moment we produce many different designs to cater for consumer taste and planning requirements. There just isn't enough standardisation to make a full factory approach financially viable."

My own view is that rather than prescribing how builders should build, the Government should focus on encouraging a sustained demand for new houses and removing barriers that prevent commercial organisations from capitalising on that demand.

Once companies can be confident of a sustained level of demand then you can be sure they will find the most efficient way to grow their market. My message to our politicians is simple – if you want more homes, encourage companies to invest, either through funding growth in social housing or creating the right conditions for private developers to thrive. If this happens, experimentation and innovation will follow, but do not try to force the direction in which this moves.

# SPEED, A KEY TO SUCCESS

H+H explains the benefits of its Rå Build method, and how it delivered on two recent housing association projects.

People in the construction industry are in the money making business and nothing makes money like a speedy delivery. That's why smart builders opt for the H+H Rå Build method of construction applicable for a wide range of project types and applications.

The Rå Build method, using the Thin-Joint System, is an inclusive package which comprises large format aircrete blockwork and quick-setting Thin-Joint Celfix Mortar. The construction creates a weather-tight masonry shell in rapidly for a time-efficient, cost effective solution.

Perfect for all project types, from self-build to commercial developments, the Rå Build method

and Thin-Joint System provides fast, easy and simple application making sure construction leaps out of the soil right before your eyes.

## FAVoured SUPPLIER

So effective is the solution that it is the preferred building method for a large number of building companies which don't hesitate when selecting H+H products for their upcoming projects. Building contractor, RT Bishop, based in Churchstoke, Montgomery, and Sherborne Homes, from Gloucestershire, are sold on this building system and recently demonstrated the use of H+H aircrete in the company's latest developments.

The first of five homes of an extensive development for Mid-Wales Housing Association have been completed by Robert Bishop and his team at RT Bishop in Churchstoke. They credit the expressed building rate that is accomplishable using the H+H Rå Build method of construction.

This first stage, part of a larger project that will see a further 22 homes built in the vicinity in the coming years, has been completed and allocated to applicants from both Powys County Council and Mid-Wales Housing. H+H aircrete, with its excellent thermal efficiency, has provided tenants with environmentally friendly homes, integrating some of the latest technologies including solar panels on the roof and air source heat pumps for sustainable heating.

The detailed brief for this housing association project stated that the homes must obtain a high level of thermal performance. This was of particular interest to Mid-Wales Housing Association, as was adhering to all Building Regulations in general. The H+H Rå Build method using the Thin-Joint System helped in achieving this goal.

The homes are built to meet a number of design standards, including Life Times Homes, Secured by Design, Welsh Government Design Quality Standards, the Code for Sustainable Homes (Level 3 plus), and the Welsh Housing Quality Standards.

As well as a high thermal performance allowing for homes to meet all required building standards, the Thin-Joint System provides building contractors with a speedy building method that enables walls to be built at a rapid rate.

Director at RT Bishop, Robert Bishop, said that by using H+H aircrete they were able to produce the inner leaf of the external walls for all homes in just five weeks – three weeks faster than had they used other traditional alternatives. This time saving not only allows work to continue faster and the project to finish earlier, but that time saved also saves





money on labour costs.

"We decided on H+H because the preference was to build with traditional masonry materials and the Râ Build method makes for a far easier and quicker build. The method enabled us to build the inner leaf of the building before the outer skin went up meaning we could continue with the first-fix faster," Bishop said.

## HOW IT WORKS

Aircrete's lightweight design, made with a mixture of pulverised fuel ash, sand, cement, lime and water, means that blocks can be laid and transported around site with ease and often can be laid by a single person or small team.

The H+H Thin-Joint System works by applying specially designed mortar via a scoop or sledge. Compared to standard mortar use, with 10 mm bedding, the Thin-Joint System works with Celfix Mortar and needs only 2 mm. The thin mortar joint begins to set within 10 minutes of application and reaches full design strength in just one to two hours.

The Celfix Mortar is cement based and designed to replace traditional sand:cement mortar. Using this, blockwork can be built extremely quickly with the inner leaf structure going up independently of the outer leaf and a full weather-tight shell can be erected in a matter of days, not weeks.



The advantage of using the H+H Râ Build method is its quick application meaning further first-fix works, electrical and plumbing can start sooner knowing they have a weather proof environment in which to operate.

"I was very pleased with the end results as it all went up a lot quicker than I thought it would. By using the complete Râ Build method we were able to save about two or three weeks. We have used timber frame systems in the past but now, after using this system, we will definitely go to H+H again," said Bishop.

Further down the country, about 70 miles from Churchstoke in Tewkesbury, the team at Sherborne Homes also opted for the H+H Thin-Joint System as a way to kick-start its housing association project.

Having used the Thin-Joint System for the last 10 years, Harry Sherborne and his team are well versed in this quick and efficient building approach and implemented it for the company's very first project for a housing association.

"We find H+H's Thin-Joint System to be quick, easy, clean on site and all comes together very simply. I am a big believer in H+H," Sherborne said.

The project involved the construction of a terraced block of units, a pair of semi-detached units and a single detached unit for Severn Vale Housing Association. Tending to shy away from timber frame building solutions, Sherborne instead relied on aircrete again to bring the job in on time and on budget.

The Râ Build method allows projects to rise from the ground quickly and without delays. The workability of aircrete means blocks can be cut to size to account for door and window locations. The combination of aircrete and Retro Fit Joist Hangers means

that block work does not have to stall after the first lift phase.

These joist hangers can be easily installed into the required course before the second lift takes place. By doing this the walls of multiple storeys can be constructed before floor joists are installed. This can see the roof trusses and roof erected sooner providing the watertight shell that will benefit secondary contractors.

The ease of use and speed of delivery that comes with using aircrete provides Sherborne Homes with a hassle free building solution and the added benefits of a great support package makes it an easy decision to make.

## TECHNICAL GUIDANCE

New staff members requiring training in using the Thin-Joint System are aided by the technical team at H+H. Prior to construction, a training course of how to correctly apply Celfix Mortar is given if required and Sherborne Homes took advantage of that when two new contractors started this project.

Further training can be found on the H+H YouTube channel, as well as technical advice from experts in the field. H+H's experienced technical team, led by technical director Cliff Fudge, is also available at the end of the phone to tackle any and all questions relating to aircrete and H+H building methods.

Both Sherborne Homes and RT Bishop are full of praise for the H+H solution and consistently use aircrete for a multiple of uses.

Further information on applications of aircrete can be found on the H+H website at [www.hhcelcon.co.uk](http://www.hhcelcon.co.uk).



# AIRCRETE: SOME QUICK QUESTIONS

## WHAT ARE THE BASIC DIFFERENCES BETWEEN AIRCRETE AND DENSE CONCRETE BLOCKS?

The main differences are thermal efficiency – H+H aircrete products are typically 10 times more thermally efficient than dense aggregate concrete – and speed.

Using our Thin-Joint System, a wall can be built to first floor height in just one day, as the Thin-Joint mortar does not need the extended curing time of its traditional mortar equivalent. This allows the watertight shell of a building to be constructed extremely quickly, allowing the interior trades into the building much sooner and significantly speeds up the whole build process.

However, since the inner leaf of aircrete in cavity construction is built independently of the outer skin, the cavity insulation can be inspected before it is covered up. In addition, the outer skin is taken off the critical path and can be constructed simultaneously when the first fix trades go in.

It is also much more flexible than dense concrete as it can be cut on site using a hand saw to accommodate the need for individual sizes and shapes.

## WHERE CAN THE BLOCKS BE USED?

H+H aircrete blocks can be used to meet the requirements of Building Regulations in the following aspects of building:

- External solid walls
- External cavity walls: inner and outer leaves
- Partition walls
- Separating and flanking walls
- Solid foundations
- Beam and block floors
- Infill to steel and concrete framed buildings

Not only can H+H aircrete blocks be used throughout a build project, they can also be used with a wide variety of finishes, just like dense concrete blocks, including brick, render, pebble dash and cladding.

## WHAT ABOUT STRENGTH AND SIZE?

At its three UK factories, H+H produces seven different types of aircrete blocks, including Celcon Foundation Blocks, Jumbo Bloks and Multi Plates. H+H aircrete blocks are available in different grades, so there is a block for every type of build job.

The most commonly used block is the well-known 440 mm x 215 mm Celcon Block. It is available in Standard Grade, suitable for use throughout a building. There is also Solar Grade, for when enhanced thermal performance is required, and High Strength and Super Strength Grades for when higher compressive strengths are required, such as in multi-storey buildings.

## WHAT ABOUT SUSTAINABILITY AND MAKING BUILDINGS MORE ENERGY EFFICIENT?

As a material, aircrete ticks many of the sustainability boxes. At least 70% of every H+H aircrete block is made of pulverised fuel ash – a waste material that is a by-product of energy generation that would otherwise go to landfill. As a result, our constructions achieve very high ratings in the BRE's Green Guide.

Just as significant is the role our products play in the construction of sustainable buildings. Our philosophy is very much one of "fabric first" – that energy efficiency should be built into the fabric of a house so that it remains effective for the lifetime of the building. This philosophy is now reflected strongly in Part L of the Building Regulations. We believe that this is a far better option than relying on technologies that are either unproven over the longer term or rely on the behaviour of the building's occupants for their effect.

## ON MANY BUILDING PROJECTS TIME IS OF THE ESSENCE – HOW CAN H+H HELP SPEED UP A BUILD?

It can take as little as a couple of days to build the shell of a house using our products and systems. Aircrete blocks alone are much lighter in weight than dense concrete blocks meaning it is easier and quicker to manoeuvre them around site. The real speed however comes when you consider the mortar and the size of the blocks.

H+H blocks come in a wide variety of sizes. Our Jumbo Bloks and Multi Plate blocks are large format which helps with the speed of building. Multi Plates are over twice the size of a Celcon Block, helping significantly to speed up the build process.

We have our own build system called Rå Build. Thin-Joint blockwork with our own Celfix Mortar enables walls to be built very quickly without having to wait the conventional 24 hours for the mortar to set before further loading can be applied.

Celfix Mortar is cement based and supplied as a dry, pre-mixed powder in 25 kg bags. It has been designed to replace traditional sand and cement mortar. Celfix Mortar starts to set within 10 minutes of application and approaches full design strength in just one to two hours. This enables blockwork to be built extremely quickly, and in the case of cavity wall construction, independently of the outer leaf, which is normally brickwork.

When Thin-Joint is used in conjunction with the large format Jumbo Bloks, the Rå Build method can be used. This provides a masonry frame with floors installed before the external brickwork. This means the inner leaf of the external walls of a house can be built in a couple of days independently of the outer leaf. This allows the first-fix trades to begin their work before the walls are even complete which saves both time and money.

## WHAT HELP IS AVAILABLE?

H+H has a very experienced technical team, led by our technical director, Cliff Fudge. The team is available at the end of the phone to answer anything from the simplest to the most complex questions. We also have two demonstrators who visit sites around the country to teach builders how to correctly use Thin-Joint and to check that those who have already been taught are doing it correctly.

## DO YOU HAVE ANY ISSUES WITH REGARDS TO MEETING DEMAND AT THE MOMENT?

We have absolutely no issues with regards to meeting the current level of demand. H+H operates two manufacturing sites – Borough Green in Kent and Pollington in Yorkshire – and both of these sites are working effectively and efficiently.



## CONTACT DETAILS

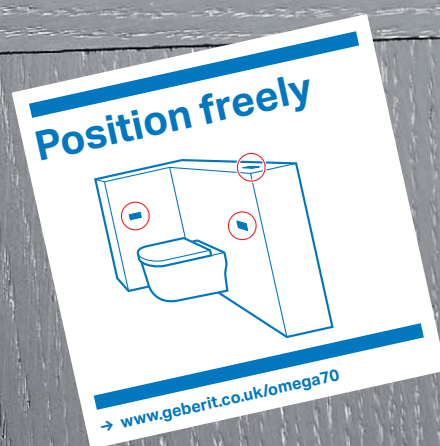
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# FRAMING THE LANDSCAPE



Steve Ginger, deputy managing director at Metsec's Purlins & Framing division, examines how quick-to-erect steel framing could provide a solution to the UK's current housing shortage.

**H**ousing within the UK is currently a widely debated issue, and when it comes to new homes, demand is now vastly outstripping supply, to the extent that house prices are at their highest point since 2007. As construction within the UK continues to grow in 2015, with a further 300,000 homes needed to meet the chronic shortage, the question still looms as to what can be done to effectively handle the increasing demand for affordable housing.

Steel framing is a potential option, as it is extremely versatile and can be used to provide solutions to many different types of construction. As a result, framing can provide a variety of value engineering solutions to cater to a wide and diverse range of buildings. When a building is constructed using steel framing, the end product still maintains its traditional feel, whilst also incorporating the modern requirements of construction, such as BIM. When it comes to speed of build, light gauge steel framing systems can provide a solution. For example, Metframe, which is a pre-panelised, load-bearing system, is designed to deliver a high quality building, whilst also offering a range of other benefits, which make it an ideal solution for quick erection accommodation.

## STEELY RESOLVE

When considering the benefits of Metframe, the use of precision steel design means that there is no shrinkage of product, resulting in complete dimensional accuracy. This, coupled with the fact that the Metframe system is in possession of ETA status, means there is no concern that any finished buildings will be lacking in quality, giving Metframe an edge over other options which are panelised off-site.

Whilst the system provides a quick and easy to construct solution, the ability for Metframe to accommodate concrete or steel joisted floor construction results in excellent acoustic and

fire performance, along with a product lifecycle of over 200 years.

In order to address the shortage of accommodation within the UK, any viable solution must not only be of the proven quality, but it is also required to be erected within a reasonably quick timeframe. Metframe boasts the key benefit of a fast speed of build, generally taking under two weeks per floor to construct.

To ensure that the build is completed quickly, Metframe sections are manufactured to precise lengths, before being shipped to authorised installers where the panels are assembled off-site. In addition, another benefit comes from the fact that external wall panels are pre-clad with either cement particle board or rigid insulation, therefore ensuring that a weather-tight envelope is achieved quickly.

As part of the Metframe construction process, all panels are delivered to site in the required erection sequence. This saves time, as the first panel to be lifted is the first panel to be installed. Once the panels are delivered to site they are craned into position, before being fixed down and bolted together. Further panels are quickly fixed into position, as specified by the building design, resulting in the structural walls of the building being formed. Once the base floor of a new home is in place, the process is repeated and subsequent floors are typically constructed within a timeframe of one to two weeks. Certain follow on trades, such as window installation, can then commence as soon as work progresses to new floors above.

## SPEEDY DELIVERY

Sanctuary Group's latest affordable housing development on Lymington Avenue, a tight inner-city site in Wood Green, London, called for a compact pre-fabricated framing solution. The use of a Metframe system solved the spatial challenge and contributed to the speedy construction of the medium-rise building.

The solution allowed the construction to utilise pre-build panels off-site in time for installation as soon as each section of the substructure was released. Crucially, the 'just in time' manufacture of all framing members required for the load-bearing structure of Sanctuary Group's new two to six storey building removed spatial concerns and kept the site tidy.

Jeff Harris, director at Atkin Group, explained the system thusly: "Typically, low to medium rise apartment blocks like these are made from concrete structures infilled with steel, or they are masonry constructions. But here the entire structure uses steel and it makes sense: the pre-panelised framing is quick, accurate and predictable, which leads to consistently good results at a considerably shorter installation time, and what's more it is an environmentally sound system that achieves high ratings within the Code for Sustainable Homes."

The speed and ease with which Metsec's pre-panelised Metframe was erected at Lymington Avenue is evidence of how the system is a viable solution when it comes to the construction of quick, efficient and sustainable accommodation.



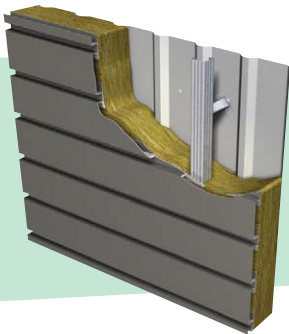
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# Always moving forward

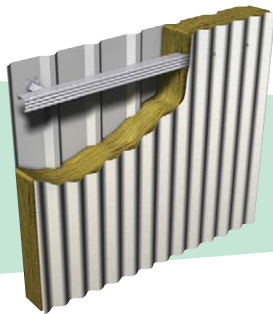


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# LOCAL MAKEOVER

An injection of colour is set to provide the starting point for a major village regeneration scheme in North Wales, aimed at attracting investment opportunities to the local area. Building Products reports.

Paints and decorative coatings from Bradite have recently been specified for a major community regeneration project. Penygroes, a 19th century village in North Wales, is to get a new lease of life, thanks to local enterprise agency Antur Nantlle Cyf, a non-profit-making community company established in 1991 to work for the benefit of the area.

The organisation, plus five local residents who make up the recently established Antur Nantlle Development Group, first approached Bradite in 2014. Their idea was to paint the town's buildings in various colours to revitalise the area and give it a decorative facelift. Given the success of similar projects in other towns such as Tenby, the group decided to apply this positive action to Penygroes.

"Like so many small towns, Penygroes has suffered significantly over the years from shops closing down and residents working out of town or moving away," explains James Burton, head of sales and technical support at Bradite. "Concerned about the lack of opportunities and investment in the area, the group approached us with the idea of working with them to do something about it."

Located on the edge of The Snowdonia National Park and within five miles of the coast, Penygroes attracts plenty of through traffic and a steady stream of tourists and outdoor enthusiasts, but unfortunately, most people pass straight through the town without giving it a second look.

"Hopefully, with its new image and bright, eye-catching appearance, more people will be encouraged in future to stop and take a look around the town," Burton continues. "The goal is to attract more visitors and more investment, and at the same time boost trade, and as a result, provide opportunities for young people to stay in their local area rather than have to move away to find work."

## THEORY TO PRACTICE

The original idea 'to paint the town red' surfaced when HSBC Bank closed its Penygroes branch. Antur Nantlle, which owns the building, has plans to refurbish

it and reopen it as a community project and local business. It also owns a number of other properties in the town, and the concept is to paint the buildings in various colours, ranging from neutrals and soft pastels, to deeper russets and blues, with plenty of contrasting shades in between.

To give the project even more local flavour, each of the 12 colours chosen has been renamed after a local site or attraction. These include Llyfni (a small river), Craig Goch (a nearby dam), Nantlle Uchaf and Llyn Ffynhonnau (two local lakes), Caer Engan (Fort Anvil), Coed y Garth (an ancient woodland), Glynllifon (an historic estate and country park), Craig y Bera (a rocky mountainous site), Dorothea and Pen yr Orsedd (two large slate quarries in the Nantlle Valley), and Cwm yr Haf and Clogwyn Melyn (two districts of Penygroes itself).

"It's all about keeping it local," says Robat Jones of Antur Nantlle Cyf. "We try to work with local suppliers and local tradespeople wherever and whenever possible." Following consultation and discussions with local residents and businesses, work is scheduled to begin this summer. As the first buildings are completed, it is hoped the momentum will build and more people will get involved.

"They can choose their own colour and either carry out the work themselves or hire local decorators of their choice," he continues. "As more residents and businesses come on board, we expect the project to continue over the next few years – depending on the weather, of course."

According to Jones, the group chose Bradite because it was "...impressed with the quality of the products and the reputation of the brand, and also, as the company is located nearby, we have been able to add another local company to our supplier list."

## COATING OF CHOICE

To achieve this ambitious project, Bradite DP28 Masonry Coating/Finish was specified. This non-flammable acrylic emulsion resin-based coating and finish paint is specially designed for use on concrete, cement render and other external



masonry surfaces. Designed to deliver long-lasting performance, its features include a tough, UV and weather-resistant film with strong adhesion to properly prime and prepare substrates, as well as an attractive matt finish. Additional features range from water resistance and moisture vapour permeability, to strong resistance to fungal and algal growth.

For extra convenience and ease of application, DP28 is surface-dry within two hours, with an over-coating interval of a minimum of six hours. It is specially recommended for use on concrete and cement render that are free of contamination, dust and efflorescence.

Depending on the particular application, a fungicidal solution may be required, Burton points out, whilst a coat of stabilising solution may be needed to bind extremely porous substrates. "Generally speaking, two coats of DP28 are normally specified to achieve long-lasting performance and a durable finish," he says.

"Part of our mandate as a social enterprise company," Jones concludes, "is to preserve the heritage of this area where the first language is Welsh, and to encourage our young people to remain here by creating employment and business opportunities as well as an appealing living environment."

"The Penygroes-Bradite painting scheme will serve as a significant catalyst in working successfully to achieve that goal."

The ex-HSBC building in Penygroes is to be coated in bolder colours and tones in order to help rejuvenate the local area



# PROBLEMS GETTING AIRTIGHT RIGHT?



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# SUSTAINABLE FABRIC

The envelope design of a new Tesco 'eco' store in Suffolk was required to meet exacting environmental criteria, whilst still remaining visually sympathetic to the local surroundings. Building Products reports.

In the last decade, the supermarket industry as a whole has been addressing the environmental impact of its produce, making a move towards sustainable sourcing, bags for life, recycling bins etc. In recent years, the focus has evolved, and supermarkets are now looking beyond the interior and what is stocked on their shelves, to address the envelope and surrounding exterior of the building itself.

Plans for Tesco's store in Newmarket, Suffolk, followed the supermarket's 'eco store' pledge which states that they will reduce the carbon footprint of their main stores by 70% between 2007 and 2020. The plans go above and beyond the updated building regulations of 50% carbon reduction, ensuring that the stores are as energy efficient as possible. In addition, the store is working towards a high BREEAM rating of 'Very Good'.

The Newmarket store comprises a single-food store with a sales area of 70,000 ft<sup>2</sup>, featuring a mezzanine-level customer café and staff office accommodation. The building, along with a petrol filling station, sits within a landscaped environment, replacing the adjacent existing Tesco food store on the site.

## EVERY LITTLE HELPS

As with Woods Hardwick's design for the Tesco Eco Store in Corby, the Newmarket development aimed to meet the statutory requirements of Tesco's own stringent environmental criteria. With the aim of a low environmental impact from the outset, the envelope, building fabric, structural components and composition had a crucial role to play in the overall development.

The plans incorporated both sustainable material choices and energy efficient elements, whilst maintaining a robust structure which could withstand the harsh environment and unpredictable British weather. The building was clad in a combination of glazed curtain walling units to the front elevation, and timber cassette panels faced in a larch outer rainscreen to the side elevations. Internally, the engineered timber frame was exposed, complementing the outer timber and creating a texturally and visually pleasing



aesthetic, as well as reducing the building's embedded carbon by 20-25%.

The envelope features a rainwater harvesting roof, which accumulates and deposits rainwater to reuse safely on site, rather than allowing it to run off. The building is topped with a series of Monodraught windcatchers, which provide both a statement feature and an ability to provide sustainable, natural ventilation to the store.

To further enhance the 'eco' experience, and reduce the energy demand of the building, large format rooflights were installed to deliver natural daylight deep into the sales floor, supplementing the need for artificial light, and helping prevent excess heat gain or loss. The heat retention capabilities of the store were further enhanced with the help of a draught lobby, lowering the demand on artificial heating.

Extended eaves were introduced to assist with the solar shading of the building, making further use of the natural environment to reduce carbon footprint and excessive use of energy.

These eco-friendly additions not only reduced the store's carbon footprint, but also enhanced the customer experience, as Mark Appleyard, director at Woods Hardwick, explains: "The use of natural lighting makes the store feel bright and welcoming, while the draught lobby and wind-catchers help it to feel less cramped and stuffy, as the natural ventilation improves airflow."

The sustainable considerations are extended beyond the external envelope,

with every element of the internal facade being benchmarked against eco-friendly credentials.

## CONSIDERATE DESIGN

With any eco development, there is always the danger of the build looking out of place in its surrounding environment. However, with the Newmarket store, the team at Woods Hardwick adopted a sensitive approach in the development of the site, ensuring that the strong design added value to the appearance of the area.

Woods Hardwick worked to create a building sensitive to the local area, incorporating physical and visual linkages between the store and the surrounding environment to assist community cohesion.

The landscaping scheme was basic yet sympathetic, complementing the building and softening the hard edges of the external spaces.

Keeping with the sustainability initiative, Tesco's Newmarket eco store offered more cycle racks than in traditional stores, encouraging cycling to shop and work. This contributed towards meeting the benchmark of the BREEAM framework which gives points across areas as diverse as air quality, ecology and encouraging cycling.

Considering the external environment, internal demands, BREEAM Benchmarks and the supermarket's own high environmentally-conscious standards, Woods Hardwick adopted a holistic approach to developing Tesco Newmarket's eco store, which is being built to leave a lasting legacy in both environmental and building terms.



# Notes from the Comar design team...

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For more information about comar5P.i ADVANCED please contact us:

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Email: [projects@parksidegroup.co.uk](mailto:projects@parksidegroup.co.uk)

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## STANDING OUT FROM THE CROWD

**HUNTER DOUGLAS** says its Quadroclad and Multiple Panel facades "stand out" thanks to their coloured mica pigmentations.

The company says it can replicate the appearance metals such as zinc, copper, titanium, Cor-Ten steel and stainless steel and reproduce anodised finishes. The Luxacote finish has been designed to withstand challenging external conditions. It improves the durability of exterior aluminium building applications with a three-layer system comprising an anorcoat pretreatment, a colour coating, and transparent topcoat.

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## TRANSLUCENT CLADDING

More than 700 m<sup>2</sup> of **RODECA's** translucent polycarbonate panels have been used on two new buildings which form the new Sacred Heart School in Camberwell, London.

In the sports and assembly halls, the panels have been used as a clerestory feature, forming a double-wall construction of 40 mm PC2540 wall panels in a Kristall finish. The same panels also form a double-wall construction to a clock-faced lightbox on top of the teaching block which acts as a lantern when lit at night. An entrance courtyard is clad with 60 mm PC2560 Rodeca wall panels in Opal finish on all sides at first floor level, while 25 mm PC2625 wall panels in Kristall finish form an outside canopy.

• 0126 853 1466 • [www.rodeca.co.uk](http://www.rodeca.co.uk)



## VENTILATING TIMBER FRAMES

**ALUMASC** has developed a new facade solution for the timber frame industry.

The company says its AlumasC Ventilated System offers an alternative approach for new build timber frame housing. The system is designed to provide a fully ventilated cavity, which keeps the timber substrate moisture-free, and is compatible with both render and brick slip finishes. It was recently specified at the Panmure Street development in Glasgow. On this scheme a closed panel, fully off-site manufactured solution was delivered, with only a small element of external on-site fabric work required.

• 0333 577 1700

• [www.alumascfacades.co.uk](http://www.alumascfacades.co.uk)



## ECHOING CLOUD FORMATIONS

**LEVOLUX's** Aerofoil Fin screening solution has been specified at a new 'Energy from Waste' facility in Great Blakenham, Suffolk.

The custom solution comprises aerofoil-shaped louvres each measuring 500 mm wide by 50 mm thick, applied across each of the building's four elevations. The extruded aluminium Louvres are set at a pitch of 750 mm and assembled into panels using aluminium side-plates. The angle of the upper-most louvre in each vertical stack increases by 10 degrees across the installation. The differing angles of the louvres changes as light passes along the facade, which the company says gives the impression of moving clouds.

• 0208 863 9111 • [www.levolux.com](http://www.levolux.com)

## MINIMISING DISRUPTION TO TEACHING

**THE PORTAKABIN GROUP** has been awarded its sixth contract for the London Borough of Barking and Dagenham Council.

The group is constructing the second phase of a primary school facility in a new £5.3m contract. A Yorkon off-site solution is being used to deliver the building to a tight cost plan and a challenging programme in time for the start of the new academic year. The company says this approach will reduce time on site to just six months and ensure less disruption to teaching.

The contract includes a full turn-key service, comprising design, planning, off-site building manufacture, ground works, fitting out, and provision of a multi-use games area, football pitch, and additional play areas.

• 0190 461 0990 • [www.yorkon.info](http://www.yorkon.info)



## STRUCTURAL OSB FOR TIMBER FRAME HOUSES

SmartPly, part of **COILLTE PANEL PRODUCTS**, has launched VapAirTight, a structural OSB panel designed for timber frame structures.

With integrated vapour control properties and airtightness engineered into each panel, the company says VapAirTight has performed six times better than Passivhaus standard for air leakage. The panels feature alternating layers of wood strands coated with resin and wax. A specialist coating is then applied to add vapour resistance. The surface has been developed to provide bonding of airtight tape at panel joints and is designed to prevent air leaks, condensation and structural damage.

Manufactured from FSC-certified timber to the specification detailed in BS EN 300:2006, the company says the rigid panel is a sustainable, robust and cost-effective alternative to specialist AVCL membranes.

• 0132 242 4900 • [www.smartply.com](http://www.smartply.com)





To view the new Knauf Facades Design  
Service video, visit  
[www.knauf.co.uk](http://www.knauf.co.uk)

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Providing durable and lightweight solutions for external walling, the SFS stud and track system allows for complete design freedom and the ability to add various external finishes, including rainscreen cladding, brick cladding and Knauf renders.

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# KNAUF

*Build for the world we live in*

## TIMBER CLADDING FOR NEW CARE HOME

**A. PROCTOR's** Canjaere Classic cladding in a golden colour, has been installed on the new Dunmuir Park assisted living care home in Castle Douglas.

Canjaere has been in the timber industry as a manufacturer since 1950, and has been manufacturing treated timber cladding since the 1960s.

The cladding features an oil treatment which is designed to protect the timber by inhibiting moisture pick-up. The company said: "Canjaere Classic range combines the beauty of natural wood with preserved, pre-finished characteristics."

The range also comes with a standard 30 year warranty against rot and decay.

• 0125 087 2261 • [www.proctorgroup.com](http://www.proctorgroup.com)



## BERKELEY GROUP PLUMPS FOR HUECK

**HUECK** has been selected by the housebuilding company Berkeley Group as a preferred supplier of window, door and facade applications.

The collaboration will see Hueck's aluminium systems specified for Berkeley's residential and mixed-use developments in London and the South East.

The company manufactures bespoke and standard systems and a choice of profiles, which are designed to integrate with each other. Hueck's Lambda range consists of 13 different window systems, and seven door systems. In addition, the company offers the Trigon range of facade systems and the Volato sliding door system.

• 0121 767 1344 • [www.hueck.com](http://www.hueck.com)



## NATURAL VENTILATION FOR RONALD MCDONALD HOUSE

Windows, doors and curtain walling manufactured and installed by **CMS WINDOW SYSTEMS** have been installed at Ronald McDonald House, a facility created to support the families of children undergoing treatment at the Royal Hospital for Children, Glasgow.

More than 65 windows were manufactured by CMS using Metal Technology's System 8 curtain walling system for the outerframes and their 4-20 thermally broken casement system for the opening vents. The large opening vents all feature parallel opening hinges to deliver natural ventilation within individual rooms. CMS also manufactured and installed seven entrance doors created using the Metal Technology 5-20D system. The doors are designed to provide safe, secure access and were supplied complete with Dorma panic hardware.

• 01324 841 398 • [www.cmswindows.com](http://www.cmswindows.com)

## MEETING SITE DEADLINES

Monocouche render by **SAINT-GOBAIN WEBER** has been specified by Cotswold Homes, Gloucester, for a new-build development in Cheltenham.

The two and three storey properties were finished externally with weber.pral M monocouche render in Chalk, which was designed to blend in with the local streetscene in the area.

Weber.pral M is a ready mixed, cementitious render and is manufactured from raw materials at facilities in Bedfordshire, Shropshire and Ireland. It requires only the addition of clean water on site and is formulated for spray application over large areas by render pump. It can be used on most suitably prepared brick and blockwork. The company says it reduces the drying time by as much as 50%, compared with a traditional two-coat system.

• 08703 330070

• [www.netweber.co.uk](http://www.netweber.co.uk)



## ON-WALL SOLAR SYSTEMS

**RUUKKI CONSTRUCTION** has launched a new 'on-wall' solar system.

The add-on system is designed to accentuate large facade surfaces with discretely detailed photovoltaic (PV) fields. The company says it is especially suited to new and existing buildings such as retail, industrial, warehouse and logistics facilities. The system is based on crystal silicon panels which convert solar radiation directly into electricity. Electricity is gathered via cables behind the panels and is transmitted to an inverter which converts the electricity into alternating current (AC).

As the system is not dependent on solar heating, it can produce electricity in conditions where there is no direct solar radiation, for example in cloudy or foggy weather.

Gareth Ellison, country manager, UK, said: "The On-Wall solar system is particularly well suited to taller buildings where there is a larger relative surface area of walls than roof, or where a roof area is occupied by plant equipment."

• 0121 704 7300 • [www.ruukki.co.uk](http://www.ruukki.co.uk)



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Offered with double or triple glazing, door options include **single** and **double**, **sliding folding**, **inline slide** and **lift & slide**, all of which are ideal for both new build and refurbishment applications.

Available in an **extensive choice of colours and finishes**, cradle to cradle **recyclable** and integrating with other Senior products including the **PURe window range**, PURe door systems provide the next generation of evolved products, to exceed current and meet future legislation.

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E-mail: [info@sasmail.co.uk](mailto:info@sasmail.co.uk)  
Innovative window, door and curtain wall systems

## SEAMLESS GLAZING FOR GIRL GUIDES HQ

**SENIOR ARCHITECTURAL SYSTEMS'** products have been specified at the new headquarters for Girlguiding North West England.

Designed by Walker Simpson Architects, the new purpose-built facility in Preston features continuous glazing across all facades, installed by Alusec UK. The building features Senior's SCW+ curtain walling and SPW600e windows.

To complete the package, Senior's ground floor aluminium SFG shop front glazing system was specified to integrate seamlessly with the SD commercial doors, which offer an anti-finger trap feature. Its resilience is designed to ensure the system's suitability for high traffic environments.

• 0170 977 2600 • [www.seniorarchitectural.co.uk](http://www.seniorarchitectural.co.uk)



## HOUSING WHISKY IN SCOTLAND

**STEADMANS** recently supplied materials for maturation warehouses at a new malt whisky distillery on the Isle of Harris.

The company provided products for the roof and walls of the buildings on the edge of Loch Bunabhainneada. These will be used by Isle of Harris Distillers, after it begins operations this summer.

Over 1,700 linear metres of its 40 mm thick AS35 composite panels, in juniper green, were specified for the warehouses. The company also supplied 750 linear metres of Zed purlins, 500 linear metres of C sections, 50 linear metres of eaves beams and 500 linear metres of flashings, plus fixings and accessories. The company's AS35 composite panels consist of two coated steel profiles bonded to a core of PIR insulation, which are used to form roofs, down to a four-degree pitch, and walls. The panels are available in thicknesses ranging from 40 mm to 137 mm.

• 0169 747 8277 • [www.steadmans.co.uk](http://www.steadmans.co.uk)



## FIBRE-CEMENT CLADDING SPECIFIED AS TIMBER REPLACEMENT

**CEMBRIT's** Cemwood cladding has been specified on a summer house in South East London.

Over 40 m<sup>2</sup> of Cemwood was installed on the new building, designed and built by homeowners, Effie and Peter Antoniou. "We were impressed with the design quality and the durability of the product," explained Effie Antoniou.

The autoclaved fibre-cement board with a texture on the front face, can be supplied in grey for on-site painting or staining, or pre-coated in a selection of coloured finishes with guaranteed colour stability for up to 10 years.

Cemwood can be used as a replacement for timber or to maximise new build design options. The fibre-cement, wood-effect weatherboard is fire, rot and insect resistant, as well as being unaffected by heat or sunlight. The company says this allows Cemwood to be extremely low-maintenance and long-lasting.

• 0208 301 8900 • [www.cembrit.co.uk](http://www.cembrit.co.uk)

## MINIMISING AIR LOSS

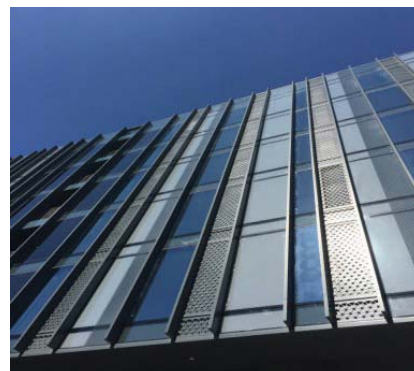
**KINGSPAN's** TEK Cladding Panel has been specified at the University of Lancaster's new flagship engineering building.

The TEK Cladding Panel was bolted to the building's concrete frame and forms the structural backing for the facility's brick facade. The panel comprises OSB/3 facing either side of a fibre-free, insulated core and can deliver U-values of 0.20 W/m<sup>2</sup>K.

The panels jointing system is designed to allow air loss from the building to be kept to a minimum. "This was a key part of the facility's energy efficient design and pressure testing on the completed building showed an air permeability of just 2.98 air changes per hour @ 50 Pa," the company said. The panels are designed and cut to size before arriving on site to improve installation speed and minimise waste.

• 0154 438 7384

• [www.kingspantek.co.uk](http://www.kingspantek.co.uk)



## PERFORATED PANELS PERFORM

**MEATALLINE's** Ultima insulated facade panels incorporating a perforated outer skin have been specified on the new Reflector residential development at Chambers Wharf in The Southwark district of London.

Designed by Simpson Haugh Architecture, the properties feature over 1,500 m<sup>2</sup> of Ultima Insulated facade panels fitted into the structural glazed system across multiple buildings on the development.

Each of the panels were finished in a Basalt Grey PPC colour and fitted via a toggle system together with an internal channel surround.

Ultima panels can be adapted to fit a variety of external applications in sizes up to and including 6,000 mm x 2,000 mm. The company said the panels are fire tested to BS 476, are designed to provide excellent thermal performance and come supplied with a range of BREEAM 'A' rated insulation materials.

• 0154 345 6930

• [www.metalline.co.uk](http://www.metalline.co.uk)



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Anti-slip tray



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## All it takes to transform a bathroom is a little Kinemagic.

The stunning Kinemagic shower cubicle fits perfectly into the same space as a bath. Its innovative design requires no silicone or re-tiling, meaning it can be installed in just a day.\* The 'Cristal Plus' glass panels can be configured for a right or left-handed installation and are completed by a high quality grab rail and folding seat, creating the ultimate safe shower experience.

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\*It is possible to fit a Kinemagic in just one day with two people. However, this is subject to site situations and the competency of your installer.



# ON THE TABLE

## Information Technology

With the Government's deadline for Level 2 Building Information Modelling (BIM) just around the corner, we asked our panel of BIM-compliant manufacturers how they have approached adoption of the technology in its infancy, and how engagement has benefitted them and the industry so far.



**Steve Thompson**  
Chair, BIM4M2  
BIM programme manager,  
Tata Steel



**Joanna Lush**  
Business development manager,  
CX Glass



**Julie Maguire**  
BIM coordinator,  
Merriott Radiators



**Stephen Sturch**  
Sales & marketing manager,  
Armacell

**Q: Collaborative 3D Building Information Modelling (BIM), with all project and asset information, documentation and data being electronic, will soon be required on all Government projects. How ready do you think the industry is, ahead of the 2016 deadline?**

**JL** The latest statistics from the NBS, which put awareness and usage of BIM at under 50% (NBS BIM report 2014) are an indicator that the industry hasn't fully committed yet.

Resistance to change, due to the investment of time and money (and the sometimes baffling data requirements) needed for BIM, is behind some of those statistics. As with any technological change in ways of working, I think we will see a surge

as the late adopters within the manufacturing industry start to see more requests for BIM from large corporates, as well as the public sector, into 2016, and realise that it will affect how and when they are specified.

**SS** The construction industry has made significant advances in terms of adopting BIM in the last 12 months. For example, we have just become the first flexible insulation manufacturer to offer BIM (Building Information Modelling) objects for our Armaflex product ranges, which are free to download from the NBS National BIM library.

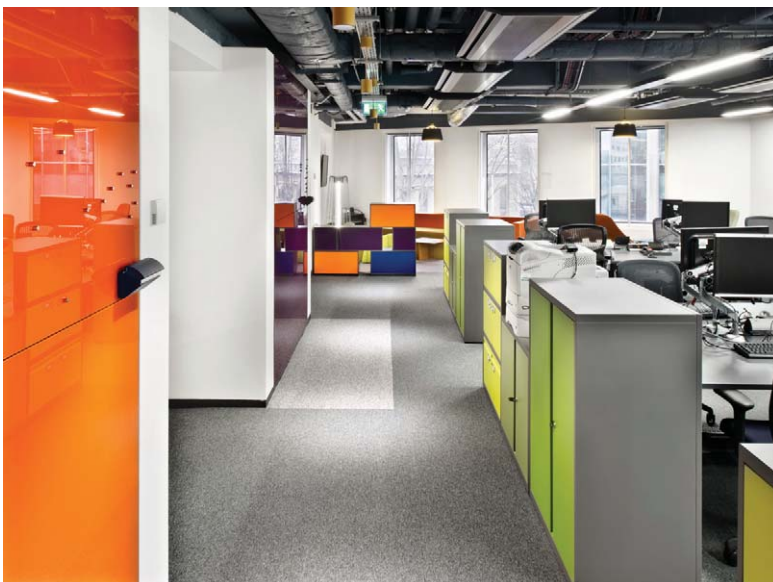
Although not all manufacturers have embraced BIM, there are generally one or more companies in each product category that have done so, for example, Armaflex

product ranges recently became the first objects for flexible technical insulation.

The general feeling is that the industry has reached a tipping point in terms of BIM adoption and as more specifiers choose to work with it, and legislation requires it on all Government projects in 2016, we expect to see further, rapid uptake.

**JM** At Merriott, we've worked hard to ensure all our products are BIM-ready and meet Level 1 standards. Being early adopters and achieving Level 1 reasonably quickly means we're in a good position to be one of the first to reach Level 2. However, while many other manufacturers are currently at (or well on their way to attaining) Level 1 status, it's unlikely that most will achieve Level 2 standards by January 2016 – especially given the huge step up between levels. Another consideration is that some Level 1 manufacturers are deliberately biding their time and waiting to see what sort of BIM regulations the government sets out before progressing to Level 2.

**ST** I certainly don't think the industry as a whole will be ready, but it's still great to see how far we have come over the last few years. Remember that not everyone will be working on public projects requiring Level 2 straight away, and those that will, tend to be prepared for the challenge. Outside of those working on public sector projects there is still a long way to go, but I also sense that many realise the benefits and potential





for digital processes within construction and are getting to grips with how it can benefit their businesses.

**Q: How did you initially decide whether adopting BIM was the right decision?**

**JM** Before adopting BIM in June last year, we noticed a significant increase in its presence – our area sales managers in particular started hearing about it more frequently, from customers and consultants alike. This prompted significant research into what BIM is, how it works and how Merriott's customers could benefit from it. We were also seeing growing demand from the design specification market, where BIM has an important role to play.

In addition to this, there was an influx of government projects with contracts stipulating BIM as a mandatory requirement of the tendering process. These acted as a further catalyst for us to get BIM-ready. As a result, we arranged for all of our products to be drawn up as models with COBie data, and got them online as soon as we could – to become the first radiator manufacturer in the market to have its entire range live on BIMstore.

**ST** For Tata Steel it was a no-brainer, looking at the current and future development of technologies and the direction of travel. It certainly wasn't something we only looked at from a UK perspective either, we looked at the markets we sold into, and the range of products that may be affected, and it was pretty clear from even the most basic calculation that it was more of a risk not to adopt.

**SS** The start point was our stated objective of making buildings more energy efficient. With buildings consuming around 40% of the UK's energy, making BIM objects available for high performance flexible insulation means that

we are helping specifiers achieve greater energy efficiency.

We felt that was important because it allows designers and installers to be able to use the BIM objects to create realistic, intelligent 3D models and then see what effect it has on the other elements of the design.

This ability to capture, explore and analyse data associated with insulation in the HVAC system represents a step change in the industry. As well as having a bearing on the overall energy performance of the building, it provides clients with greater visibility of the overall operating costs and environmental footprint of the development.

The information in these models remains consistent and available to everyone involved in the project and will result in more informed decision making around energy efficiency and reduced running costs.

**JL** We decided to adopt BIM based on a number of factors:

- A desire to get ahead of the competition.
- We saw how prevalent data is for the specification market, and it made sense to digitise our products.
- We could see that it would make it easier for our products to enter the project lifecycle.
- It is a form of future proofing for public sector work.
- We also see the BIM product data as a valuable commodity for our business.

**Q: What proportion of your current, active projects are requiring BIM? Is the decision to use BIM on projects predominantly client-led, or are others spearheading its usage?**

**ST** As a manufacturer that's not easy to say. From a BIM4M2 perspective though,

we have been working with Barbour ABI to understand current levels of adoption. From its figures, 12% of all projects say they are using BIM collaboratively, and that increases to 32% of projects with a value of £10m or over.

**SS** A growing number of the projects where our Armaflex product is specified use our new BIM objects. Those that do soon realise that it offers them a number of advantages – there is huge potential in specifiers being able to use BIM objects to visualise and digitise a building project's lifecycle. For example, our new BIM objects allow rapid and meaningful energy analysis at the very early design stages and that will result in a huge potential to drive through greater energy efficiency over the entire building lifecycle.

**JL** The majority of the projects we're working on now were specified up to two years ago, and it's only recently that we're starting to see a small number of requests for BIM data right at the beginning of an enquiry.

We believe that the spearheading of usage will start with our end clients – the developers and architects – and will filter down the specification process to us as a product manufacturer within the next 12 to 18 months.

**JM** The analytics we receive from BIMstore are the best indicator of who is using our models – and we estimate that active projects requiring BIM account for up to 20% of our business at present. It can be quite difficult to make the connection between those downloading our components and the jobs for which they have been specified.

Currently, Merriott's decision to use BIM has been predominantly a reaction to rising client demand. That said, we are also proactively spreading the word about BIM among contractors, house-builders, specifiers and architects and letting them know that our models are available for download. This is partly in response to feedback from customers (particularly architects) that they often aren't made aware by manufacturers of which products are BIM-ready and where to get them from. Feedback like this really helps us to drive our BIM offering forward and provide our customers with an even better service.

**Q: A recent survey conducted by UK Construction Week, in partnership with BRE, found that 71% of non-manufacturing respondents believed that suppliers are not moving quickly enough to provide BIM objects.**

**“It was pretty clear from even the most basic calculation that it was more of a risk not to adopt [BIM]”**

Steve Thompson,  
Tata Steel



**“If BIM can help to encompass or standardise the sustainability side of building design, then we think adopting BIM might become a lot easier and more appealing”**

Joanna Lush,  
GX Glass

**Conversely, 41% of manufacturers said there hasn't been the requisite level of demand from clients to warrant investment in creating BIM components. In your view, how can we best combat this 'chicken and egg' scenario? Should manufacturers just bite the bullet and invest, in the expectation that BIM will be widely used in the future?**

**SS** BIM does require a significant investment and it is therefore understandable that some manufacturers have not yet gone ahead. However, in becoming the first to offer BIM for flexible insulation, we took the view that because it makes specifying insulation easier, and gives both the designer and the client better visibility of building performance, it was important to make the investment.

**JL** We took the pro-active approach and invested in 2014. The need for BIM from an environmental, time, cost, and data management perspective is well documented, and our audience comprises both contractors and specifiers. We can only see positives from our products being available in the BIM format, so that they can be dragged into specs and drawings, which is great for us.

If BIM does what it has set out to do, then why would we not want our products available at a click of a button?

**JM** As one of the first commercial heating and cooling manufacturers to adopt Level 1, at Merriott we are confident that BIM will be widely used going forward – and we're ready to respond to growing demand. However, for other manufacturers, the approach often depends heavily on whether BIM becomes a mandatory regulation for building projects. As it is a guideline at the moment, there is a degree of uncertainty around BIM and a lack of urgency to invest in it. As a result, most are waiting to see what the government does before progressing to Level 2. In other words, it's likely to be a combina-

tion of demand and legislation that will dictate further investment in BIM.

**ST** No, I certainly wouldn't recommend just biting the bullet and investing. Firstly, there are many different types of BIM objects out there, some much better and more useful than others, so you need to think about what your customers need – what type of data and geometry. Everyone wants different information, from 'all of your BIM', to specific data that may not be in an object bought off the shelf.

Secondly, not all manufacturers are affected in the same way. I'd recommend manufacturers visit the BIM4M2 website, where we have a section called The Curve. This provides a tool to give you an indication on the potential impact to your business, followed by impartial guidance on how to develop your BIM strategy and implement it.

**Q: In your opinion, to what extent would prescriptive standards make the journey to BIM compliance easier? Initiatives, such as the NBS' BIM Object Standard, are helping to facilitate greater standardisation, but would you agree that the road to BIM implementation is perhaps more complicated than it needs to be?**

**JM** Yes to both. Prescriptive standards and more clarity would have made Merriott's BIM journey considerably easier, as well as making Level 2 compliance by January 2016 much more achievable. If the Government made BIM a mandatory requirement (as opposed to a guideline), this would undoubtedly create a greater sense of urgency to comply. It would also make the transition to implementation clearer and more straightforward. For example, with no government framework in place to dictate how BIM should be implemented, there are no standardised templates for transferring technical drawings. This, in turn, leaves the question of how best to present information to clients open to interpretation – which has been known to cause conflict between manufacturers and BIM host sites, such as BIMstore and NBS.

**JL** I think that the manufacturing industry would wholeheartedly welcome the idea of prescriptive standards to make it easier to create BIM objects of products and materials. However, from our experience of creating objects, I think there will be a lengthy period of time before all required building products and their components have standardised data. The shared and distinct data points needed for a plastic

light fitting, a brass tap, or floor paint are highly complex. It's going to take a while.

**ST** Clear standards certainly help, but I do mean standards such as the BS 8541 suite, not proprietary documents such as the NBS BIM Object Standard or its equivalents. BIM4M2 are working with others across the industry to develop standard attributes and data structures to provide consistency.

**SS** Buildings, by their very nature, are complicated and becoming more so as greater energy performance has to be factored into the design. It is encouraging to see initiatives such as Object Standard because it creates a platform for standardisation.

**Q: How closely have you worked with your supply chain to promote BIM? Have they been receptive to BIM, or are many still reluctant? Please use examples where relevant.**

**JL** We have soft launched our BIM objects via our website, and we're promoting them to our specifiers and clients, but the uptake is fairly small. Until BIM is more prevalent with the specification market, we're not using it as point of differentiation. When it does pick up, we will be actively using it as a marketing tool and USP.

**SS** We find that most people are receptive to BIM once they have tried it. For instance, specifiers like it because it allows them to make an initial presentation to a client of realistic, factual information on the running costs of various designs. Contractors, too, are given a clear plan of action for exactly what needs to be done on site.

As a result, people in the industry are becoming more receptive to BIM and we can see it becoming a key driving force in the specification and installation of insulation.

**Q: To what extent do you believe that BIM can help the industry move from a lowest cost model to a best value model?**

**ST** Certainly moving to a whole life model, and embedding real user requirements into the design and delivery process with really help, including visibility of progress throughout the process.

**JM** BIM has the capacity to deliver impressive financial and logistical results, as well as having a positive impact on the environment. Clash detection, for instance, saves both time and money by cutting re-deliveries (and, in turn, carbon emissions), and also means subcontractors and tradespeople can finish the job on time without issue – all of which makes for a much more sensible method



of construction. It's a simple concept, but it allows for a building design process that is virtually fault-free. Likewise, having a feature that can produce a Bill of Quantities from just one model eliminates the risk of human error.

Even before construction begins, the ability to access all necessary information about every aspect of the build in one place – from room configuration to design aesthetics – means less time is spent searching or waiting for replies to correspondence. BIM provides the best-value model for building by taking all functions into account – not just the cost of one product. It encourages a much more efficient way of working.

**SS** Our BIM objects are already helping specifiers and contractors share knowledge and work in collaboration on the common goal of achieving a reduced carbon footprint. This early and on-going working partnership results in reduced construction schedules, greater predictability of building performance, elimination of design anomalies and benefits in overall project costs. All these factors help drive through best value options, and have the potential to make significant savings on a development.

**JL** Combined with sustainability initiatives and the concept of circular economy, BIM will help to pave the way for a best value model that provides the longevity needed for building and data in the future, rather than the most cost-effective option.

**Q: Can you yet say confidently that the investment made in BIM (including software licenses etc.) has been worthwhile so far, or is going to take years to prove its return? Is it more a case that you 'couldn't not make the investment'?**

**JM** At Merriott, given that all of our products are custom-designed, simply being on BIMstore is opening up lots of specification opportunities for us in new build projects – which we expect will lead to both new and repeat business. We certainly feel that our investment so far has been worthwhile, and is in line with current BIM demands.

Based on the exposure we've had to BIM so far, we've been very impressed, and we're already seeing the positive effect it is having on the way the world of construction operates. It's too early to quantify the return on our investment in BIM, but we must remember that the official deadline is still several months away. Over the course of 2016, we expect to see a noticeable spike in demand and,

subsequently, a significant ROI.

**SS** The insulation of mechanical services is one of the most effective ways of improving a building's energy efficiency. Aside from reducing energy loss, flexible insulation prevents condensation and can significantly extend the life of equipment. Therefore, the value of mechanical, flexible insulation is difficult to underestimate, especially as the payback can be 12 months or less.

These BIM objects will make a significant contribution to the design, modelling and running of a building over its life cycle and will therefore revolutionise the way in which insulation is specified. When this is factored against the initial cost of developing BIM, we feel as though it is an investment that adds value to our customer proposition.

**ST** What we have created so far as an industry, and as BIM4M2 or Tata Steel, is a platform to build from, so many of the benefits will not be realised for some time. However, yes, I'm confident it has. The structuring of data internally, as well as the willingness of many across the industry to share experiences and work together has been of huge benefit.

**JL** As a manufacturer and subcontractor, we know that our investment in creating BIM objects is a long term one, and if BIM does what it has set out to do then the business rationale writes itself.

We understood upfront that it would require a commitment to updates and on-going maintenance of the data. Given that we're currently averaging 16 BIM downloads per month, combined with the speed at which specifications become tenders, we know it'll be a few years before it has paid for itself and a few more before we see a significant return.

**Q: What would you say is currently the most significant barrier to wider BIM adoption? In your opinion, how best could it be tackled?**

**SS** One of the largest barriers to the widespread adoption of BIM was a lack of expertise and knowledge to fully put into practice what was a new concept. However, as more BIM objects are made available and the industry works together to provide training, this is now changing.

**JL** There is a wider issue with the adoption of data-based systems for the industry – not just related to BIM.

BIM has been created to standardise information and make a coherent, single object to represent a building. However, there isn't a sustainability system for

buildings or product and material certification in the UK or globally that can slot neatly into or alongside BIM.

There is a vast amount of information required for the specifications, green credentials, and project lifecycle of various standards. For example, those working towards BREEAM and LEED for their building specifications want one type of data and product information, but there are those who look for material and product specifications such as BIFMA, Cradle-to-Cradle, or the Health Product Declaration – not to mention those large corporates who have their own specification systems. Which one should we adopt? Which should we work towards?

If BIM can help to encompass or standardise the sustainability side of building design, then we think adopting BIM might become a lot easier and more appealing. **JM** The biggest barrier to BIM adoption is the approach taken to date. As BIM isn't mandatory yet, manufacturers are poised and waiting for this to happen, which is slowing the process down. Firm legislation is needed to give them the confidence to invest. For this to happen, the BIM taskforce and the government need to join forces to promote and implement BIM for the benefit of everyone – from manufacturers and architects right through to clients.

**Q: What is your biggest headache currently concerning IT and what advice and solutions have you been seeking to address it?**

**SS** Our advice would be to invest in the best quality software as that will avoid issues with bugs, glitches and other issues that affected some BIM objects in the very early days.

**JM** Converting existing technical documents into electronic ones – and ensuring they're in a user-friendly format that allows for seamless data transfer to the manufacturing process – has been a significant challenge. Not only is it time-consuming, but ultimately it also means training existing IT staff and/or employing new people, as well as acquiring additional re-formatting software and hardware. This equates to a significant investment on top of what has already been spent on creating BIM models, which is a real issue for many manufacturers. If BIM were mandatory, the promise of returns would serve to justify this additional outlay to those who are currently reluctant – which is another reason why a robust legislative framework would be welcome.

**“It's too early to quantify the return on our investment in BIM, but we must remember that the official deadline is still several months away”**

Julie Maguire,  
Merriott  
Radiators



# Everybody's going to UK Construction Week

With overwhelming support from associations and trade bodies from across the industry, as well as big name exhibitors and hosts for its comprehensive seminar programme, UK Construction Week is set to be the leading industry event for construction and building professionals.

Organised by Media 10, the UK's biggest design and build event company, UK Construction Week will be held at the Birmingham NEC from 6-11 October (with the trade days from 6-8 October).

Bringing together nine shows under one roof, the event will feature the Build Show, incorporating Civils Expo, Timber Expo, the Surface and Materials Show, Kitchens & Bathrooms Live, Plant & Machinery Live, Energy 2015, HVAC 2015, Smart Buildings 2015 and Grand Designs Live,

Free to attend, the event will play host to 1,000 exhibitors and more than 55,000 visitors, giving exhibitors valuable face-to-face time with active buyers, specifiers and decision makers from across the industry. For visitors, it provides the opportunity to speak to suppliers and manufacturers from a wide range of diverse industry sectors, all in one place.

Lee Newton, CEO of Media 10: "As construction growth is continuing to drive the UK's economic recovery and with more than 2.2 million people employed in this sector, it's an exciting time to be involved in the construction industry. We recognise that there's a very real desire for an event that brings the entire industry spectrum together, providing a much-needed opportunity to network, learn and do business. To this end, our aim is to support the industry at this crucial time by offering a viable growth platform and a valuable resource to professionals in all areas of construction."



Leading broadcast figures John Humphrys, Steph McGovern and Krishnan Guru-Murthy will be chairing talks at UK Construction Week

## SUPPORT NETWORK

UK Construction Week is supported by the industry's leading trade groups and associations, some of which include the Construction Products Association (CPA), the National House Building Council (NHBC), the Building Research Establishment (BRE), the Royal Institute of British Architects (RIBA), the Renewable Energy Association (REA), the Royal Institute of Chartered Surveyors (RICS), the Society of British and International Design (SBID), the Timber Research and Development Association (TRADA) and the Zero Carbon Hub.

Brian Berry, chief executive of the FMB, said: "We are pleased to give UK Construction Week our full backing, as we believe the UK needs an event that caters for the needs of builders and contractors. We will be working closely with the organisers of the Build Show to ensure the event is a success."

## SEMINAR PROGRAMME

Working in partnership with these prominent industry names and placing a firm emphasis on knowledge sharing, discussion and debate, UK Construction Week has organised a comprehensive seminar programme, providing a wealth of sector-specific information in the dedicated hubs. In addition to this, there will be a main stage seminar theatre hosted by influential broadcast journalists John Humphrys, Krishnan Guru-Murthy and Steph McGovern, which will tackle the biggest construction industry topics and challenges.

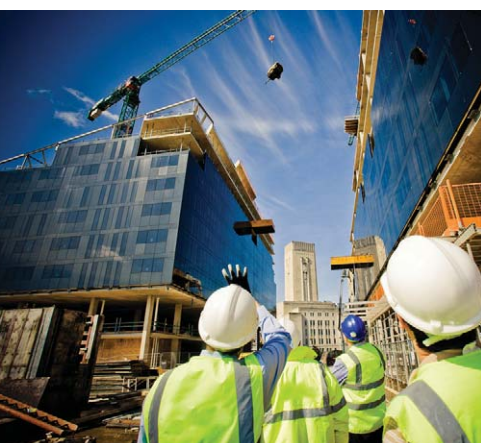
Seminars of note include a keynote presentation from the head of construction at the Cabinet Office, Dr David Hancock, who will set out parliamentary plans and policies for the construction industry over the next electoral period, and a session led by Natalie Bennett, leader of the Green Party, who will speak about the future of sustainable transport.

Visitors will also be able access additional content such as the Careers Centre, in association with the House Builders

Federation, Meet the Installer sessions across several shows and the Surfaces & Materials Hub, in partnership with SCIN Gallery. Further to this, there will be a dedicated space for civil engineers to discuss the hottest topics in the form of the Infrastructure Hub and there will also be a commercial vehicle test drive zone.

Within the Build Show, the BIM Prospects Theatre will feature a packed programme of seminar content examining how BIM can increase efficiencies, save time and reduce cost. Meanwhile, the Site Zone will focus on helping builders 'Learn to Earn' through a hands-on interactive experience incorporating training, workshops and demonstrations about competing for and winning work, managing costs and practical ways to save time and money on site.

What's more, with a huge variety of on-site after-hours entertainment planned, UK Construction Week is also the perfect chance to relax with colleagues and peers. Some of the additional features include a beer festival, a casino night in association with Construction Enquirer, builders' break-fast and award ceremonies.



**UK CONSTRUCTION WEEK | 2015**

**FURTHER INFORMATION**  
 Twitter: @UK\_CW  
 Web: [www.ukconstructionweek.com](http://www.ukconstructionweek.com)

# EDUCATION IN ROOFING

A recently launched roofing system helped the construction team for a new nursery in West Lothian meet multiple, rigorous project requirements. Building Products reports.

For any project, there are a number of factors to take into account when it comes to the specification of a roofing solution. The roof is integral to a building's overall aesthetic yet, at the same time, the products chosen need to meet a plethora of performance, legislative and sustainability objectives.

This was certainly the case for the Little Owls Nursery, located in Armadale, West Lothian. Due to open in summer 2015, the nursery will be able to cater for up to 100 children between the ages of 0-5 years old.

Designed by 99 Design Architects and built by Balgownie Scotland, the roof for the building features three different levels of pitched roofing and a solution was required that could combine high performance, ease of installation and a modern, aesthetic appeal.

## MEETING BUDGETS

The Little Owls Nursery had originally been designed with an aluminium roof, however this proved too expensive and it was up to McDonald Roofing to source an appropriate solution that would offer the highest levels of quality and performance, within budget. After being introduced to the product by Burton Roofing Merchants, the construction team specified the new SSR2 Standing Seam Roofing and Cladding system.

"We always use Catnic for lintels and when this new roofing system was shown to us by our local merchant we knew it was the perfect solution for The Little Owls

Nursery. In addition to its aesthetic advantages, the product's technical credentials also impressed," explained Stewart McDonald, director of McDonald Roofing.

"Using any new product is potentially challenging, however the SSR2 system has proven easy to install for our team of specialist roofers. Each section features an integrated eyelet hole fixing strip – so once all the flashings are fixed, you simply slot the roofing sections into place. From McDonald Roofing's perspective it's great – the SSR2 product can ensure the building is water tight and secure as quickly as possible."

## FAST TURNAROUND

The team from McDonald Roofing installed the system in just three weeks, helping to maintain the project's tight build schedule. The SSR2 panels are manufactured to be approximately seven times lighter than traditional roof tiles, which results in less handling and therefore a significantly reduced fixing time – helping to save time on site. The panels are designed to provide a durable solution that can last in excess of 40 years, with BBA Certification.

Catnic says the system has been manufactured to meet all relevant legislation, including load bearing for wind speed in accordance with EN 1991-4, and weather tightness, in accordance with BS 5534 Parts 1 and 2.

The SSR2 system offered the team at Little Owls an easy approach to detailing, with external and internal gutters, matching fascia and soffits, and a range of eight

colours to select from.

Sourcing products that can help to meet the aesthetic requirements of a build is vital, yet specifiers still need to take into account that the environmental credentials of roofing products are high on the agenda for many clients. The added advantage of the SSR2 system is that it is a BRE Green Guide 'A' rated product, which helps to maximise the potential of obtaining credits under the Responsible Sourcing of Materials section of BREEAM, and at end of life, the panels are claimed to be 100% recyclable.

Gilbert Naismith, owner of Balgownie Scotland, the company responsible for building the nursery, concluded: "The new system allowed the team from McDonald Roofing to complete the installation quickly and effectively, helping to keep our build programme on schedule. The added benefit of the SSR2 system is that, once complete, we have a fantastic looking roof, which is such an important part of the building's overall aesthetic. We are very happy with the results."

When it comes to roofing – construction and project teams will always face the challenge of making the design a working reality. This means achieving all the necessary aesthetic, performance, legislative and eco credentials possible, while factoring in the need for a product that can be installed quickly and effectively. For the Little Owls Nursery in Scotland, the new SSR2 Standing Seam Roofing and Cladding system helped the team to achieve those goals.



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



# GUARANTEED PROTECTION



Amanda Green, marketing manager at SIGA Slate, argues that when specifying natural slate, it is worth paying more to work with reputable suppliers, to prevent being short-changed in the event of product failure.

When it comes to specifying natural slate, the choice is endless. One of the world's oldest and most continuously used roofing materials, natural quarry slate remains a popular choice amongst architects, specifiers, builders and developers for both new build and refurbishment projects. Indeed, many reclaimed slates continue to be installed on re-roofing projects, even after decades of previous use.

As with all premium products, natural slate commands a premium price. Therefore, when cheaper slate becomes readily available, it can be tempting to be swayed by the price, or to be seduced by the super extended warranties being offered by some suppliers – in some cases up to 100 years.

When designing and specifying natural slate roofs, there is a long list of factors to consider – from the type of slate, to its colour, size and texture, and of course, the cost. The warranty should also be a key consideration.

## WARRANTY WOES?

When things go wrong, robust warranties should provide an effective safety net. If there is a problem with the project or slate, it's important to be able to rely on that company to stand by any warranties that may apply. When the chips are down, will the supplier step in? If the company ceases trading or the supply chain breaks down further down the line, what then? If the slate was imported, is the warranty even enforceable under UK law?

If just one link becomes broken, there could be no back up and the warranty can disappear too, regardless of its longevity. The only recourse is to seek legal action, a timely and costly exercise at best, and the onus is very much on the builder or developer. During the recession, many slate supplier companies were wound up voluntarily. Whilst some disappeared without trace, others re-emerged trading

under a new name, supplying the same products, but without providing cover for any previous warranties.

Unfortunately, what may seem like such a sweet deal at the time of specification can soon turn very sour. Of course, the impact from the fallout will only be felt in the event that a warranty claim needs to be made. However, that's precisely at a time when support is most needed.

Therefore, how do you safeguard against a company going into liquidation, leaving you without valid warranties and after-sales service? When selecting your slate, you should seriously consider the reputation and credibility of your supplier. More than ever before, this is the barometer of confidence in your purchase. Reputation and integrity count for everything, and if problems surface further down the line, and support becomes necessary, these attributes will far outweigh the savings you may have made by sourcing cheaper products or falling victim to extended warranties.

## BUY IN CONFIDENCE

Pick a supplier that is in it for the long term, is financially sound, and has a plc status. The origin of the products it supplies is important too. For example, if you are purchasing products manufactured in the UK and the merchant goes into liquidation or re-registers its company name, you will have some legal protection from the manufacturer under British law. However, when it comes to imported products, seeking redress via the European courts can be tricky in the event of a claim, as proving the source of origin can often be practically impossible.

Despite sourcing products from abroad, there are natural slate providers, such as SIGA, that offer robust warranties and case histories. They have invested in their suppliers and supply chain, and will have sufficient protections in place. More



importantly, when you buy premium branded slate, like SIGA, all warranties will be honoured, even if the slate quarry that supplies the slate ceases trading.

When it comes to choosing natural slate, you should always take into account its quality and selections. Equally important though is the traceability of supply and labelling of the slate, as this is a likely indication of the professionalism and chain of custody provided by the supplier. Should there be a problem linked with any one of these three components, the contractor could be left with a problem.

Always remember, if it sounds too good to be true, then it probably is. With natural slate you get what you pay for, more than with any other roofing material. There is always cheaper slate around, but there will always be a reason that it's cheap, so specify with caution.

Specifying inferior slates may not only damage your pocket, it can seriously discredit your reputation. Far better to put your trust in a reputable supplier, safe in the knowledge that the slate you are buying is the real deal.





## with Catnic SSR<sup>2</sup> roofing

SSR<sup>2</sup> standing seam metal roofing, is a pre-finished steel roofing and cladding system designed for the residential and commercial market. Seven times lighter than clay or slate tile equivalents, quicker to fix and cost effective compared to traditional roofing alternatives, it can be used on pitched roofs even as low as 5°. Our steel systems are rated 'A+' within the BRE Green Guide and the carbon footprint of SSR<sup>2</sup> is three times lower than other leading eco-designed urban roofing products currently on the market. With SSR<sup>2</sup> you get the highest quality, BBA approved product and because it's from Catnic you can also rely on the best support from technical specification, to installation and beyond.

For a different perspective on roofing simply visit [www.catnic.com/ssr2](http://www.catnic.com/ssr2) or call us on **02920 337900** for our angle.

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## LOW ODOUR ROOF REPAIRS IN YORK

**SIKA LIQUID PLASTICS'** Decothane Ultra was recently specified at York NHS Trust headquarters to repair the damaged roof and balcony. A low odour option, Decothane Ultra has been developed for use in highly sensitive areas, such as hospitals, food manufacturing plants and schools.

Sarah Spink, product manager at Sika Liquid Plastics, said: "One of the main issues facing the use of liquids in various refurbishment situations, still relates to the odour emitted during and for a short period after application. Decothane Ultra negates this problem."

The product is cold applied and does not require any heat or naked flames during application.

• 0177 225 978 • [www.liquidplastics.co.uk](http://www.liquidplastics.co.uk)



## CHAPEL GETS ROOFING UPGRADE

**SSQ SLATE** recently provided 1,000 of its Montegris, First Grade slates for installation across the roof of a 200 year-old chapel in Dyfed, Wales.

The Old Chapel in Pembroke Dock required slate that was in keeping with the building and its surroundings. Lee Williams, owner of Lee Williams Roofing, said: "The colour of SSQ's Montegris First suited the building perfectly and blend in very well with the surrounding landscape too."

The tiles have a riven texture and the company says the natural grey colour will not fade, even in the strongest sunlight. SSQ's Montegris roofing slate has been tested in accordance with EN 12326.

• 0208 961 7725 • [www.ssqgroup.com](http://www.ssqgroup.com)



## ROOFSHIELD DONATION HELPS SCOTTISH APPRENTICES

**A. PROCTOR GROUP** has donated its Roofshield breather membrane to Dundee & Angus College, to enable apprentices to work with real life materials.

The company says Roofshield is the highest performing breathable roofing membrane on the market, and following independent testing, complies across all of the UK wind zones as defined in the new BS 5534.

The new Code of Practice introduces a single test for the measurement of the wind uplift resistance of underlays, which all testing bodies will follow to allow for greater transparency and consistency.

"By directly supporting the local colleges, the A. Proctor Group has supported the next generation of roofing contractors," the company said.

• 0125 087 2261 • [www.proctorgroup.com](http://www.proctorgroup.com)

## SAVING TIME AND MONEY

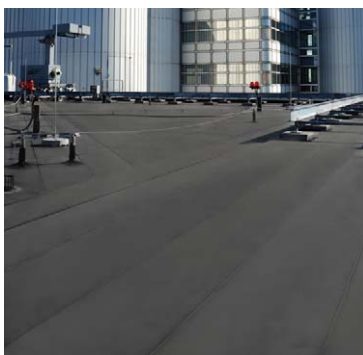
**WOLFIN**, part of the Icopal Group, has developed a roof refurbishment system for failed flat roofs.

The vapour permeable roof refurbishment solution is a 20 year insurance-backed system, which is designed to save time, money and disruption for commercial and public sector clients.

The company said an independent cost analysis by Aecom found that a saving of circa 17% to 28% is possible in comparison to traditional refurbishment methods.

Due to the formulation and black colour of the membrane, the roof layers heat up under the influence of solar radiation. This causes a high vapour pressure that gradually dries out the trapped moisture by forcing it up and through the vapour permeable membrane. As the roof dries out, the thermal properties of the existing insulation are restored.

• 0843 224 9690 • [www.wolfin.co.uk](http://www.wolfin.co.uk)



## ROOF-MATCH SOLAR PV TILES

**ROMAG** has launched Intecto, an integrated solar PV tile that has been designed to fit alongside standard residential and commercial roof tiles, which is available in a range of colours to match existing roof coverings.

Installed directly onto wood roofing battens using a guaranteed fixing system, the frameless Intecto units sit flush with conventional interlocking concrete, clay and terracotta tiles and can be used to provide a whole roof PV solution if required.

The company says the lightweight tiles reduce roof loading, eliminating the need for any roof reinforcement, and contribute to higher Code for Sustainable Homes and BREEAM ratings.

The range is available in black, grey and terracotta colours.

• 0120 750 0000 • [www.romag.co.uk](http://www.romag.co.uk)



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## WIRELESS ROOF WINDOW CONTROL

**FAKRO's** Electro FTP-V natural pine and FTU-V white, PU-coated pine roof windows now incorporate 'Z-wave' wireless technology as standard.

This enables windows, blinds, roller shutters and appliances to be controlled using devices such as the ZWP TV remote. This has a display screen to provide information about specific, individually named items and can operate up to 36 receivers separately, including infra-red RTV devices. Other controls include the ZWK10 multi-channel keyboard and the ZWG1 wireless touch pad. Z-wave communication also enables activation using a smart-phone and the ZWMP Weather Module links to wind and rain sensors in the window.

• 0128 355 4755 • [www.fakro.co.uk](http://www.fakro.co.uk)



## 'BREATHABILITY' RESTORED

**KLOBER's** Permo air underlay has been specified in the conservation and remodelling of the Grade I-listed All Saints Church in Kingston.

Permo air was used as part of a re-roof of the choir vestry at the £1.7m project.

Ptolemy Dean Architects drew up plans which included opening up two entrances on the church's north side. The north west porch had previously functioned as a boiler room while the other entrance had not been used since the early 19<sup>th</sup> century.

The company says Permo air is being used on a growing number of conservation and restoration projects, as well as for new build housing.

"Its versatility is provided by an exceptional standard of 'breathability' which is unmatched in UK construction," the company added.

• 0133 281 3050 • [www.klober.co.uk](http://www.klober.co.uk)



## EASING ROOFLIGHT INSTALLATION

**XTRALITE** has launched the X2 range rooflight, developed to provide a solution to differing roof insulation thicknesses which can cause complications during the rooflight installation process.

The rooflight features a suite of interchangeable and interlocking PVC extruded kerbs. The system also eradicates the need to construct metal frames or timber grounds as the vertical riser sections can accommodate both flat board and tapered insulation schemes, creating a bespoke kerb height solution. The new design vent offers a maximum of 802 cm per linear metre when fully opened and directs air flow upward toward the underside of the glazing which reduces risk of downdraughts and condensation forming.

• 0167 035 4157 • [www.xtralite.co.uk](http://www.xtralite.co.uk)



## CREATING A FLUSH FINISH AT LONDON RENOVATION

**GLAZING VISION's** Flushglaze fixed rooflights were recently specified in the renovation of a North London property.

The renovation involved repurposing the existing floor plans in order to incorporate a large open kitchen and dining space. This included the installation of two Flushglaze fixed rooflights.

Flushglaze rooflights were specified to contribute to the lighting scheme required by the architect. Two large panes of glass were installed side by side, with a solid section in the centre to suspend a bespoke light fitting.

The two rooflights, with their flush finish and minimal framework, are designed to help to illuminate the scheme by day, whilst the light fitting at night creates colourful effects that reflect upon both sections of glass.

• 0137 935 3741

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BUILDING PRODUCTS







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ALUTEC's aluminium rainwater systems have been specified as part of a sustainable homes project by the Prince's Foundation for Building Community.

The foundation designed and built three homes according to its Natural House model, which is designed to achieve high standards of sustainability through the careful selection of materials, whilst maintaining a focus on traditional design. Alutec's Traditional Half Round 113 mm gutter system and Tudor 63 mm downpipe were specified for the properties. The Traditional and Tudor ranges are designed to combine the classic look of cast iron rainwater systems with modern performance characteristics.

Made from marine grade aluminium, the company says its Traditional and Tudor products are 65% lighter than cast iron, making them easier to handle on site. The products also have a maintenance-free lifespan of 50 years.

• 0123 435 9438 • [www.marleyalutec.co.uk](http://www.marleyalutec.co.uk)

### REPLACING PLYWOOD

NORBORD says Sterling OSB (oriented strand board) is increasingly being used as a replacement for plywood in roofing projects.

SterlingOSB is a multi-layered timber product, but unlike plywood, which is made from alternate sheets of veneer placed at 90 degrees to each other, it is made from layering strands of wood in specific orientations and then bonding the layers with a resin. Sterling Roofdek is a sanded, tongued and grooved board designed specifically for flat roof decking and pitched roof applications. The company says the sanded surface enables excellent adhesion for glues, self-adhesive felts and bitumen. The tongue and groove profile of the board is designed to prevent the boards moving, meaning the felts will last longer.

• 0178 681 2921 • [www.norbord.co.uk](http://www.norbord.co.uk)



### ROOFING REVAMP

A SIKA SARNAFIL Membrane in Patina Green has helped the roof refurbishment of the University of Edinburgh's Joseph Black Building win the Single Ply Roofing category at this year's NFRC National Roofing Awards.

Work to replace the roof included installing a new timber taper fall once the copper roof was lifted, to improve drainage, which was then covered with the mechanically fastened Sika Sarnafil system. The membrane was applied with standing seam profiles to replicate the original copper roof details.

• 0170 739 4444 • [www.sarnafil.co.uk](http://www.sarnafil.co.uk)

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See the installation video  
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[www.marlonclickfix.com](http://www.marlonclickfix.com)

Daylight Systems

# MODERN LIVING



Simone Hellyer speaks to manufacturer Richard Burbidge to find out more about the uses and applications of its Contemporary range of balustrades for stairs and balconies.

**A**lthough rarely thought of as a major specification decision, stair balustrades can make a big difference in terms of the design and function of a space.

Richard Burbidge's Contemporary range of balustrades was launched at a time when traditional timber designs dominated the nation's staircases, especially in residential settings.

"Fusion was launched over 10 years ago now. Nothing like it had really existed for residential stairparts and Richard Burbidge really created this market. We thought a new refreshing style and easy installation would be a great option for consumers and installers alike," said Paul Martin, channel marketing manager for Richard Burbidge.

Three styles make up the range: Fusion, Elements and Immix. Fusion features a mix of glass or acrylic panels, metal connectors and a choice of timbers. The Fusion collection was the company's first departure into a more modern style of balustrade and was launched to help customers who wanted change the look of their interior, "but felt stuck with 1970's ranch style stairparts".

Initially, the Contemporary collection was aimed at customers who wanted an easy-to-install stair system. This is still the focus of the collection and advice and instructions on fitting and finishing can be downloaded from the company's website. However, the range has also evolved into more of a design statement.

"The style has carved a niche with people who want to make a statement and have stairparts that match their modern home living," added Martin.

Fusion features pre-cut metal balusters which screw into place and a selection of pre-finished timber options in Walnut, White Oak, and Sapele, as well as the option of Acrylic or Glass Panels. The timber rails and newels arrive pre-finished.

Elements and Immix were introduced to the range four years ago. Elements

is designed for domestic refurbishment projects. Consisting of pre-drilled handrails and baserails with a choice of decorative metal balusters, Elements can be installed with either White Oak or Classic White Oak newels.

Immix is available in combination of White Oak or Walnut with gun metal connectors and glass panels. The company said Immix was introduced to appeal to customers with larger halls due to its chunkier newel posts.

The glass is toughened to the appropriate standards but is designed to be a stylistic rather than functional choice. The manufacturer says that glass can help bring additional light into a room and create the illusion of extra space.

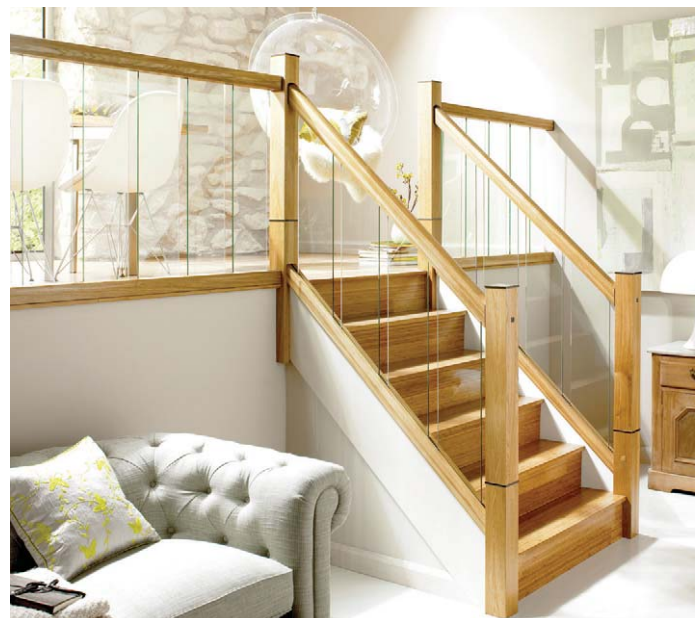
## ADDITIONAL APPLICATIONS

According to Richard Burbidge, the Contemporary collection tends to be specified on smaller, more selective projects. However, some of the Contemporary stair part ranges are tested and suitable for commercial applications.

"Fusion, in particular, is quite often specified in these environments. This normally means a slightly different design than residential due to the additional requirements," said Martin.

The Fusion indoor and outdoor commercial offering consists of a structural metal frame and incorporates a range of timber or glass panels and baluster options. It is designed for new build or refurbishment projects in a variety of styles, including cut string staircases. Connectors allow adjustments to suit the majority of staircase designs, which include straight and split types. The system is also suitable for timber, concrete and metal stairs with pitches of 33-42 degrees, and handrail heights of 900 mm and 1,100 mm for the landing.

To satisfy safety requirements, the commercial range is designed to achieve 1.5 kN/m strength loadings, making it suitable for use in areas where groups of people



congregate such as areas with tables or fixed seating. The company says it is well suited for bars, restaurants and outdoor dining areas, as well as for high level decks and balconies.

The Fusion range of stair balustrades features a choice of glass or acrylic panels

The Juliette balcony option is based on the Fusion balustrade and features different sized glass panels and handrail options. It is available without the addition of a top handrail to give a minimalist appearance or with timber and metal handrails.

## CASE STUDY

Tulloch Homes recently specified the Fusion Outdoor Commercial range and Juliette Balconies as part of its housing development projects.

The Bay development in North Kessock, Inverness is an exclusive collection of detached homes from the property developer's luxury collection. Fusion glass infill panels were specified to reflect light and make the balcony appear more spacious.

Andrew MacMaster, Tulloch Homes, said: "Richard Burbidge stairparts provide that all-important first impression for potential buyers, offering buyers high-end interior design as soon as they pull up to the property."



# ELEVATED VALUE



Alastair Stannah, managing director at Stannah Lifts, discusses factors to consider when specifying lifts for domestic settings.

**M**ost homeowners value luxury in their residences, therefore it comes as no surprise that the trend for building high-specification homes has resulted in many developers and owners installing lifts. A home with a lift (or two) helps it stand out from the crowd, propelling a property into a highly-desirable 'must-have' category.

## MULTI-STOREY OPTIONS

Houses come in all shapes and sizes – as do lifts for the home. For houses with two or more floors and generously-proportioned internal space, a domestic platform lift should be the most suitable solution. With a footprint that meets regulations to ensure it can accommodate up to four people or a wheelchair user, this type of passenger lift is capable of serving the occupants of a large house over an extended period.

The addition of a platform lift into a private dwelling has a number of considerations and costs. In a new dwelling these can all be part of the architect's plans and building work, and therefore costed as part of the whole project. Platform lifts need a level entry so may require a shallow pit at ground level. Adequate space on each landing should be provided too.

Platform lifts can be supplied in a wealth of designs – automatic single opening door, sliding doors (for a more conventional passenger lift appearance), or even with doors to match a house interior. Entrances can be single or multiple, giving flexibility on each landing and the operating shaft can be purpose-built, structure-supported, glass or clad. The lift finishes can also be matched to the interior of the dwelling.

In an existing dwelling, there are four clear stages to a project: surveying the site to produce plans, the builder's work, the

lift installation and the internal decoration.

Stannah's Midilift range of platform lifts meet the requirements of BS 8300:2001 and are designed to give specifiers a wealth of options to meet every technical and aesthetic requirement.

## CHOICE FOR SMALLER HOMES

When the lift requires only two stops, a simpler, through-the-floor lift can provide a perfect solution. Installed very simply, with no shaft required, these types of lifts have a small footprint for just two standing passengers and can fit discreetly into the corner of a room. This makes the location of the lift quite flexible.

Installing a through-the-floor lift requires minimal builder's work, and within just a few days, the lift is installed and ready to use. Discreet and occupying minimum space, these products provide quick access over two floors.

At Stannah, our through-the-floor Salise lift, which meets the requirements of BS 5900:2012, has proven to be a popular choice in smaller homes.

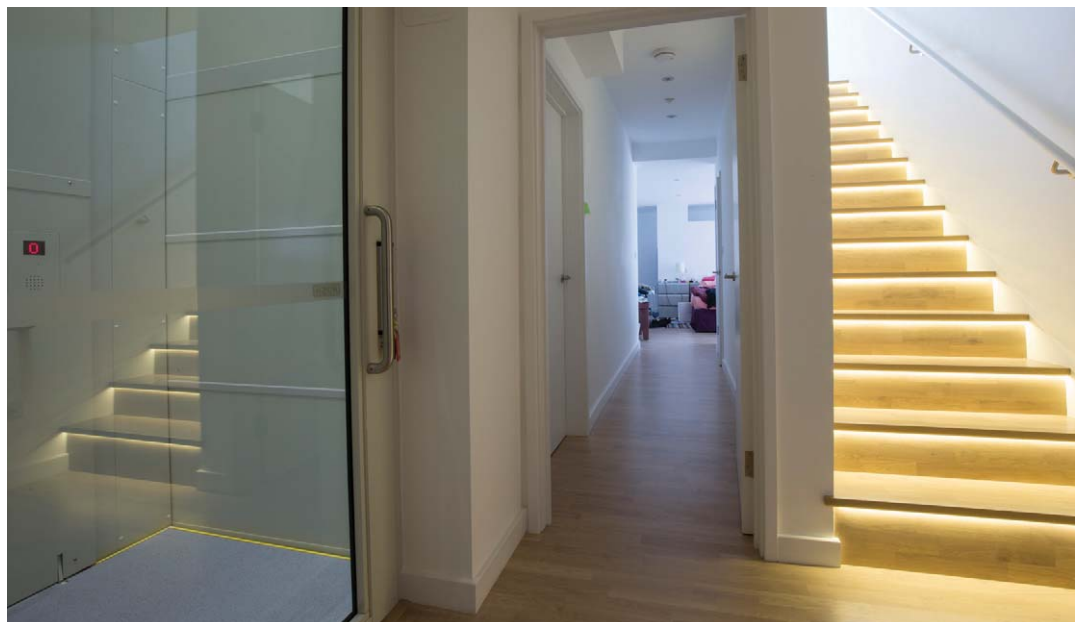
## TRANSPORTING GOODS

The trend for the convenience of a lift in luxury homes doesn't end there. The fashionable town house with multiple floors and unconventional layouts may mean bringing the groceries home (or having them delivered) could involve many flights of stairs. That's why high-end developers and city conversions are building in a small service lift to take the strain. It's certainly not a new phenomenon, as grand Victorian homes often had a pulley lift or 'dumbwaiter' in a wooden shaft that assisted the below-stairs staff with service in the formal dining room.

In grand home refurbishments, the addition of a small service lift adds both convenience and value to a property – and a little grandeur too.

Stannah's Microlift dumb waiter has been frequently specified in these settings. Supplied in its own small shaft and able to travel 30 m, with up to three entrances available on each level, the Microlift helps to provide an extra pair of safe hands in a busy home.

Even smaller homes can benefit from the installation of a passenger lift



# STOP THE ROT



Dr. Eric Rirsch, R&D director at Safeguard Europe, argues the case as to why specifiers should not be dissuaded from installing external wall insulation to properties, even though it can play a role in exacerbating the effects of rising damp.

**T**he number of properties with external wall insulation (EWI) is growing. Government statistics show that between October 2012 and March 2014, around 47,000 homes had EWI installed, thanks to the Energy Company Obligation (ECO) scheme.

Installing EWI can have a dramatic impact on energy and family finances, saving up to an average of £460 on fuel bills, according to the Energy Saving Trust. However, there could be downsides. One of the potential problems that some may not be aware of is that if rising damp already exists in a wall, EWI is likely to make it worse.

## EWI PROSPECTS

The market for EWI is potentially huge. According to the Insulated Render and Cladding Association (INCA), there are around eight million homes with solid walls in the UK, a third of UK housing stock and half of them are occupied by people in fuel poverty. These properties require either external or internal insulation in order to reduce energy loss through their walls.

There are pros and cons for both EWI and internal wall insulation (IWI). Cost is usually much higher for EWI, whereas one of the most common concerns about IWI is that it reduces living space and causes disruption for households. In older properties, it also means any period features are hidden behind the new insulation.

One of the cited benefits of EWI over IWI is that it is less prone to causing or exacerbating damp problems. This is true in some cases.

EWI reduces the risk of vapour condensing on the inside skin of the wall, as the dew point temperature moves closer to the external face of the insulated wall. It can also protect against penetrating damp, which is caused by driving rain. However, it is important to ensure that there are no gaps, for example at the

eaves, where rain can find its way in and get trapped behind the insulation.

However, what neither EWI nor IWI can do is improve the situation with rising damp. The height that damp will rise is largely influenced by the rate at which moisture can evaporate from the wall. Cover either side of a wall up and you prevent evaporation, although with IWI the problem is less obvious as it is hidden and may take some time to emerge.

Most of the UK's solid-walled housing was built before the 1920s and the majority of these were constructed without a damp-proof course (DPC). Though not all of these properties will suffer from problematic rising damp, the lack of a DPC does mean that if the conditions are right, it will occur.

Water will rise up through all porous materials – such as brick, mortar and sandstone. Mortar also becomes more porous with age. The characteristics of the wall's material, its 'sorptivity', or ability to absorb liquid by capillary action, combined with the evaporation rate, are what determine how high damp will rise.

Often the damp only rises a few inches up the wall and remains hidden behind the skirting board – one of the reasons they were invented. Where rising damp becomes a real problem is when it gets high enough to reach timbers which can lead to decay, or if it starts to damage décor, with occupants noticing blistering paint or peeling wallpaper.

## ISING TO THE CHALLENGE

Where severe rising damp is present in a property where EWI is planned, advice should be sought from a specialist surveyor. However, cases that are not severe can be treated quickly and cheaply by installing a remedial DPC.

The treatment of rising damp can be costly, especially when expensive replastering is required. However, some damp proofing products are more effective

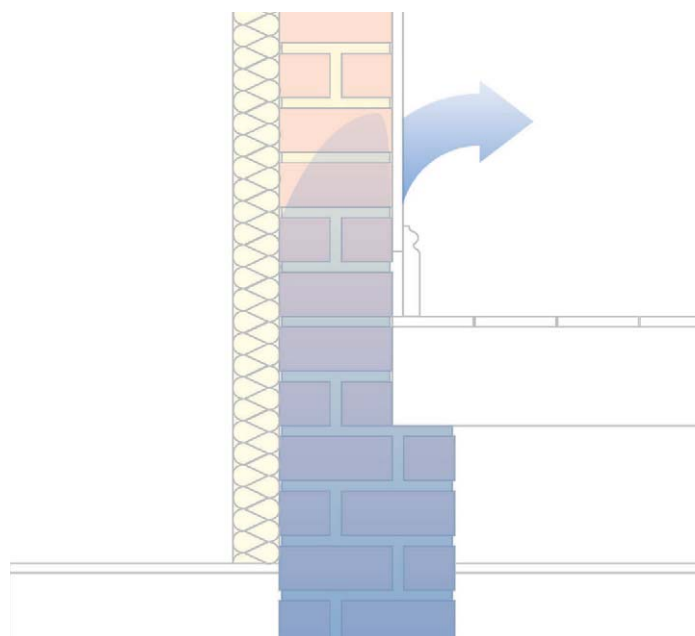
and reduce the need for replastering. Fortunately, there are now fast, low cost replastering systems which have recently reached the market.

Installing a DPC has been greatly simplified with the development of modern products that can be installed rapidly. Holes are drilled at set intervals along a mortar bed, and filled with a damp proofing cream, or damp proofing rods inserted. The chemicals from the cream or rod diffuse out to form a DPC.

The potential problems with rising damp should not be a reason to discount EWI as a possible solution to solid-walled properties requiring insulation. It is a vital tool in improving the energy efficiency of our housing stock and decreasing the UK's carbon emissions.

However, it is important that more care is taken when surveying properties prior to EWI installation, so that even the most minor cases of rising damp are treated. The last thing that anybody wants to see is measures aimed at improving a household's quality of life leading to damp and the associated health issues that it can cause.

This graphic demonstrates how EWI can exacerbate rising damp, as excess moisture is less able to evaporate through the outer wall



BP



# SEAL OF APPROVAL



With clients continually demanding more from window sealant products, Peter Thompson, general manager, ISO-Chemie UK, explains why solutions need to deliver both high levels of performance and ease of installation.

**W**hen it comes to window installation sealants, housebuilders and developers are not only looking for excellent thermal and acoustic efficiencies to meet and exceed regulations, but also products which are faster and simpler to install and have improved reliability over a longer service life.

It is imperative that during new installations and replacements, windows and doors can be quickly and easily sealed, ideally from inside the building. High performance 'fit and forget' impregnated tapes are ideal for fast and effective sealing, with ease of installation due to their inherent user friendly features. Based around the European RAL principles of three-level sealing, these products help to avoid time consuming and costly delays, leading to potential savings of hundreds of pounds per day.

The greater the amount of installations that can be carried out within any given time period means a higher margin for installers. ISO-Chemie estimates that its ISO-Bloco One multi-purpose foam sealing tapes can provide significant cost savings, thanks to their fast installation capabilities.

## THREE-PRONGED PROTECTION

Three-level sealing ensures that buildings are better protected from wind, dust and moisture ingress by accommodating the changes in structural movement caused by environmental, cyclical and settlement factors. The external seal area supplies weather resistance and breathability, while the intermediate seal area provides extra thermal and acoustic properties. The internal seal incorporates airtightness and humidity regulation. All three levels are designed to accommodate movement between the adjacent materials.

The most advanced sealants for windows and doors can meet stringent new energy efficiency building regulations. They are able to accommodate extremes of temperature change of anything from -30°C to +80°C. They can also accomo-

date the interaction of differently designed window frames made of wood, PVC and aluminium against various construction materials and methods, in order to guarantee complete sealing. This prevents humidity penetrating the building connection joint and stops damage to the building in the long-term.

The sealing products most in demand are so called 'all-rounders', which can be used for both passive energy houses and for refurbishing buildings. They can be specified to significantly reduce a building's convective heat losses, which has a positive effect on energy balance. To further reduce delays, impregnated and pre-compressed Polyurethane (PUR) foam 'fit and forget' sealants can be installed in windows, regardless of external weather conditions.

In older buildings, large amounts of warm air are quite often lost, a fact that is reflected in proportionally higher heating bills. For this purpose, sealing existing dilapidated building joints can help improve the long-term energy efficiencies of new fittings and reduce occupant bills in the process.

When listed buildings are refurbished,

their appearance and basic historical structure must be retained to a major extent. A common difficulty when refurbishing or renovating old buildings is making sure that high energy-related requirements are combined with functionality. The ability to absorb movement and reliably process the material is also a challenge. Therefore, sealing systems must not only be functional and efficient, but also sympathetic to the original appearance of the building.

## THE CUSTOMER'S NEEDS

Feedback from many of the UK's biggest housebuilders, developers and merchants has revealed that they want sealing products to combine ease of installation with guaranteed 'as built' high levels of performance. Ideally, they desire products which are able to withstand driving rain at a minimum of 1,000 Pa and have internal airtight seals that can meet a 1,000 Pa pressure difference, which is around 20 times more than UK Building Regulations. Zero air loss, U-values of around 0.55, and a sound reduction of 45 dB after installation are also increasingly in demand.



## HARDWEARING SLIP RESISTANCE

**TREMCO ILLBRUCK's** MMA based system has been specified in the refurbishment of a block of Housing Association flats in Glasgow.

Contractor J&D Solutions was awarded the contract to renovate 1,100 m<sup>2</sup> of balcony areas and chose Tremco SX250, CP151, CP215, CP360 and CP930 products for the job.

The senior architect on the project Gavin McNab, JM Architects, said: "We are familiar with the Tremco range, including the liquid damp proof membranes and liaised regularly with the Tremco area sales manager for our region, to arrive at a specification which was hardwearing and durable for the conditions, as well as slip resistant, and gave a good appearance."

• 0194 225 1400 • [www.tremco-illbruck.co.uk](http://www.tremco-illbruck.co.uk)



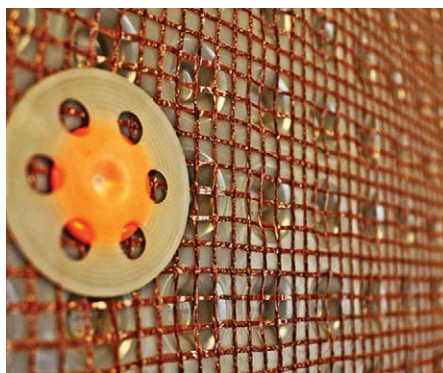
## WATERPROOFING INSIDE AND OUT

**DELTA MEMBRANE SYSTEMS** says its Delta-PT product is capable of waterproofing and damp-proofing internal and external walls and vaulted ceilings, above and below ground, in new construction of existing buildings over a contaminated or damp background.

The polyethylene membrane is extruded into a series of studs which create a continuous air gap behind the waterproof membrane. On the face of the membrane, a welded mesh allows plasters and renders to bond, achieving dry and durable finishes. The company says Delta-PT is watertight, resistant to high and low temperature extremes, chemically resistant to acids, alkalis, oil and solvents, and approved for use in potable water applications.

Temperature resistant from -30°C to +80°C, Delta-PT is 0.5 mm thick with stud heights of 8 mm.

• 0199 252 3523 • [www.deltamembranes.com](http://www.deltamembranes.com)



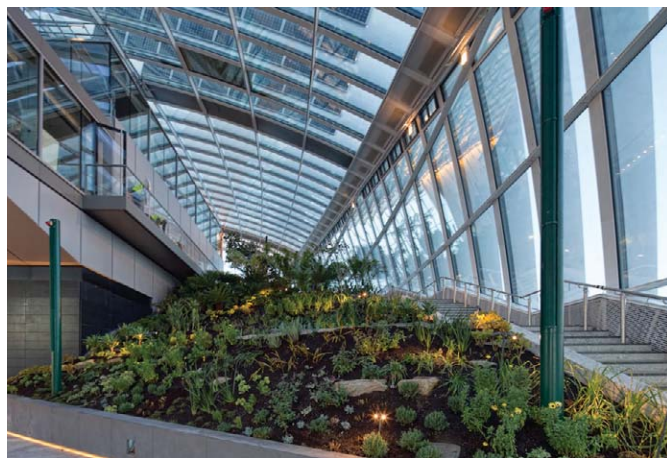
## READY-MIXED FLOORING ADHESIVE

**NORCROSS ADHESIVES** has updated its Ultim8 range of ready-mixed tiling adhesives to include Ultim8 M+, a solution for fixing acoustic matting or decoupling membranes to a variety of surfaces.

Ultim8 M+ comprises a ready-mixed synthetic contact adhesive which will fix Norcross Acoustic Mats or fleece-backed polyethylene-type decoupling membranes. It is water-based and can be used either internally or externally.

The product operates as a system in which the installer firstly fixes the mat or decoupling membrane to the substrate using Ultim8 M+, applied with a vinyl trowel. Once the adhesive is dry, the tiles may be fixed using any of the Norcross Adhesives flexible cement-based adhesives. The adhesive is available in a 15 kg tub.

• 0178 252 4140 • [www.nxadh.co.uk](http://www.nxadh.co.uk)



## OVERCOMING LOGISTICAL CHALLENGES AT 'WALKIE TALKIE'

**PRATER** has helped address the logistical challenges of installing an inverted roofing system and waterproofing package for the 'Walkie Talkie' building in London.

The company began work on the site in 2013 and was responsible for the inverted roofing system and 2,000 m<sup>2</sup> of waterproofing on the ground floor, which helped to form the construction of several huge planters. The majority of materials used were liquid applied Radmat Building Products, including Paraflex and Permaquick.

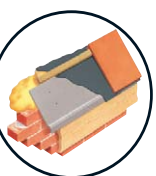
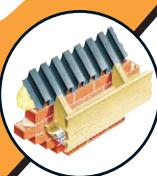
Gavin Hamblett, managing director of Prater, said: "The roof's steep 45 degree angle meant that installing the waterproofing required precise measurements, an uncompromising approach to health and safety as well as a high level of skill from our delivery team. The project to deliver the roofing package and waterproofing was completed in 18 months – on time and on budget."

• 0173 777 2331 • [www.prater.co.uk](http://www.prater.co.uk)

## Roof, Wall, Soffit & Fascia Ventilation?

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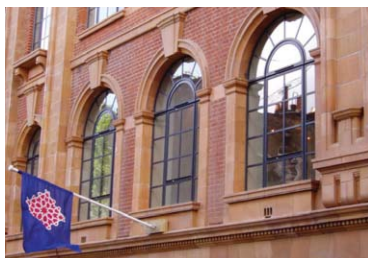
## ENHANCING SECURITY

The **STEEL WINDOW ASSOCIATION** (SWA) says that because of the inherent strength of their frames, steel windows are the best for safeguarding against intruders.

"One of the best deterrents to a prospective thief is the traditional 'cottage' style steel window, divided into small panes, with interlocked steel glazing bars. SWA members also offer W40 steel windows that comply with Secured by Design requirements," SWA said. When manufacturing new windows, SWA members provide locking devices, locking handles, concealed bolts and mortice deadlocks. Hardware is attached using steel screws threaded into the steel frame. A concealed multi-point cremone bolt locking system, operated through the frame by a geared handle, can also offer resistance to intrusion on new windows in the W40 range.

• 0844 249 1355

• [www.steel-window-association.co.uk](http://www.steel-window-association.co.uk)



## 'ZERO' CLEARANCE DOORS

**BRIO** has developed a range of hardware for exterior and interior sliding timber doors.

The company's Zero Clearance range was developed to accommodate the popularity of floor to ceiling sliding doors and shutters. The Single Run Zero Clearance range has been designed to deliver clearances of 2.5 mm between the track and top of the door. The new spring loaded guide and bottom rail can also be concealed within the bottom edge of the door, extending Zero Clearance to floor level. The track can be installed into the ceiling so the door looks as though it is floating.

• 0191 229 1224 • [www.briouk.com](http://www.briouk.com)



## ENERGY REDUCING GLASS LAUNCHED

**PILKINGTON** has launched K Glass A, a low-e hard coated glass, which has been designed to help windows to achieve a Window Energy Rating (WER) 'A' rating, when installed within a suitable frame.

When used as the inner pane of an insulating glass unit, and combined with Pilkington Optifloat or Optiwhite, the company says a U-value of 1.4 W/m²K can be achieved. Suitable for both commercial and residential settings, K Glass A is designed for high light transmission to maintain neutrality and avoid a grey appearance. The glass can be used in both annealed and toughened formats. It is also designed to reduce internal condensation and enable designers to extend the glazed area of a building without increasing heat loss.

• 0179 559 6100 • [www.pilkington.co.uk](http://www.pilkington.co.uk)



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## HEAVIER PANELS LAUNCHED

**ALUK** has recently launched the BSF70 HD aluminium folding door system into its product range, to provide end users with a greater choice of heavier panels, without any loss in performance.

The new BSF70 HD features a heavy duty roller and top guide to accommodate heavier glass load up to 130 kg per panel.

The increase in panel weight means the door system can carry heavier double or triple glazed panels. The system comes with a built-in alignment pin within the hinge assembly to provide permanent panel positioning. It also has an improved bottom hinge carrier design, incorporating stainless steel rollers with high performance needle bearings.

• 0163 381 0440 • [www.aluk.co.uk](http://www.aluk.co.uk)



## MAXIMISING DAYLIGHT

**BRETT MARTIN DAYLIGHT SYSTEMS'** architectural glazing system has been specified to help Jaguar Land Rover's new advanced engine manufacturing facility in the West Midlands achieve a BREEAM excellent rating.

The Marlon Clickfix 1040 polycarbonate glazing system was chosen to maximise daylight, airtightness, fire performance, durability and UV stability. The lightweight 40 mm polycarbonate panels are designed to offer impact resistance, resilience, structural strength and a U-value of 0.99 W/m<sup>2</sup>K. The Marlon Clickfix VF glazing bar system has been developed for vertical installations like facades, whilst Clickfix RL has been designed for use in low pitch rooflights and canopies.

• 0289 084 9999

• [www.brettmartin.com](http://www.brettmartin.com)



## DORMA SAVES ON SPACE

**DORMA** has launched FFT Flex Green, a folding door for applications where space is restricted.

The door is suitable for both external and internal applications, adheres to EN 16005 standards and possesses safeguarded self-monitoring sensors. It provides a thermal separation feature, with low thermal transmittance values. It also features an intelligent drive system that detects wind loads and compensates accordingly. The door is designed to achieve improved dynamic response and silent efficiency by transmitting its power without toothed belts. It can be specified up to 2.5 m high and 2.4 m in width.

• 0146 247 7600 • [www.dorma.com](http://www.dorma.com)



## RESPONSIBLE SOURCING

**LOMAX + WOOD** has announced that its Kensington & Chelsea range of timber sash windows has achieved FSC (Forest Stewardship Council) Chain of Custody certification FSC C126169 in compliance with BM Trada. This certification is designed to ensure that the products originate from responsibly sourced forests. It is independently certified by BM Trada, which is ASI accredited to ensure that the material is traced through every stage of the process from forest to end-user. The range includes sash windows with coordinating casements, external doors, French doorsets and bi-folding doors. Products are factory-finished and traditional flush joints, rather than Swedish joints.

• 0127 735 3857

• [www.lomaxwood.co.uk](http://www.lomaxwood.co.uk)

## TIMBER FRAMES ARTIST'S HOUSE

Traditional timber sliding sash windows, casements and French doorsets from the Conservation range by **MUMFORD & WOOD** have been specified in FAT Architecture and Grayson Perry's 'A House for Essex'.

The design of the property, located in Wrabness, close to the Essex coast, relates to a number of influences, including stave churches, arts and crafts houses, and English baroque architecture. The made-to-order timber Victorian-style sash windows feature spring balance operation and are adorned with fixed curved semi-circular fanlights. Coordinating Conservation casement windows and doors feature a contemporary-style moulding. All products have been finished in purple red, RAL 3004, with a single doorset supplied in yellow.

• 0162 181 8155 • [www.mumfordwood.com](http://www.mumfordwood.com)



## LARGER WINDOWS DRIVE BLIND SALES

**MORLEY GLASS** says it has seen a 29% rise in sales of its Uni-Blinds sealed units with 22 mm and 27 mm cavities due to increased demand for larger windows and sliding patio doors.

Ian Short, managing director at Morley Glass, said: "Typical domestic windows and doors feature 28 mm sealed units with a 20 mm cavity, into which we can fit ScreenLine integral blinds, in a wide range of colour options. However, there is growing demand for larger windows and doors – both for the domestic and commercial markets – which require 22 mm or 27 mm cavities. Our Uni-Blinds sealed units with ScreenLine integral blinds inside can be fitted into doors and windows as large as 2 m high and 2 m wide."

Integral blinds that can be fitted into larger windows can also be used for bi-folding and sliding patio doors to provide privacy, reductions in sound intrusion and solar glare.

• 0113 277 8722 • [www.morleyglass.co.uk](http://www.morleyglass.co.uk)







### HIDDEN LEAVES CREATE LARGE OPEN ENTRANCES

**GEZE UK** has enhanced its Manual Sliding Wall (MSW) system by eradicating the need for a swing door end panel, enabling the leaves to be hidden from sight when not in use.

The company's SmartGuide technology was designed to allow the leaves to glide easily around corners and be stored away, making it useful for creating large open entrances or for spaces that need temporarily dividing. MSW is modular in design and features walls which are lockable when closed. The SmartGuide carriage features enhanced rollers and guiding, which allow individual sections to be moved. The switching guide side on the carriage means that a swing door end panel is not required because all the leaves can be moved and stored within the stacking area.

A choice of three profile designs are available: Classicline profiles fit directly on to the glass at a slight angle and have a profile height of 107 mm, Pureline profiles can be combined with existing systems and Protectline provides increased protection against glass damage.

• 0154 344 3000 • [www.geze.co.uk](http://www.geze.co.uk)

### ENTRANCE UPGRADE

**TORMAX's** iMotion automatic sliding doors were recently specified to upgrade four entrances at Derby Homes' offices.

Two Tormax 1301 iMotion operators were used to drive internal and external swing doors whilst a iMotion 2202 bi-parting operator was installed to provide sliding door access to newly refurbished open-plan office space.



iMotion door drives feature low-energy operation as standard. Their internal design means that the high-torque motors have none of the usual working parts that wear out, such as gears and brushes. Additionally, over 95% of the operators are manufactured from recyclable materials.

• 0139 223 8040 • [www.tormax.co.uk](http://www.tormax.co.uk)



### HEAVYWEIGHT DOORS

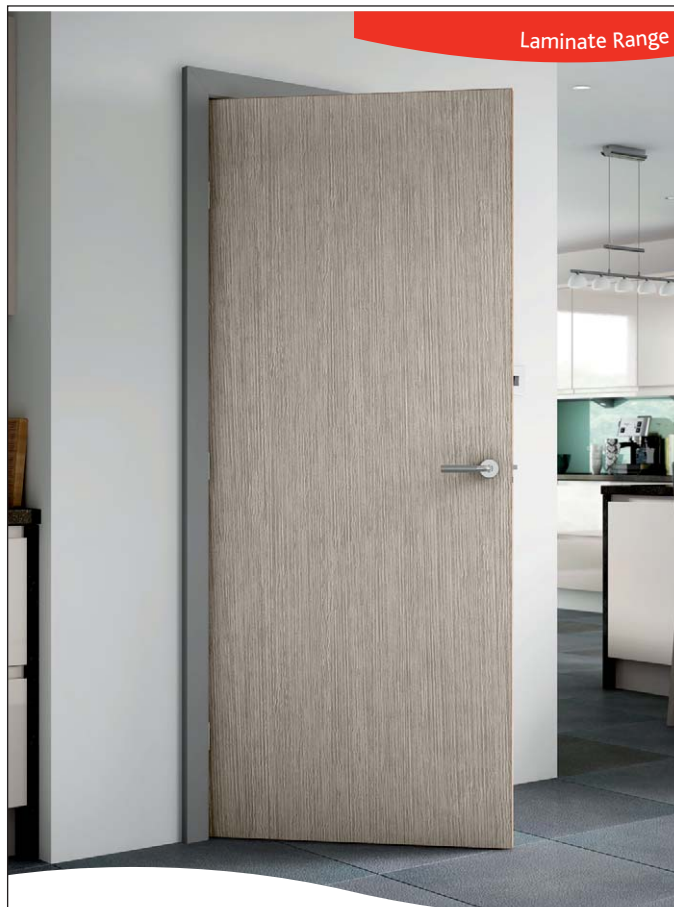
**P C HENDERSON** has updated its Securefold exterior folding door range with the addition of a new heavier weight category product.

Suitable for timber or aluminium door panels, the new hardware has been tested to 150 kg. The Securefold

150 is designed for both residential and commercial external outward opening door applications that require a heavy duty system which moves effortlessly.

Available in a brushed satin finish, the company says Securefold 150 hardware is extremely durable and corrosion resistant and features components made from 316 stainless steel. All components in the Securefold range undergo extensive cycle testing in accordance with EN 1527.

• 0191 377 0701 • [www.pchenderson.com](http://www.pchenderson.com)



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## REDRING GETS AN 'A' FOR EFFICIENCY

**REDRING XPELAIR** has received an 'A' class Energy-related Products Directive (ErP) rating for its electric shower and water heater products.

The Galaxy electric showers range achieved the A-rating, including the new Expressions Revive model and Dash, an entry-level electric shower.

Also A-rated were all Powerstream instantaneous water heaters, instant hand wash units and the new instant electric hot water taps, providing hot water in any wash basin location.

Steve Holton, strategic marketing director, Redring, said: "Our A-rating achievements demonstrate once again just how energy efficient electric instantaneous hot water solutions can be."

• 0844 372 7761 • [www.redring.co.uk](http://www.redring.co.uk)



## SERVICING MULTIPLE APPLICATIONS

**SANIFLO** says its range of macerators and pumps are suitable for new domestic applications, including cloakrooms, en-suites and greywater situations in kitchens and utility rooms.

Saniaccess 1 is designed for use with one WC in a cloakroom setting and is primarily intended for new installations as the inlet and outlet positions vary from other Saniflo models. Saniaccess 2 is designed to service a WC and a washbasin and, for this purpose, features two high-level side connections.

The Saniaccess 3 model has the capacity to service a new en-suite comprising a WC, bidet, washbasin and shower. The Saniaccess Pump is designed for domestic grey water applications, including kitchens and utility rooms. Also suitable for new installations, the Saniaccess Pump features two inlets and an optional top inlet.

• 0208 842 0033 • [www.saniflo.co.uk](http://www.saniflo.co.uk)



## 'FLOATING' SANITARYWARE

**SIAMP** says that in recent years it has been developing 'floating' sanitaryware, which is designed to hide evidence of pull chains and pipework in the bathroom.

The manufacturer's products are designed to make the toilet appear as if it is floating. Above the toilet, a flush plate eliminates the need for a chain. Paired to the Wall Frames is Siamp's range of Concealed Cisterns, either pneumatic or cable operated. The company says that its siphons, inlet valves and other components are designed, tested and manufactured to exacting WRAS standards.

• 0161 681 2120 • [www.siamp.co.uk](http://www.siamp.co.uk)



## BRIXTON LEISURE CENTRE GETS WASHROOM REFURB

**WASHROOM WASHROOM** has recently refreshed the changing areas at a public leisure centre in Brixton.

Working with interior fit out specialist, RJ Interiors, Washroom installed new male and female changing areas on the fourth floor of the building. Cubicles from Washroom's Forte range were installed for both the WC and changing cubicles. Impervious to water and with a satin anodised aluminium headrail, the company says Forte provides an aesthetic, affordable and long-term solution. Manufactured in Solid Grade Laminate (SGL) for extra durability, the cubicles were finished in a dark wood effect.

Legato benching, an integrated benching system which consists of an aluminium support construction, profiled seating and complementary hookrail, was also installed along with Washroom's Forza lockers in the same dark wood finish.

• 0845 470 3000 • [www.washroom.co.uk](http://www.washroom.co.uk)





Visit [www.washroom.co.uk](http://www.washroom.co.uk) to view our colourful range of iconic washrooms, changing and shower facilities.



## BASF HELPS GENERATE ENERGY

**BASF** has played a role as both product manufacturer and funding partner at the recently opened Solcer house.

The Solcer house was designed by the team at the Welsh School of Architecture, Cardiff University. The house demonstrates the ability of current technology to deliver a low cost dwelling that can generate more energy than it uses. It is designed to have very low energy demand as well as generating its own energy from different sources. Highly insulated external walls are created from SIPs panels, utilising BASF's Neopor insulation material. The upper story of the south facing facade of the building is formed by a Transpired Solar Collector, also manufactured from coated steel, which conducts warm air into the house to provide space and water heating. Coil coatings from BASF were applied to the steel used in these areas.

• 0159 482 7744 • [www.basf.co.uk](http://www.basf.co.uk)



## ENHANCING ENVIRONMENTAL CREDENTIALS

**KINGSPAN INSULATED PANELS** has launched IPN-QuadCore, a new insulated panel core which, the company says, delivers the best thermal, fire and environmental performance of any closed-cell material.

Invented with a bespoke technology process that creates a microcell structure, IPN-QuadCore is designed to lower lifetime costs and enhance environmental credentials.

"IPN-QuadCore delivers a 20% thermal improvement over standard polyurethane insulated panel core insulation. It has a lambda value of just 0.018 w/mK, the best in the industry, and achieves U-values as low as 0.08 W/m<sup>2</sup>K," the manufacturer adds.

IPN-QuadCore is certified to FM 4882 for use in smoke sensitive occupancies. It can also help achieve an additional six BREEAM Ene01 credits for a retail or distribution warehouse.

• 0135 271 6100

• [www.ipn-quadcore.co.uk](http://www.ipn-quadcore.co.uk)



## INSULATION CHECKED-IN AT PASSIVHAUS B&B

The fully certified Totnes Passivhaus B&B in Devon has been retrofitted with products from **KINGSPAN INSULATION's** Kooltherm range.

The cost of replacing the existing floor slab at the property proved to be impractical. As a result, insulation had to be laid over the existing slab and needed to deliver a U-value of 0.20 W/m<sup>2</sup>K without encroaching on headroom. Kingspan Insulation's Kooltherm K3 Floorboard was specified as the solution. A 10 mm plaster layer was applied to the existing slab and then 80 mm of Kooltherm K3 Floorboard was installed along with 20 mm wood fibre insulation. Finally, a 14.5 mm hardwood floor was fitted. To finish the renovation, Kooltherm K5 External Wall Board was fitted to the outside of the existing walls and finished with a white render. The insulation is suitable for use behind traditional and lightweight polymer modified renders as well as dry cladding systems. It was specified to minimise thermal bridging through the property's walls.

• 0154 438 7384 • [www.kingspaninsulation.co.uk](http://www.kingspaninsulation.co.uk)

## LOWERING U-VALUES

**CELOTEX** has launched a new solution for full fill cavity wall applications to help to deliver a U-value within walls of 0.18 W/m<sup>2</sup>K without the need to widen the cavity.

The latest addition to the company's '5000' series product range, Celotex CF5000 is a BBA certified full fill cavity wall solution. Making use of the whole cavity width, CF5000 is designed to optimise the thermal performance through the wall and achieve lower U-values without the requirement to widen the cavity, improving plot efficiency as a consequence.

The cavity wall solution comprises a rigid polyisocyanurate foam core which is adhesively bonded to aluminium foil facings on both sides. The company says it is easy to cut and is available in 1,200 x 450 mm dimensions so that it fits with standard cavity wall tie spacing.

Mechanically engineered with a rebated edge to eliminate the passage of moisture, Celotex CF5000 also features a low lambda value of 0.021 W/mK.

• 0901 996 0100 • [www.celotex.co.uk](http://www.celotex.co.uk)



## PRE-BONDED PROTECTION

**KINGSPAN INSULATION** has introduced a new pre-bonded protective layer for its OPTIM-R vacuum insulation panels.

The protective layer, which can be bonded to either one or both sides of the OPTIM-R panel, allows the product to be fitted directly onto substrate without the need for an additional protective sheet.

The pre-bonded OPTIM-R panels can be used in a range of different applications and are designed to help to simplify and streamline installations, saving both time and cost.

"With an aged design value thermal conductivity of just 0.007 W/mK, Kingspan OPTIM-R panels can achieve the desired U-value with a thickness up to five times slimmer than other commonly available insulation products," the company says. The panels form part of Kingspan Insulation's range of LABC approved Kingspan OPTIM-R Systems.

• 0154 438 7384

• [www.kingspaninsulation.co.uk](http://www.kingspaninsulation.co.uk)

## REDUCING AIR LEAKAGE

**TIMLOC** has added a radiator pipework air barrier to its range of products.

The air barrier is a purpose-designed, face-fix unit which provides an air leakage barrier around the point of entry for through wall 10 mm plastic radiator pipework. As well reducing air leakage, it is also designed to keep warm air in and reduce heat loss. It has an air leakage performance rate at 2 Pa and achieves Part L's testing pressure of 50 Pa without the need for sealants. Dave Bean, sales director, Timloc, said: "Easy and quick to install, the air barrier is a mechanically-fitted unit. It replaces the requirement of electrical back boxes or intumescent foams or sealants, saving mess, materials and cost."

• 0140 576 5567 • [www.timloc.co.uk](http://www.timloc.co.uk)



## RENEWABLE HEAT ON SHOW

Heat pump manufacturer **DIMPLEX** and renewable energy installer Ecoliving joined forces to host a Renewable Heat Showcase at Dumfries House in Scotland, demonstrating the opportunities for renewable heat in commercial properties.

The companies have delivered a rolling programme of renewable heat installations at the estate over the last three years. In total, they have installed green heating technologies to ten different properties on the estate, including the art studios, hospitality centre, STEM Centre and visitor centre. The showcase event gave delegates the opportunity to see products in action, including high temperature ground source and high efficiency air source heat pumps from Dimplex.

• 0121 517 1008 • [www.dimplex.co.uk](http://www.dimplex.co.uk)

## STAINLESS STEEL STORAGE

**RINNAI** has launched the Infinity Solo Re-Circulator water heater with combined storage.

The Infinity Solo range of condensing and condensing low NO<sub>x</sub> water heaters is the first Rinnai product for the UK to combine the technology of its wall mounted continuous flow water heaters with a stainless steel storage cylinder. Chris Goggin, associate director, Rinnai, said: "Because the cylinder is stainless steel it greatly reduces the weight compared to glass lined models."

Solar thermal or heat pump technology can also be integrated into the system.

• 0192 853 1870 • [www.rinnaiuk.com](http://www.rinnaiuk.com)



## WARMING UP BRIXTON FLATS

**GAIA CLIMATE SOLUTIONS'** underfloor heating (UFH) system has been installed at a 155-apartment development in Brixton.

Joshua Demetrescu, sales manager, Gaia Climate Solutions, said: "We were employed specifically to install the Polypipe UFH by Woodford Heating & Energy which had the main plumbing contract with the house-builder."

"The project was delivered on a tight schedule and to a high standard of finish. The apartments sold very quickly off-plan and we could not afford any delay to the schedule. Good teamwork ensured a successful completion."

• 0845 434 9488 • [www.gaia.co.uk](http://www.gaia.co.uk)

## PRE-INSULATED PIPES PROVIDE SOLUTION

**FLEXENERGY's** Flexalen polybutylene pre-insulated pipe provided a solution for Plymouth City Council when a new district heating scheme meant re-routing the pipe network from new gas boilers to serve offices in the Council House.

The Civic Centre, located alongside the Council House, had a gas boiler system which served the council offices. It will be serviced separately to enable its disposal for re-development and the Council House will be fed from the new Guildhall boiler installation via the underground heating pipework.

Contractors ECS installed the network, comprising 31 in no 12 m lengths of pipework and 16 pre-fabricated bends, insulation kits and stub flanges.

• 0159 277 3167 • [www.flexenergy.co.uk](http://www.flexenergy.co.uk)



## SONTAY UPGRADES SENSOR RANGE

**SONTAY** has expanded its range of Air Differential Pressure (DP) sensors by launching the new PA-60 and PA-65 models.

The PA-60 solution for measuring filter conditions can also be utilised for other ventilation and air conditioning system applications in commercial buildings, laboratories and cleanrooms. The sensor features user selectable measurement ranges and output types, and four pressure ranges between 0 and 500 Pa. Mounted in an IP65 housing, PA-60 has an optional LCD display and ModBus or BACnet connectivity to allow for easy connection to any building management system. The PA-65 is a multi-configurable sensor designed for differential pressure measurements of air and other neutral gases within HVAC applications. The PA-65 senses differential or gauge (static) pressure and converts this pressure difference into a proportional electrical output.

• 0173 286 1200 • [www.sontay.com](http://www.sontay.com)





## ELIMINATING CHANGES IN WATER TEMP

**RINNAI's** Infinity continuous flow water heaters have provided a hot water solution to a family-run caravan park in York.

Infinity units are designed to eliminate sudden changes in water temperature via the digital temperature controller. "So, for example, if somebody is showering at, say 42°C, and a tap is turned on elsewhere, the temperature will not vary. As a failsafe, the unit will automatically cut the heater should the temperature rise by 3°C above the chosen set point," the company said.

Park owner, Roger Hall has been using Rinnai Infinity continuous flow water heaters since 2005. All four of his showers are served by a 69 kW LPG Rinnai unit water heater and he recently replaced a 36-year-old LPG multipoint with a Rinnai unit.

• 0192 853 1870 • [www.rinnaiuk.com](http://www.rinnaiuk.com)



## AN EDUCATION IN ENERGY EFFICIENCY

**ATAG COMMERCIAL's** ATAG XL boilers were recently specified by Keele University to replace the heating and hot water systems servicing their science blocks.

The boilers feature ATAG's 316 stainless steel heat exchanger technology, which the company says gives the XL range an efficiency of 109.3% (EN677), achieved through seamless upwards modulation.

There are three models in the XL range with outputs of 65.4 kW, 105 kW and 130.9 kW and these can be configured in multiples of up to eight units to give a maximum output of 960 kW.

Prior to ATAG boilers being specified, key personnel from Keele's facilities department team were invited to training sessions at the company's HQ in Chichester.

• 0124 381 5770 • [www.atagcommercial.co.uk](http://www.atagcommercial.co.uk)



## MAKING THE MOST OF RHI

**EUROHEAT** has re-classified its HDG

Compact 200 pellet or wood chip boiler to allow end-users to make the most of recent changes to the non-commercial RHI.

Whereas before the most attractive tariffs ended under 200 kW (199 kW or lower), this has been recently changed to include 200 kW boilers, equating to £2,000 additional RHI returns a year. The HDG Compact 200 biomass boiler's combustion technology is designed to result in low fuel consumption, with an advanced PLC control governing the boiler's output ensuring that only the required amount of heat is produced. Fully automated, with pellets or chips transported to the combustion chamber and then ignited automatically, the Compact 200 also features self-activated cleaning and a large ash container.

• 0188 549 1112 • [www.euroheat.co.uk](http://www.euroheat.co.uk)



## PROTECTING AGAINST FROST

Eastbourne-based Abacus Flame has specified

**FERNOX's** Antifreeze Protector Alphi-11 to protect against the freezing temperatures and corrosion formation in the upcoming winter months in static caravan and residential park home heating systems.

Non-toxic and compatible with all metals and materials commonly used in heating systems, Alphi-11 is designed to be left in the system all year round to maintain efficiency and prolong the system's life, and can be topped up as and when needed.

The product can be used to provide protection in temperatures as low as -22°C, depending on the concentration.

• 0330 100 7750 • [www.fernox.com](http://www.fernox.com)



## UPGRADING FILTER DESIGN

**GRANT UK** has upgraded the design and packaging of its universal Mag One Magnetic Filter, which is designed to provide protection for all types of central heating systems up to 36 kW.

The Mag One filters magnetite and non-ferrous debris from central heating systems, using a 12,000 gauss neodymium magnet. The filter features a triple action filtration design, 360° installation and an installation and servicing date wheel, 28 mm chrome isolation valves with 22 mm reducers, manual air bleed and a 500 ml dosing capacity. Compatible with all system inhibitors and glycol solutions, the Mag One operates at a maximum working pressure of 6 bar and a maximum working temperature of 120°C.

• 0138 073 6920 • [www.grantuk.com](http://www.grantuk.com)



## SMART RADIANT PANELS

**MERRIOTT** has added a range of radiant panels to its range of heating and cooling solutions for commercial and industrial applications.

The Smart range operates by transferring radiant heat from above directly onto the surfaces inside a building, which then act as a secondary heat source to raise the indoor temperature. The company says this process means buildings benefit from optimum heating comfort at a reduced air temperature, around 3°C lower than convective systems (CIBSE B1-4). Alternatively, the panels can operate as passive chilled beams, using cool water. As well as the Smart Radiant Panel the portfolio includes Smart Plus for larger surface areas, Smart Style with integrated services and Smart HD for industrial use.

• 0163 365 7222

• [www.merriott-radiators.com](http://www.merriott-radiators.com)

## POWERING COVENT GARDEN PIAZZA

**POP UP POWER SUPPLIES** recently supplied six retractable service power units for installation in Piazza at Covent Garden. The 450 kg units are buried out of sight, beneath the cobbled piazza, and are raised out of the ground when required by a turning handle. When not in use, the units do not impact on the historic appearance of the Piazza as they sit flush with ground.

The Services Team now has access to a combination of 16 A and 32 A sockets in both single and three phase-all with RCBO protection.

• 0208 551 8363 • [www.popuppower.co.uk](http://www.popuppower.co.uk)



## ATAG HEATS HISTORIC LIDO

**ATAG HEATING** recently replaced four old boilers at Bristol Lido with two of its XL110 commercial boilers.

Bristol Lido dates back to 1849 and is one of the oldest surviving in the UK. The newly revamped and restored Lido opened its doors on December 2008 and features a restored pool, restaurant and spa.

Installed by main contractor Octagon Heating Services, the two ATAG XL110 boilers have a combined output of 190 kW and will supply domestic hot water and heating for the restaurant, pool and spa. There are three models in the XL range with outputs of 65.4 kW, 105 kW and 130.9 kW and these can be configured in multiples of up to eight units to give a maximum output of 960 kW. The boilers can be either wall or frame mounted in line or back to back.

• 0124 381 5770 • [www.atagcommercial.co.uk](http://www.atagcommercial.co.uk)



## BESPOKE BRASS FOR CITY FACADE

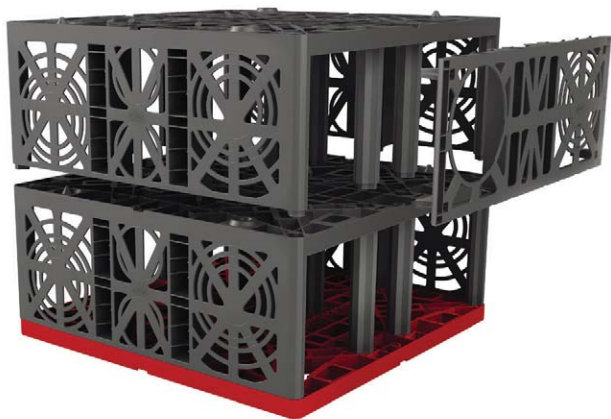
**RUNDUM MEIR** specialises in high quality, standard and custom-made exterior door systems made from a range of materials, including solid timber, copper, aluminium, bronze and glass.

In plan, the doors can be designed to be curved, straight or even wavy.

A recent project involved a bespoke side sectional patinated brass door, which was fitted to match the external facade of a new build house in central London.

Rundum exterior door systems have been used on listed buildings, award-winning new build, conceptual architecture, refurbishment projects and a high profile passive house.

• 0151 280 6626 • [www.rundumuk.co.uk](http://www.rundumuk.co.uk)



## FLEXIBLE SOLUTIONS TO MINIMISE FLOOD RISK

**JDP** will feature its latest product, the Rainbox Attenuation Solution, at the Build Show next month on stand C8/843.

Rainbox is designed to provide developers and contractors with flexible solutions to minimise the risk to localised flooding and provide best practice Sustainable Urban Drainage Systems (SuDS).

The company will also feature its range of Underground Sewer Systems including the range of Axedo plastic inspection chambers. JDP says a full range of BS EN 1401-1 underground drainage pipe, fittings and sewer drain is available for adoptable sewers and surface water drainage.

PVC access chambers from JDP are manufactured from 100% recycled material. The range includes solutions for house inspection chambers, water & utilities, valve & hydrant chambers and major projects.

• 0800 195 1212 • [www.jdpipes.co.uk](http://www.jdpipes.co.uk)

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**L1A Building Regulation 3.9 –Thermal Bridges**

2013 Edition, Page 19

*"No reasonably avoidable thermal bridges caused... by gaps within the various elements, at the joints between elements and at the edges of elements, such as those around window and door openings"*

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



## UNINTERRUPTED FIRE DISPLAY OPTIONS EXPANDED

Dik Geurts, the brand **DRU** uses for its wood and multi-fuel fires and stoves, has launched a store version of its Ivar 5 stove, with a log storage shelf under the stove, and larger Ivar 8 stoves, in High, Low and Store options.

The Ivar 5 contemporary wood and multi-fuel stoves include a High version for freestanding installation and a Low version for installation into an inglenook chimney.

The new models have a higher heat output of up to 8 kW. They also have large viewing windows, which the company says are easy to clean and give an uninterrupted view of the fire display, which can be adjusted with the air slider. In addition, there is a detachable 'cold touch' handle for safety of operation.

All Ivar stoves can be turned into multi-fuel versions with the addition of the custom-made multi-fuel kit.

• 0161 793 8700 • [www.dgfires.co.uk](http://www.dgfires.co.uk)



## SEAMLESS DRAINAGE FOR NOTTINGHAM KAYAK CLUB

**HARMER's** Stainless Steel Floor Drain has been specified in the refurbishment of Nottingham Kayak Club (NKC).

Vertical mini floor drains were fitted with 200 mm grates to provide a seamless finish alongside the 200 mm floor tiles used in the club changing rooms. Manufactured from 304 grade stainless steel, the new floor drain is designed to deliver corrosion resistance and a high flow rate performance with minimal maintenance requirements. The company says it is also long-lasting and sustainable, and manufactured using material that is 100% recyclable.

Mark Blatchley, project spokesman for NKC, said: "The Harmer drains are really effective, look great and are an easy-to-maintain solution that will last."

• 0808 100 2008 • [www.harmerdrainage.co.uk](http://www.harmerdrainage.co.uk)


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Marmox Soundboard reduces the noise that is transmitted through the floor. It effectively removes the link between where the impact happens (i.e. the footfall on the tile) and the ceiling below.

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

## FUTURE-PROOF WINDOWS

**COMAR ARCHITECTURAL ALUMINIUM SYSTEMS** has launched the Comar 5P.i ECO+ range, a Polyamide Insulation (P.i) casement window system.

By extending the polyamide strips and inserting thermal foam, the company says this product range will provide a future-proof solution for casement windows.

Due to its slim profiles, the Comar 5P.i ECO+ range weighs less than 0.79 Kg per linear metre and achieves a Green Guide A+ rating, which can help specifiers achieve the highest BREEAM levels.

• 0208 685 9685 • [www.comar-alu.co.uk](http://www.comar-alu.co.uk)



## HORIZON SPECIFIED BY LARKFLEET

**SANIFLO's** Kinedo Horizon range of cubicles have been specified by Larkfleet Homes in several of its new developments in East Anglia.

The Horizon cubicle features opaque interior glass panels which prevent the need for tiling and grout. The 6 mm exterior panel and 8 mm door are manufactured from transparent toughened safety glass and the structure sits over a bespoke shower tray with pre-formed sills, which the company says ensures a 'leak-free' shower.

The unit is available in corner, quadrant and recessed versions and supplied with a built-in shower valve, contemporary rainshower head and handset.

• 0208 842 0033 • [www.saniflo.co.uk](http://www.saniflo.co.uk)

## METALWORK MAKEOVER

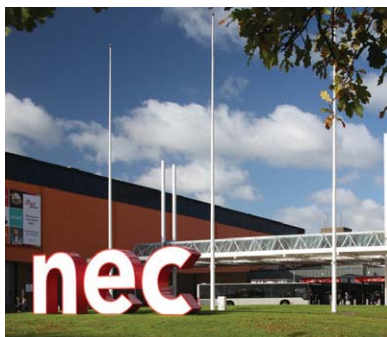
**JOHNSTONE'S TRADE Steel & Cladding** Semi-Gloss Topcoat has been specified in the refurbishment of the main entrance at Birmingham's National Exhibition Centre.

The product was used to repaint the exterior metalwork of the building. The topcoat has been formulated to provide long-lasting anti-corrosive protection for metal and profile claddings and is also resistant to UV damage.

Gerard Sherwood, director at decorator Modmill, said: "I have over 40 years' experience and have used Johnstone's on hundreds of projects during that time. Where possible I always use Johnstone's as I know it performs well and is easy to apply."

• 0192 435 4354

• [www.johnstonestrade.com](http://www.johnstonestrade.com)



## 'PLUG-AND-PLAY' SECURITY

**STANLEY SECURITY PRODUCTS** has announced that it has secured the exclusive UK distribution rights to the InfinitePlay IP based video door entry system, which will join its existing PAC Access Control and GDX Door Entry range.

InfinitePlay is a 100% IP based 'plug-and-play' system that the company says doesn't require sophisticated networking knowledge.

It can be fitted as a new standalone system or added to an existing IP based door entry system. The system features lighting activation, video calls between apartments, voicemail, interconnection with a mobile device to answer and unlock the door and enables the occupier to send messages, attachments and service information to and from apartments.

• 0161 406 3400

• [www.stanleysecurityproducts.com](http://www.stanleysecurityproducts.com)

## 'FUN AND FUNCTIONAL' FLOORING

**POLYFLOR's** Expona Flow range of commercial flooring was recently used to create a "fun and functional" flooring design at Quwwat Islam Education Centre in Preston.

The grey Luna and Storm colours were chosen for the base and border of the design floor, whilst the circular designs with striped, spotted and swirl patterns inside were created using the brighter Burnt Orange, Flaxen, Steel Blue, Meadow and Plum shades. The Expona Flow range features 50 heavy commercial sheet vinyl flooring designs in a 2 m wide sheet format with a 2 mm gauge and a 0.7 mm wear layer. The designs used in then corridor are from the Cosmos collection of solid colour, smooth floor coverings within the Expona Flow range. Subtle highlights created by pearlescent fragments within the flooring is designed to give the floor added depth and movement.

• 0161 767 1111 • [www.polyflor.com](http://www.polyflor.com)



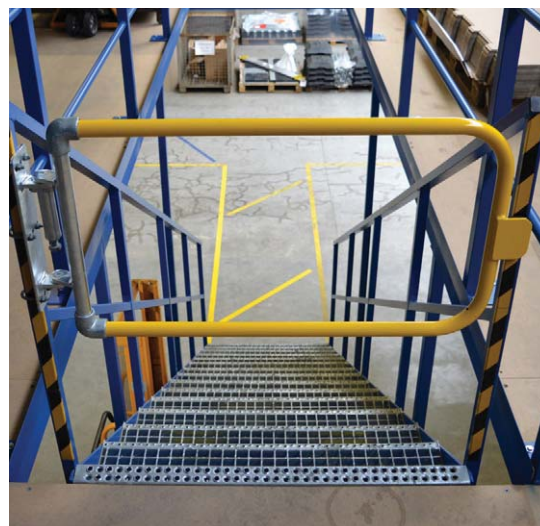
## SELF CLOSING GATES ENSURE SAFE ACCESS

**KEE SAFETY** has launched Kee Gate, a range of self-closing safety gates that provide industrial workers with a safety solution when working at height and on ground level.

The gates are designed to work both internally and externally, on ladder and stair access points, roof hatches, walkways and roof tops. They are also spring loaded so can automatically close behind the user.

They are available in galvanised steel or can be powder coated in safety yellow. The safety gate is available with standard 'U' bolts for fixing to uprights of 33.7, 42.4 and 48.3 mm diameter, enabling the gate to be fixed quickly to existing supporting structures, posts or stringers. An additional fixing pack is provided which allows the gate to be fixed to square, flat or angle uprights.

• 0138 463 2188 • [www.keesafety.co.uk](http://www.keesafety.co.uk)





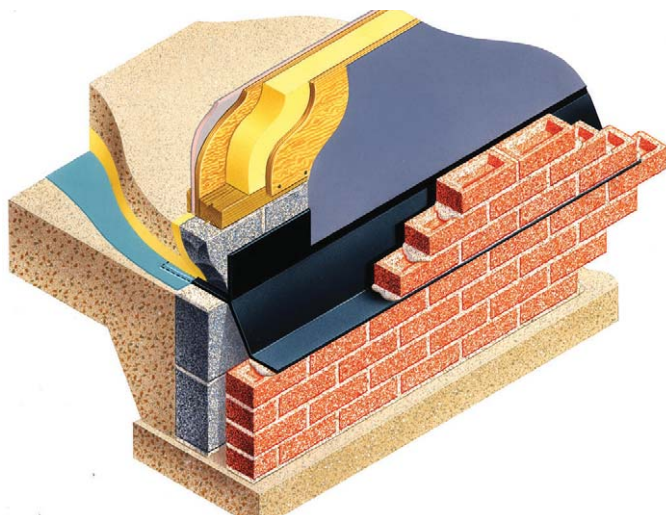
## CONTROLLING RAIN PENETRATION AT BUILD SHOW

**CAVITY TRAYS** will be exhibiting several new products at the Build Show, this October.

The updated Type X cavitray for gable abutments is designed to provide an effective way of arresting and controlling rain penetrating masonry above a sloping abutment. It has a ready-shaped flashing attached and an adjustable back upstand. The recently released Type BWVC is designed to overcome lateral transference, referring to exterior skin masonry becoming saturated and then permitting saturation to permeate 'sideways' into the structure.

Also being launched at the show is a reveal face closer that permits full fill insulation to be continued unpunctuated to the reveal face. The company's stand will also feature a range of damp courses and a wider choice of cavitclosers.

• 0193 547 4769 • [www.cavitytrays.co.uk](http://www.cavitytrays.co.uk)



## NON-DISRUPTIVE REPAIRS FOR LISTED BUILDINGS

**HELIFIX**'s non-disruptive concealed repair techniques have been used to help repair cracking, outward movement and bowing at a Grade-II listed 18<sup>th</sup> century stone cottage.

Concealed Helifix repair techniques were able to stitch cracks, stabilise the wall and reconnect it to the floor joists, restoring structural integrity, without affecting its aesthetic appearance.

The company says its non-disruptive concealed repair techniques are ideal for any masonry structure but, with no external straps or unsightly plates, they are particularly suitable for listed or heritage structures.

Helifix's range of stainless steel ties, fixings and reinforcement systems are designed to be slim, versatile, lightweight, flexible and non-intrusive. They can accommodate natural building movement, introduce no additional stresses and improve structural performance through a composite action with the host masonry.

• 0208 735 5200 • [www.helifix.co.uk](http://www.helifix.co.uk)

## LETTERBOX STYLE GAS FIRES ADDED TO RANGE

**DRU** has introduced two new models to its Global range of gas fires. The new 100 and 120 CF glass-fronted models are designed in the 'letterbox' style.

The models measure 1 and 1.2 m wide respectively, with a height of 42 cm for an enhanced view of the fire bed. In addition to the 'front' versions, these fires now come in two-sided Corner and three-sided Triple versions.

They are available in a log fire, white stone or anthracite glass display. The company says all three versions feature high, realistic flames that are regulated by an electronic remote control.

The interiors of the fires are available in standard black or mirrored Ceraglass. The fires provide a maximum heat output of 7.5 kW and have a maximum energy efficiency rating of 88%.

• 0184 429 9371 • [www.drufire.co.uk](http://www.drufire.co.uk)



## HIGH STRENGTH LINTELS PROVIDE MAXIMUM SUPPORT

**SUPREME CONCRETE** has launched a high strength lintel system designed to provide maximum support at window and door openings, in all types of masonry buildings.

The system combines dense concrete lintels with new, branded padstones, which are designed to distribute the weight of the supported masonry efficiently through the main structure.

Engineered using Supreme's 'Strongcast' pre-casting technology, the lintels and padstones work together to support imposed loads in excess of 50 N/mm<sup>2</sup>. The Strongcast lintels are made in a range of standard lengths to suit unsupported spans of up to 3.3 m, and can be supplied cut-to-length for specific applications. Like the padstones they come in a choice of dimensions to suit all normal wall widths and coursing depths, and are ready to use, helping to reduce overall build time and cost.

For higher loading requirements, Strongcast High Strength lintels are available to provide additional security.

• 0148 783 3317 • [www.supremeconcrete.co.uk](http://www.supremeconcrete.co.uk)



## LIGHTWEIGHT COVERS FOR HEAVY LOADS

**FIBRELITE** has re-configured the internal fibreglass architecture of its lightweight F900 Composite Trench Covers to accommodate areas imposing particularly high wheel loads, such as aircraft pavements, taxiways of civil airports, shipping ports and dockyards.

The company says it can now meet the permanent set and test load requirements of BS EN 124. The covers are designed to fit into existing frames and deliver cost and time savings as there are no break outs of existing structures and no curing time resetting structures into concrete.

The design incorporates up to two lifting points for specially designed lifting handles. These allow the operator to remove the cover without trapping fingers or bending over.

• 0175 679 9773 • [www.fibrelite.com](http://www.fibrelite.com)



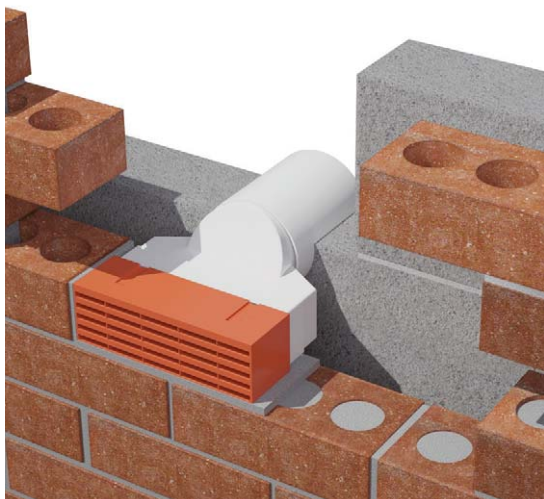
## TIMLOC LAUNCHES AIRBRICK ADAPTER

**TIMLOC** has launched a new duct-to-airbrick adapter, which it says will transform industry practices and set a new standard in extraction installation.

The adapter is designed to provide a complete solution when ducting through to an exterior wall. It comes as a single unit in a preassembled set that is built in as part of the brickwork package and enables 'first-fix' ceiling duct extraction connections.

It terminates at a standard plastic airbrick, which is supplied with the set, and installed exactly the same way as standard practice. The company said it saves time, reduces cost and minimises the need for external fitters, core drilling and specialist tools. Available in a variety of airbrick colours, the adapter is suitable for bathrooms, en-suites, WC cloakrooms and utilities.

• 0140 576 5567 • [www.timloc.co.uk](http://www.timloc.co.uk)



## NORTHCOT LAUNCHES YELLOW HANDMADE BRICKS

**NORTHCOT BRICK** has launched a range of yellow bricks as part of a planned extension of its handmade range.

The company says the three new blends – Woodstock Weathered, Wellacre Antique and Marlborough Mellow – will add variation to the rich warm red and orange hues often associated with the brickworks.

Handmade using traditional bench mould methods and burnt in a coal-fired kiln, the yellow bricks are designed to complement the architecture and traditional stock bricks of London and the South East. Suitable for new build and commercial projects, the range is available in 65 mm, 68 mm and 73 mm sizes and a range of British Standard special types is also available. The handmade yellow range is manufactured to British and European standards, including F2 rating for Frost Resistance BS EN 771-1: 2003 and the bricks are hand checked before dispatch.

• 0138 670 0551 • [www.northcotbrick.co.uk](http://www.northcotbrick.co.uk)

## PROVEN FIRE PROTECTION

Gypsum fireboard from **FERMACELL** has been commended for helping to prevent the further spread of a house fire.

Fermacell's technical manager Andrew Richardson said: "Feedback from the site was that they were very thankful that the Fermacell was there as it stopped the leapfrogging of the fire to a great extent and thus reduced the risk and potentially saved lives and possible subsequent damage, especially as the fire performance was not the primary reason the board was being used."

The company added that the fireboard's racking strength, as well as its fire resistance, makes it particularly ideal for minimising fire risk during timber-frame builds.

• 0121 311 3480  
• [www.fermacell.co.uk](http://www.fermacell.co.uk)



## STACKING UP AT HOSPITAL

Products from **ARMSTRONG CEILINGS'** service and systems portfolio have been specified at the recently opened Queen Elizabeth University Hospital in Glasgow.

Armstrong worked with Roskel Contracts to create two 800 m<sup>2</sup> mock-up areas of its square-edged Bioguard Acoustic tiles, which are designed to combine good sound absorption and attenuation to ISO 5 levels with antimicrobial properties. Subcontractor, PFP, then had a team of up to 60 men on site for two and a half years, installing 110,000 m<sup>2</sup> of Armstrong's Bioguard Acoustic mineral tiles and a variety of wall-to-wall suspension and transition systems. For the cantilevered pods, a 100 mm Axiom profile was coupled with a bespoke 225 mm Axiom profile and riveted together to create a 325 mm bulkhead/upstand at a custom length of 3.6 m.

• 0800 371 849  
• [www.armstrong-ceilings.co.uk](http://www.armstrong-ceilings.co.uk)



## JOHNSTONE'S COLOURS E4 BRICK HOUSE

**JOHNSTONE'S TRADE** products have been used exclusively throughout the recently unveiled Wienerberger e4 brick house.

The concept for the house was developed to address the need for affordable, sustainable housing in the UK. The e4 brick house model focuses on the four pillars of Wienerberger's global e4 concept – energy, economy, environment and emotion.

Johnstone's products were specified for the project due to their environmental credentials. The company's Acrylic Durable Eggshell, Covaplus Vinyl Matt, Acrylic Durable Matt and Aqua Water-Based Undercoat and Gloss were all used and have all received Environmental Product Declaration (EPD) verification from BRE Global.

• 0192 435 4354 • [www.johnstonetrade.com](http://www.johnstonetrade.com)



## PROVIDING A FLUSH FINISH IN BATTERSEA

**ICOPAL** has supplied 9,000 m<sup>2</sup> of its flame retardant scaffold sheeting for Embassy Gardens, a new residential development close to the River Thames in Battersea.

Monarflex Scaffoldband Flamesafe scaffold sheeting was secured to a purpose-designed scaffold screen framework to ensure it remained in place. The company says this provided a flush finish, whilst extending the life span of the product.

Sam Jones, director at Millcroft Scaffolding, said: "Monarflex is a high grade of scaffold sheeting that is less likely to fray or tear, a benefit that was key due to the development's proximity to the Thames. What's more, with the development's prime location, we felt that the product we used to weatherproof the scaffold needed to be of the highest durability and quality."

• 0843 224 7400 • [www.monarflex.co.uk](http://www.monarflex.co.uk)



## CUTTING RENDER APPLICATION TIME AT BRISTOL CARE HOME

**SAINT-GOBAIN WEBER's** weber.rend OCR one-coat base render has been specified in the refurbishment of the Westbury Care Home in Bristol.

The 1,000 m<sup>2</sup> application involved the cleaning and preparation of the brickwork fascia using weber.rend aid, a polymer modified preparatory key coat. The powder blend includes an integral bonding agent which requires only the addition of clean water on site. It is designed to provide suction control across both high and low suction substrates. The product is also resistant to water penetration and improves the weather resistance of the specified weber.rend OCR.

Weber.rend OCR is a pre-mixed, dry powder base-coat render formulated with Portland cement, lime and sand. The addition of ECO Smart cement replacement technology is designed to reduce the product's environmental impact. It can achieve a thickness of 16-25 mm to most suitably prepared substrates, including brick, block and concrete, and can be sponge-finished after 4-6 hours.

• 0870 333 0070 • [www.netweber.co.uk](http://www.netweber.co.uk)

## SEAMLESS ILLUMINATION

**RIDI LIGHTING** has introduced Venice-LED, the latest update in its Linear Lines range.

The Venice-LED lighting system provides a continuous light channel solution and is available in surface/suspended-mount versions and recessed formats.

Utilising LED boards combined with an extruded inner reeded optic, they are designed to ensure seamless illumination as well as eradicating blackspots and light peaks on the front diffuser.

Optimised for recessing or surface mounting, Venice-LED uses the embedded internal wiring system from the Linia-VL system. This system allows LED gear modules to be moved for increased flexibility and enables devices such as sensors to be plugged into the system.

• 0127 945 0882 • [www.ridi.co.uk](http://www.ridi.co.uk)



## PAVING FIT FOR A KING

**AGGREGATE INDUSTRIES'** products were specified to help transform Leicester's historic Greyfriars conservation area, ahead of the city's high profile reburial of King Richard III.

The Charcon team was awarded the contract to specify block paving products for the re-development of paving and walkways throughout the area. In total, 6,672 m<sup>2</sup> of Charcon Andover Textured premium precast concrete paving was supplied in three new shades: Washed Pink Granite, Washed Heather Porphyry and Washed Tuscan Porphyry.

To complete the scheme, Charcon supplied an additional 400 m<sup>2</sup> of Vianova in Anthracite Charcoal shade, a contemporary polished paving, was laid in a linear format to act as a guidance strip for pedestrians.

• 0133 537 2222 • [www.aggregate.com](http://www.aggregate.com)

# LEGAL EYE



Jahanara Hussein, senior associate, and Tom Botterill, trainee solicitor at Pannone, part of Slater & Gordon, outline the importance of adhering to agreed payment procedures, in light of two recent cases which saw expensive disputes ensue from disagreement over contract payment terms.

There have been numerous cases which deal with payment provisions and many of those cases deal with the parties' actions and whether they have complied with the payment procedures. One such case is *Leeds City Council v. Waco UK* [2015], for which the decision may surprise some but act as a reminder to others.

In this case, the Council and Waco had entered into an amended JCT Design and Build Contract, 2005 Edition Revision 2 2009 for a school in Leeds. The contract required Waco to make monthly interim applications for payment on specified dates until practical completion and thereafter every two months "unless otherwise agreed".

Before practical completion, Waco made a number of applications and generally these were not made on the contractually specified dates, but a few days after. Nevertheless, the employer's agent mostly ignored these irregularities and certified payment.

After practical completion, Waco made three applications which again were not made on the correct dates, but the employer's agent did not object.

The issue before the Court was whether an interim application for payment made after practical completion on 22 September 2014 was valid despite it being issued six days before the contractual date. If it was valid then it would be payable as the employer's agent had not issued the relevant notices.

The Court decided that the conduct of the parties had resulted in there being an implied term that Waco could submit an application on or within three to four business days after the contractually specified dates. This meant that the Council was entitled to reject applications which were issued outside this period and/or which were issued early. It should be noted that the Council had paid one application early, but the Court did not consider that this was enough to establish a course of conduct.

What *Leeds City Council v. Waco UK* [2015] shows is that, whether you are an employer or a contractor you should be following the contract as otherwise you may end up in a costly argument as to whether the parties' actions had varied the contract.

## PAYMENT INTERPRETATIONS

Another recent case which deals with payment procedures is *Caledonian Modular v. Mar City Developments* [2015]. *Caledonian Modular* was appointed by Mar City under a letter of intent dated 19 December 2013, to carry out extensive construction works at a site in North London. The letter of intent contained no payment or adjudication provisions, and so the Scheme for Construction Contracts was implied.

*Caledonian Modular* had made 14 interim applications in the same format: a letter attaching the details of the application, the total amount due, the amount previously certified, the net amount due, the date a payment notice was to be received from Mar City, and the date for final payment. The interim applications were also made towards the end of the each successive calendar month.

On 30 January 2015, *Caledonian Modular* issued application for payment number 15 which followed the format of the previous applications issued. It identified the last date for a payment notice to be issued was 5 February 2015, with the final date for payment being 28 February 2015.

Mar City emailed a payless notice to *Caledonian Modular* on 5 February 2015 and on 13 February 2015, *Caledonian Modular* e-mailed Mar City, disagreeing with its valuation. Then on 19 March 2015, *Caledonian Modular* issued an invoice, to which Mar City responded with a payless notice on 26 March 2015.

The issue before the Court was whether the 13 February 2015 e-mail was a new application for payment, and if so, whether the invoice issued on 19 March 2015 was a notice of default. If this was the case, then Mar City's payless notice sent on 26 March was out of time.

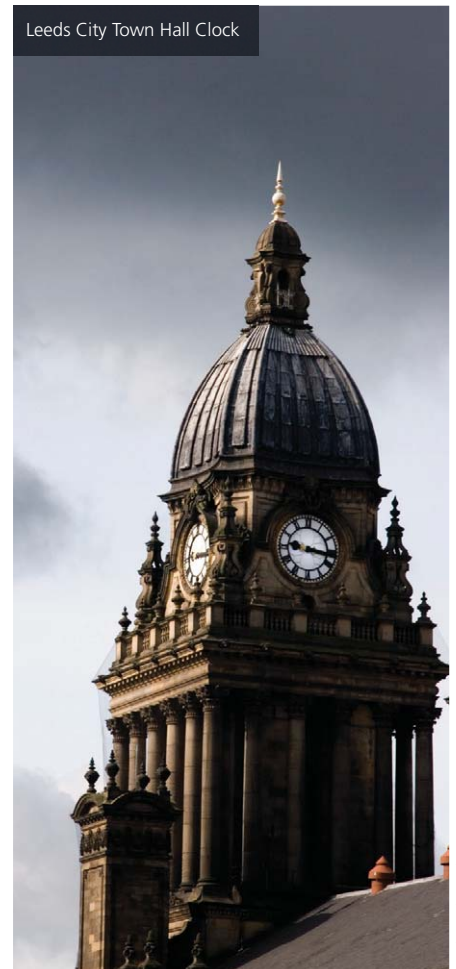
The Court decided that the 13 February 2015 e-mail was not an application for payment or a valid payee's notice for the following reasons – it did not state it was a new application for payment, the invoice of 19 March 2015 did not say that it was a default payment notice or that the original application for payment had been made on 13 February 2015, and Mar City had in fact asked *Caledonian Modular* what the 13 February 2015 documents were, to which *Caledo-*

*nian Modular* had responded that the documents were updates. The judge also pointed out that the purported application of 13 February 2015 came in the middle of the month, rather than at the end, as all previous applications had done.

What *Caledonian Modular v. Mar City Developments* [2015] shows is that if you are issuing an application for payment make clear on it that it is an application for payment so that the payment period is triggered.

There is no 'new' law in either of these cases, however they act as a useful reminder and it is clear that the Court expect contractors to set out their interim payment claims with clarity and in accordance with the payment cycle. If an application for payment is issued early, the Court is unlikely to look on it too kindly.

Leeds City Town Hall Clock



Credit: Rob Ford/Getty Images

BP



# SHOWCASE PRODUCT LITERATURE

• [editorial@buildingproducts.co.uk](mailto:editorial@buildingproducts.co.uk) • 020 8253 4605

## AIRFLOW

Drawing on the expertise of sponsor Airflow Developments, The National Training Group (NTG) has released a new Ventilation Learning Guide, which explains the importance of ventilation and best practice principles for those specialising in the kitchen, bedroom and bathroom industry. Airflow Developments has been instrumental in producing the latest Ventilation Learning Guide, which outlines why effective ventilation is paramount for protecting the longevity of homes



and ensuring occupants do not suffer from negative health effects due to poor indoor air quality. The guide also explores a variety of whole house, continuous and intermittent ventilation solutions, and explains optimum installation zones for each specific option.

• [www.kbbntg.org/product/ventilation-series-1-pdf](http://www.kbbntg.org/product/ventilation-series-1-pdf)

## SNICKERS

The new 'Next Generation' workclothes brochure from Snickers celebrates 40 years of workwear innovation and focuses on what to wear if you want to stay warm and keep cool this winter. This new 'What to Wear' brochure provides information and advice on the best working clothes for the autumn and winter months – with a particular focus on the new 'Next Generation' Work Trousers. Fabric, Functionality and Fit are the Hallmarks of this 'Next Generation' and the result of three years of meticulous R&D informed by hundreds of hours of product testing and end-user feedback.



• 0148 485 4788 • [www.snickersworkwear.co.uk](http://www.snickersworkwear.co.uk)

## CEFEP

The CEFEP, an interest group of leading manufacturers for technical insulation, has announced the launch of its new website. It offers a central forum for the technical insulation material industry and provides detailed information on current developments and specific product advantages. It describes the principal fields of application for technical foams made of flexible elastomers (FEF) and polyethylene (PEF) for technical building equipment and for application in industry. Leading European manufacturers of technical insulation materials have joined forces in CEFEP to give users of the online platform better guidance when selecting products and to represent the sector in important national and European bodies.



• +49 (0)51 41 – 88 92 65 • [info@cefep.net](mailto:info@cefep.net)

## LUCIDEON

Lucideon, the international materials consultancy, is pleased to announce the publication of the technical paper 'Energy Saving: The UK Approach to Insulating the Fabric of Existing Masonry Houses'. Written by Dr Geoff Edgell, director and principal construction consultant at Lucideon, the paper highlights the requirement to reduce energy waste from homes in the UK and discusses the methods engaged to try and increase insulation levels in existing stock, as well



as evaluating their successes and short comings. The technical paper was initially presented at the Twelfth North American Masonry Conference (12NAMC), University of Colorado, Denver, 17-20 May 2015.

• 0178 276 4428  
• [www.lucideon.com/construction](http://www.lucideon.com/construction)

## WIENERBERGER

A new limited edition specification guide has been launched by Keymer, manufacturer of handmade roof tiles, which is now part of the Wienerberger group, that showcases its history and products. The 76-page guide, which can be ordered free-of-charge is a compilation and celebration of Keymer's history,



products and installation techniques, utilising hand drawn images that call back to the company's founding in 1588. The images within the guide are the same that featured in the original brochure, which was previously launched to critical acclaim.

• [info@keymer.co.uk](mailto:info@keymer.co.uk)  
• [www.wienerberger.co.uk](http://www.wienerberger.co.uk)

## ARCO

Safety expert Arco releases its 2015/16 Big Book catalogue this September, offering one of the largest arrays of safety equipment, workwear and hygiene products in the industry. Featuring over 20,000 products spanning 972 pages, the new catalogue offers unrivalled choice for customers, from the latest products and solutions, to training packages and consultancy services to ensure people are kept safe at work. New products for 2015 include an extension to Arco's colour cut control glove range, now fully weatherproofed for use outdoors, and the coloured safety footwear range from Trojan. The safety boots



feature 100% non-metallic toecaps and are designed to be lightweight and comfortable.

• 0148 261 1611  
• [www.arco.co.uk/catrequest](http://www.arco.co.uk/catrequest)

## CEMBRIT

Cembrit has developed a Fibre Cement Slates guide to provide specifiers, craftsmen and trades people with the relevant information for the successful design and installation of pitched roofing with the ever popular fibre cement slates.



The book demonstrates how all forms of slating and fibre cement technology offers users peace of mind not available from other suppliers and highlights the wide range of slates and accessories the company offers. The 80-page document, entitled 'A Guide to Double Lap Slating with Fibre Cement Slates' provides a full explanation on technical specification, design considerations, colour availability and installation advice.

• 0208 301 8900 • [www.cembrit.co.uk](http://www.cembrit.co.uk)

## FAKRO

Fakro's updated website fulfils the latest in contemporary design and is compatible with all mobile devices. With a wealth of information on the company's extensive ranges of roof windows, loft ladders and roofing accessories intuitive navigation makes the site exceptionally user friendly. Content has been dedicated to the needs of general browsers, installers and specifiers with scope provided



to compare product features on the page with dropdown boxes to show relevant technical detail. There is also a wide selection of literature downloads, CAD and links to video channels and social media.

• 0128 355 4755  
• [www.fakro.co.uk](http://www.fakro.co.uk)

# SHOWCASE COMPANY NEWS

• editorial@buildingproducts.co.uk • 020 8253 4605

## ENCON INSULATION

Bounce Back is celebrating the launch of the first Dry Lining Training Centre to open in a London prison in a unique joint initiative with the construction industry. Supported by Knauf and Encon working with Be Onsite, Land Securities and Lend Lease the centre responds to the urgent need for trained workers in the sector and demonstrates how the industry can support in-prison training in a sponsored model which will see nearly 100 prisoners a year training to enter the workforce. The facility offers the inmates of HMP Brixton the opportunity to learn dry lining in a state of the art training space.



• [www.encon.co.uk](http://www.encon.co.uk)  
• [info@encon.co.uk](mailto:info@encon.co.uk)

## CMS WINDOW SYSTEMS

The founder and managing director of CMS Window Systems, manufacturer and installer of aluminium, PVC-u and timber hybrid windows, doors and curtain walling systems, as well as external wall insulation (EWI) installer, has been named as a Scotland Winner in the prestigious and globally renowned EY Entrepreneur of the Year 2015 Awards. Andy Kerr, who set up CMS in 2006 now goes forward to the UK final with a chance to be named UK Entrepreneur of the Year at a prestigious event in London in October. Today, the manufacturing business has a £27m turnover and employs more than 200 people.



• **0132 484 1398**  
• [www.cmswindows.com](http://www.cmswindows.com)

## NATURAL PAVING PRODUCTS

Recognising the outstanding work of its approved installers and in an effort to provide even more practical support, Natural Paving Products (UK) has employed Craig Brook, a time-served hard landscaping professional, as its installer support manager. Bringing with him more than 23 years of experience, Craig will be the main point of contact for members of Natural Paving Products' Approved Landscaping Professionals (ALP) scheme and a valuable resource of product and installation knowledge. Taking the lead in managing the scheme, Brook will be developing the way it operates.



• **0845 072 1150**  
• [www.naturalpaving.co.uk](http://www.naturalpaving.co.uk)

## DULUX DECORATOR CENTRE

Dulux Decorator Centre is announcing the launch of its newly rebranded range of accessories. The new own-brand offering will aim to provide high quality accessories at competitive prices to professional painters and decorators. With the introduction of new products and also improved specifications, notably within the brushes range, the complete set of accessories is now available



online and in-store at each of Dulux Decorator Centre's 188 stores across the UK. Including key products such as brushes, rollers, containers and poles, the new accessories range has updated, new-look packaging and is competitively priced. • [@DuluxDecCentre](https://twitter.com/DuluxDecCentre)  
• [www.duluxdecoratorcentre.co.uk](http://www.duluxdecoratorcentre.co.uk)

## FISCO TOOLS

With more and more consumers in the UK seeking out home-based British brands, Fisco Tools has now joined a growing number of British manufacturers to become a member of the 'Made In Britain' campaign. As well as the Made in Britain brand, every Fisco product is stamped with the 'Hultafor Tools' Hallmarks of quality and reliability – a guarantee of on-site effectiveness. Fisco



says it is the UK's only measuring tape manufacturer and "a leading world force in the field of measuring". The firm enjoys a reputation for high quality measuring instruments both in the UK and abroad.

• **0148 485 4788**  
• [www.hultafor.co.uk](http://www.hultafor.co.uk)

## BOND IT

Manufacturer of sealants, adhesives, tiling products, waterproofing compounds and other building chemicals, Bond It has lent its support to a builder raising funds for the Lighthouse Club. The business sponsored Will Lindsay as he



undertook a mammoth, 1,000 mile, Land's End to John O'Groats car run in aid of the building industry charity. Founded in 1956, the Lighthouse Club provides welfare assistance and support to construction industry workers and their families during times of injury or ill health. Since the charity's formation, it has delivered financial aid to the value of £11m.

• **0142 231 5300**  
• [www.bond-it.co.uk](http://www.bond-it.co.uk)

## CRENDON TIMBER ENGINEERING

With its sixth and seventh roof truss manufacturing plants recently opened in Exeter and Bridgend, Crendon Timber Engineering is expanding its activities nationwide. Following the retirement of managing director Philip Bell after 38 years' service, the Crendon board is pleased to announce its appointment of Alex McLeod as its new managing director. Alex McLeod joins Crendon Timber



Engineering with wide-ranging expertise in green building products, having been managing director of St Gobain Isover and CEO of Superglass. McLeod's experience in growing markets for cutting edge building products matches Crendon's ambition to increase significantly its engineered timber roofs and floors business.

• **0184 420 1020** • [www.crendon.co.uk](http://www.crendon.co.uk)

## SENIOR ARCHITECTURAL SYSTEMS

As part of the company's on-going commitment to meeting and exceeding the needs of its clients, Senior Architectural Systems has invested heavily in a new specification team and technical services department. Andrew Cooper has been appointed to the newly created role of national specification manager and will head up Senior's new specification division with support from a team of architectural advisors operating on a regional level. The expansion of the specification



team will provide support to architects, local authorities, specifying bodies and contractors, both regionally and nationally, and will also see Senior establish its first dedicated specification sales presence in central London. • **0170 977 2600**  
• [www.seniorarchitectural.co.uk](http://www.seniorarchitectural.co.uk)



## HOWARTH TIMBER

Howarth Timber has continued to invest in its digital presence following the appointment of a new online manager. The appointment of Rebecca Galyer to the position comes shortly after the launch of the company's brand new website. Galyer, who was instrumental in the development of the website, is now responsible for overseeing the continued development of Howarth Timber's online presence and its ability to meet the evolving needs of its customer base.



Galyer said: "The new website allows us to support our customers in a way that we've not been able to before, with the ability to manage accounts online and view live stock levels, as well as features such as Click and Go." • 0330 119 2509 • [www.howarth-timber.co.uk](http://www.howarth-timber.co.uk)

## INK TECHNICAL SERVICES

INK Technical Services was established to help housebuilders, architects and other specifiers meet standard requirements which ensure insurance companies are satisfied that a robust waterproofing system is in place. The INK team represents nearly 100 years of structural waterproofing experience and includes CSSW qualified structural waterproofing surveyors. In addition to the production



of waterproofing risk assessments, INK Technical Services offers a waterproofing design service, site inspections, reports on failed systems and proposals for remedial measures and approved contractor referrals. • 0132 231 8846

• [www.inktechnicalservices.com](http://www.inktechnicalservices.com)

## IKO

IKO Permatrack High Modulus (Permatrack H) has achieved HAPAS (Highways Authorities Product Approval Scheme) certification from the BBA for its Ironwork Reinstatement System. Rigorously tested on performance and durability, Permatrack H achieved the necessary standards required to gain HAPAS certification. Permatrack H is a polymer-modified mastic asphalt crack sealing system. It is a flexible and hard wearing solution comprised of bituminous



material, for use in repairing general cracks in the road surface, Bridge deck expansion joints and areas adjacent to ironworks such as manhole covers and rainwater gullies by reinstating the road surface around them.

• 0844 412 7224 • [www.ikogroup.co.uk](http://www.ikogroup.co.uk)

## SCHUECO UK

Facade, window and door specialist Schueco UK has gained Investors in People (IiP) Champion status just six months after achieving IiP Gold Accreditation. Schueco UK is the only company in their sector to have notched up this remarkable double in the South of England region, which marks it out as a market-leader in terms of managing people and related HR issues. During its assessment, the company recorded an overall audit score that put it in the Top 3 of IiP-recognised companies. Mike Lane, managing director at Schueco UK, said: "Qualifying for IiP Gold was a huge achievement that acknowledged the positive changes made in Schueco UK over the last few years. Becoming an IiP Champion,

however, is the icing on the cake." • 0190 828 2111

• [www.schueco.co.uk](http://www.schueco.co.uk)



## SOCIETY OF FACADE ENGINEERING

Following the success of the inaugural event in 2013 the Society of Facade Engineering has called for entries for FACADE2015, the second international competition designed to recognise, promote and reward excellence in this increasingly important element of building design and construction. Three awards will be presented: Facade of the Year 2015-New Build, Facade of the Year 2015-Refurbishment, and an additional category Outstanding Facade Innovation 2015. The winners will be presented in December 2015. All entries must be received by 2 November 2015 and those shortlisted will be notified by 21 November 2015. • [entries@sfecompetition.org](mailto:entries@sfecompetition.org)



• [www.sfecompetition.org](http://www.sfecompetition.org)

## IKO

Last year IKO contributed to an episode of the BBC's DIY SOS – and got the taste for helping! Now IKO has contributed to another episode in this year's series. The project in Dartford was the biggest build ever on an individual house, designed to provide suitable living space for Charlie, a teenager with severe disabilities.

IKO provided several rolls of its Rubershiel breather membrane for the roof of



the house. DIY SOS, with the help of dozens of local tradesmen and suppliers, rebuilt the whole of the downstairs and remodelled the rest of the house to provide a significantly better living environment so Charlie could stay at home with his family.

• 0844 412 7224 • [www.ikogroup.co.uk](http://www.ikogroup.co.uk)

## PIONEER TRADING

It's not every day that you get to see your blood, sweat and tears appear on national television, but that's precisely what happened to Pioneer Trading's head of aluminum Bruce Williams when the windows he redesigned for the country's largest village hall in Silver End, Essex were featured in an episode of Penelope Keith's Hidden Villages on Channel 4. The original windows throughout Silver End village were manufactured in steel. Compelled to maintain the aesthetics of



the village, through the strict conservation rules by which the village is maintained, Pioneer was able to recreate the original 1920s styling of the windows using a modern aluminum system purposely designed for heritage projects. • 0124 536 2236

• [www.pioneertradingcompany.co.uk](http://www.pioneertradingcompany.co.uk)

## D R SERVICES

Offering high aesthetic values and superior craftsmanship, MWE stainless steel library ladder systems are available from D R Services. The ladders provide design solutions for a variety of situations and the comprehensive range embraces movable ladders to ladders with telescopic, autostop or hook on functions.



Custom ladders can also be supplied for an individual shelf unit, library, wine cellar or retail outlet. MWE library ladders are made from stainless steel and are engineered to blend ergonomic simplicity with excellent contemporary aesthetics. With round-section or rectangular stainless steel uprights they are easily integrated into interior schemes.

• 0127 944 5277 • [www.drservices.co.uk](http://www.drservices.co.uk)

## REHAU

The huge success of Rehau's recent Passivhaus seminar, held at the SS Great Britain in Bristol, illustrated just how much interest there currently is across the construction industry in the practical application of the technology. As new members of the Passivhaus Trust and with a number of Passivhaus certified products in its portfolio, Rehau hosted the event to demonstrate its ongoing



commitment to the concept. More than 70 delegates were at the seminar from across the Midlands and South West with a healthy mix of architects, engineers and clients attending.

• 0198 976 2600

• [www.rehau.co.uk](http://www.rehau.co.uk)

## VEKA UK

Adding yet another new face to its expanding team, VEKA Recycling has appointed its third business development manager, Ian Ward. With a background in PVC-u recycling, Ian's primary role will be to develop and grow VEKA Recycling's source material business via its new Midlands Recycling Centre in Stourbridge, as well as help bolster the sales team in the UK. Working in Scotland, West



Yorkshire and both the North West and North East, his previous job was to generate local business for recycling PVC-u windows and profile from a mixture of local window manufacturers and waste recycling companies. • 0132 238 7219

• [www.veka-recycling.co.uk](http://www.veka-recycling.co.uk)

## BOSS TOWERS

The BoSS X-Series is a tough, professional and manually propelled range of micro powered access platforms that allows you to carry out a multitude of tasks. Within the range, BoSS has developed the Self-Propelled BoSS X3X-SP micro scissor lift which offers a host of leading features, such as the tilt sensor and



auto braking for safe and space efficient working. If your work requires a lower working unit then the BoSS Low Level Work Systems range is ideal. Designed for demanding, long duration jobs and where frequent access to the working area is required, the BoSS low level product range allows variable working for up to two workers to carry out a host of maintenance jobs, internally or externally, with the capability to join units together.

• [www.youngmangroup.com/brands/boss-towers](http://www.youngmangroup.com/brands/boss-towers)

## HADLEY GROUP

The MD of Europe's largest independent cold rollforming manufacturer has received recognition for his outstanding contribution to the business sector and West Midlands' economy. Stewart Towe CBE, MD of Hadley Group, was awarded



the coveted title of Ambassador of the Year at the West Midlands Business Masters Awards at Edgbaston Stadium in Birmingham. The awards run by TheBusinessDesk.com seek to recognise excellence, entrepreneurship, growth and enterprise amongst the region's businesses. The highlight of the evening is the Ambassador of the Year award, which is presented to an individual who the judges believe has done the most to promote the region over the last 12 months.

• 0121 555 1300 • [www.hadleygroup.com](http://www.hadleygroup.com)

## POLYPIPE TERRAIN

The green credentials of UK plastic piping manufacturer Polypipe have been recognised by independent built environment expert BRE for the company's commitment to sustainability. For successfully managing and reducing the environmental impact of its entire supply chain, the BRE awarded Polypipe Terrain with its BES 6001 framework standard for responsible sourcing of material. To achieve the BES6001 accreditation, the Framework Standard for Responsible Sourcing, is to demonstrate that both the company and its suppliers



are committed to producing materials that are environmentally considerate.

• 0162 279 5200

• [www.polypipe.com/terrain](http://www.polypipe.com/terrain)

## BIG WIPES

Tradespeople can now take Big Wipes wherever they go because for the first time the industrial strength wipe specialist has harnessed its 4x4 formula in new compact sachet packs of 40 wipes. Thanks to these conveniently sized sachet packs you can now keep the Big Wipes 4x4 'one wipe and it's gone' cleansing power even closer to hand than ever before. If you haven't got space to carry a tub, no worries: the sachet pack dimensions have been designed and specified to fit perfectly into the tool pouches of most leading brands of workwear, van gloveboxes and toolbags.



• [@bigwipes](http://@bigwipes) • [www.bigwipes.com](http://www.bigwipes.com)

## GE LIGHTING

With the aim of fostering innovation and developing the next generation of technology talent, GE Lighting has become the founding sponsor of a new urban regeneration initiative: the Intelligent Community Challenge. Centred around a design competition, the initiative will look to crowd source new perspectives and fresh ideas on key urban challenges by uniting local councils, communities and university students to develop intelligent and innovative LED solutions to these issues. Participating councils have submitted briefs detailing a challenge within

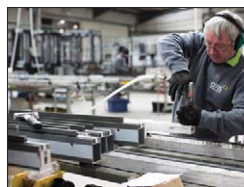


their authority that needs regeneration and student groups from across the UK are invited to develop proposals that solve these problems, using intelligent LED lighting solutions as the mechanism.

• 0800 169 8290 • [www.gelighting.com](http://www.gelighting.com)

## CMS WINDOW SYSTEMS

Leading window, door and curtain walling manufacturer and installer CMS Window Systems has boosted its aluminium division by adding one of the world's leading systems to its portfolio and obtaining CWCT membership. The company, which employs more than 200 people at its HQ and main manufacturing facility near Glasgow, has joined forces with Kawneer to become



an authorised partner in a move which gives customers access to an even greater range of fenestration and building envelope solutions. Strengthening its technical credentials further, CMS has also become a member of the renowned Centre for Window Cladding Technology (CWCT).

• 0132 484 1398 • [www.cmswindows.com](http://www.cmswindows.com)

## HULTAFORS

Professional craftsmen know the difference it makes when they're working with top quality tools. This is especially true for Clamps, which often have to be put into place quickly to hold, support or stabilise whatever you're working with.

That's precisely what Hultafors' new range of Clamps do. They are easy to use,



durable and deliver a reliable clamping force quickly and efficiently. They're made from sturdy glass-reinforced nylon and have a die-cast steel rail that enables them to withstand tough conditions and maintain a consistent clamping force over a long period of time.

• 0148 485 4788

• [www.hultafors.co.uk](http://www.hultafors.co.uk)

## REYNAERS

Reynaers has held a series of exclusive events for specifiers to cement relationships to drive business forward. Six different 'R-Cuisine' events, taking place from July until September, have been organised by Reynaers. Each event features an exquisite 10-course tasting menu and overnight stay in a luxurious hotel. Participants also get the chance to take part in the Top Gear 'Star in a reasonably priced car' track experience and battle it out against industry peers to earn a place



on the leaderboard. Paul Duffy, sales director at Reynaers, said: "We're celebrating 50 successful years this year and wanted to thank our network of architects, main contractors and consultants for their support."

• 0121 421 1999 • [www.reynaers.co.uk](http://www.reynaers.co.uk)

## HOWARTH TIMBER

Howarth Timber and Building Supplies' branches across the country are being refitted with LED lighting after the company successfully secured funding from the Department of Energy and Climate Change. Howarth Timber and Building Supplies was one of 18 successful bidders for funding from the Electricity Demand Reduction pilot scheme. LED lighting is praised for its efficiency, with



up to 90% less energy used when compared to incandescent lighting. There are 30 sites designated for refitting, with work having commenced at the beginning of 2015. A total of £600,000 is being spent on the initiative overall.

• 0330 119 2509

• [www.howarth-timber.co.uk](http://www.howarth-timber.co.uk)

## KEYSTONE GROUP

The Keystone Group is delighted to have won a top UK award for its patented IG Brick Slip Masonry Support System, receiving the 'Commercial Innovation of the Year' award at the Construction News Awards. The award was presented by TV personality Gabby Logan to IG Masonry Support Systems General Manager, Owen Coyle at the glittering awards ceremony which took place at the Grosvenor House Hotel in London on 30 June 2015 in front of over 1,300 Construction Industry professionals. The Keystone Group was particularly



pleased by the judges' response, who stated: "The winner demonstrated an exceptional innovation culture developing a product that provided a step-change in the approach to tackling a particular challenge."

• 01283 200 157 • [support@igmss.co.uk](mailto:support@igmss.co.uk)



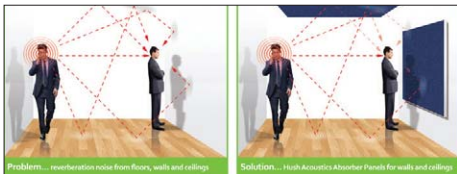
## AQUARIAN CLADDING

The new Apley House administration building at the Royal United Hospital (RUH) in Bath has scooped two awards at this year's South West Built Environment Awards, winning both the 'Innovation' and 'Value' award categories. Designed by architects SRA, the building's brick facade is clad in the Gebrik Insulating Brick Cladding System, supplied by Aquarian Cladding Systems. Bath-



based SRA's design incorporates the panel-based Gebrik system into its own Öppen building method, delivering an estimated 40% reduction in build time and 15% reduction in capital costs when compared to traditional construction methods. • 0844 334 0077 • [www.aquariancladding.co.uk](http://www.aquariancladding.co.uk)

## HUSH ACOUSTICS



Hush Acoustics has launched a consultancy service designed to offer practical, economical and friendly ways to minimise noise levels within all environ-

ments. The company says reverberation noise is especially common in a building where there are hard surfaces. Hush undertakes site visits to carry out a survey, calculate the reverberation issue and then calculate the amount of absorption needed. Guidance on the installation of acoustic solutions is also a service that Hush offers. • 0151 933 2026 • [www.hushacoustics.co.uk](http://www.hushacoustics.co.uk)

## KAWNEER

Glazing solutions from leading architectural aluminium systems supplier Kawneer have achieved Secured by Design accreditation, the official UK police flagship initiative supporting the principles of designing out crime. The renowned certification for windows and doors from the manufacturer's extensive portfolio of products is a tangible demonstration of the company's continued commit-



ment to on-going testing for safety and security. Extensive testing of the company's products to PAS 24:2012 means architects, planners, contractors and client end users can be assured that Kawneer products provide the ultimate resistance to criminal attack. • 0192 850 2500 • [www.kawneer.co.uk](http://www.kawneer.co.uk)

## NATIONAL HOME SECURITY MONTH

Having established success and gained growing support over the past few years, National Home Security Month will return again this October, highlighting the importance of home security to homeowners across the UK. Sponsored by Yale, the nationwide campaign is now in its third year and focuses around weekly themes on different aspects of home security, delivering valuable advice to consumers via a dedicated microsite, social media and marketing activities.



The campaign will kick-off in the first week of October with a series of hints and tips highlighting ways consumers can keep their homes, families and possessions safe.

• [www.homesecuritymonth.com](http://www.homesecuritymonth.com)  
• [info@homesecuritymonth.com](mailto:info@homesecuritymonth.com)

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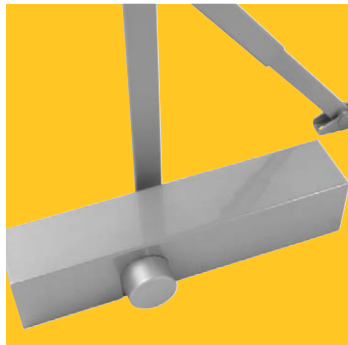
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