

building construction design

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June/July 2019

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Cover image: Aurubis
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Sustainable House benefits from Copper Rainwater System

If you are wanting a natural looking and eco-friendly rainwater system then Copper gutters and down pipes from the Yeoman Rainguard range, as chosen by the owners of a charming detached residence in North Yorkshire, are the solution.

With solar panels already in place the proprietors were keen to extend their sustainable ideas to a new rainwater system choosing a copper product for its natural attributes.

Yeoman Rainguard 125 x 70mm copper half round gutters along with 80mm dia. downpipes were expertly fitted to the

property by local contractor Robertson Building & Roofing Ltd of York.

Over time the bright finish will darken through natural oxidation to, eventually, a beautiful green patina. This attractive finish looks perfect against natural stone, timber and red brick facades.

The finish is not only pleasing to the eye but gives copper gutters and downpipes their own self-manufactured defence to corrosion, meaning a low maintenance lifecycle of over 50 years.

A copper rainwater system is also a perfect choice for those, as in this case, wanting to harvest rainwater because it is a natural biocide which prevents the build-up of algae.

"We are very happy with what Yeoman Rainguard have supplied us and look forward to the system giving us many years of maintenance free service," commented the house owner.

0113 279 5854 www.rainguard.co.uk



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Water drainage system installed at new automotive showrooms and servicing centre

Developed by CJ Automotive Group, the £9.5 million Lightcliffe automotive dealership showroom complex and servicing centre is the first in Wales to have all the Volkswagen Group car and commercial vehicle brands; Volkswagen, Audi, Skoda and Seat on one site.

Nearly 700 metres of Hauraton RECYFIX® PLUS 100 Type 010 surface water drainage channels, factory fitted with ductile

iron HEELSAFE 6mm slot grating to loading Class D400 were installed at the new VW Group dealership at The Point, Llandudno Junction, Wales.

Each RECYFIX® PLUS channel component is moulded from 100 per cent recycled polypropylene (PP) with galvanised steel pressings permanently fitted along the exposed top edges.

Channels supplied to the VW site were factory fitted with 6mm slot HEELSAFE ductile iron gratings. The gratings on both channels' and access points' being treated with a corrosion resistant coating (KTL). This treatment is absorbed by the ductile iron, allowing Hauraton to give a life time guarantee against rusting alleviating any concerns raised by consulting engineers, Rolton Group.

Main contractor, the Watkin Jones Group commenced work on this project in 2013, handing over the finished prestigious complex in May 2014. The new showrooms aim to



provide 200 new job opportunities to the Llandudno area.

Ian Burton, the Hauraton project engineer was please that ground-workers found the RECYFIX® PLUS easy to install, "With each one metre channel assembly only weighing 10.9kg one man could lift and position each unit during the installation phase".

01582 501380 technical@hauraton.co.uk

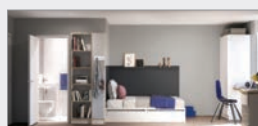
Obtaining Your Local Area Information

Information on your local area is now easy to obtain and understand thanks to a new tool by CIA Landlord Insurance. The local area statistics calculator provides up to date information on the average property prices and crime rates in your area. The information provided includes a breakdown of the values of different property types and a list of the most common criminal offences. The calculator can find information for any area of Great Britain. This allows you to search for information on your area, neighbouring areas and locations further afield, that you may be looking to relocate to. The calculator can be found on the CIA website and is free to use for all.



01788 818 670 www.cia-landlords.co.uk/local-property-stats

Delivering over 1,100 bathroom pods



Offsite Solutions, one of the UK's leading bathroom pod manufacturers, has manufactured and delivered 1,178 bathroom pods for two new student housing schemes developed by Mace. The contracts are worth over £2.6 million to Offsite Solutions. The Offsite Solutions design team worked closely with Mace to develop a standardised ensuite pod solution which can be used on multiple student schemes. This GRP composite pod which is fully fitted out in the factory, has only left and right-hand variations for maximum efficiency in manufacturing.

www.offsitesolutions.com/GRP-pods

Specialist furniture for new £212m hospital



More than 5,000 items of furniture were manufactured and installed by Deanestor, one of the UK's leading contract furniture specialists, in a £1.4m contract for the new Dumfries and Galloway Royal Infirmary. Deanestor manufactured more than 300

bespoke bedheads which were finished in a natural oak laminate and had provision for medical gases, electrics, nurse call system and lighting. Over 40 variations were installed by Deanestor's own fitting team with removable panels for easy access to services. Laboratory furniture was also manufactured as part of Deanestor's contract.

enquiries@deanestor.com

NICEIC electrical accreditation for Offsite



Offsite Solutions has become one of the first bathroom pod manufacturers in the UK to achieve NICEIC Approved Contractor accreditation for electrical installations. It now has a dedicated team of engineers inhouse who are responsible for electrical testing at its factory in Somerset. The Offsite Solutions electrical testing team demonstrated that they meet the stringent industry standards and regulations for the factory installation of electrics in bathroom pods. Its qualified supervisors have been assessed for competence in inspection and testing in accordance with BS 7671.

info@offsitesolutions.com



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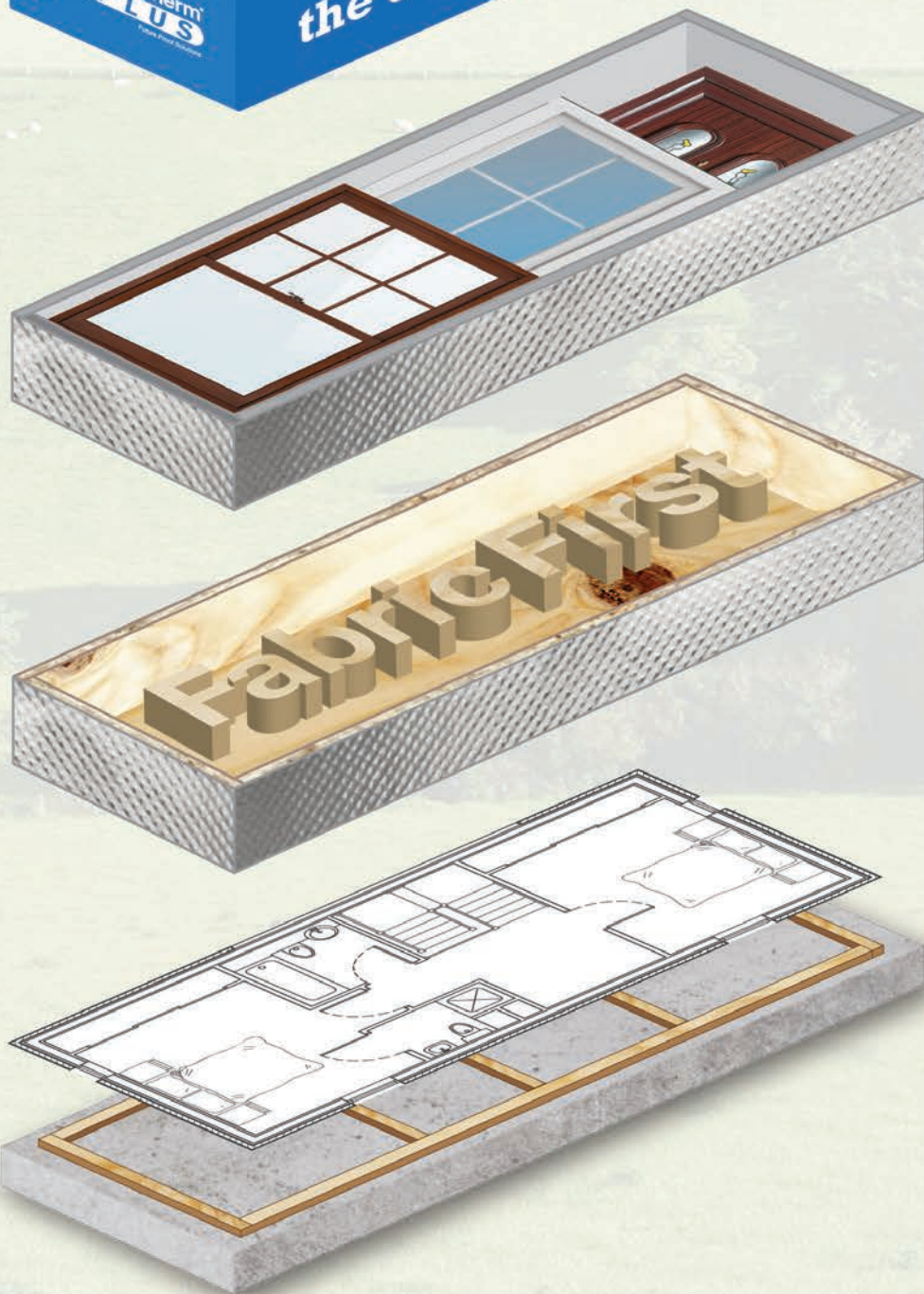
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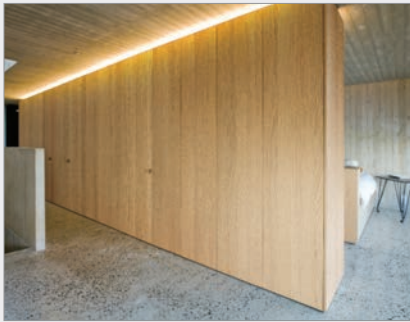




The ecological answer to interior design trends

Exclusive to James Latham in the UK, Decospan's inspiring collection of Querkus veneers offer architects and designers an ecological option of using Oak with a contemporary twist.

In a unique production process, Querkus combines both FSC® certified European white Oak and reclaimed Oak timbers, capturing and enhancing the beauty, colour, markings and structure of solid wood along with the



many advantages of a veneered panel.

Using Decospan's unique and innovative veneer matching techniques, boards are created that give designers unprecedented choice in a wood panel product. Wire brushing and patented "saw effect" scratching options impart character, texture and authenticity so that no matter how they are finished, Querkus panels look natural, adding dimension, depth and texture to any project.

Panels are supplied untreated so that a wood stain or varnish can be applied according to taste and specification. Wood oil also offers optimum protection, while retaining the veneer's natural feel and warmth.

Group Veneer Product Champion for James Latham, Dan Mahoney commented, "Querkus is a sustainably designed product that combines authentic materials with engineered stability. With four eye-catching and distinctive ranges in the collection,



including Oak Natural, Oak Vintage, Oak Smoked and Oak Retro, reaction from architects and designers has been really positive, and we are seeing more and more specifications coming through, particularly for high-end residential, retail, commercial and hospitality projects."

As well as Querkus, James Latham's exclusive collection of Decospan's added value products also includes the Shinnoki, Nørdus, and Look' likes collections. For full details, swatches and samples contact your local James Latham depot or showroom.

0116 257 3415 www.lathamtimber.co.uk

Creating new openings

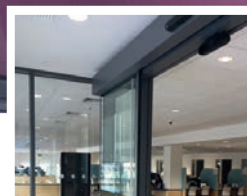
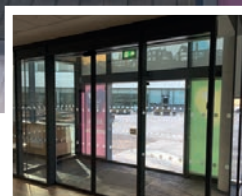
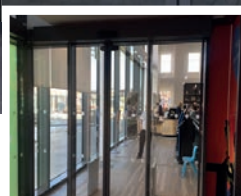
automatic door systems

record is proud to be a part of the recent redevelopment works at Tameside One, home to Tameside College's Advanced Skills Centre.

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Corridors Refreshed with Yeoman Shield Wall & Door Protection



Following in the footsteps of a string of successful installations at the Northern General Hospital, Sheffield, Yeoman Shield products were again chosen as part of the refurbishment of the hospital's Firth C & D floor corridors.

With the need to refresh the interior walls and doors, as well as future proof them from further damage and marking, a variety of products from Yeoman Shield's range were employed.

Corridor doors, which are on the frontline when it comes to impact damage, were fitted out with Yeoman Shield Door Edge Protectors and PVCu clad glazing beads, both in a graphite colour. Contrasting Mid Grey Door Protection Panels were installed to both sides of the doors with vulnerable architrave and framework also protected by Yeoman Shield products.

This comprehensive, fire rated, door protection system will extend the life cycle of expensive fire doors helping to keep them in good working order.

Yeoman Shield Guardian Handrails in the same colour scheme were fitted along the

hospital passageways. Bespoke metal brackets were manufactured by Yeoman Shield to implement the spanning of the rail over pillars through out a glazed corridor.

Beneath the handrail 2mm thick FalmouthEx Wall Protection Panels were fixed to offer low level protection. A cream colour was chosen for the panels accompanied by Mid Grey Corner Protection Angles to keep a light and airy feel to the scheme.

Pete Trenchard, who specified and project managed the scheme on behalf of Sheffield Teaching Hospitals added "When carrying out improvements and refurbishment of the corridors, in line with the STH standard colour scheme and standard fit out, I was keen to incorporate the Yeoman Shield range of products to achieve a long-term solution.

"The specification of Yeoman Shield products on corridor walls, vulnerable corners, doors, frames & architraves, protects the fabric of the corridors without detracting from the visible aesthetic appearance expected of a hospital environment.

"I worked closely with the Yeoman Shield team through the design and specification



phase, drawing on their expertise to find a cost-effective fit for purpose solution. The site survey and installation offered a start to finish package which has been contributory to the successful and well received outcome of the project".

For information on Yeoman Shield wall & door protection products suitable for refurbishment projects, please contact the company.

0113 279 5854 www.yeomanshield.com



Raising the standard

BAL are revolutionising the standard-set category with new adhesive technology; BAL Flex One. With its 'One' rapid-set technology, BAL have previously helped fixers with its rapid-setting products that provide significantly longer open and working times than all other rapid-set products but are still ready to grout in three hours. With ever larger tiles growing in popularity, complex designs required, possibly difficult or irregular backgrounds on-site and even hotter temperatures being experienced now in the summer months; the use of even improved rapid-set adhesives still may not provide enough open, working or adjustability time for a fixer. The new BAL technology is the first truly enhanced standard-set technology – developed from traditional standard-set chemistry as a basis. BAL's R&D team have developed an enhanced standard set adhesive with a long open time, excellent non-slip properties and may be grouted in as little as six hours. BAL Flex One provides a truly innovative technology that raises the standard.

01782 591100 www.bal-adhesives.com

Largest ever education furniture contract



Deanestor, one of the UK's leading furniture and fit-out specialists, has been awarded its largest ever contract in the education sector. The £3m project is for the manufacture and supply of furniture, fittings and equipment for the new £55m Inverurie Community Campus – one of the largest school construction projects in Scotland. The contract is Deanestor's third school project for principal contractors, Robertson Construction. Commenting on the project, Iain Loud, Senior Design Manager at Robertson Construction, said: "Deanestor met all our requirements for quality, cost, experience and strong financial stability."

enquiries@deanestor.com

Accommodation benefits from Optima



Profile 22 Flush Tilt & Turn Windows were chosen for a £24 million project to build new accommodation for 735 students at Sheffield Hallam University. While aluminium windows were specified for the building's street facing elevations in order to meet planning requirements, Profile 22's high performance Flush Tilt & Turn Windows in Smooth Anthracite Grey were specified for the internal courtyard. Purposely designed for medium and high rise buildings, the sash on the Flush Tilt & Turn Window is neatly positioned inside the frame of the window to create an elegant and sleek 'flush' appearance that means it is a cost-effective alternative to aluminium.

info@profile22.co.uk



Norcros Adhesives offers the best solutions for today's housebuilders

Norcros Adhesives offers a wide range of tile adhesives and surface preparation products for the fast-growing housebuilding sector. Norcros Adhesives has demonstrated that its products are able to meet the most demanding goals, which is why the company now has an exclusive arrangement with Barratt Homes – the UK's number one housebuilder – on its entire range of tile adhesives.

Norcros Pro-Gyp Base Fast Track Sealer allows fast track fixing to anhydrite screeds. This product is a system solution which enables tiling to be carried out on to anhydrite screeds at a much higher humidity level (95 per cent) than the standard requirement of 75 per cent RH, which can generally be achieved within seven days of laying the screed instead of the standard minimum requirement of 60 days for a 50mm thick screed.

As part of its one-stop shop to cover all stages of the flooring or tiling process in house construction, the full range of levellers from Norcros Adhesives includes products for different applications. Norcros Pro 30 Fast Track Eco Levelling Compound is the newest addition to the range and contains recycled crushed glass, replacing quarried sand. It is suitable for a large number of different substrates.

01782 524140 www.norcros-adhesives.com

Healing Acoustics



According to healing design principles, superior acoustics in hospitals are recognised as one of the most important factors in their design. This is being proved in an innovative temporary patient room for a major new hospital being built in Copenhagen. Bispebjerg hospital is an ultramodern psychiatric project covering 22,500sqm which includes an emergency admission unit and provides 200 rooms for patients. The study focuses on creating a stress-free environment where patients feel secure and at peace. In this room, the lighting is a combination of natural daylight and dynamic LED lighting that is specially adapted to suit the circadian rhythm. Good acoustics are ensured by light coloured Troldekt ceiling panels in a fine finish, while the walls have been clad with acoustic oak slats which provide natural ventilation with more fresh air and reduced solar gain in the summer months. Specified throughout the UK and Europe, the benefits of 100 per cent Troldekt natural wood wool panels include high sound absorption, high durability, natural breathability, low cost life cycle performance and sustainability as documented by Cradle to Cradle certification at silver level.

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Nordic Copper Inside and Out

A strong, decorative approach to copper cladding for both internal and external surfaces – combining three different Nordic Copper products from Aurubis – defines Onslow House, a prominent commercial headquarters building in the heart of Guildford.

Interior design and external alterations, designed by architects AWW, sought to add value to letting space and bring the 90,600 ft² building up to date. The updated, massive, glazed entrance atrium incorporates feature walls – including inset doors – faced with horizontal copper panels, alternating in three different surfaces: Nordic Standard bright ‘mill finish’, Nordic Brown Light and Nordic Brown pre-oxidised copper. The Nordic Brown range offers lighter or darker colour shades determined by the thickness of oxide layer.

Structural columns are similarly enwrapped with alternating finish copper bands and the copper detailing is even continued into elements of bespoke furniture. The internal copper cladding had a post-lacquer finish applied to arrest further oxidation, so

retaining the three colours and protecting the surface. This creates a reflective surface, mirroring and enhancing the lightness of the atrium space. The same horizontal copper panel composition of three surfaces continues past the external glazing to the outside. Here, the building’s entrance has been transformed with new copper-clad canopies to create a strong, easily recognised identity, with minimal work to the existing building envelope.

Externally, the copper has not received a lacquer finish, as AWW explain: “We consider copper’s natural surface development outside, reflecting the local environment, to be one of the material’s key attributes. An attractive, gradual weathering and softening of the differentiation between the three Nordic Copper surfaces on the canopies has already begun – and will continue over time – as we anticipated.” Fabrication and installation of the Nordic Copper panels was carried out by specialists CGL Facades.

In addition to Nordic Standard and Nordic Brown, extensive Nordic Green, Nordic Blue and Nordic Turquoise ranges have been



developed with properties and colours based on the same brochantite mineralogy found in natural patinas all over the world. A wide choice of Nordic Decor mechanically applied surface treatments is also available.

Nordic Copper alloys include Nordic Brass – which can also be supplied pre-weathered – and Nordic Bronze, an alloy of copper and tin initially with a similar colour to Nordic Standard, which gradually changes to a stable, dark chocolate brown. The innovative Nordic Royal, an alloy of copper with aluminium and zinc, enjoys a rich golden through-colour which remains very stable.

g.bell@aurubis.com www.nordiccopper.com

McAvoy wins place on new framework



Crown Commercial Service (CCS) has awarded four lots on its new £500m Modular Building Solutions framework to **The McAvoy Group**. McAvoy has secured the opportunity to provide bespoke modular buildings and interim hire facilities with a particular focus on education

and healthcare. Commenting on this latest framework appointment, Eugene Lynch, Chief Executive of The McAvoy Group, said: “Long-term frameworks are very important to our business and are a major source of new contracts, helping us to continue to grow sustainably. We look forward to working with CCS over the next four years.”

info@mcavoygroup.com

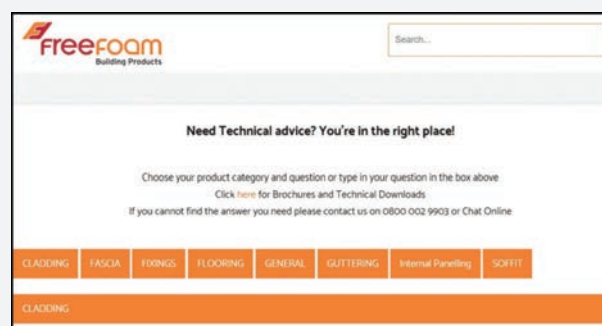
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monthly CPD Focus and fortnightly ADF Newsletter offer updates on products, services, events, and learning opportunities available from a wide variety of manufacturers and suppliers.

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Freefoam facts and fitting at your finger tips

Following customer feedback and online requests **Freefoam Building Products** are pleased to announce the launch of a brand new online feature – Technical Frequently Asked Questions. The database covers a wide range of technical questions that customers and fitters have asked and find most useful. Quick and easy to access from a pop up box on every web page the tool allows site visitors to view a wide range of topics and issues covering the full Freefoam product range. From general fitting instructions and product information, to more specific fitting tips and examples of individual fitting situations the database allows users to filter by product range or simply type in their question. Accessible from PC, mobile and tablet the tool is instantly available to customers and fitters out on the job. With the ability to add new questions and topics Freefoam are expecting the database to grow and develop over time, making it a live resource with valuable up to date information for all customers.

01604 591110 www.freefoam.com

Daylighting fit for Kings

Recent redevelopment of the food court at Kings Mall Shopping centre, on a five-acre site in London's Hammersmith area, exposed up some interesting and complex challenges.

As part of the ongoing development, the new residential apartments above the shopping centre were being adversely affected by light pollution and lack of privacy from visitors looking through the food court atrium.

To solve this problem, owners and developers Schrodgers decided to install Kalwall translucent cladding around the whole of the atrium. This screened the external courtyard above, thereby mitigating the issues around privacy, while maintaining the maximum levels of interior daylight.

Installed in a Verti-Kal pattern, the Kalwall panels complement the industrial feel of the redevelopment and its hard concrete and stone surfaces, while providing several benefits for shoppers and residents alike.

This project perfectly illustrates the advantages of Kalwall over traditional glazing. Here it offers complete line-of-sight



protection, maintaining privacy for the residents and controlling light pollution, while bathing the interior with diffused daylighting, regardless of the weather. The panels are lightweight but very durable with excellent resistance to impact and scratching. They are also vandal resistant with good protection against windborne debris.

In addition, Kalwall's insulating properties mean that U-values down to 0.28 can be achieved while daylight is driven deeper into the interior space below, thereby reducing

energy costs for both artificial lighting and temperature control.

The exterior face is colour stable and includes a UV resistant, self-cleaning surface. This means that normal rainfall helps to keep the surface free of dust and dirt while at the same time retaining the original colour during the weathering process. All this helps to reduce the costs of maintenance and cleaning.

01233 501 504

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Six reasons to specify wood windows

Tony Pell, the Chair of The Wood Window Alliance (WWA), explains the benefits of timber windows – and it's not all about aesthetics

Wood windows are undeniably better looking than their PVCu equivalents. Wood is intrinsically beautiful, embodies character and delivers design credentials for a wide range of building projects from domestic to healthcare, education and commercial. Wood windows can conjure up thoughts of traditional design, but their versatility and longevity mean that they are now specified for even the most contemporary projects as the sustainable long-term choice.

Here are six reasons why wood is good for any type of build:

Built for longevity

Modern WWA member wood windows are factory finished and highly engineered to have a long life. Overall, they are found to provide better long-term value than PVCu windows. A report by Heriot Watt University, Whole Life Analysis of Timber, Modified Timber and Aluminium-clad Timber Windows, found “an expected service life for timber windows of between 56 and 65 years; for modified timber windows between 68 and 80 years; and for aluminium-clad timber windows 71 and 83 years. These are set against a base case for PVCu of between 25 and 35 years.” The report also compared differing exposure levels and concluded that “in all exposure conditions over 60 years, PVCu window frames were shown to have the highest whole life cost.”

Wood windows are carbon negative over their lifetime

Buildings contribute to nearly a third of all carbon emissions and following the Inter-governmental Panel on Climate Change's report on limiting global warming to 1.5°C, there is increasing pressure to design zero carbon buildings. A report by Heriot Watt University, Whole Life Analysis of Timber, Modified Timber and Aluminium-clad Timber Windows, found that considering all aspects of materials production, conversion, transport, maintenance and disposal, a typical wood window made to WWA standards has a negative GWP (Global Warming Potential) over 60 years. The same study revealed that using a timber frame in place of a comparable



PVCu frame will save 160kgs of CO2e over 60 years in average conditions – that's around one and a half tonnes of CO2e in a typical house. As part of membership criteria, all WWA manufacturing members must hold either FSC® or PEFC™ chain of custody.

Wood windows require minimal maintenance

There is a misconception that wood windows require regular upkeep and are high maintenance. This may be true of the decades old, single-glazed wood windows but modern window frames made to WWA standards are given a specialist paint or stain factory-finish coating. This not only means the window frames have an attractive, even finish but they are extremely durable, and weather protected. The peeling paint is a thing of the past with microporous paint that allows the timber to breathe. WWA-approved factory-finished windows are backed with a specialist supplier-backed coating guarantee – typically 10 years for paint and seven years for stain coatings.

Wood makes people feel good

Wood is proving to be the catalyst for architecture professionals in creating spaces that promote a real connection to nature. Using timber in a build can have a calming effect, improve air quality by moderating humidity and lead to a general feeling of wellbeing. In a 2010 Australian study, children's heart beats reduced when they were taught in timber-built classrooms. Two years ago the WWA undertook independent research with 1,000 homeowners across the UK which revealed that 49 per cent of homeowners feel that



having natural materials in their homes makes them feel happier.

A quality choice

As with any building product, a key consideration has to be the quality of the manufactured product and its correct installation. Founded and managed by its members, the Wood Windows Alliance (WWA) is the benchmark for the industry, providing the reassurance of high quality, performance and sustainability standards. Using engineered softwood, quality hardwood or modified timber, all member products are provided with supplier-backed guarantees; typically 30 years for the frame and 10 years for glazing and hardware.

The design choice

Crucially, wood windows offer the potential to add character and personality across a myriad of projects. Of course, wood windows are the first choice when it comes to period properties; particularly those in conservation areas. For sympathetic replacement of original windows, WWA members can offer intricate period detailing for exact replication. However, it is in contemporary projects where wood is increasingly being used to deliver impact and longevity. With triple glazing and slim sightlines, contemporary wood windows are the sustainable, alternative choice.

To find a supplier you can trust, visit The WWA's website or find them on Twitter:

@woodwindowall
www.woodwindowalliance.com

A functional and aesthetic facade for an award-winning building



A vast regeneration project for Lincoln City Centre has resulted in a modern and effective transport hub for both visitors and residents, with a pedestrian plaza, retail space and a bus station.

The single largest element of the project is the 1,000-space six-level multi-storey car park.

The facade of the car park has been created with 3,600 m² of expanded metal and 400 m² of perforated sheets, with the Lincoln coat of arms and fleur-de-lis reproduced on to the perforated panels by means of RMIG ImagePerf technology.

The inspirational style of the building and

TECHNICAL CHARACTERISTICS

Raw material:
ALU EN 1050 H14/H24
Pattern: LTH200x76x30x3 &
RMIG ImagePerf
Thickness: 3.0 mm
Finishing operations: Bending
Surface treatment:
Powder coating (Syntha Pulvin
Anodite 547)

its architectural merits have resulted in the award for Best New Car Park at the British Parking Awards.

For further information or if you are interested in our CPD presentation 'Perforation in Architecture' contact info.uk@rmig.com.

01925 839610 www.city-emotion.com

Blue roof design considerations after BS 6229:2018 update

Nigel Blacklock, technical director at Bauder, and Chris Roddick, green and blue roof product manager for Bauder, discuss the changes in the BS 6229:2018 update that impact rooftop water management solutions.

Chris, tell us about Bauder's rooftop SuDS system, BauderBLUE

Chris: BauderBLUE is a blue roof system which attenuates heavy rainfall and controls its discharge over a 24-hour period to tackle standing water and flash flooding in built up areas.

How will the revisions in BS 6229 update impact the design considerations for a BauderBLUE roof?

Chris: The 2018 update clarifies and reinforces the meaning of a zero falls roof used in most blue roof systems. A zero falls roof is defined as having no more than a

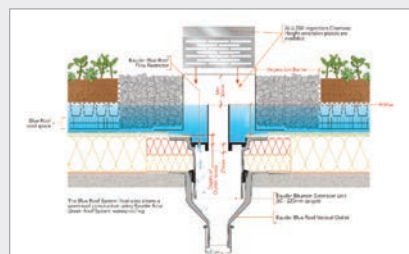
1:80 fall, but more importantly the roof must not have any back falls away from outlets. This will mean all back falls must be corrected with localised latex screed or additional outlets.

Nigel, what structural considerations are required when thinking about zero falls on a blue roof?

Nigel: A detailed structural analysis of the deck should account for construction tolerances, settlement and deflection under load with a concrete slab level survey carried out to identify any back-falls prior to the waterproofing being installed. Hence the advice "design a fall of 1 in 80 to achieve not less than zero", starting at zero inevitably will lead to back-falls.

How does the thermal performance update apply to a blue roof?

Chris: The U-value achieved in an inverted roof greatly depends upon the amount of



water that passes through the joints of the insulation and sits on the waterproofing, as this will cause rainwater cooling. This has a negative effect upon the roof insulation value.

Nigel: There is now a note that suggests that not less than 10 per cent is added to the thickness of the insulation to take account of rainwater cooling. However, water on an inverted blue roof might sit on the waterproofing for longer and with a greater depth, BS6229:2018 states no correction factor should be used which will lead to much thicker insulation than is currently used.

BauderBLUE is supplied as part of a full Bauder roofing system and therefore has a single point warranty.

0845 271 8800 www.bauder.co.uk



The future is permeable

New legal requirements for Sustainable Drainage Systems (SuDS) on developments across Wales apply from January, heralding wider use of concrete block permeable paving. Meanwhile, the trade association Interpave has published the new Edition 7 of its definitive guidance to this essential SuDS technique – ‘Design and Construction of Concrete Block Permeable Pavements’ – now available to download from www.paving.org.uk.

The Welsh Government has now implemented Schedule 3 of the 2010 Flood and Water Management Act. This includes the establishment of a SuDS Approving Body (SAB) within each local/unitary authority, alongside its lead local flood authority duty. SAB approval will be required before construction of drainage systems can commence on new and redeveloped sites.

The Welsh National Standards point out that: “The SuDS approach mimics natural drainage, managing surface runoff at or close



to the surface and as close to its source as practicable, controlling the flow... and providing a range of additional benefits.” By its very nature, concrete block permeable paving is uniquely placed to meet these requirements, as an attractive, surface-based, multifunctional SuDS technique.

Interpave’s new ‘Design and Construction of Concrete Block Permeable Pavements’ guidance covers the most recent permeable paving techniques, such as overlays to existing

road constructions and enhanced, predictable water storage using flow controls. It can be downloaded from Interpave’s new website www.paving.org.uk – an essential resource covering all aspects of design with precast concrete paving, including an inspirational project gallery and case studies, supported by background information for all design stages, as well as for CPD.

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Schöck Isokorb for largest UK Passivhaus development

Claimed to be the UK’s largest Passivhaus development to date and Camden Council’s largest community project, Agar Grove Estate is undergoing a major regeneration, due for completion in 2025. It will deliver 493 high-quality homes for existing residents, with ground floor maisonettes and apartments above with full width balconies.

As the project is to Passivhaus standard, the high levels of insulation mean exceptional levels of airtightness; and a critical requirement is the avoidance of thermal bridging. A frequent cause of increased heat and energy loss, condensation and likely mould growth.

The risk of thermal bridging is at connectivity points involving the balconies and parapets. And one of the most effective countermeasures is the Isokorb range of structural thermal breaks from Schöck. The Isokorb type used for the balconies has been awarded the “low thermal bridge construction” certificate by the Passivhaus



Institute in Darmstadt and transfers both negative moments and positive shear forces.

The conventional insulation method for parapets is to wrap the perimeter of the wall with an insulation barrier. However the Schöck Isokorb designed for parapets avoids the need for wrapping. It is more cost-effective than conventional wrapping and

its 120mm insulation dramatically reduces heat loss.. Also there is no risk of any additional thermal bridging through balustrade fixings, it requires no maintenance and no expensive restoration due to waterproofing problems.

In addition to the Isokorb types used at Agar Grove, the comprehensive Schöck range also offers solutions for concrete-to-steel and steel-to-steel situations. When any Isokorb product type is incorporated into residential buildings, the required fRsi value is always comfortably met. Products meet full compliance with the relevant UK building regulations, have NHBC approval and offer LABC Registration. There is also the security of independent BBA Certification.

Contact Schöck or visit the website for a free copy of the Schöck Thermal Bridging Guide; the Schöck Specifiers Guide and to view the full range of downloadable software.

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Kemperol 2K-PUR stands the test of time

A liquid roofing and waterproofing system, which was the first of its kind to be launched in the UK, has turned 20.

KEMPEROL 2K-PUR, which is manufactured by Kemper System, has retained its unique market position over the last two decades. It remains the only cold liquid-applied wet-on-wet waterproofing product in the UK which is sustainably sourced, solvent-free and completely odourless.

Manufactured using an 80 per cent castor-oil formula derived from sustainable sources, the liquid system bonds directly to the substrate forming a seamless, elastomeric waterproof membrane that cannot delaminate and is UV stable.

Stuart Hicks from Kemper System said: “The 20th anniversary of Kemperol 2K-PUR

is a major milestone and demonstrates our forward thinking commitment to innovation, quality and sustainability.

“The system has stood the test of time with a proven 20-year track record and continues to be one of the most popular and sought-after systems for all sorts of projects. Its unique qualities make it ideal for waterproofing buildings where environmental considerations are a priority or for occupied properties when the work has to be carried out without disruption from strong odours.”

Kemperol 2K-PUR is applied using a reinforcement fleece, which has recently been upgraded by Kemper System. The new fleece is perforated as part of the production process rather than needle punched post manufacture. This makes it stronger and

greatly reduces the formation of air bubbles under the fleece allowing the resin to saturate the fleece more quickly and improving the speed of application.

“As the liquid waterproofing industry continues to grow, it is vital that we keep innovating and providing the highest quality products to meet our customers’ demands,” continued Stuart. “The launch of the new time-saving fleece keeps Kemperol 2K-PUR ahead of the game and is another major benefit for roofing contractors. Its design enables them to apply the liquid resin very quickly and easily, helping them to work even more efficiently.”

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Building for the Future with H+H

H+H Celcon Foundation Blocks are being used in a major development in the North West. Jones Homes, a local regional housebuilder, is transforming a site once home to a local college in Horwich, Bolton. Forty homes are currently being constructed by main groundworks contractor Matthews & Leigh Civil Engineering in Phase One of the development which is expected to comprise of 139 two, three and four-bedroom homes aimed at families and first-time buyers once complete.

Developer Jones Homes often work with Matthews & Leigh so allow them to make the decision on which supplier to use and the new development at Rivington Grange is no exception.

H+H Foundation Blocks were of particular benefit for the site at Rivington Grange as Jones Homes design each of their homes with a 150mm cavity, which requires a durable foundation block that is up to the job. Matthews & Leigh chose to specify H+H Celcon Foundation Blocks (340 x 215 mm) in 3.6N strength for the two storey homes and 7.2N strength for the three storey homes.

Aircrete is growing in popularity as a masonry material however the perception remains that aircrete blocks cannot be used below DPC level, which means that dense aggregate blocks are



needlessly specified, adding to the overall costs of the project. H+H Celcon Foundation Blocks are fully load-bearing and capable of supporting buildings up to three storeys tall.

There are many advantages for house-builders, not least their ease of use. Requiring only a single leaf of blocks, a solid aircrete block can be laid onto a strip of poured concrete to match the thickness of the wall. This method also requires no mortar at the perpendicular joints; instead they can be butted against each other.

There are also significant cost benefits to be gained from making the switch to aircrete. A

recent study by independent consultancy firm Calfordseaden found that specifying aircrete for foundations alone could reduce total build costs by almost 25 per cent. This is achieved through aircrete's naturally quicker build speed which leads to reduced labour costs and the solid construction means that fewer materials are needed.

Additional benefits of using BBA certified H+H Celcon Foundation Blocks include improved thermal performance which exceeds current UK Building Regulations, superior resistance to sulfate attack and protection from fire and frost.

H+H prides itself on the levels of customer service it offers, regardless of the size of the order. Alan was frank about the reasons why he continues to use H+H: "If we weren't satisfied with the level of customer service, we wouldn't use them. We've been with H+H for over three years now and the relationship just gets better each year.

Matthews & Leigh have been on site since February 2018, laying the foundations for the new properties. There has already been keen interest from prospective buyers with nearly 90 per cent of plots in Phase One already reserved.

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Look at the roof to achieve cost effective decent homes compliance

Latest statistics reveal that at least 20 per cent of homes (4.5 million) are still below Decent Homes standards.

In the drive to improve the insulation and energy efficiency, contractors working on behalf of social housing providers have to balance Building Regulations compliance with budgetary constraints.

Roof ventilation solutions from Hambleside Danelaw are proven in practice to provide a cost-effective solution towards achieving appropriate upgrading of homes, delivering compliance with Approved Document C2 and

British Standards such as BS 5534:2014+A1:2015 Slating and tiling for pitched roofs and vertical cladding – Code of Practice.

Equally suitable for new build, the range can be installed quickly and efficiently across the roof- be it underneath the roof covering via a vapour permeable low resistance underlay, or as an integral part of the roof covering at eaves, ridge, valleys and inbetween. The products can be used in refurbishment and upgrade projects, minimising disruption for the occupants.

Hambleside Danelaw has purpose-designed its products to be as simple as possible to fix, whether mortared or dry fix.

Graham Roofing is just one contractor for whom Hambleside Danelaw has become a preferred choice, after first using for a Dundee Council housing refurbishment project. That first contract featured the use of 400 HD TV15/1 tile vents. Project manager Alistair Tirns observed, "We are very pleased with the ease of use of the product."

Norfolk-based Breckland Roofing reinforced the ease of use, following inclusion of Danelaw Dry Fix Valley Troughs, Universal Dry Fix Ridge and Hip System and Interlocking Dry Verge on a new build housing association project. Site Contracts Manager David said, "We can give Danelaw products to the roof tilers and know



they will fit without problems."

Hambleside Danelaw is one of the UK's leading manufacturers of roofing ventilation solutions. Its in-house R&D and manufacturing capability gives the flexibility and speed to react to the continual design, technical, Regulatory and environmental changes within the building industry. Thus it continually brings to market products that are fully compliant, efficient to install, and meet performance criteria and expectations.

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Cover image: Aurubis
See page 09 for details