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The trade magazine for UK roofing, cladding and insulation professionals

TODAY

Issue 108 September - October 2023



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CONTACT ROOFING TODAY

EDITORIAL

Editor

Dr Claire Griffiths

editor@roofingtoday.co.uk

Editorial Assistant

Emma Hardman

digitaldesk@roofingtoday.co.uk

ADVERTISING

Senior Media Accounts Executive

Brenda McNally

brenda@roofingtoday.co.uk

Media Accounts Consultant

Paul Fitzgerald

paul@roofingtoday.co.uk

ADMINISTRATION

Administrator

Jemma Daly

administration@roofingtoday.co.uk

CIRCULATION

Circulation Manager

Helen Threlfall

circulation@roofingtoday.co.uk

Roofing Today Magazine is published by
Construction Media Publishing Ltd



78 Mount Pleasant
Liverpool L3 5SL
Tel. 0151 708 0070

enquiries@roofingtoday.co.uk

www.roofingtoday.co.uk



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Dr Claire Griffiths, Editor



We start this edition with a fascinating insight into Tony Lawther's approach, as new BriggsAmasco MD, to doing business and managing its risks. Alongside this is a picture-led report on BriggsAmasco's impressive work on the spectacular new Everton Stadium being built on Liverpool's waterfront.

As experts in their field, our industry roofing training groups are an invaluable asset, and we have a comprehensive assessment of the current state of UK skills and training from Chair of the National Roof Training Group, Denise Cherry.

Also, later in this edition, Roofing Today visited Greenlight Training's centre in Bristol discussing what makes for a successful roofing apprenticeship experience.

Continuing our focus on solar roofing we have a

thought-provoking perspective from Bailey (MK)'s Charlie Bitowt, who argues there may be technological advantages to the rail systems often unconsidered in the rush towards new in-line solar roofs.

In our contractor interview, we visited RTC Roofing who are completing a listed slate barn roof, learning about how they re-roofed this heritage project.

Following the Building Regulations update and clarification of guidance for the fire safety of balcony constructions, Marley Alutec's Tim Streeton outlines their impact on the selection of drainage products.

Regular contributor, Steve Dickinson of London Flat Roofing explains how AVCLs should be installed on cold and warm roofs to achieve an airtight construction and avoid condensation. And later on in the magazine, Proctor's Iain

Fairnington asks if the future is warm roofs.

Anthony Hogan from the SPRA provides important clarity on Building Regulations, interpreting guidance in the approved documents specifically for compartmentation to prevent the spread of fire.

Shail Chauhan explains how CCM is tackling both the cause and effects of the climate emergency with the development of a new roof covering product, which also enables other green elements to be incorporated in the roof construction.

Lastly, we raise a cheer to all who participated in this year's LRWA Charity Team Challenge, which raised a fabulous £9,000 for the LandAid youth homelessness charity. We have the snaps - from Japan to a garden in the 'burbs - showing all the hard work that went into this impressive fundraising effort. III



Featured Front Cover

The beautiful natural slate project on this edition's front cover is the stunning Higoaks Project in north London. CUPA PIZARRAS' CUPA 12 natural slate was specified for the roof of the new family home, built in the garden of a historic Grade II listed Arts and Crafts property.

CUPA 12 slate provided the perfect balance: being a natural and historically appropriate material that could also provide a clean aesthetic with a smooth, uniform finish. This - combined with the steep pitch of the roof, overhanging eaves and series of intersecting gables - helped to make the roof of the property a defining feature.

CORRECTION: In July's 2023 Roofing Today Top 40 we erroneously printed Hodgson Sayers pre-tax profit as -£7,281 and the year-on-year change as being -171%.

In fact, Hodgson Sayer made a pre-tax profit of £673,081, which was a year-on-year change of 163%. We offer our sincere apologies to Hodgson Sayers for the error, which has now been corrected in the digital edition.

Every effort has been made by the publisher to ensure the accuracy of the contents of this magazine. However, under no circumstances does the publisher accept liability for any loss or damage which may arise or result from errors or omissions in any advertisement or editorial, its content or position.

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buildings by October



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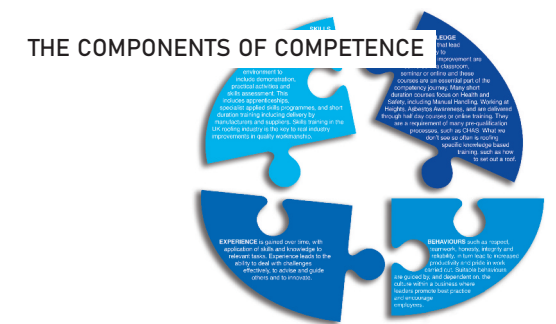
All buildings that are at least 7 floors high, or 18 metres tall or higher and contain two or more residential units must be registered with the Building Safety Regulator by **1 October 2023**.

Register now

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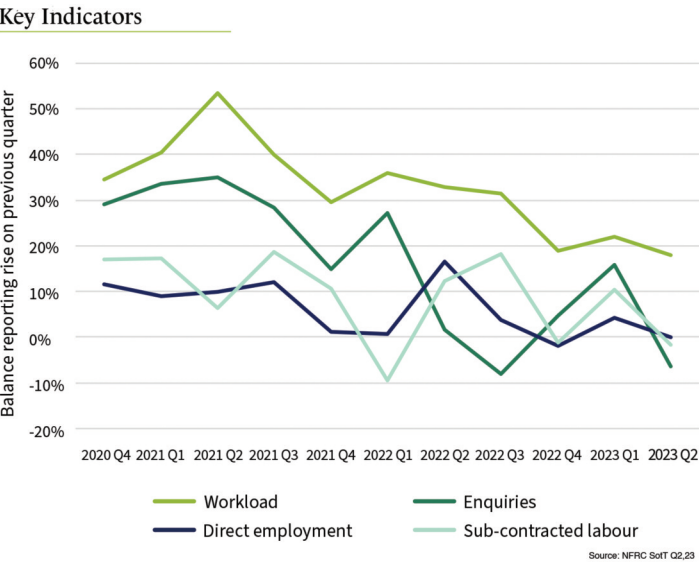
Workforce Growth Plateaus Amid Continuing Recruitment Difficulties

Direct employment levels plateaued in the second quarter (Q2) of 2023 among roofing contractors, with use of subcontracted labour only rising very slightly.

The latest State of the Roofing Industry survey report, from NFRC and Glenigan, shows that as many firms reported an increase in their employee numbers, as reported a fall.

Use of subcontracted labour also changed very little with some increase in staffing, in the public non-residential RM&I sector, whilst the opposite was seen in the commercial and public non-residential new build sectors.

Just under half of firms (46%) reported increased difficulty in finding workers with the necessary skills. Roof slaters and tilers were in shortest supply followed by built-up felt roofers. Meanwhile, firms' labour costs continued to increase, suggesting they are increasing pay to retain staff and subcontractors.



Pipeline

Concerns in some sectors about near-term pipelines of work reflected a slight fall in enquiry rates for UK roofing contractors. In Q2,23 22% reported increased enquiries, against 29% seeing a decline.

However, workloads continued to grow: 38% of firms reported an increase versus 20% with a decline. Enquiry levels varied by sector, with residential new build work notably seeing a decline. Commercial RMI stood out as the strongest sector pipeline.

On costs, material price inflation persisted and late payments affected 67% of roofing contractors receiving pay over 30 days. Firms also reported being subject to cash retentions, affecting 76% of firms, rising to 90% of companies doing new residential work. More firms expect their workloads to fall over the next 12 months than expect an increase.

James Talman, NFRC CEO, said: "The survey reflects current uncertainties around pipelines of work in specific sectors, and the number of opportunities that do materialise will reflect government priorities in the coming months."

"We will continue to advocate for the needs of roofing and cladding contractors to government, and welcome members' input on our advocacy priorities."

The full report is now available from the NFRC website: <https://www.nfrc.co.uk/>.

Rise in New Roofing Businesses

The number of businesses registered as offering 'roofing activities' increased in 2022 by more than 70% compared with the previous year.

A total of 2,300 businesses in the roofing industry were launched last year, according to Companies House data. This compares to just 1,341 businesses launched in 2021, equating to a 72% rise year-on-year analysis by Easy Offices finds.

The figures show how the roofing contractor sector has grown over time in terms of newly formed companies. In 2019, and pre-pandemic, the number of companies launched was just 678, less than a third of those opening this year.

Also notable is the increase in 18-25 year-olds and those aged 50 and over who are starting their own businesses in the industry.

The figures show how both groups were at the helm of a

significant portion of the new companies started last year - a trend which can be seen over time, back to 2019.

In terms of year-on-year changes, older business directors (aged 50+) launched just 91 businesses in the sector in 2021, but a year later in 2022, this rose to 406 - a rise of 346%.

Meanwhile, the number of young entrepreneurs in the sector rose by 328% from 2021 to 2022 - up from 52 to 223.



Year	New companies* registered to 18-25 year olds	Total number of companies launched	% of companies started by 18-25 year olds
2022	223	2,300	10%
2021	52	1,341	4%
2020	17	880	2%
2019	16	678	2%

Year	New companies* registered to 50+ year olds	Total number of companies* launched	% of companies started by 50+ year olds
2022	406	2,300	18%
2021	91	1,341	7%
2020	97	880	11%
2019	106	678	16%

* Refers to companies registered as providing 'roofing activities'.



2023 UK Roofing Awards
Roof of the Year winner
Stuart Wheeler Roofing Ltd

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BMI Apprentice of the Year 2023 Winners



The winners of the BMI Apprentice of the Year 2023 competition are - in the pitched roofing category Euan Forsyth, an apprentice at Mithril Roofing and training at Fife College.

In the flat roofing category the winner is Charlie Plant, an apprentice at Sussex Asphalte Ltd who trains at Simian.

Reflecting the high standard, two other apprentices were Highly Commended. Flat roofing apprentice, Joseph Potts of Complete Roofing Systems, and pitched roofing apprentice, Christopher Burns of JLC Roofing.

Flat Roofing Finalists

- Jack Bailey, Absolute Roofing Solutions, Juniper Training
- Christopher Fenwick, M&C Roofing Contractors, Optimum Skills
- Lewis Hubbe, Complete Roofing Systems, Simian
- Billy McDougall, S G & Sons Roofing, CITB Inchinnan
- James McGhee, M&C Roofing Contractors, Optimum Skills
- Ben Oliver, Taylor Roofing, CITB Inchinnan
- Charlie Plant, Sussex Asphalte, Simian
- Joseph Potts, Complete Roofing Systems, Simian
- Joseph Pullen, D Richards Roofing & Home Improvements, Juniper Training
- Declan Westwood, D Richard Roofing & Home Improvements, Juniper Training

Elevate Appoints New Specification Managers

Elevate (formerly Firestone Building Products) has bolstered its UK team with two new appointments.

Jonathan Keyes and Anthony Dyer have been appointed as specification managers. They will be responsible for advising architects and other specifiers on Elevate's EPDM roofing systems

for the commercial market, including RubberGard EPDM. Jonathan brings 15 years' experience of flat and pitched roofing to the team. He said: "There is huge potential to grow the Elevate brand in the commercial market. I'm looking forward to working with architects as well as end-users to inform them of our proven



over just two days, which shows just how bright their futures are in our industry."

As well as winning BMI Apprentice of the Year, the winners received a £1,000 cash prize and three years of training support from the BMI Academy.

Charlie Plant, BMI Icopal Apprentice of the Year in Flat Roofing, said: "It's a great feeling to have won and be able to say that I'm Apprentice of the Year, especially when there were so many great apprentices taking part this year. It has been a great opportunity and I couldn't recommend it more highly."

Pitched Roofing Finalists

- Andrew Addison, Historic England, Leeds College
- Stevie Armstrong-Brown, Brosnan Roofing, Newcastle College
- Christopher Burns, JLC Roofing, Simian
- Kyle Burns, DMG Services, South Lanarkshire College
- Marc Cutler, DMG Services, South Lanarkshire College
- Euan Forsyth, Mithril Roofing, Fife College
- Hayden Gordon, Fife Council Building Services, Fife College
- Lewis Round, Stormforce Roofing, South Devon College
- Brogan Rourke, A Rourke Roofing, Dundee & Angus College
- Morgan Wood, Purple Roofing, Leeds College



Jonathan Keyes

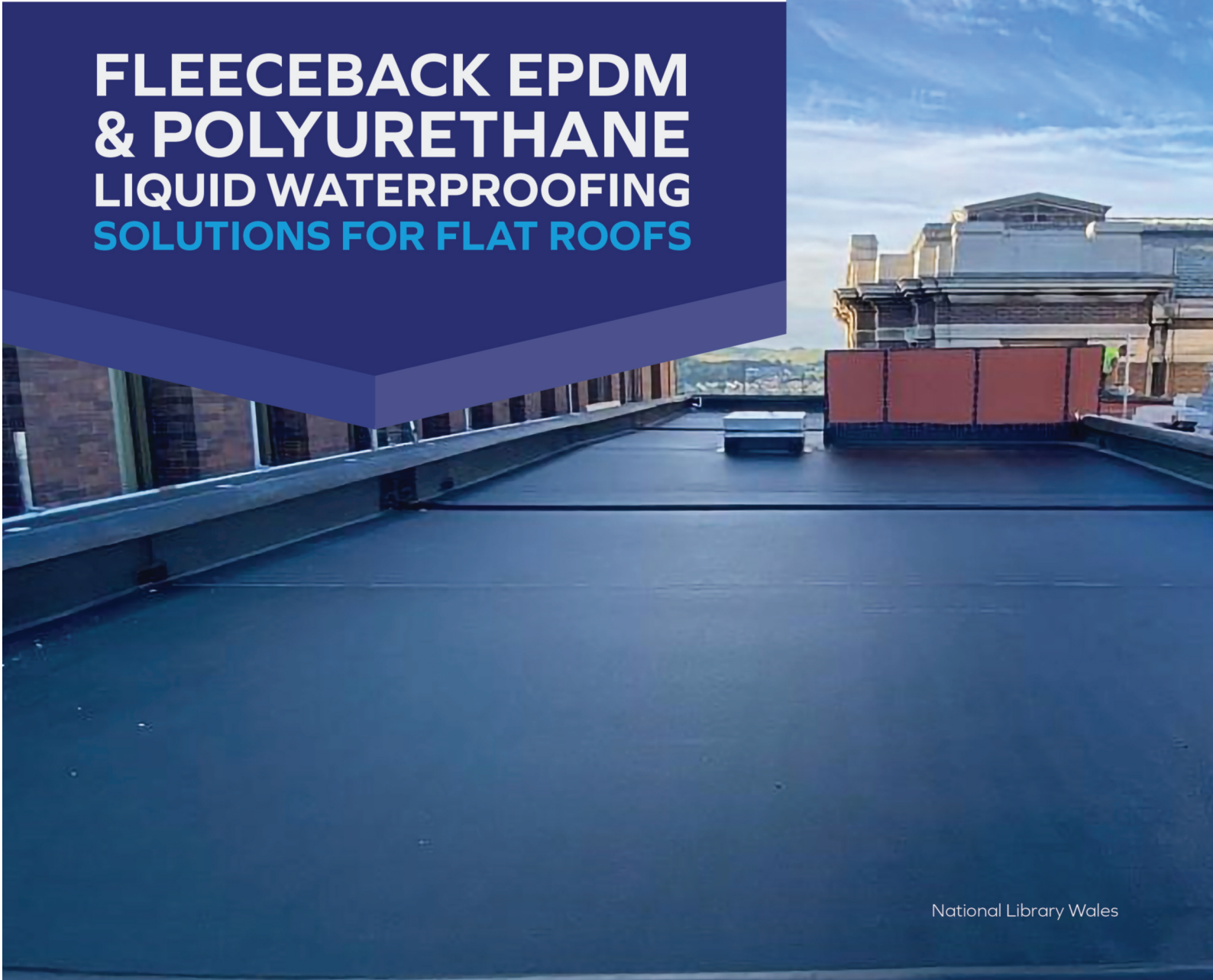


Anthony Dyer

Also with more than 15 years' experience of the construction industry, Anthony has forged a career in specification and sales for a range of building products, including facades, insulation and sheathing boards. He said: "This role is a fantastic opportunity to be part of large, global organisation with a leading reputation in roofing."



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Mark Harris Receives Institute of Roofing Fellowship



The Institute of Roofing (IoR) has awarded Mark Harris a fellowship in recognition of his outstanding contribution to the industry.

Mark has been working in roofing for 36 years and is Head of Technical and Operations for Radmat Building Products, a position he has held since 2012. He began his career in sales support for IMI Broderick Structures single-ply flat roofing division and has since honed his skills in various roles, gaining extensive technical, training and marketing expertise.

In 1997, Mark joined Sarnafil as Product Manager and after the business was acquired by Sika, became Head of Marketing for its roofing divisions in 2006. In 2010, he moved to Blackdown Greenroofs, a specialist green roofing company, as a director of the business.

Throughout his career, Mark has played an active role in trade associations and industry bodies. He joined the IoR in 1998 and in the same year, was appointed chair of the Single Ply Roofing Association's (SPRA) technical committee, becoming SPRA council chair for 5 years.

In 2008, he co-founded the Green Roof Organisation and is the board's Secretary and Technical Committee Chair. Mark also Chairs the Joint Flat Roof Technical Committee at the National Federation of Roofing Contractors and is on the board of the Liquid Roofing and Waterproofing Association.

Applying his extensive knowledge and expertise, Mark has contributed to a vast range of industry documents, providing best practice advice and specialist technical guidance. He is actively involved with the European Committee for Standardisation (CEN), and the British Standards Institute, representing the roofing industry.

Mark said: "I am really pleased to have been recognised for my contribution to the industry and my commitment to making a difference. I got involved in trade associations as I recognised the opportunity to glean knowledge from experienced people in the industry. In more recent years, my involvement has given me the chance to give something back by passing on my expertise and helping others."

"As an industry, there is still more to be done in terms of raising standards and demonstrating competency, but we are gaining traction now with engagement from a much wider audience who want to make positive changes. I am proud to have been a part of that and to have helped shape and improve industry standards and guidance."

Kay Rose, CEO of the IoR, added: "Mark is renowned as one of the most experienced and knowledgeable professionals in the roofing industry. For more than three decades, he has worked with others to raise standards and share his expertise, going above and beyond in every role he has held."

Roofer Reaches Semi-final of Screwfix Top Tradesperson Award

Jamie Taylor, a roofer from Bathgate in West Lothian, Scotland has reached the semi-finals of Screwfix Top Tradesperson 2023.

Jamie, 33, who owns Taylor Roofs has been working in the trade for 17 years. His application highlighted Jamie's professionalism, dedication, and commitment to supporting the future of the industry, securing him a place in the semi-finals for the coveted award.

Jamie has grown Taylor Roofs into a multi-million turnover business specialising in roofing as well as solar PV and battery installations. With 35 employees, Jamie is committed to giving opportunities to the next generation of roofers. He is well-known in the UK roofing industry, sharing advice and tips through his podcast Taylor Talks Trades.

He will now compete against 26 other top tradespeople selected from over 1,000 entrants for the chance to be shortlisted as a top 10 finalist.



The top 10 will participate in a one-day final event at Screwfix LIVE, on 22 September, where a panel of industry experts will interview them before deciding this year's champion.

The winner will be crowned Screwfix Top Tradesperson 2023, and take home a trade bundle of tools, tech, and training worth £20,000.

Jamie said: "I'm thrilled to get through to the semi-finals of Screwfix Top Tradesperson 2023, particularly knowing how many incredible tradespeople I would have been up against. Reaching the national final in September and winning the award would be great recognition for me and my business."

"I hope to impress the judges by demonstrating how I have built a well-established business that is committed to building a great team who strive for 100% customer satisfaction, reducing its carbon footprint, supporting apprentices, and giving back to the community."

Roofing Tool Maker Funding Boost

Specialist roofing tools manufacturer, CMS Tools, has received a six figure funding investment to reinforce its margins and market position.

The funding from FW Capital is provided as part of the Northern Powerhouse Investment Fund. It will support plans to invest in

infrastructure, create new jobs and the bulk buying of products to improve CMS Tools' margins, market position and increase profitability.

Headquartered in Normanton, West Yorks. CMS Tools started in 1981 and has a £3m turnover.

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Welsh Roof Training Group Welcomes New Cardiff Home with Roofbase

The Wales National Roof Training Group (WNRTG) is moving home to the Roofbase Training Academy in Cardiff from its former training centre in Caerphilly.

The WNRTG Group Training Officer, Lesley Hughes, is starting a new position with independent roofing merchant Roofbase as its Training Manager.

Combining Roles

Lesley will combine her WNRTG role with the new Roofbase position. She will be based at Roofbase's Cardiff branch, where the Roofbase Training Academy will double up as the new home for WNRTG.

Steve Lloyd, Managing Director of Roofbase, said: "Lesley's experience and knowledge of roofing industry training will help us to further improve and increase the training that we provide."



The Roofbase Training Academy already offers roofers training in lead, liquid-applied roofing, solar, EPDM roofing and rooflight installation.

CITB Funding Pulled

The training group move follows a CITB decision in March 2023 to pull funding from Specialist Applied-Skills Programme (SAP) roofing apprenticeship training in South Wales after 14 years. Lesley

warned at the time that losing the funding would threaten closure for WNRTG's Caerphilly training centre.

Despite CITB assurances that alternative roofing apprenticeships would be offered for South Wales' roofing contractors, the Welsh government website, Careers Wales, shows no roofing apprenticeship courses are available in the region. The

nearest roofing apprenticeship training is offered in Wrexham or in England.

Collaborative Approach

Speaking to WNRTG members about the move, Lesley said: "The current service you receive from myself via WNRTG will not change and I will still continue this independent role while all the roofing training is moving to Cardiff from Caerphilly.

"I will be adding to my current role as the Roofbase Training Manager and this will enable a collaborative approach to roofing training in South Wales that will benefit all."

Lesley's new role starts at the beginning of September. There will be a launch event at Roofbase Cardiff in early October to officially welcome her and WNRTG.

Lesley can be contacted at lesley.hughes@wnrtg.co.uk.

SAVE THE DATE

The North West Roof Training Group (NWRWG) has something special coming up for members: the keynote speaker for its next meeting in Haydock on 8 November is Sam Bawden, specialist construction law solicitor at Holmes & Hills. He works with developers and employers, main contractors and subcontractors nationwide. He also works alongside project managers, architects, construction consultants, contracts managers and dispute resolution service providers, in servicing and advising mutual clients.



With significant experience of adjudication (including in the Technology and Construction Court), arbitration, and litigation in all tracks, he advises clients on contracts and terms of employment, as well as engagement with a contractor or subcontractor.

Sam and his team will identify areas where attendees may be at a contractual stumbling block and provide the audience with top tips on taking back the advantage while focussing on dispute avoidance and how to resolve disputes if they arise. There'll be a question and answer session following the presentation.

Places are limited, so for more detail and to book, contact NWRWG at nwrooftraining@gmail.com.

CSCS Card Renewal

As 2024 approaches, we expect a rush for those looking to renew their blue CSCS cards, as the criteria now means that an NVQ Level 2 is required. We can tap into funding for those who have a minimum of two years' experience, who live in Greater Manchester, and have no other L2 qualification.

Find out more by emailing nwrooftraining@gmail.com.

South West Roofing Training Group Delivering Roofing Training Again!

The South West Roofing Training Group (SWRTG), has played its part in helping to tackle the skills shortage by providing specialist roofing training via the CITB for over 25 years. However, changes in CITB funding meant they looked for alternative funding for their roofing training. SWRTG has now secured a place on the Register of Apprenticeship Providers to deliver the government-funded Level 2 Apprenticeship in Roof Slating and Tiling.

SWRTG's first course starts in September 2023 from the group's dedicated roofing training centre in Exeter. They also have a centre in Melksham, Wiltshire where they plan to deliver the

apprenticeship training from January 2024.

The roofing apprenticeship is for those who want a qualification in roofing while gaining work experience with an employer. The fully funded training consists of 3 days training per month over a period of 16 months with an additional 3-month period for the End Point Assessment. The training will culminate in the learner achieving their Level 2.

If you think you have the perfect candidate or you are in the position to take on an apprentice, then please get in touch.

Visit www.swrtg.co.uk

There are additional grants available for CITB members.



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Roofing & Construction Products

Managing the Risk: Industry Interview with Tony Lawther, New MD of BriggsAmasco

Earlier this year Tony Lawther took over from Dave Maginnis as the new managing director of BriggsAmasco. They're considerable shoes to fill: Dave is a well-known personality in the roofing industry, who remains in the company as Chair.

So, what will Tony's approach be as the new MD? Speaking to him a few months into the role, his watchword seems to be risk: its elimination, its mitigation, and its accommodation.

Tony is very well-placed indeed to assess risk for BriggsAmasco's operations: he's been with the company for 38 years, since he started in Scotland as an apprentice school leaver, "making tea and running to the bookies".

"The guys that I started work with were old school," says Tony. "They would have been in their forties (although they seemed much older to me), and they took the time to show me what to do."

Assessing the Risk

After a spell studying construction management, and also gaining a NEBOSH, Tony went on to read construction law, all sponsored by BriggsAmasco. It honed what is a critical skill in his leadership role, as he explains: "At BriggsAmasco we'll take a risk, but I need to know what that risk is; I won't take it unless I know the detail and then I can put measures in place to deal with it."

"My construction law training taught me the basics really, and built on my experience and mentoring from others. Control over what's in the contract can be limited, however a mature review and discussion can unlock contentious issues. If something's apparently unreasonable but unlikely to happen, then yes, I might accept that risk, or more likely seek to amend that part of the contract."

It can take months to finalise a contract with all the stakeholders involved but it all goes back to assessing the risk. We need to get to a happy medium where the risk is shared.

For Tony, negotiating and re-writing the contract is worth taking time over. To be successful, it has to be an open and fair process where the risks and rewards are fairly balanced between contractor and client. Only when this has been achieved can a spade be put into the ground, or rather a scaffold up to the roof.

Tony explains, "It can take months to finalise a contract with all the stakeholders involved but it all goes back to assessing the risk. We need to get to a happy medium where the risk is shared with the best person to deal with it. For example, we can't always deal with the weather. But then program compliance, material specification and design is within our control."

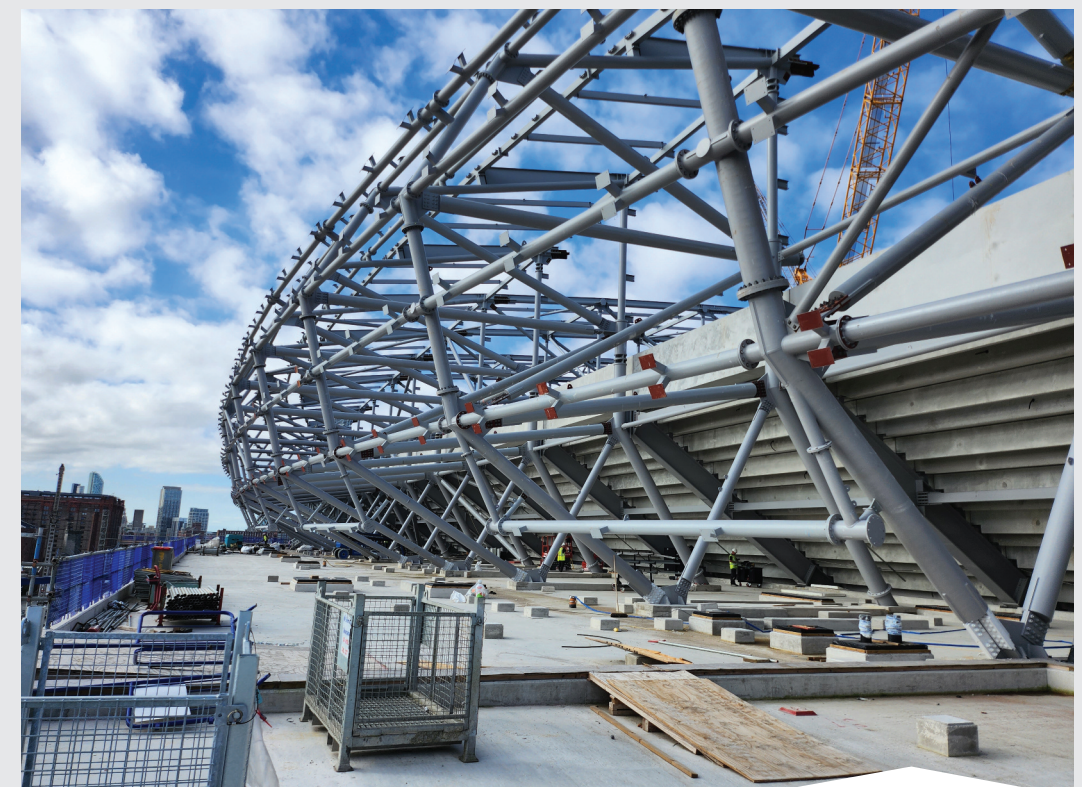
"It's critical that you put in a contract how the site's going to be managed and run, you are setting the parameters and they are out in the open. If they're questioned by the main contractor, we tell them it's all about achieving the outcome and quality they want. For example, is it reasonable that the site team is working in water every day? I certainly don't think



BriggsAmasco is laying over 1000 tonnes of mastic asphalt across the 20,000m² first-level perimeter roof of Everton Football Club's new £555 million stadium being built at the former Bramley-Moore dock site on Liverpool's waterfront.

The robust roof covering is perfect for the super-exposed site, facing, as it does, on to the River Mersey and out to the Irish Sea. It's also ideal for the density of plant the roof will need to accommodate to provide services for the 54,000+ fans the stadium will seat.

Set to open at the beginning of the 2024/25 season, Tony Lawther, MD of BriggsAmasco says "It's a major project for us and it's quite a tight programme,



but I know we can do it. We've got Keith Melling who is our operations director who alternates weekly visits with me to the

site. I served my time doing that work, I know exactly what I'm looking for, so we can ensure the highest quality roof."

It's hard to appreciate the sheer scale of the new Everton stadium site. As subcontractors to the main contractor Laing O'Rourke, BriggsAmasco will be on site from May to October 2023, joining up to 1,000 construction workers present on the 9 acre site at any one time.

BriggsAmasco Mastic Asphalt Roofs at Everton FC's New Dockside Stadium



Everton's new stadium site is built on Bramley-Moore dock, which until 2021 was filled with seawater the same as the other docks on the Merseyside riverfront.

Over 450,000 m³ of sand was dredged from the Irish sea beyond the Mersey rivermouth to fill the 15m dock to a depth of 9m, taking 4 months. The sand was installed over about 1m of silt left in the dock once the water was removed, and which has taken about a year to fully settle. The sand was then compacted before the piling process continued into 2022, dropping 2,500 piles into the sandstone bedrock below the river level.

An artist's impression of the finished Everton stadium designed by Meis architects.

Taking its inspiration from the brick, steel and glass designs of the historic maritime and warehouse buildings nearby, the brick frontage of the stadium echoes the adjacent Stanley Dock Tobacco warehouse, reputedly the largest brick built structure in Liverpool.

The design features a 'fan plaza' for pre- and post-match entertainment. The site is orientated south-north to create the best sunshine and shadow on the pitch.



“If it is, it results in poor working conditions, reduced productivity and of course quality; we insist that all areas are free from standing water prior to commencement.

“But we mainly work for Tier 1 contractors - Hinkley Point, LOR, Mace, Skanska, Galliford Try – they know what they’re doing. We aim for no confrontation onsite and the easiest way to manage it is to set your stall out early and then you’ve got something to reference back to.”

That’s not to say Tony goes about putting red lines through clauses or ripping up contracts; in fact, his approach is centred on the exact opposite: discussion and negotiation no matter how entrenched the issues.

“It can be easier to object to something in the contract than try to talk to someone about it, such as the main contractor’s lawyer, quantity surveyor or commercial director. I had a meeting last week where the main contractor’s team were all there. It can be intimidating but we have a knowledgeable and strong team behind us to assist in getting the right provisions of contract,” Tony says.

Mitigating the Risk

The increasing industry focus on building safety and compliance is heartily welcomed by Tony because it helps to strengthen the contract and design out the risk. Tony cites one such case from the past few months: “People still design to back falls, despite BS6229: 2018. We had a recent project ... where we had to charge an extra £100,000 to add in the falls. If they hadn’t allowed that and we’d left it, that wouldn’t comply with BS6229 and therefore would not be contract compliant.”

Any construction business’s nightmare – roof fire - is one of the highest priorities on the risk agenda at BriggsAmasco. Being an exclusively flat roofing and waterproofing contractor, the firm is a fully signed up members of NFRC’s Safe To Torch campaign, which replaces open flame, propane-fuelled tools with

electric ones, and BriggsAmasco has committed to a huge investment to tackle the issue.

“One of our biggest risks is fire and we’re trying to move to eliminating it altogether”, Tony explains. “We’ve got 18 hot melt electrically heated machines costing around £27,000 each, but that means we can do without propane gas. We also use high powered electric heaters to dry the deck, but, again, the investment is huge: £9,000 versus around £250 for the propane gas version. We have just had to get on and make that investment because its the right thing to do and has considerable environmental benefits.”

Complex negotiations and calculations also underlie the requirement for liability and indemnity insurance, an increasingly difficult area of procurement for the construction industry in recent years. Premiums are assessed according to the project’s risks and the company’s record – and they can be adjusted through excess levels – all of which requires careful mapping out. “We’ll have several meetings and I’ll write a paper showing how we control risks, what the design points are, where we’re liable and where we’re not,” says Tony. He explains that the company has several insurers to spread their risk exposure, adding, “I think it helps to be open, whether it’s negotiating a contract, a specification or insurance.”

Accommodating the Risk

This principle of openness was certainly put to the test during the challenges of recent years. BriggsAmasco was not immune from the pandemic-period problems posed by material shortages, long lead times and price inflation. At the time, the company was in the middle of the enormous Battersea Power Station Redevelopment Project. Tony explains how the business mitigated the particular perils presented: “We bought a lot of product upfront to hedge prices because it was difficult to get a long-term fix and the client didn’t want to take the risk on



BriggsAmasco is laying around a 1,000 tonnes of mastic asphalt on the first level perimeter roof of the new Bramley-Moore Dock Everton stadium. Once the company is finished in October 2023, the huge steelwork structure will be clad covering most of the roof area and the huge quantities of plant it will house to provide services for the up to 62,000 fans the stadium is designed to seat.

fluctuation. The commercial director of the Development Company grew up about a mile from where I did, so we understood each other; he could see that we could share the risk. So, we put it in a storage facility and said ‘look here it is, now we both know it’s here’, and so we effectively capped the risk, with the client paying under a vesting agreement.”

For Tony, as MD, the best approach is to go into a partnership to deal with such problems as inflation. As he says, “It’s the manufacturer who is best placed to understand the risk of their products rising in price, not me as the contractor. They should know what bitumen is likely to do, or insulation, or what they’ve hedged. Some manufacturers just seek to add an arbitrary increase without any science behind it.”

“Thankfully,” he continues, “inflation is dying away now to

around 6-8% which is much more manageable and we can build that in for our client and suppliers so that no one is exposed to risk, but, again, it pays to read the small print.”

Tony is confident that the outlook is good in roofing. Nevertheless, the legacy of the past few years means the current trend is to procure major projects early to get price certainty. Now the company seeks fixed prices from manufacturers and an expiry date, and that date goes into the contract. As Tony says, “You used to have a price from manufacturers from January to December. It’s not reasonable to have that now. So, we agree a price with them, and they’ll agree a price further down the line with their suppliers, who’ll agree a price further down with their suppliers, so no one should be at risk.

“But everyone still has to win work”, Tony ends. ■



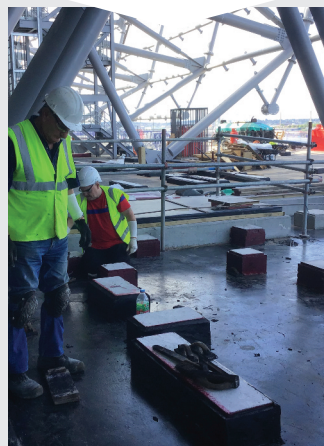
The mastic asphalt roof on the stadium’s east side is well underway. The roof consists of three layers: an isolation layer is laid on the concrete deck before the first 10mm layer of mastic asphalt is applied. A final 10mm top layer is finished with a white, solar-reflective coating to help minimise the roof-temperature and thermal movement across the stadium’s roofs.



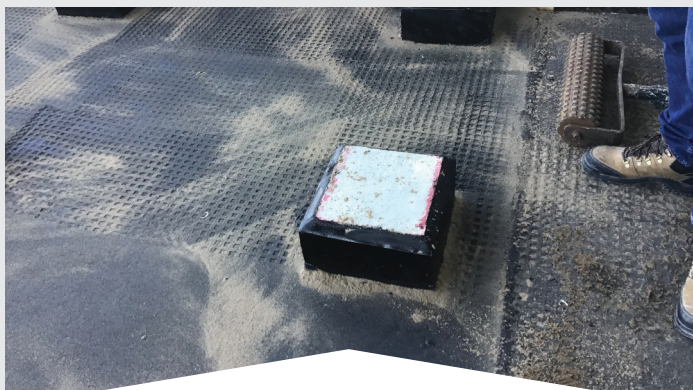
The molten mastic asphalt is wheelbarrowed from the nearby hot boiler to the stadium’s west side roof area where it’s poured. The waiting roofers have to work quickly before the 180°C asphalt cools. It’s a highly-skilled job to ensure the asphalt is laid level, to the correct depth and the joints are watertight.

Jack Ashworth IKO’s Technical Field Engineer joins Tony in his quality assurance visits to the Everton site in order for IKO to guarantee the work.

Each of the numerous rooftop column and plinth details are being finished with liquid waterproofing by BriggsAmasco to ensure a watertight finish.



Tony is visiting the Everton site every week to check on progress and quality. As a time-served mastic asphalt roofer who worked on the tools for 15 years, his knowledge comes from practical experience as well as from his years in management.



Once laying is complete, the mastic asphalt roof is finished with a crimping pattern and sand to create a safe surface for follow-on trades to install the huge quantities of plant being installed on the numerous rooftop plinths. Crimping is hot, heavy work done by hand using a 80kg crimper roller and has to be performed while the mastic asphalt is still warm, before it cools and sets.



The 13-row concrete seating of the stadium is now in place, covered by a 45m high cantilevered roof structure.

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Constructing and Connecting the Components of Competence

Skills and training are integral to delivering and demonstrating competence in the construction industry. Here, Denise Cherry, Chair of the National Roof Training Group assesses current UK roof training provision and considers whether it is ready to fulfill the challenge.



Following on from the Grenfell Tower fire and improvements to building safety, one of the most important topics in our industry today is competence, defined as an amalgamation of skills, knowledge, experience and behaviours that combine to ensure a person is fit to perform their role in the construction industry. This definition is sound, but I think few would argue the component parts of the competency jigsaw in the roofing industry are currently cohesive, with some pieces clearly incomplete or some elements that are misaligned.

The industry’s infrastructure to support achievement of competency is patchy and disjointed, with relatively few

providers delivering accredited skills training outside apprenticeships. It means upskilling and multiskilling of the existing workforce depends heavily on manufacturers, onsite training and mentoring, which is largely unrecorded and wholly outside a competency framework.

The latest State of the Roofing Trade report (Q2 2023) commissioned by the National Federation of Roofing Contractors (NFRC) stated that 46% of firms reported difficult finding workers with the necessary skillsets, with 32% of these seeking roofers for slating and tiling and 26% for roofers with skills in Built Up Roofing. Another recent report, analysing Companies House data on the formation of new roofing

There has been a welcome rise in training provision over recent years, with manufacturer training being the major growth area. Manufacturer training centres now provide a significant amount of skills training.

businesses, records that 2,300 new roofing businesses launched in 2022. How many of these new business owners are competent, or possess the qualifications to enable being certified as competent? With 10% of these businesses being started by people within the 18-25 years old age range, it raises a question about the experience and depth of knowledge of this group of new roofing business owners.

The Rise of Training

There has been a welcome rise in training provision over recent years, with manufacturer training being the major growth area. Manufacturer training centres now provide a significant amount of skills training, with key players like Sika delivering courses to around 750 learners per year. Sika is one of the few manufacturers who have become a Construction Industry Training Board (CITB) Approved Training Organisation (ATO), which means that registered contractors attending training courses can claim CITB grant towards the cost, and access additional funding for accredited courses. Many ATOs and Roof Training Groups offer contractors support with funding applications.

Another significant player is NCTS/MasterRoofers which has two centres in Hoddesdon, Hert.s and Salford near Manchester. Their successful delivery of courses, in slating, tiling, lead and hard metals includes short duration courses to CITB standards, and they have achieved the equivalent of delivering 2,500 training days to date, with an increase expected in future months.

Manufacturers, such as HD Sharman, deliver courses free of charge to roofers in their approved contractor network who use their products, seeing the

The Components of Competency



training as an essential investment in their quality processes, alongside survey and onsite support.

The support from roofing product manufacturers with resources for training has been consistent, impressively generous, and extends to a range of training providers throughout the UK. Training centres are always in need of quality resources to deliver effective training and providers are enormously grateful for this support.

Contractor Training Centres

The exceptional contribution to the training landscape from contractor-supported training centres should be recognised, with several companies across the UK, including SPV Special Projects, M&J Roofing, J Wright Roofing, Rydale Roofing, Barclay Roofing and DMG Roofing, offering apprenticeship and other skills training and who support recruitment initiatives by working with schools and colleges.

So much good work is taking place, and there is definitely an expansion of provision and take up in training across the roofing industry. However, in terms of competency, this enthusiasm is not being harnessed and focused towards a clear and coordinated route to competence or accreditation.

Great strides have been made in roofing training in recent years and there seems to be a greater appetite for collaborative working than ever before. Collaboration is greatly needed if we are to tackle

the stubbornly persistent skills shortage and the industry needs to consider how to make substantive improvements, particularly in mapping out a clear route to competence across the industry in terms of skills training.

Roofing Skills Summit

Is the time right to call for a Roofing Skills Summit to consolidate the great work already being done - to advance together towards a achieving a competent and safe specialist sector?

Apprenticeships Roofing Standard/Specialist Applied Skills Programme (SAP)

II The majority of roofing skills training carried out across the UK is through apprenticeships, which work towards a Level 2 Standard in England and Wales. The Level 2 standard is completed with an End Point Assessment, and students can develop further skills to achieve NVQs which will enable them to apply for a CSCS Blue Skilled Worker Card. In Scotland apprenticeships lead to Level 3 and 4 Vocational Qualifications.

TRAINING PROVIDER	LOCATION	TRAINING COURSES
Liquid Roofing & Waterproofing Association (LRWA)	Sika Preston	Applied Waterproof Membrane SAP
Eastern Region Roof Training	Ipswich	Const Support Tech L3 Apprentice
Eastern Region Roof Training	Ipswich	Flat Roofing Standard
Greenlight Training	Bristol	Flat Roofing Standard
Greenlight Training	Bristol & Plymouth	Pitched Roofing Standard
Juniper Training	Walsall	Flat Roofing Standard
Juniper Training	Walsall	Pitched Roofing Standard
Simian Training	Warrington	Pitched Roofing/Flat Roofing Standard
Simian Training	London	Pitched Roofing/Flat Roofing Standard
CORE Hereford	Hereford	L3 Heritage Skills
Lead Sheet Training Academy	Tonbridge, Kent	L3 SAP Lead or Hard Metal (L2&3)
NCTS/Master Roofers	Salford, Manc.s & Hoddesdon, Hert.s	L3 SAP S&T Heritage
NCTS/Master Roofers	Salford, Manc.s & Hoddesdon, Hert.s	L3 SAP Leadwork
Fife College	Dunfermline	Modern Apprenticeship Roofing
South Lanarkshire College	South Lanarkshire	Modern Apprenticeship Roofing
National Construction College	Inchinnan (Glasgow)	NVQ 2 Built Up Felt Roofing
Bolton College	Bolton	Pitched Roofing Standard
Derwentside College	Derwentside	Pitched Roofing Standard
Eastern Region Roof Training	Ipswich	Pitched Roofing Standard
South Coast Roof Training	South Coast Region	Pitched Roofing Standard
Leeds College of Building	Leeds	Pitched Roofing Standard
Newcastle College	Newcastle	Pitched Roofing Standard
Optimum Skills	Gateshead	Pitched Roofing Standard
Preston College	Preston	Pitched Roofing Standard
Redcar & Cleveland College	Redcar	Pitched Roofing Standard
Skills Construction Centre	Kirkham	Pitched Roofing Standard
South Coast Roof Training	Littlehampton	Pitched Roofing Standard
South Devon College	Paignton, Devon	Pitched Roofing Standard
Juniper Training	Walsall	Sheeting & Cladding
Single Ply Roofing Association	Sika, Preston	Single Ply Membranes SAP
Eastern Roof Training	Ipswich	Site Supervisor L4 Apprenticeship
National Construction College	Inchinnan (Glasgow)	SVQ 2 Cladding Operations
Edinburgh College	Edinburgh	SVQ L3 Roofing Occupations

The Industry is Not Recruiting Enough New Talent



Ruth Scarrott Head of Careers at NFRC , comments: “According to CITB’s 5-year outlook, the roofing industry has an annual recruitment requirement of 400 new individuals until 2025. Since the introduction of the new Apprenticeship Standard in roofing disciplines, the highest annual intake has been 370 new apprentices per year, with 310 so far this academic year, according to government statistics on apprenticeship starts.

“Not all of these apprentices will become qualified roofers, meaning that the industry is not recruiting enough fresh blood.

“I believe that the industry is full of opportunities to develop a fulfilling and lifelong career. Working together, we can make progress towards resolving skills and labour shortages.”

Roofing Skills Courses

Roofing skills courses are difficult to locate, and there are very few centres that are CITB Approved Training Organisations (See When Challenge Becomes Opportunity for funding information) these include:

TRAINING PROVIDER	LOCATION	TRAINING COURSES
CORE Hereford	Hereford	Pitched Roofing and H&S courses
Eastern Roof Training	Ipswich	Pitched, Flat and H&S Courses
Langley	Daventry	Flat Roofing Courses
Lead Sheet Training Association	Peckham	Lead and Hard Metals
NCTS/Masterroofer	Salford & Hoddeson	Slating and Tiling, Heritage Skills, Lead and Hard Metals
Proteus	Rayleigh	Flat Roofing Courses
Sika	Preston	Flat Roofing Courses
South West Roof Training GP	Exeter	Pitched, Flat and H&S Courses
SPV Special Projects	Walsall	Sheeting, Cladding, Rainscreen
Wales National Roof Training Gp	Cardiff	Pitched, Flat and H&S Courses

Manufacturer Training

Manufacturers provide an excellent range of skills training often linked to their Approved Contractor Networks. These courses are not currently aligned to CITB standards or mapped to qualifications and do not attract CITB Grant. They include:

TRAINING PROVIDER	LOCATION	TRAINING COURSES
HD Sharman	High Peak, Derbyshire	Gutterline, Liquid Coatings, Lifecycle of a Metal Roof, Architectural Roof Coatings
BMI Redland & BMI Icopal	South Cerney, Gloucestershire	Solar, Flat, Pitched Roofing
Weinerberger/Sandtoft	South Yorkshire	Solar, Pitched Roofing
Permaroof	Alfreton, Derbyshire	Flat Roofing

Knowledge Based Courses - Roofing

TRAINING PROVIDER	LOCATION	TRAINING COURSES
Institute of Roofing		Associate Course, Level 3 Award in Roofing Management
LRWA	Online & CPD	Foundation for Liquid Applied Roofing + Online library of CPDs
MCRMA	CPD	A range of CPDs with assessment
Polyroof	CPD	Risk Management, Cold Applied Liquid
A Proctor	CPD	Range including Building Design and Airtightness
Ram Sanderson	Online	Wildlife Awareness For Roofers
Rooftrain	Exeter	Roof Estimating
SPRA	Online & CPD	Small Roofs Training E-learning, Wind Load Calculation Protocol
Weinerberger / Sandtoft	South Yorks	CPD
Wildflower Trust	South Coast	Green Roof Training Days

Knowledge Based Courses - Health & Safety

TRAINING PROVIDER	LOCATION	These organisations work closely with the roofing industry delivering Health and Safety Courses, including PASMA, IPAF, Harness Awareness, Manual Handling, Abrasive Wheels, First Aid, Fire Safety and Asbestos Awareness. Site Safety Plus Courses Best Practice Note - If your company is CITB Registered add the following rider to booking confirmation “this course is booked on the understanding that the provider is an ATO and will claim CITG grant on behalf of whose CITB Registration number is ”
Safety Maintenance Co	Leeds	
Boss Training	UK Wide	
Birkwood	Wakefield	
South Coast RTG	Littlehampton	
Wales National RTG	Cardiff	
South West RTG	Exeter	
Barry Services	Cardiff	
Eastern Roof Training	Ipswich	



Courses Supporting Behavioural Change



For people to take responsibility for their own safety and wellbeing and that of others, their fundamental needs for survival, safety and belonging must first be met. This will then lead to a healthy environment, creating a positive workplace culture within which to bring about behavioural change. These are the underpinning principles of good mental health and wellbeing and the Lighthouse Construction Industry Charity has a whole range of courses, free to all, that supports this structure.

A greater sense of belonging and achievement can be encouraged through a company focus on workplace culture and team working – as is discussed in more detail in *Working towards Positive Wellbeing* in Roofing Today 103 November 2022. III

Evidence for the Future Homes Standard – Are You Ready?

The Future Homes Standard is expected to require roofing contractors to provide evidence of compliance with the Building Regulations. Duncan Winter, Commercial Director, SIG Roofing, explains why the requirement for evidence is likely to be fundamental to the new standard.

The Future Homes Standard will require all new homes to be 'zero carbon ready' – preparing homes to become zero carbon over time as the electricity grid decarbonises, without the need for further costly retrofitting work. Similarly, the Future Buildings Standard will deliver new non-domestic buildings that are zero carbon ready.

The government has said it will start technical consultation on both standards this year, with the intention of implementing both standards in 2025. The uplift to both standards is expected to be extremely challenging.

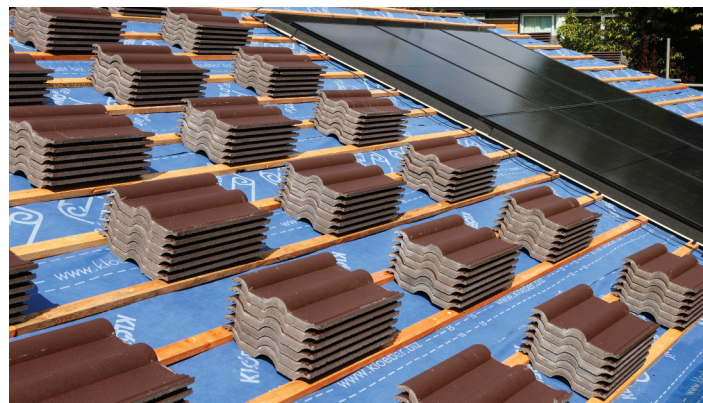
We know this because the government introduced an interim amendment to Part L of the Building Regulations for both new and existing homes and new and existing non-domestic buildings back in 2021 (which came into effect in 2022). The government refers to this update as "interim" because it is a steppingstone to both the Future Homes and the Future Buildings Standards in 2025.

Understanding Part L for Roofers

Part L is the section of the Building Regulations that deals with the conservation of fuel and power. It is published in two volumes: Volume 1 deals with dwellings, Volume 2 deals with all buildings other than dwellings.

The interim upgrade to Part L was introduced to help the industry develop the new skill sets and supply chains in advance of the implementation of these far more challenging regulations, so it is useful to consider the implications of the interim update on roofing projects.

The energy efficiency improvements in the interim



upgrade were not particularly onerous. For example, in new dwellings the maximum (limiting) U-value for all roof types went from 0.20 W/m².K to 0.16 W/m².K - remember the lower the U-value the lower the heat loss through that particular element.

Achieving the enhanced U-values on new builds should be relatively straight forward for both pitched and flat roofs. However, things get more complicated on roof refurbishment or upgrade projects where compliance with Part L requires an increase in insulation thickness. This could create problems with upstands where these are not deep enough to accommodate the increased insulation thickness.

Where this is the case, it is advisable to discuss the issue with SIG Roofing branch managers, who may be able to suggest various workarounds, such as installing more efficient and hence thinner insulation.

Providing Photographic Proof

While the thermal efficiency improvements in the interim upgrade to Part L were relatively minimal, more radical was the requirement to demonstrate that a building has been built according

The requirement to demonstrate that a building has been built according to the design and is in compliance with the Building Regulations ... includes a requirement for the provision of photographic evidence.

to the design and is in compliance with the Building Regulations. This includes a requirement for the provision of photographic evidence.

This requirement for evidence is expected to form a key element of the new Future Homes Standard, so it is worth reiterating what is required.

In England, the revisions require evidence from site to be provided by contractors and their subcontractors in the form of a Building Regulations England Part L (BREL) report. This now requires geotagged photographic evidence of build quality showing, for example, that a roof insulation detail has been installed properly

along with detailed compliance calculations.

Appendix B of Approved Document L Volume 1 states: photographic evidence of each main roof type must show "thermal continuity and quality of insulation" at joist/rafter level and at eaves and gable edges.

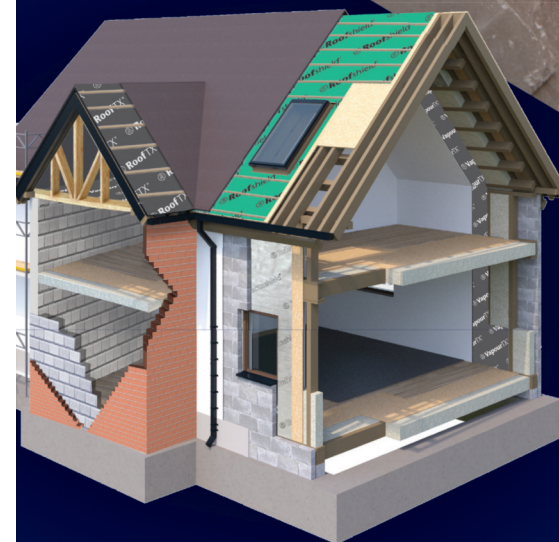
The intention is that the requirement for evidence will improve construction quality. This could have an impact on the actual thermal performance of homes and it would also help to reduce the performance gap between design intention and the actual performance.

It is probably worth a mention that under the recently introduced Building Safety Act, roofers are required to be competent (and to demonstrate that they are competent) to ensure an installation has been completed in compliance with the building regulations.

SIG cannot provide evidence of build quality or the competence of a roofing contractor. What it can do, using the technical support from the SIG360 Team, is provide proof that a roofing design is technically compliant.

It is also worth noting that renewables cannot be used to offset poor U-values in the interim Part L, as they were under the previous version. Nevertheless, high energy prices and high levels of public support for low carbon energy generation mean that homeowners in particular are using the opportunity of a roof refurbishment to consider the installation of photovoltaic panels, which could provide an additional source of revenue for enterprising roofing businesses. ■

Find out how SIG Roofing can help: www.sigroofing.co.uk.



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Flashing Kits – How to Ensure an Installed Rooflight is Secure and Watertight

Natural top lighting can be a stunning addition to any project and is a perfect solution to creating a light, bright and airy feel to the interior of a property. With the trend for flush fitting rooflights still on the rise, the most desirable effect is for rooflights to be installed in line with the roof from the outside creating a smooth transition from tile to glass. Consequently, the primary role for the roofer is to ensure a robust installation, protecting the interior of the property from the elements, through all seasons of the year. When installed correctly, a rooflight can improve thermal efficiency, support ventilation within the property and be completely watertight, whilst simultaneously creating a beautiful aesthetic.

Obtaining the most appropriate flashing kit to install alongside the rooflight is crucial to ensuring optimum performance and endurance. Selecting the right solution should be based on the rooflight type and build-up of the roof. The Rooflight Company has a range of solutions and an expert technical team to support you in achieving a watertight fit in all roof types, with complete confidence.

On The Rafter Flashing Kits

In cases where rooflights are designed specifically to be low profile, such as The Rooflight Company's Conservation and Neo Rooflights and where the roof build up is deep enough for a flush finish, the rooflights are installed directly onto the rafters. The lower frame of the rooflight is designed to act as a gutter for surface rainwater. This channels rainwater away from the jointing positions between the rooflight and the roof. At these jointing positions, the specially designed flashing kit affixes to the lower frame and integrates with the roofing membrane to ensure a seamless and watertight finish.



We are dedicated to advising on the most appropriate solution for your project as we understand the importance of achieving a high-quality finish for your clients.

Flush Slate Flashing Kit

Slate roofs often result in a thinner roof build up. In these situations, it is still possible to install the rooflights flush with the roof line through the installation of bearers to sit inside the clear structural opening. These bearers create a rebate within the structural opening for the rooflight to be recessed down onto, to be in line with the top of the slates. The installation of the flashing kit then works in just the same way as with 'on the rafter' installations and results in a completely watertight, secure and energy efficient rooflight.

Lead Soakers

For listed properties and those in Conservation Areas or Areas of Outstanding Natural Beauty, it can be appropriate to use lead soakers. Lead soakers help retain the authenticity and character of period buildings and details such as these are often looked upon favourably by planners. When combined with one of our original Conservation Rooflights, lead soakers add an authentic touch whilst ensuring the rooflight meets all modern performance standards.

Alternative Roof Finishes

Achieving a flush finish is not limited to conventional roof build ups. With the support of our in-house technical design team, a watertight flush finish can be achieved in a variety of alternative roof finishes. In standing seam roof types where the rooflights are installed alongside zinc or copper for example, the rooflight lower frame can be tailor-made to integrate with the cladding, allowing the edge of the standing seam to lap over the frame.

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Are Rooftop Solar PV Panels a Sustainable Option?

There is growing interest in installing rooftop solar, fuelled by rising energy prices and more stringent regulatory requirements. Overcoming what's often considered to be the unsightly installations of traditional on-roof solar panels, roof tile manufacturers have developed in-line solar systems. Here Charlie Bitowt, Business Development Manager at Bailey (MK) argues there's a downside to in-line systems not often considered.



Solar photovoltaic (PV) panels are constructed using semi-conductors. A semi-conductor is a material that can act like a conductor under the right conditions and allow electrical energy to pass through it. Link this energy to a circuit and you can generate power.

Whilst the ability to use this natural source of energy is a great opportunity for business and offers potential reductions on our energy bills, there are some foreseeable pitfalls that should be considered.

One is the rapid development in semi-conductor technology and the potential for unsustainable construction. This might seem counterintuitive – how can installing solar PV panels be unsustainable? Let me explain.

Why are Semi-Conductors Necessary for Solar PV Panels to Work?

In the context of a solar PV panel, sunlight hits the semi-conductor in the panel and is converted to electrical energy. There are a few common ways we use that energy: we send it directly back to the national grid at an agreed rate per kW to an energy provider; we use it straight away by diverting it to appliances in our homes; or, we store it in a battery for use at a later time. Whatever you do with it, it's a free source of energy.

So, we can safely say we need semi-conductors to make our solar PV panels work in order to generate free energy from the sun.

What Types of Solar PV Systems are Trending Now?

There are a few different solar PV systems on the market, but



generally speaking they can be categorised into two types: in-line and bracket.

An in-line system sits in line with the roof covering and provides a sleek, flush appearance. No bird spikes are needed around the perimeter, although panels are still prone to bird droppings nonetheless.

A bracket system sits on the roof using brackets screwed into the rafters. The PV panels are raised a little higher than the roof covering and should have some bird spikes around the perimeter to prevent birds nesting underneath the panels.

Clearly, the in-line system has the advantage of being more aesthetically pleasing to the majority of homeowners. But, when we take into account how fast the semi-conductor technology is developing, the in-line system becomes less favourable.

So, How Fast is Semi-Conductor Technology Developing?

Some readers may be familiar with Moore's Law. For those who aren't – it's an observation over

past years used to predict and plan for the rate of development of semi-conductor technology in the future. The prediction is staggering and has generally held true from the 1970s to date: the number of transistors on an integrated circuit doubles every two years.

The reason I'm highlighting this is because, to achieve this pace of development, the research and use of semi-conductor materials must also develop. So, it follows that the semi-conductor technology in solar PV panels will become outdated a lot sooner than you may think – making in-line systems less attractive.

The Problem

Placing an order for a full in-line system ties you to a manufacturer and significantly reduces the flexibility for you and your customers. Manufacturers create flashing kits specific to their solar PV panels – they aren't interchangeable with products from other manufacturers. Apart from the PV panels and flashing kits, they'll also supply inverters, cabling, isolators and accessories.

When the time comes to renew the installation with improved

technology you have to use the same manufacturer. The manufacturer knows you need to use their system and there is no incentive for them to be competitive on price this time round.

Your hands are tied: you have to use system compatible products. It means you could develop a reputation for charging more than the average market price, and a competing company may get a better rate from their manufacturer and undercut you.

A More Sustainable Solution

Now let's look at the bracket system. There are a range of bracket systems out there that are independent of the big tile manufacturers in the roofing industry. They are compatible with many different solar PV panel manufacturers and need no manufacturer-specific flashing kits. When the time comes to replace this installation, you have flexibility to source solar PV panels elsewhere and at a competitive rate. You can renew the panels a lot faster because you are not interfering with the roof coverings or flashing kits. In theory you can carry out more upgrade works than an in-line system and increase the volume of work you do.

The Takeaway

To summarise: protect your company from other competing businesses by looking for flexibility in your supply chain. Diversify your risk. The semi-conductor industry is changing rapidly. Bracket systems ensure suppliers remain competitive on price and could potentially increase your volume of work as an installer. ■



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Making the Modern Balcony: Safe Drainage



Residential balconies are an important amenity, especially in dense urban areas. Here, Tim Streeton, Senior Technical Engineer at Marley Alutec outlines the key legislation and standards with regards to fire safety for balconies, and the implications when it comes to selecting rainwater drainage products.

Understandably, cladding has become the focus for many when it comes to fire safety and the importance of material choice. However, as an extension of the façade, it is crucial that balconies do not contribute to the spread of fire. Unlike cladding which, if combustible, can help the spread of fire up a building, the protruding nature of a balcony can help a fire to spread downwards, as particles can fall from balcony to balcony and ignite other apartments, buildings or gardens below. This summer, many local fire services and news outlets reported on the dangers of balcony BBQs. With temperatures rising and owners making increased use of their outdoor space, it is crucial that all elements of a balcony, including the drainage system are carefully considered so that they provide the highest level of fire safety to inhabitants.

What is the Guidance?

Approved Document B of the Building Regulations in England and Wales and Section 2 of the Building Standards in Scotland provide guidance on the design of

balconies for fire safety. British Standard BS 8579:2020 – *Guide to the design of balconies and terraces*, also provides best practice guidance in this area, as does the National House Building Council (NHBC) Standards.

The most recent update to Approved Document B crucially includes a new section providing guidance on balcony design. It states that where residential buildings are over 11 metres or more in height, only non-combustible materials (class A1 or A2-S1,d0) should be used on balconies. This includes buildings with a 'residential purpose' or in other words anywhere where people sleep – hospitals, hotels, care homes, boarding schools and student accommodation.

Likewise, Section 2 of the Building Standards for Scotland states that for buildings over 11m in height, any 'specified attachment', including balconies, should be constructed by materials that achieve European Classification A1 or A2 in terms of combustibility. Interestingly, in this case, the requirement is extended to both domestic and

Given the risk of burning materials or molten particles falling from a burning balcony to another, BS9579:2020 takes its guidance one step further, suggesting that only non-combustible materials should be used on buildings of any height that have stacked balconies.

non-domestic buildings of that height.

Given the risk of burning materials or molten particles falling from a burning balcony to another, BS9579:2020 takes its guidance one step further, suggesting that only non-combustible materials should be used on buildings of any height that have stacked balconies – including staggered balconies that still overlap 'on plan'.

Where Does Drainage Come In?

Drainage plays an important role in balcony construction, ensuring that water does not collect on the balcony and result in water ingress into the building. BS 8579:2020 necessitates that all balconies are designed with

'controlled drainage'. This is to prevent the use of free draining where the rainwater drains straight through the pedestrian surface of the balcony onto the balconies below with no control.

The controlled drainage methods available are piped drainage and edge drainage. For most balcony structures, piped drainage which collects rainwater via outlets and downpipes is the most appropriate solution. Edge drainage, where the water is collected and discharged from the balcony edge is permitted; however, there are other considerations in the Standard that make this method impractical.

For example, there is a need to protect people, structures and landscaping below from dripping ||-

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SCAN ME

Piped drainage is the primary source of drainage used on balconies. However, when looking to ensure that piped drainage is compliant there are relatively few materials on the market that can fulfil the fire safety requirements.

|| water. Also, where stacked balconies are edge drained, there is the need to manage the 'cascade effect', where each balcony discharges water onto the one below, concentrating the water on to the lower balconies. Furthermore, for inset balconies that do not project from the wall of the building, edge drainage does not discharge water far enough from the building to prevent staining and damage.

As such, piped drainage is the primary source of drainage used on balconies. However, when looking to ensure that piped drainage is compliant there are relatively few materials on the market that can fulfil the fire safety requirements.

Is Aluminium the Answer?

Unlike PVC, both aluminium and cast iron are classified as A1 non-combustible and would technically meet the requirements of the legislation. However, aluminium possesses a number of other characteristics that make it the ideal solution. Firstly, it is incredibly durable thanks to a naturally occurring protective oxide coating, which means that if

its surface is damaged, the material oxides again to protect itself. As such, aluminium rainwater systems require minimal maintenance and have a functional life expectancy of 50+ years, offering the ultimate 'fit and forget' solution. In comparison, cast iron – while fairly resistant to weather and temperature changes – requires costly maintenance every 10 years or so to prevent degradation.

Powder Coating

A polyester powder coating can also be added to aluminium rainwater systems to further enhance the colour stability and longevity of the solution. If requested, this coating can be used to accurately mimic the appearance of traditional cast iron gutters and downpipes and depending on the provider, alternative colour options will also be available.

Furthermore, aluminium drainage systems are very easy to install as aluminium is 65% lighter than cast iron and yet still incredibly strong. Aluminium systems can also be adapted onsite and fitted using standard

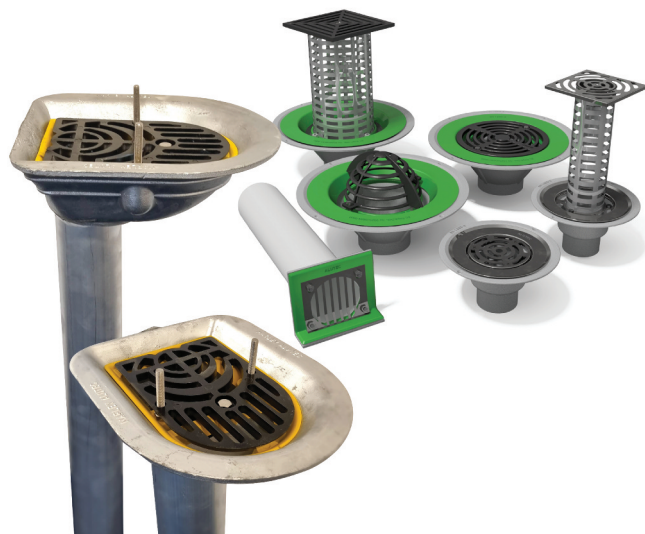


carpentry tools meaning that any bespoke requirements can be easily met. This is especially important on large-scale projects and can help to minimise delays.

However, it's important to look carefully at the product as not all aluminium balcony outlets are the same and can vary in terms of quality, flow rate and compatibility with other areas of the rainwater drainage system. For example, a product manufactured from high-quality marine grade aluminium will deliver a longer, issue-free lifespan compared with products made of a less robust material.

With fire safety for high rise buildings a key focus for the industry, every element of a building's construction must be considered carefully – not just cladding but balcony structure and balcony drainage as well. Thanks to their non-combustibility, aluminium rainwater systems provide the ideal solution to balcony drainage, ensuring compliance with the latest building safety requirements as well as current drainage best practice. |||

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Air Vapour Control Layers for Flat Roofs

Steven Dickinson, Principal Surveyor and Estimator at London Flat Roofing explains how Air Vapour Control Layers (AVCLs) should be installed on warm and cold roofs and how to achieve an airtight and effective roof construction.

When I'm answering the phone and replying to emails, the questions that come up the most are always something to do with AVCLs, an extremely confusing subject but, like most things, easy when you have all the facts. Possessing all the facts means you've not only done a lot of homework and researched the specifications, but you must also have a very good knowledge of construction. Choosing the correct AVCL is not only about the material itself, but also where and how it's going to be installed. Often, I'm approached by design teams putting together specifications where they've chosen an AVCL that is the correct specification on paper but totally inadequate when it comes to the installation. Unfortunately, there is a dreadful lack of clarity in the information available that causes a high level of confusion, potentially leading to costly mistakes.

What is an AVCL?

An AVCL is a membrane (generally either plastic or tar-based) that is fitted on the warm side of the insulation in a flat roof.

The word 'air' in the title denotes airtightness - the most important part the membrane plays in roof construction. If I only impart one fact in this article, it would be to ensure the AVCL is airtight, as it doesn't matter about the membrane's vapour control properties if you have air leakage.

'Vapour', also in the title, means an AVCL has the ability to



Some of the available AVCLs.

control the amount of vapour that can transfer through to the roof from the environment below. However, it's a control layer, which means it doesn't prevent all vapour from getting through.

General living, breathing, cooking, showering, etc., generates moisture in our rooms, and this moisture 'wants' to escape to the outside (positive moisture pressure). The more we insulate and draft-proof our living areas, the more we need to be concerned about controlling our internal environment, and in particular the humidity. Years ago, this was dealt with by natural

ventilation and air changes through drafts.

In cold countries, such as the UK, AVCLs should be fitted on the warm side of any insulation. By contrast, in hot, humid countries, AVCLs are fitted on the outside of the insulation.

Plastic AVCLs

Plastic AVCLs are generally used for cold roof construction. A manufacturer once told me that green was the industry colour code for plastic AVCLs. However, I soon found out that some plastic AVCLs are not green! Silver, blue

There is a dreadful lack of clarity in the information available that causes a high level of confusion, potentially leading to costly mistakes.

and transparent ones are also on the market; normally these have a greater vapour resistance and are meant for buildings that have higher humidity, for example, offices, swimming pools and enclosed public places.

When you buy a plastic AVCL, generally there are components that come with it, such as sealing tapes, as you are buying a tested system. Unfortunately, suppliers don't normally stock the system tapes, nor do they tend to list them on their websites. Therefore, most people are completely oblivious to the fact that they have to be used as part of a system. Some systems need two or three different tapes, each with a different function - sealing sheeting together, sealing where fixings penetrate the plastic and, depending on perimeter detailing, further tapes may be needed. So, consulting first with the manufacturer is always a good thing. Fitting these systems takes a lot of time and care and should not be left to unskilled labourers.

Tar-based AVCLs

Tar-based AVCLs are best used for warm roof construction. There are many available, including torch-on, sticky-backed, black, foil-faced on one side and some with a white side. The vapour resistance of these AVCLs tends to be very high and I will get into that shortly as, although the vapour resistance is important, its airtightness upon installation is the most important.

These tar-based AVCLs are not only easy to install, but are also self-sealing, so no sealing tapes



Cold roof with correctly installed plastic AVCL: tapes on all joints where screws will penetrate, also at wall joints; totally airtight.

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are necessary to fix them together. Depending on what tar-based AVCL you're using, you may also need a primer. Applying these AVCLs to a deck and up any abutting walls, creates not only a completely airtight system right across the roof, but also waterproofs the decking. So, if the weather window closes, just down tools until the next dry period comes along. There is no excuse to let the decking get wet or to rush the job and add insulation in bad weather, locking in moisture.

Cold Roof AVCLs

Bear in mind BS 5250 states: "This type of roof should be avoided because interstitial condensation is likely and its effect on the structure and insulation can be severe". If you are going to do a cold roof, when installing insulation it's going to be between and under the joists, so the AVCL is going to be fixed to the underside before the ceiling goes up.

Warm Roof AVCLs

If you are doing a warm roof over a timber construction, you should always have a sub-decking over the joists to support the AVCL and the insulation. Some manufacturers say that you can install the insulation over the joists without a sub-decking, but realistically this is not a good idea, as it makes the whole buildup above insecure and unstable and it's extremely hard to install the AVCL correctly.

Problems When Using a Plastic AVCL on a Warm Roof

- You cannot glue it down or glue anything to it.
- Mechanical fixings that penetrate the plastic must be used to hold the insulation down.
- It's very hard to seal to the perimeter walls and get a robust, airtight seal.
- It doesn't offer protection to the sub-deck in adverse weather.
- Often low vapour resistance membranes are used because they are cheap and easily sourced.



Self-adhesive, tar-based AVCL on warm roof awaiting the next good weather window.

Vapour Resistance of an AVCL

The vapour resistance of the AVCL is a calculation that should be made taking into consideration the entire building and its use. The parameters sound complex, however the thought process is simple.

In a roof build up, each individual component will have its own level of vapour resistance. Given the chance, vapour can permeate through each of these individual components, therefore it's imperative that the chosen AVCL should have the highest vapour resistance of all.

Think of the consequences if the AVCL vapour resistance was lower than that of the components above it; vapour would permeate through and then be trapped between layers, unable to escape, building up, potentially causing interstitial condensation!

Let's look at the levels of vapour resistance for each component in the build ups:

Cold Roof

- Plaster board with paint, no holes (low)
- AVCL (higher resistance than any other component)
- Foil-faced insulation between joists (high)
- Foil-faced insulation under joists (high)
- Through-ventilation above OSB3 (medium)
- *Waterproofing membrane (high) *Note: As there is a*

vented space between the roof and insulation, we don't need to take into consideration the roofing membrane.

Warm Roof

- Plaster board with paint, no holes (low)
- OSB3 (medium)
- AVCL (higher resistance than any other component)
- Foil-faced insulation (high)
- OSB3 - Optional (medium)
- *Waterproofing membrane (high)

Understanding Vapour Resistance Measurement

AVCL vapour resistance measurement is displayed a couple of different ways:

Water Vapour resistance (MNs/g), e.g.

- tar-based AVCL can be 7500 MNs/g (very high),
- polyethylene 1000 gauge sheet can be 500 MNS/g (very low).

SD or SD value (m) - (a.k.a. the Equivalent Air Layer Thickness)

Calculating the SD value if you've been given the measurement in MNS/g, simply divide by 5. So, using the examples above, SD values are calculated thus:

- tar-based AVCL, 7500 MNS/g; $SD = 7500 \div 5 = 1500m$
- polyethylene 1000 gauge sheet, 500 MNS/g; $SD = 500 \div 5 = 100m$

The vapour resistance of the AVCL is a calculation that should be made taking into consideration the entire building and its use.

Conversely, to calculate the water vapour resistance (MNs/g) of a material if you've only been given the SD value, simply multiply by 5.

Note: I am frequently asked if a plastic membrane that is 1000 or 2000 gauge is the correct AVCL to use. The gauge or thickness does not dictate its vapour resistance.

Takeaway Facts to Bear in Mind

- Airtightness is paramount - ensure other trades don't puncture the AVCL.
- Ease of construction - choose the right membrane.
- Choose highly robust materials to survive roof longevity.
- When looking at costs, take into account the entire AVCL system (think tape components), together with installation labour.
- Vapour resistance - the highest of all components in the roof build up.
- Always seek professional guidance from manufacturers or anyone who has provided specifications. ■■



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RTC Roofing Gives Victorian Barn Some Major TLC

Roofing Today's Emma Hardman recently met with RTC Roofing as they completed the slate re-roof of Grade II listed barn.

Wirral-based roofing contractor, RTC Roofing Ltd, recently received a call about an old barn in desperate need of some major TLC. Starting life as a Victorian stable block, the barn dates back to around 1880 and in the last century was used to house a horse-drawn milk float.

Located near Sefton Park in Liverpool, the barn is situated at the back of a row of artisanal properties, and is shared between the owners.

When RTC came to start the slate re-roof, they found the building to be in significant disrepair. In some areas the brickwork was damaged, there were a lot of missing copings, and the timber frame structure supporting the roof had collapsed. Mark O'Neill, RTC Roofing Director, explains: "It had just been left in a really bad state. The roof had been replaced once before, but the work wasn't great. It had the old Tarco felt on so it had leaks all over it. It was a bit of a mess."

Mark and two of his team, Mick Maguire, and Morgan Galer who recently completed his apprenticeship with RTC Roofing, with the help of Ben Bloor, spent three weeks restoring the barn's roof back to its former glory. First, the team tackled the collapsed timberwork. Mark said, "It was mainly the top spars that were going so we replaced the top sections. I think we redid about ten in total. Ten spars and then six wall plates."

Salvaging Slate

RTC then stripped the roof of the old asphalt felt, which they replaced with a breathable membrane before laying down diminishing courses of random, mixed-length Welsh Penrhyn



When RTC came to start the slate re-roof, they found the building to be in significant disrepair. In some areas the brickwork was damaged, there were a lot of missing copings, and the timber frame structure supporting the roof had collapsed.

slates - some of which they were able to salvage from the existing roof. Mark explains, "We've actually salvaged quite a lot of slate. I think we lost about 35%. It's been a slow process trying to source the slate. It's not the kind of thing you can rush, we just have to take our time because basically nearly every course is different cuts, so it's just a slow process really."

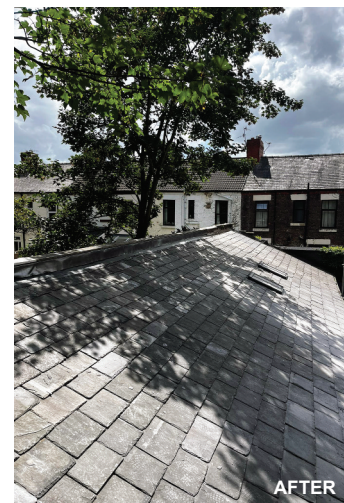
Adding a slightly more modern finish to the Victorian property, roof windows were also installed at the owners' request. Mark chose to install Dakea's vintage conservation roof windows. "I prefer to work with the Dakea ones to be honest", he said. "And they're a bit more in keeping with this property."

As the barn is jointly owned by the adjoining property owners

and two of the owners chose not to go ahead with the refurbishment, Mark also had to incorporate a join to separate the old slates from the new ones. Taking enormous pride in his work, Mark was frustrated not to

complete the whole roof.

However, the two owners have made Mark promise he'll come back when they have saved up to get their portion of the roof overhauled.



Family Business

Like many roofing firms, RTC Roofing is a family business. Mark started out in roofing working for his dad, Joe O'Neill, who founded the company. And it's a tradition which is set to be carried on by Mark's eldest son, Charlie O'Neill, who will be starting his slating and tiling apprenticeship this September under tutor Luke O'Gorman at the SIMIAN training centre in Warrington. There's also space for RTC to venture into solar in the future, with Mark's younger son looking to become an electrician.

Upskilling

Even Mark and a fellow colleague will be enhancing their skills this September, as they take on the Master Roofers/NCTS Lead Welding course in Salford. "I mean we're pretty good anyway," says Mark, with a grin. "We can do it, but it's the welding - that's something we want to brush up on."

The company mainly focuses on reroofs, and repair and maintenance work which keeps them busy. "We do a bit of council work as a subcontractor as well, and quite a bit of reroof work across the Wirral. We've got another project in West Kirby coming up that's getting new Spanish slate on top."

This is a project which Mark is keen to start as he favours working with slate over tiles due to the more complex nature of the work involved. "There's more to



Starting life as a Victorian stable block, the barn dates back to around 1880 and in the last century was used to house a horse-drawn milk float.



it," he says. "It usually makes for a more interesting job."

However, Mark says these days RTC tends to get more tile jobs. "We like to work in slate but because tiles are cheaper a lot of people now seem to go for them. So we're not doing as many slate jobs, but I prefer them. They're a lot nicer to work with, but it's just the money that's often an obstacle to the customer. A lot of people take slate off and are going for concrete tiles instead."

This is the case for a recent project RTC took on in Hoylake

on the Wirral, which despite not being a slate job, is Mark's favourite work yet.

"It wasn't a run of the mill type job", says Mark. As the roof is a series of staggered elevations, constructed of eight hips and three valleys, it required a huge amount of detail.

"The client was delighted with the result and Mark was proud to handover a new watertight roof which is beautifully neat and will provide the homeowner with a roof that will last for decades to come. III

Consult Building Control to Ensure Compliance with the Building Regulations

Anthony Hogan, Technical Manager, Single Ply Roofing Association



Most building work (as defined by Regulation 3) being carried out in England must comply with the Building Regulations 2010 (as amended). The Approved Documents set out what, in ordinary circumstances, may be accepted as one way to comply. Note, however, that complying with the guidance in the Approved Documents does not guarantee that building work complies with the requirements of the Regulations – the Approved Documents cannot cover all circumstances.

Those responsible for building work must consider whether following the guidance in the Approved Documents is likely to meet the requirements in the particular circumstances of their case.

There may be other ways to comply with the requirements than those described in an Approved Document. If those responsible for meeting the requirements prefer to meet a requirement in some other way than described in an Approved Document, they should seek to agree this with the relevant building control authority at an early stage.



Pictured: Best New Build 2022 award winning project, Bellingham Mews won by Invictus Roofing Ltd working with Danosa UK Ltd.

Those responsible for building work must consider whether following the guidance in the Approved Documents is likely to meet the requirements in the particular circumstances of their case.

Interpreting Building Regulations

This leaves compliance with the Building Regulations 2010 open to interpretation. One aspect of building work related to flat roofing that generates much debate is compartmentation.

The spread of fire within a building can be restricted by sub-dividing it into compartments separated from one another by walls and/or floors of fire-resisting construction. The objective is twofold: to prevent rapid fire spread, which could trap occupants of the building; and to reduce the chance of fires becoming large, on the basis that large fires are more dangerous – not only to occupants and fire and rescue service personnel, but also to people in the vicinity of the building. With regard to national Building Regulations, compartmentation is complementary to provisions made for the protection of escape routes, and to provisions made against the spread of fire between buildings.

Approved Document B (AD B – for use in England) relates to fire safety and is published in two volumes. Volume 1 deals solely with dwellings, including blocks of flats, while Volume 2 deals with all other types of building covered by the Building Regulations. Note that the devolved nations of the United Kingdom: Northern Ireland, Scotland and Wales, have different requirements. Refer to Technical Handbook E (Northern Ireland), Building Standards Technical Handbooks Section 2 (Scotland) and Approved Document B (Wales) for further guidance.

Requirement B3 of AD B, Volumes 1 and 2, gives practical

guidance about the junction of a compartment wall with a roof.

'A compartment wall [that does not extend through a roof] should meet the underside of the roof covering or deck, with fire-stopping to maintain the continuity of fire resistance,'

and,

'be continued across any eaves.'

'To reduce the risk of fire spreading over the roof from one compartment to another, a 1,500mm wide zone of the roof, either side of the wall, should have a covering classified as BROOF (t4) [EN 13501-5] on a substrate or deck of a material rated class A2-s3, d2 [EN 13501-1] or better. Thermoplastic roof lights that... are regarded as having a BROOF (t4) classification are not suitable for use in that zone.'



Pictured: Best Refurbishment 2022 award winning project, Smart Systems Ltd won by Bauder Ltd working with Central Roofing and Building Services Ltd.

The spread of fire within a building can be restricted by sub-dividing it into compartments separated from one another by walls and/or floors of fire-resisting construction.

'Materials achieving class B-s3, d2 or worse used as a substrate to the roof covering... may extend over the compartment wall in buildings that are... a maximum of 15m high,'

and,

'in one of the following purpose groups: [Residential (dwellings)] (purpose group 1); [Residential (other) (purpose group 2(b)); Office (purpose group 3); [and] Assembly and Recreation (purpose group 5).'

'Thermoplastic insulation materials should not be carried over the wall.'

AD B, Volumes 1 and 2, Appendix B11 defines a thermoplastic material as:

'any synthetic polymeric material that has a softening point below 200°C if tested to BS EN ISO 306 Method A120.'

Definitions

○ **Compartment** (fire): A building or part of a building, comprising one or more rooms, spaces or storeys, that is constructed to prevent the spread of fire to or from another part of the same building or an adjoining building.

○ **Compartment wall or floor:** A fire resisting wall or floor to separate one fire compartment from another.

○ **Fire-stop/Fire-stopping:** A seal provided to close an imperfection of fit or design tolerance between elements or components, to restrict the spread of fire and smoke.

SPRA
Single Ply Roofing Association

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|| The Single Ply Roofing Association (SPRA) interprets Requirement B3 as follows:

- [Roof] covering refers to a complete flat roofing system and not just the waterproof covering, as it is required to have a BROOF (t4) classification. Such a classification could not apply solely to the waterproof covering.
- Where they apply to flat roofing, both deck and substrate refer only to a structural flat roof deck and no other component of a flat roofing system, such as thermal insulation.
- Except for a structural flat roof deck, Requirement B3 makes no provision for the minimum Reaction to Fire classification of any other flat roofing system component that extends over a compartment wall.
- Polyisocyanurate (PIR) is a thermoset plastic (not a thermoplastic as defined above) and, therefore, PIR insulation materials may be

carried over a compartment wall.

The relevant building control authority and its officers may interpret Requirement B3 differently to the interpretation above. For example, they may interpret [roof] covering as relating to the waterproof covering only and insist that any thermal insulation that extends over a compartment wall is of a material rated class A2-s3, d2 or better.

The Final Say

Ultimately, the building control authority has the final say. Interpretation of Requirement B3 within and between different building control authorities is becoming increasingly varied. It is advisable, therefore, to clarify their requirements prior to work starting on site to avoid any demand for remedial works at a later date.

Once a method of compliance with the building control authority's requirements has been agreed, it is important to qualify the responsibilities of each stakeholder. In a new build,

typically it is the responsibility of the internal fit-out designer and contractor to ensure that any compartment wall meets the underside of the structural flat roof deck and suitable fire-stopping is installed. Nonetheless, the manufacturer, supplier and installer of the flat roofing system are advised to qualify this prior to works starting on site to avoid any contractual dispute.

Where the structural flat roof deck material to be installed above a compartment wall is to differ from that installed across the rest of the roof, the location of the compartment wall should be confirmed by the client, principal designer, designer and/or principal contractor prior to works starting to ensure the accuracy of installation. Ideally, this should be in the form of a plan drawing issued for construction.

Similarly in a flat roof refurbishment, typically the manufacturer, supplier and installer of the flat roofing system are not responsible for internal works. Again, it is advisable to qualify this prior to works starting

on site to avoid any contractual dispute. It is prudent, however, to make the client aware of their obligations: do existing compartment walls meet the underside of the structural flat roof deck? Is the existing fire-stopping – if any – sufficient? If access to the underside of the existing structural flat roof deck were restricted, an invasive survey by a competent person would be required. A refurbishment and demolition survey for asbestos containing materials may be required, too.

The Building Regulations can be contravened by not following the correct procedures or not meeting the technical performance requirements. If the building owner or those responsible for the works contravene the Building Regulations, the local authority may prosecute them in the magistrates' court. Consult the relevant building control authority at an early stage to clarify their interpretation of the requirements; agree a method of compliance; and avoid demands for remedial works, or – worse – prosecution. |||

Pictured: Health and Safety 2022 award winning project, Balerno High School won by Proclad (Small Works) Ltd working with Sika Ltd.

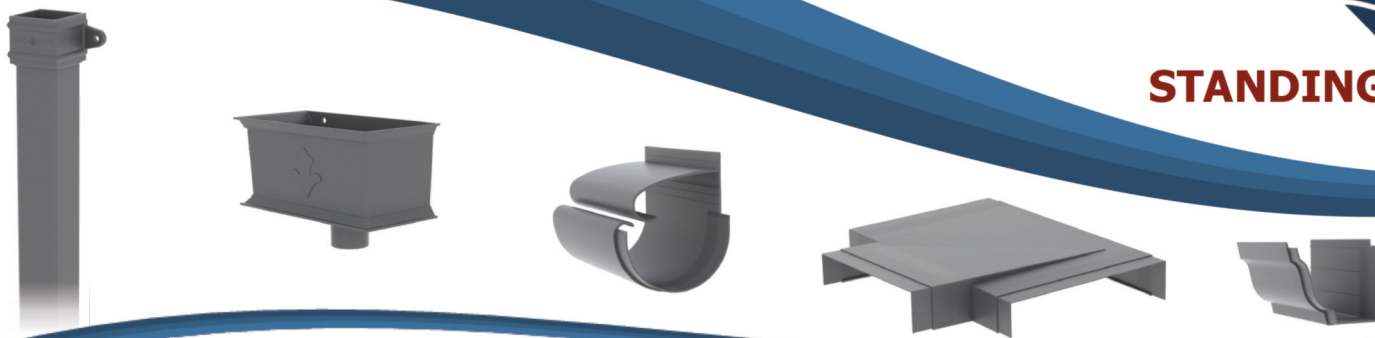


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Tackling the Cause and Effect of Climate Change with TPO Roofs

Shail Chauhan, Marketing Manager of Carlisle Construction Materials, the global specialist in building envelope solutions for roofs and facades, discusses the need for roofing systems that both address the causes and reduce the impacts of climate change, highlighting how thermoplastic polyolefin (TPO) waterproofing roof coverings fit the bill on both counts.



This summer's weather in the UK may most accurately have been described as a wash-out, but the damp July here belies the evidence from across the world that the planet is heating up at a speed that not even the scientists who warned of a climate crisis had anticipated.

According to the World Meteorological Organization (WMO), 6th July saw the highest ever daily average global mean surface air temperature, making it the hottest day on record, closely followed by 5th and 7th July. Europe has gone into meltdown again this summer. According to ERA5 data from the Copernicus Climate Change Service (C3S), the first three weeks of July were the warmest three-week period on record, with temperatures reaching 47°C in Sardinia, and 20,000 people being evacuated from the Greek island of Rhodes due to forest fires caused by tinder box conditions.

All of these factors present huge challenges for the specification

Increasingly, developers, designers, building owners and the whole construction delivery chain are looking for solutions that deliver a circular approach to sustainability.

and construction of our built environment. Not only do buildings need to be robust enough to respond to our changing climate, providing a safe and comfortable indoor environment without onerous levels of maintenance; they also need to avoid exacerbating the problem due to the use of materials with high levels of embedded carbon and low life expectancy.

Increasingly, developers, designers, building owners and the whole construction delivery chain are looking for solutions that deliver a circular approach to sustainability and leading manufacturers such as Carlisle are enabling them to build those priorities into their specification with high performance, sustainable systems. So, as Carlisle launches the proven SURE-WELD® TPO (thermoplastic polyolefin) system in the UK, how can TPO reduce a building's impact and improve its resilience to climate change?

Enhancing Green Credentials

Roofing is just one element of a potential green specification for a building, but it can play an important role in enabling other green credentials that may be included in the building design. This is particularly pertinent to larger roofs, which have the potential to be a resource for the building and its location, as well as part of the building fabric.

Operators of large buildings, such as logistics hubs and factories, are increasingly aware of the need to invest in environmental best practice as part of their ESG commitment. They are also cognisant of the operational cost and resilience benefits of using renewable energy, rather relying on the grid. As a result, companies like Amazon are installing solar panels at their sites and both new build and refurbishment projects for large roofs need to consider the potential for solar panels to be part of the specification, either at build or as a future retrofit. TPO is an ideal partner for rooftop solar PV, because it is robust enough to support the installation and its pale colour provides reflective properties that help to maximise the potential energy conversion of solar panels.

Similarly, large roofs have the potential to enhance biodiversity and embed green space into development projects with the specification of a green roof. Offering excellent root resistance, TPO is also suitable for green roof systems.

The Urban Heat Island Effect

One of the most instantly recognisable features of a TPO roofing membrane is its colour. TPO is available in a variety of colours including pale grey or white. The significance of this is much more than aesthetic, as the light roof covering reflects heat, preventing solar gain that not only heats up the fabric of a building, but also increases the heat of cities and urban environments.

Heat absorption and retention by buildings is a phenomenon known as the urban heat island effect, but it is not confined to urban areas; it can also affect industrial estates, logistics hubs, large hospital complexes – in fact any environment where large expanses of roof have the potential to absorb or reflect heat. It is a problem that is growing exponentially, as the level of urban density and the scale of industrial and logistics buildings increases. Moreover, the factors affecting the heat absorbed and retained by a building exacerbate each other: the warmer the climate, the more heat a building will absorb; the warmer buildings become, the more they rely on cooling systems, which generate heat and require energy that may contribute to global warming.

While a heat-reflecting roof covering such as SURE-WELD TPO is not a complete solution to the urban heat island effect on its own, it is a key element of the role that the specification of the building fabric can play in reducing this issue. When specified in combination with energy efficient building services and an insulated building envelope that reduces heating and cooling requirements, it can form part of a robust environmental strategy.

Robust Performance

The flip side to the higher temperatures the world is experiencing due to a changing climate is the level of rainfall we're getting – which is also predicted to increase in the coming years. Waterproofing the roof is the main purpose of any



The light roof covering reflects heat, preventing solar gain that not only heats up the fabric of a building, but also increases the heat of cities and urban environments.

roofing system, and any technology, properly installed, should deliver that fundamental purpose. As best practice goals, however, specifiers should also be looking for waterproofing systems that enable the project team to make the structure watertight quickly, reduce the risk of leaks at seams or fixings, and provide consistently high levels of waterproofing performance throughout an extended service life.

For larger roofs, a flexible membrane available in large sheets enables the project team to make the building watertight quickly, TPO is ideal in this regard. Using induction technology, not only enables a quicker and simpler installation process, but also means that the membrane can be removed cleanly and easily from the roof at the end of its service life.

Longevity is also an important element of performance and environmental credentials. TPO contains no environmentally hazardous toxins or plasticisers, so it will not crack or blister over time, retaining its elasticity and consistent performance throughout an extended service life. TPO membranes do not need softeners and have a high level of temperature stability. This is enhanced for Carlisle's latest membrane with an ingredient combining U/V and temperature stabilisers, to improve durability and flexibility as well as resistance to dirt, mould, bacteria and other contaminants, keeping it whiter for longer and increasing the efficiency and potential lifespan of the roof covering – an important sustainability, operational and cost factor.

A More Sustainable Future

Both the construction industry and the wider world are looking for solutions that reduce waste and avoid materials that are hard to recycle.

In Berlin, for example, the authorities have banned PVC products, including PVC roof coverings, indicating a need to consider alternatives. TPO can be recycled at the end of its service life and the SURE-WELD® TPO is made using recycled materials and can be removed cleanly from the roof for re-use or recycling at the end of its service life.

TPO roofing systems may be a less conventional choice for UK specifiers at the moment, but specifiers should work with trusted supply chain partners to understand the benefits of the various roofing systems available and explore the potential of TPO as one of the options that might meet their project requirements, particularly for larger roofs. ■

Record Number of Roofing Firms Join Together for Charity

The winners of the Liquid Roofing and Waterproofing Association (LRWA)’s Charity Team Challenge 2023 contest have been revealed.

Now in its fourth year, the challenge invites teams of up to 10 people to walk, run, cycle or swim as far as they can in 30 minutes to achieve the highest number of kilometres and raise money for the LRWA’s chosen charity, LandAid.

Record Participation

This year saw a record of 20 teams take part, with 182 participants across the liquid waterproofing sector. The LRWA has announced that across the

three-week challenge period, a total of £9k was raised for charity with 1,209 km achieved collectively by the teams.

Winners

Taking gold this year was Sika Liquid Plastics (Sika Wolf Pack), silver was awarded to Axter (Axter Allstars), and Linroc (Linroc Lions) scooped bronze.

The most original photo, voted by the public online, was awarded to Tyrone Elkins from Restec Roofing Systems (Restec Raptors), for his photograph at The Sculpture Park in Surrey. The team that raised the most money for LandAid was the Linroc Lions.

Speaking of the 2023 event, Sarah Spink, CEO of the LRWA, said: “This year, we’ve had the highest number of people enter the challenge to date, and it’s fantastic to see the sector getting involved in a fun and social event, whilst raising money for such a worthwhile cause.

“Well done to all the winners, and for everyone who took part in this exciting challenge. I hope all team members enjoyed it; it was great to see the competitive spirit in full swing across social media platforms.

“As an association, we’ve actively been raising money for charity since 2016, and have donated almost £30k in the last 6 years to a variety of different causes

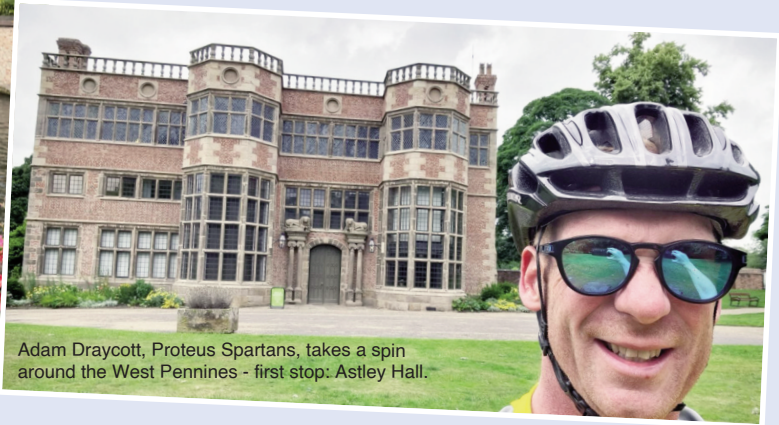
including Mind, Find a Better Way and LandAid. Thank you to everyone who generously donated.”

The Challenge took place from 30 June 2023 until 21 July 2023, and teams submitted their entries online. The LRWA’s chosen charity, LandAid, invests more £2 million every year in projects working to end youth homelessness. The charity is focussed on providing safe, secure and affordable accommodation for young people across the UK who are experiencing homelessness.

The Sika Wolf Pack team will be awarded their Charity Challenge Trophy at the annual LRWA Awards and Gala in March 2024. |||



Bruce D'Cruze, Linroc Lions, keeps the challenge going while on holiday in Bruges, Belgium.



Adam Draycott, Proteus Spartans, takes a spin around the West Pennines - first stop: Astley Hall.



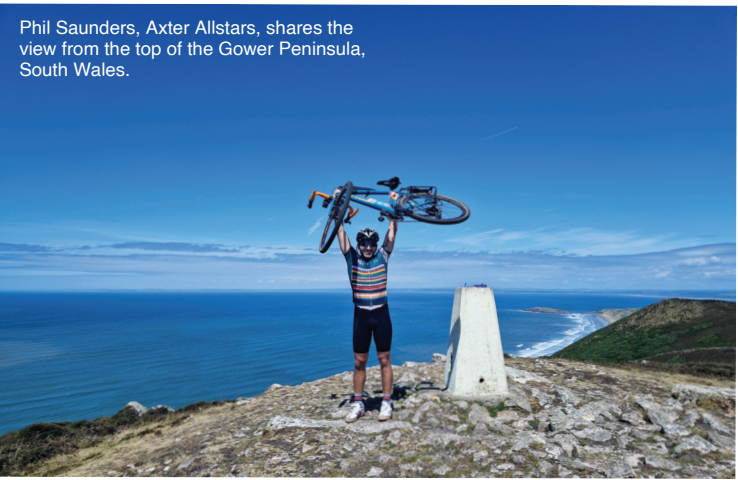
Aman Chahal, TP Tornadoes, takes a jog along the beach



Simon Gardner, Proteus Spartans, shares the view at Dovestone Reservoir.



Adrian Michel, Sika Wolfpack, enjoys a picturesque ride around Mount Fuji, Japan.



Phil Saunders, Axter Allstars, shares the view from the top of the Gower Peninsula, South Wales.



Annie Hunn, Axter Allstars, tackles the challenge with support from her lovely labrador.



Tyrone Elkins, Restec Raptors, won most original photo for his unique snap at The Sculpture Park in Surrey.



Anna Godzinska, Axter Allstars, poses for a pic at the Green Wind sculpture.



Is the Future Warm Roofs?

Are traditional roofing designs and installation practices hampering the UK in moving towards more airtight and so more efficient roof spaces? Here, Iain Fairnington, Technical Director at A Proctor Group considers the challenges of cold and warm roofs, as well as some of the alternatives.



The A Proctor Group has been supplying construction membranes for over 30 years, and then, as now, most of the mainstream housing in the UK was built using truss rafters with insulation placed across the ceiling. This type of construction, a 'cold pitched roof', leaves a large, unheated, and uninsulated void above the habitable spaces.

Prior to the common usage of trusses, which began in the 1960s, these roof spaces were made from a frame of cut timbers, which allowed a relatively easy path to convert the loft space in the future, as is the case in many older properties. Trusses make this process all but impossible, but at the time this space was still a useful storage area, often floored, but not really useful as living space. This leaves the UK with a significant enclosed volume of unused space within our dwellings, by some estimates

In the 2020s, we still build roofs much the same way. Only now, the issues surrounding these cold roofs are more pronounced, with modern regulations demanding thicknesses of insulation that rule out even using these spaces for storage.

enough space to house the population of a city the size of Sheffield.

Inefficient Design

The issues with this type of construction have been recognised, and for as long as we've been supplying roofing underlays, it's been suggested that such cold roofs are a dying trend. Since the 1980s progressive design wisdom was that this inefficient use of space would 'soon' be phased out in favour of insulated, heated, and habitable roof voids,

as is standard practice in many other markets around the world.

But in the 2020s, we still build roofs much the same way. Only now, the issues surrounding these cold roofs are more pronounced, with modern regulations demanding thicknesses of insulation that rule out even using these spaces for storage. This increased insulation also increases the risk of thermal bridging at the wall/roof junctions.

It can even be argued that the traditional, highly skilled slating and tiling commonly used in our

roofs exacerbates the current critical housing shortages. Despite the army of tradesmen and apprentices working across the country, and showcases, such as the NFRC's Skillbuild competition, houses cannot be built fast enough to meet demand, even where the will exists.

Optimised for Modern Methods

Single ply membranes or continuous sheets such as standing seam present a faster alternative, potentially more optimised for modern methods of construction, but these systems introduce a particular aesthetic, which may not always be desirable to clients. They also complicated the balance of air and moisture movement between the 'primary' outer weather protection and the 'secondary' layer, the roofing underlay.



So What are the Alternatives?

The various types of roof configuration are illustrated and defined in the guidance document BS5250, the code of practice for the management of moisture in buildings. This management of moisture, and the inter-related effects on air movement and heat loss are central to effective and efficient design, even more so now with regulations demanding ever lower energy use.

We've introduced the cold roof, where insulation sits over the ceiling ties, already. In this type of roof, condensation risks are mitigated using either roof void ventilation, or a vapour permeable underlay.

Due to the size of the loft void and the cold outer surfaces, ensuring moisture control is accounted for is particularly critical in this type of roof.

Underlays which are both air and vapour permeable, such as our Roofshield, are ideally suited to this as they can permit a greater degree of moisture flow.

In a warm pitched roof, the 'loft' is within the heated space, and the insulation follows the pitch of the roof, usually between and/or over the structural rafters. This differs from a warm flat roof where the insulation is always over the

structural deck. In this configuration there are typically no cold voids in the construction. That means other factors, such as minimising thermal bridging and air leakage, can be prioritised and the specification of insulation and underlay adjusted to reflect this.

Room in the Roof

A hybrid, or room in roof, construction typically has cold roof section at the eaves and ridge, with warm roof sections in between. This creates a complex mix of considerations, with ventilation paths and underlay specifications requiring more careful consideration than roofs which are entirely warm or cold. The different roof types and the junctions between them must be

carefully considered to ensure moisture can move freely and evenly through the construction.

SIPS & CLT

Finally, we can consider the most modern roof types, structural insulated panels, and cross laminated timber.

While hygrothermally similar to warm roofs, these systems are characterised primarily by continuous insulation layers and hence greatly reduced thermal bridging.

The insulation here can be designed to remain unbroken between roof and wall elements, and this approach can be extended to vapour permeable membranes. A SIP or CLT

Looking 30 years into the future, will we still be using cold roofs? Who knows, but to meet and mitigate the challenges of net zero, skills shortages and whatever unforeseen issues may arise, a tightly integrated design process with good communication is key.

dwelling with unbridged insulation layers and a high-performance air barrier, such as our Wraptite, can easily achieve and meet even the most onerous energy performance requirements while avoiding moisture problems.

Combining this performance with modern methods of construction, such as modular and volumetric offsite systems, can deliver high quality at speed, but there will always be a place for the traditional methods and skilled trades in the industry.

Looking 30 years into the future, will we still be using cold roofs? Who knows, but to meet and mitigate the challenges of net zero, skills shortages and whatever unforeseen issues may arise, a tightly integrated design process with good communication is key.

As material suppliers we are in a unique position where we have ongoing dialogue with everyone from regulators to designer to installer to building control officers. This insight into the entire process allows us to assist in the optimisation of designs throughout the process ensuring whatever design is adopted is up to any challenge it may face. ■

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Choosing the Best Rooflight Option for Your Clients

With rocketing energy prices and mortgage rates, as well as record-breaking heatwaves the changing performance credentials demanded of rooflights gets ever tougher. Squaring the circle of heat retention and transmission is all about using the right products, says Paul Higgins, Commercial Director at TuffX.

“Times have changed, and our homes are changing with them,” says Paul Higgins, Commercial Director at toughened glass and rooflight specialists TuffX.

“Energy prices have rocketed to heights we never would have imagined, and the cost of living continues to rise. We’re unlikely to see the historically low mortgage rates we’ve become used to again for a long time. Financially this all affects our decisions as homeowners and renovators.

“But many people are also still working from home, if not continually now, then in a hybrid fashion which has been so popular among employees and looks set to stay to some degree or other. And this impacts how we want to use and feel about our homes, which are working harder than ever. So, it’s about making quality product choices with benefits that justify the cost, and longer term also improves the efficiency of the home and consequently the cost of those energy bills.”

Zoning with Daylight

New home spaces, with room for desks and ideally dedicated work



areas that can be stepped away from at the end of the day, have become popular as we work more from home. Rooflights can provide a creative solution to ‘zoning’ new areas in the home – be it a home office or new living space.

Using rooflights creates the impression of separate ‘zones’ in an otherwise open space. “They’re a great way to update an open plan home to include a new designated zone for work or living,” says Paul.



“Roof lights and lanterns are also ideal for extensions as they flood the home with natural light, particularly in terraced or narrow properties, where the centre of the house can otherwise lose this and become quite dark,” says Paul. “Natural light isn’t just a pleasant nice-to-have either, it can reduce eye strain, headaches and fatigues, as well as increase productivity, all important in a working environment.”

For year-round comfort, solar glass rooflights are a popular option. But, explains Paul, most come with a compromise: “These usually include a glass tint applied to the outer pane to help manage heat transmission which can have a substantial impact on ambient light levels in the home.”

However, if you do your research, you will find new products are slowly coming to market that do away with this trade-off between heat management and the proportional loss of light

associated with tinted solar products. “The result of these innovative products is maximum light transmission with minimal solar heat gain, helping to maintain comfortable indoor summer temperatures,” explains Paul. “New, pioneering glass coatings can now absorb and reflect up to twice as much heat as standard glass, meaning homeowners are no longer forced to choose between light and comfort. If homeowners opt for a unit with a low U-value too, heat should be retained equally well during the winter months.”

Paul says: “Times may be tough, but that’s why it is more important than ever to make sure the products you offer clients, whether in a new build or renovation, are working hard to give your customer what they need – energy efficiency, great value and a home that performs as brilliantly as it looks.”

For further information visit www.tuffxglass.co.uk.



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IDV Our original interlocking dry verge which suits most single lap interlocking concrete tiles between 260 and 355mm batten gauges.

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Snickers Workwear Trousers – Working as Hard as You Do

Hi-tech fabrics, functionality and fit are the hallmarks of this market-leading working clothes range. Trousers that deliver functionality, comfort, protection and mobility are key factors in the brand choices of professional tradesmen and women. That's why the sustainable, street-smart, body-mapping features of Snickers Workwear work trousers make them the clothes of choice for those who want to work at their best.



The AllroundWork trousers suit work in any trade. FlexiWork trousers deliver freedom of movement, while LiteWork trousers keep you cool, dry and ventilated. Then there's RuffWork trousers, reinforced and tough for the roughest work on site; ProtecWork protective wear for hazardous environments, and certified High-Vis trousers when personal visibility on site is a priority. Snickers Workwear trousers also deliver certified protection with the patented KneeGuard® system and CORDURA® reinforcement for greater flexibility, comfort and durability. This is what makes them the optimal choice for craftsmen and women who need to get every job done comfortably, efficiently and sustainably on site. Visit: <https://www.snickersworkwear.com/list/product-guide/trousers-made-to-fit>

More Contractors Enjoy More 'Appy Days with Building Superstore

Building Superstore has seen an increase in orders placed via its mobile app over the last three months. The online builders merchant offers a quick and easy alternative to buying building materials in person, providing 130,000 different products whilst still offering access to a real-life customer service team who can help with product selection, technical queries, and best price points.



Designed to help trade contractors save time and money, the app is available for all Building Superstore account holders and offers additional benefits, including exclusive offers and discounts. Users of the Building Superstore app will be supported by advisors who are on hand by phone or live chat to assist with orders. An account can be both cash or credit and, as all of Building Superstore's products come directly from the supplier, the best and most competitive prices are guaranteed. The app can be used across all of CMO's online superstores. For more information, visit <https://www.buildingsuperstore.co.uk/account/register.html> or search for the Building Superstore App on the Google Play Store or Apple App Store.

Cut out the Lead with Samac Fixing's Rooftec Flex

As the requirement for more sustainable building solutions gains momentum, the demand for alternatives to traditional lead roofing is skyrocketing. Rooftec Flex from Samac Fixings is a replacement for lead flashing and harnesses the benefits of EPDM, together with an expanded aluminium mesh core. Made from synthetic rubber derived from natural gas and oil, it can be easily recycled and is an excellent choice for any roofing project that needs to reduce its carbon footprint.



Designed to resist degradation caused by UV rays, ozone exposure, and extreme temperatures, Rooftec Flex has a life expectancy of 40 years and carries a 15-year guarantee. It can be used on roof abutments, dormers, ridges, chimneys, valleys and skylights and is compatible with substrates such as concrete, wood, and metal. Rooftec Flex is lightweight and easy to handle, even on complex roof structures. Also, unlike traditional lead roofing, both EPDM and aluminium hold no scrap value, so they won't be a target for thieves. Available in anthracite grey, lead grey or black and in a range of sizes, Rooftec Flex helps roofing contractors meet the expectations of eco-conscious clients while championing a greener, more responsible future in construction. Visit: <https://www.samacfixings.co.uk>.

SIG Expands in Solar

Building on the success of its in-line solar PV offer, including products from Marley, BMI and Wienerberger, SIG Roofing is expanding its range of renewable technology to include a full PV package for pitched, flat and industrial roofs. This is no longer limited to Solar PV panels: SIG is offering all fixings plus electrical connections, cables, inverters, battery storage and EV charging points. Flat and industrial roof installations are part of the market for our customer base. SIG Design and Technology and Industrial Roofing and Cladding (IRC) will be able to include solar solutions as part of a full roof specification. With the MCS approved products packaged together from SIG Roofing, and online help available, it's a very user-friendly service for the contractor. The full SIG Solar PV package is available through all SIG Roofing branches, together with specialist technical support from the SIG Roofing Solar team. For more details, visit www.sigroofing.co.uk/solar.



With a challenging timescale for the development of the full contractor support programme, SIG Roofing is rapidly recruiting a number of BDMs and technical support roles. For more detail on these roles, email solar@sigroofing.co.uk.

Bond It Saves Customers from Harsh Choices

Bond It is making it easier for homeowners and landscaping professionals across the UK to enjoy cleaner patios and hard landscaped areas without resorting to the use of harsh chemicals. The business has revamped its Patio Blaster green mould remover, including new packaging. Kirstie Cooper, Marketing Manager at Bond It, explains: "Patio Blaster is highly effective at removing green mould, lichens, moss, algae and other organic growth but does so without employing acids or bleach as part of its formulation."



In addition to its gentler cleaning action, which kills off green growth in two to three days, Patio Blaster is biodegradable, anti-bacterial and long-lasting. After application, it will protect treated surfaces from the reoccurrence of organic growth for several months. Patio Blaster can be used on patios, driveways, fencing, decking, pathways, roofing, stonework, brickwork, masonry and concrete. It is also effective on artificial play surfaces, garden sheds, greenhouses, conservatories and even caravans. Plus, thanks to its gentle formulation, Patio Blaster can be used on delicate surfaces such as glass, rendering, mortar and plaster without causing damage.

New Mapei Polyglass Roof for Enfield Council Civic Centre

A Mapei Polyglass waterproofing roof system has been used to complete an extensive renovation at Enfield Council Civic Centre. The project, completed by Alex Bennett Precision Roofing, spanned the link roof at the centre and provided ungraded insulation, along with a host of features that were much-needed to improve the safety and efficiency of the building. During the roof refurbishment, limestone was removed from the asphalt surface and the existing waterproofing system was cleaned and prepared. Mapei's fast-drying Bituminous primer, Polyprimer HP45 Professional, was then applied to the surface to eliminate dusting and the roof was treated with germicidal foam. The new roof system included three Mapei Polyglass membranes: Polyvap SA P-AL prefabricated self-adhesive bitumen membrane, featuring ADESO® technology; Bitulight P – prefabricated elastomeric-plastomeric membrane featuring REOXTHENE® Ultralight Technology compound and Polyshield prefabricated waterproof plastomeric membrane. The system was installed with Adepur insulation adhesive. For more information, contact info@mapei.co.uk or visit www.mapei.co.uk.



Roofing Apprenticeships at Greenlight Training, Bristol

Roofing Today recently visited Greenlight Training at its Bristol centre. Opened one year ago, the centre joins Greenlight's sister facility in Plymouth – with both centres now offering training to over 80 roofing apprentices, making it one of the largest roofing apprenticeship providers in the South West.

Greenlight's dedicated Bristol centre is well equipped with several roofing rigs for both pitched and flat roofing. Apprentices attend the centre for three days every month for a mix of practical activities and onsite classroom-based tasks.

Located next door to specialist roofing merchants Roofbase, Greenlight apprentices benefit by attending roofing CPDs held at the depot, as well as from materials generously donated by the company and its suppliers. Recent donations have included fibre cement from Cedral, tiles from Crest, and Midland Lead which supports apprentices with donations and recycling of lead.

Training at Greenlight's Bristol centre is delivered by Simon Siddle, an experienced roofer who worked on the tools for 25 years full time, both employed and subcontracting, installing domestic and commercial roofs.

Although Simon still keeps his hand in with occasional roofing work, most of his time is now taken up with teaching: "I most enjoy seeing apprentices' attitudes change during their training," says Simon.

"It's great to build the rapport with them and see them settle down. We set up a Whatsapp group for each cohort and they share the pictures of the roofs they're working on. They start to feel comfortable with each other and are happy to ask questions and that's when you know they are really taking learning in."

Serving a wide geographical area, up to Gloucestershire in the north, down as far as Taunton, and Bath in the west across to Bournemouth, Greenlight has its own recruitment team. They'll



Pictured: (l-r) Simon Siddle (Tutor), Tracy Scorgie (Centre Manager), Cameron Roberts, Alfie Maddern, Matthew Winsley, Thomas Everett, Charles Butt and Tyler Thomas.

find employers in the apprentice's area (important for school leavers who don't yet drive), as well as finding apprentice candidates for employers, and can help with funding paperwork. Greenlight has a good retention track record and works with some of the area's biggest roofing companies such as Ashcroft Services, AL King and Davis Roofing.

Simon teaches apprentices with a wide range of skill levels, from beginner school leavers, to roofers with a year or two's experience who want to become qualified. "Employers vary too," says Simon. "Some employers have a gradual approach to introducing

apprentices to increasingly complex work, whereas others let their apprentices just get stuck in whatever jobs they're doing. Often apprentices are put in a gang with other experienced roofers and that's very helpful to their learning – but sometimes it goes two ways, with apprentices bringing back to work ideas on new ways of doing things."

"Slatng and tiling is the most popular apprenticeship and the students love doing ornamental work and leadwork skills towards the end of their training. We also offer the flat roofing apprenticeship: torch on, liquid applied and single ply."

Support and Success

Greenlight in Bristol has so far had three apprentices complete their End Point Assessments (EPAs), with another 12 waiting for a date. Results have been impressive, with two passes and one distinction. The shortage of roofing assessors means that Greenlight has extended its use of EPA providers beyond NOCN to try and find more availability for their apprentices to complete their EPAs.

Simon says Greenlight's success is down to the support it receives from employers and suppliers as well as the Centre's commitment to extending the apprentices' experience through visits and talks. Parents and guardians aren't forgotten, with regular Open Days to involve them. It all adds up to supporting apprentices' skills and expanding their industry knowledge and networks, helping them to launch into successful roofing careers. ■



Cameron Roberts and Alfie Maddern show off their flat roofing skills.

Greenlight Safety and Training
Unit 127 South Liberty Lane
Bristol BS3 2SZ
Tel: 0117 4320 030
Mobile: 07821650917
www.greenlightsc.co.uk

CUPA 12 Slate Used to Maintain Aesthetic at Listed Welsh School Refurbishment

CUPA PIZARRAS' CUPA H12 natural slate was specified for the refurbishment of a Grade II listed school in Newport, South Wales. Selected as a cost-effective yet authentic alternative to traditional Welsh slate, the CUPA H12 helped the project team retain the original aesthetic of the St Woolos Primary School annexe building.

Due to the building's listed status, the Ffestiniog slate roof needed to be replaced with a slate that matched the original aesthetic. Following a Natural Slate CPD, the project design team Newport Norse chose CUPA PIZARRAS' Spanish slates as an alternative. Stuart Black, Area Sales Manager at CUPA PIZARRAS explained: "Our slate is an ideal replacement for many traditional British slates that are no longer mined or more difficult to source. For St Woolos Primary School, I suggested the grey CUPA 12 slate, which closely matches the colour of traditional Welsh slate and as such has been used on several listed buildings across South Wales." The installation was carried out with the CUPA H12 slate in 60x30cm dimensions. The ridge and hip tiles were also replaced with new red clay tiles to match those on the main school roof. [For more details, visit: www.cupapizarras.com/uk/](http://www.cupapizarras.com/uk/).



EJOT Strengthens UK Sales Engineer Support with Dual Appointment

EJOT has welcomed Lauren Winn and Zack Outhwaite to its UK technical sales team. With a strong background in technical sales within the electrical and HVAC sectors, Lauren's experience is suited to her new role, which involves working with roofing and cladding contractors in the north of England along the M62 corridor. Covering a region to the north east of Lauren, Zack will be supporting EJOT's customer base in Newcastle, Sunderland, County Durham and Teesside. He brings with him several years of technical sales experience in the building supply chain.

Their appointments demonstrate EJOT UK's strategy to expand its customer sales and support teams, ensuring contractors and specifiers in the building envelope market receive world-class service at a time when face-to-face sales operations are dwindling. Lauren and Zack give contractors a key point of contact to maintain regular orders and discuss new requirements. As they support customers at the early stages of project planning and costing, they can also provide access to additional technical resources, including the EJOT Applitec centre for assistance with training and best practice. [Visit: www.ejot.co.uk](http://www.ejot.co.uk).



Mapei Introduces Polylastic Water-based Bitumen

Mapei has launched a new water-based elastomeric bitumen membrane. Polylastic is a ready-to-use coating system which can be used to waterproof a variety of substrates. Offered in six colours, the membrane is fast and easy to apply by brush, roller or trowel. It also adheres to damp surfaces, making it ideal for fast-track application in all seasons.

Part of Mapei's Polyglass Roofing Line, Polylastic can be used to waterproof concrete structures, fire-cement, wood steel, galvanized sheet metal, sandblasted tiles and bitumen membranes. It can also be used to repair old polymer bitumen membranes. The water-based membrane comprises a blend of special bitumen, synthetic elastomeric resins and high-dispersion fillers; the resulting compound has a high level of adhesion which creates the waterproof coating. Once dried, the membrane forms a highly elastic waterproof film which is UV-resistant and which withstands substrate hairline cracks. After application, it can be left exposed or covered with cement mortar or coated. Polylastic colour options include Grey, Brick Red, Bright Red, Blue, Green, and White, each available in 5kg and 20kg units. [For more information, visit: www.mapei.co.uk](http://www.mapei.co.uk).



Snickers Workwear's New Hybrid Jacket

The new Hybrid Multi-purpose Work Jacket is a street-smart, highly versatile garment. Great on site or for leisurewear, it's made of flexible, wicking jersey fabric with Repreve® fabric insulation in the shoulder and upper body area. The Hybrid Jacket provides great freedom of movement and elasticated comfort for all types of work and warmth or ventilation when you need it.

Whatever top layer clothes you need – for work, play or protection against hazards – Snickers Workwear has a range of jackets that will work on site for both men and women, always delivering optimal performance, comfort and good looks.

Just check out the features of Snickers Workwear jackets. There will be one to suit you - wherever you are, whatever you need, whatever you're doing. [Getting more information on the Snickers Workwear jackets range is easy, visit: https://www.snickersworkwear.com/products/work-jackets](https://www.snickersworkwear.com/products/work-jackets).



Wraprite Protection for Cliff Top Residential Dwelling

The Wraprite external air barrier system from A. Proctor Group, selected for the redesign and extension of a property on the Essex coast, will improve energy efficiency and protection from the elements. Designed by AFT Design architects, the residential dwelling on the clifftop at Frinton on Sea was partly demolished and extended with single-storey extensions constructed to the rear elevation and roof level. Both extensions comprise a light gauge steel panelised system, including a sheathing board and Wraprite installed by Nexus Modular.

Bill Attwell, Nexus Modular Director explains: "We chose Wraprite for the breather membrane because of its strength. The self-adhesive fixing of Wraprite assisted with the durability in the high wind conditions. The erected LGS frame with sheathing and breather membrane had to be left exposed to the elements for some weeks until the render cladding system was installed. The self-adhesive application of Wraprite simplifies the installation and provides a totally durable solution." [Visit: www.proctorgroup.com](http://www.proctorgroup.com).



Access 360 Launches Toolbox Talks Series

Access 360 is delivering Toolbox Talk sessions to support contractors in achieving the highest level of safety and compliance on site. As a building products manufacturer positioned at the forefront of industry advancements, the Toolbox Talks form part of Access 360's commitment to providing industry professionals with the latest guidance on regulations and best practices when installing access products. The Toolbox Talks will comprise two separate sessions, delivered by Access 360's Specification Sales Manager, Jake Slade, and will cover Access 360's Profab Access and Bilco UK brands.

The Profab Access session will discuss the successful installation of riser doors and maintaining compliance with fire regulations for commercial and residential buildings. The Bilco UK talk will address roof safety considerations when working from height. The Toolbox Talks form an extension of Access 360's RIBA-accredited CPD seminars, hosted virtually and in person to architects and specifiers on a monthly basis. [Individuals interested in receiving a Toolbox Talk can contact Jake Slade directly at Jake.Slade@access-360.co.uk](mailto:Jake.Slade@access-360.co.uk). [For more on Access 360, visit: www.access-360.co.uk](http://www.access-360.co.uk).



CCF is on the Road to Lower Carbon Deliveries with HVO Fuel

CCF has invested in a sustainable fuel source to cut carbon emissions across its delivery fleet. CCF has introduced hydrotreated vegetable oil (HVO) refuelling sites at several of its branches to provide part of its delivery fleet with a low carbon alternative to diesel fuel. The shift to a more sustainable fuel source is part of CCF's commitment to decarbonise its deliveries by reducing the carbon footprint generated by its lorries by 92%.

The HVO used by CCF is sustainably sourced and made from waste materials such as used cooking oils. It has the potential to reduce emissions, including nitrogen oxide by 30% and particulates by 85%, and requires no modification to existing diesel engines. As well as bringing environmental benefits, CCF has made the move to HVO fuel to support customers who wish to reduce the embodied carbon within their supply chain. The move also supports CCF's involvement in the public sector where it is working with contractors to deliver the decarbonisation ambitions of the Government's Net Zero strategy. [Visit: www.ccf ltd.co.uk](http://www.ccf ltd.co.uk).



Burton Roofing Lays Down Mariseal for UK Market

Burton Roofing Group has signed a distribution partnership with Maris Saint-Gobain to bring its Mariseal premium liquid-applied systems to the UK. Available across Burton Roofing's 38 branch network, the new polyurethane liquid applied range offers a 25 year guarantee, providing peace of mind to both installers and their customers. The Mariseal systems provide an ideal solution with high performance application for waterproofing, protecting and flooring solutions. The high tensile strength membrane provides extra waterproofing, especially for areas with complex detailing. Maris Saint-Gobain explains: "Mariseal is available in 50 countries across the globe and the next step was the UK market. We saw a gap to offer a premium liquid-applied range that is cost effective, easy to apply and has a 25 year guarantee according to BBA, BR00T4, ETAG005 other top certificates and verifications like EPD. We needed a partner with strong technical expertise and an extensive distribution network and we found it in Burton Roofing Group."

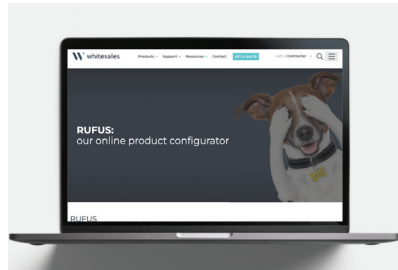
Burton Roofing Group is offering bespoke training courses on Mariseal for industry professionals to become accredited Maris installers. The one day courses will run across the branch network.



Upgraded Online Experience from Whitesales

Whitesales, the rooflights and daylighting specialist, has updated its website to make it easier for different types of customers to find exactly what they are looking for. Merchants, contractors, architects, homeowners and fabricators can now just select from a drop-down menu to access relevant products and technical and purchasing support.

Alex Gallop, Whitesales' Marketing Communications Manager, explained: "If you're a homeowner browsing for a rooflight system for your home, you need very different information from an architect who's specifying a continuous rooflight system for a hospital. We've reorganised the website so that there's an intuitive online journey for every type of customer - taking them directly to the products and support they need. For instance, the merchant pages feature the product catalogue, access to our merchant support package and RUFUS, our online rooflight configurator. While for fabricators, there's information on our partnership proposition, how-to installation guides and a focus on our new roof lantern. Visitors can obviously choose to browse the whole website; this is just the latest example of how we make it easy to work with us." [Visit: https://www.whitesales.co.uk/](https://www.whitesales.co.uk/).



EPD Insulation Group Employee Makes Final of Transport Manager of the Year 2023

Chris Pratt, Transport Manager at EPD Insulation Group is one of the last five national finalists in the running to become Transport Manager of the Year 2023. The competition was started in 2022 by UK Logistics, one of the UK's leading logistics businesses. It was created to be a platform to shine a light on the great work UK transport managers do, keeping goods, services and the supply chain wheels moving around the country. The event was a fantastic success and Lee Prentice, Transport Manager at Greggs plc, was crowned it first ever winner.

This year, EPD Insulation Group's Transport Manager Chris Pratt will compete for the title. Chris explained the process that got him to the final stage, "As this is a knowledge and case study-based award rather than one won through votes, I was interested in applying as I felt that it is more of an achievement. I have had to pass a test, submit a case study and next I have an interview with the judging panel where the winner will be decided." The winner will be announced on 30th November 2023 at an award ceremony in Birmingham.



Delivering Long-term Sustainability Commitment at Tata Steel's North Wales Site – One Year On

In 2022, Tata Steel's Shotton site, which manufactures the Colorcoat® range, announced its sustainability commitment. One of the short-term targets was to reduce CO₂ emissions by 20%, with the goal for Shotton to become carbon neutral before the UK greenhouse gas emissions net zero target of 2050. Now, a year on, the site has revealed its achievements so far. By switching its electricity supply to 100% renewable sources, the site has reduced its annual CO₂ emissions by 16%. In the last year, the site has also recovered 90% of onsite waste, and as a result, decreased its overall waste by 10% in the last five years.

Furthermore, Tata Steel's Colorcoat® products offer a range of carbon reduction options. One solution being explored is solar reflectance pigments on one of its pre-finished steel products, Colorcoat Prisma®, to help reduce a building's operational carbon. The solar reflectance pigments will reflect sunlight, helping to reduce the operational carbon emissions associated with mechanical cooling. [To find out more about Tata Steel's Shotton site and how it's building a more sustainable future, visit: www.colorcoat-online.com](http://www.colorcoat-online.com).



Construction Industry Updates from SFS's Podcasts



SFS UK, the manufacturer and distributor of carbon and stainless-steel fastening solutions for roofing, cladding and façade systems, has been offering support to specifiers for 120 years. Today, this support includes informative podcasts. There is a series of three podcasts focusing on fall protection and subframes, each lasting 30 minutes, discussing fragile roof design trends, the effects of thicker insulation in rainscreen cladding subframe systems and the effect of rainscreen subframe systems on the overall performance of external walls. The podcasts address industry regulations and best practice in installation; they are designed for everyone in the construction industry.

Also on offer is SFS PocketTalks, a range of shorter podcast episodes addressing the latest construction practices. PocketTalks discuss u-values, the challenges created by a lack of testing standards for permanently attached fall systems, the implications of the UK Cabinet Office's Construction Playbook and consider the impact of thermal bridging on rainscreen subframes. SFS podcasts can be accessed at <https://uk.sfs.com/podcasts>. Call 0330 0555888 or visit <https://uk.sfs.com/>.

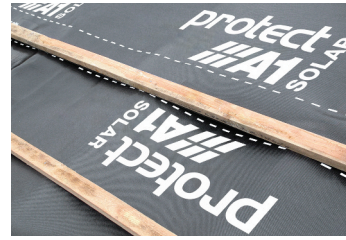
Understanding SterlingOSB Zero



All West Fraser's Oriented Strand Board (OSB) products are manufactured using selected fibres of timber that are laid in cross directional layers and mechanically pressed to form a structurally-engineered panel, designed for construction and other industrial applications. OSB is viewed as the natural successor to plywood because it is eco-friendly, home produced and affordable, while it contains none of the voids or knots which have historically weakened plywood. As the boards are formed from individual strands of softwood, some may question their strength and durability, especially if exposed to inclement weather, but this is a misunderstanding of OSB's characteristics.

West Fraser's SterlingOSB Zero OSB3 is BBA-certified, as well as approved for load bearing in humid conditions. If being used outdoors for extended periods, it can be painted or varnished, and can be treated to protect against fungal and insect attack. SterlingOSB Zero boards come in both square edged and tongue and groove format, which can be used for roofing and timber frame construction, as well as flooring – making the whole range infinitely flexible in use. Check out the West Fraser housebuilders' page <https://uk.westfraser.com/housebuilders/> for useful downloads and product information. Call 01786 812 921 or visit <https://uk.westfraser.com/>.

Glidevale Protect Provides New Solutions for Solar Roofs



With the recent Building Regulations Part L update and solar installations on the rise, there is an ongoing need to reduce carbon emissions within homes. Glidevale Protect has developed a range of membrane and ventilation products for use on cold and warm pitched roofs where in-roof solar PV panels are being installed.

New to the range is Protect A1 Solar, a heavy duty, type HR impermeable roofing underlay. The 145gsm membrane offers unrestricted use in wind uplift zones 1-5 at the maximum batten gauge of 345mm to BS 5534. Together with Glidevale Protect's high and low level ventilation options, Protect A1 Solar reduces the risk of condensation forming on the underside of in-roof solar PV panels. Due to its impermeable design and high resistance to water vapour transfer, Protect A1 Solar eliminates the need for a ventilated counter batten space above the membrane. Other Glidevale Protect pitched roofing membranes such as vapour permeable, type LR underlays can also be used together with in-roof solar PV panels. The Glidevale Protect Technical team offers guidance to aid specification via a full roof ventilation strategy and house type take off. Find out more at glidevaleprotect.com.

Don & Low Redefine Product and Technical Excellence at UK Construction Week 2023



Don & Low, the UK's renowned vertically integrated manufacturer of Roofshield® is set to captivate industry professionals at UK Construction Week this October. At the event Don & Low will unveil its construction membrane product range, a testament to its commitment to providing a holistic building envelope solution. From inception to completion and direct purchase, Don & Low has architects, house builders and merchants covered. Since 1996, Don & Low has been at the forefront of manufacturing roofing membranes. What sets Don & Low apart is its ability to customise membranes, offering a spectrum of prints and colours, coupled by its ethos to focus on recycled content, pioneering the path towards a greener future. As a visionary market leader that integrates quality, price control, and product performance, Don & Low stands poised to shape the future of membrane manufacturing and supply.

Sales and technical experts will be happy to welcome the visitors in stand 5332 at the NEC in Birmingham from October 3rd to 5th, 2023. For inquiries and further information, please visit www.donlow.co.uk or email info@donlow.co.uk.

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