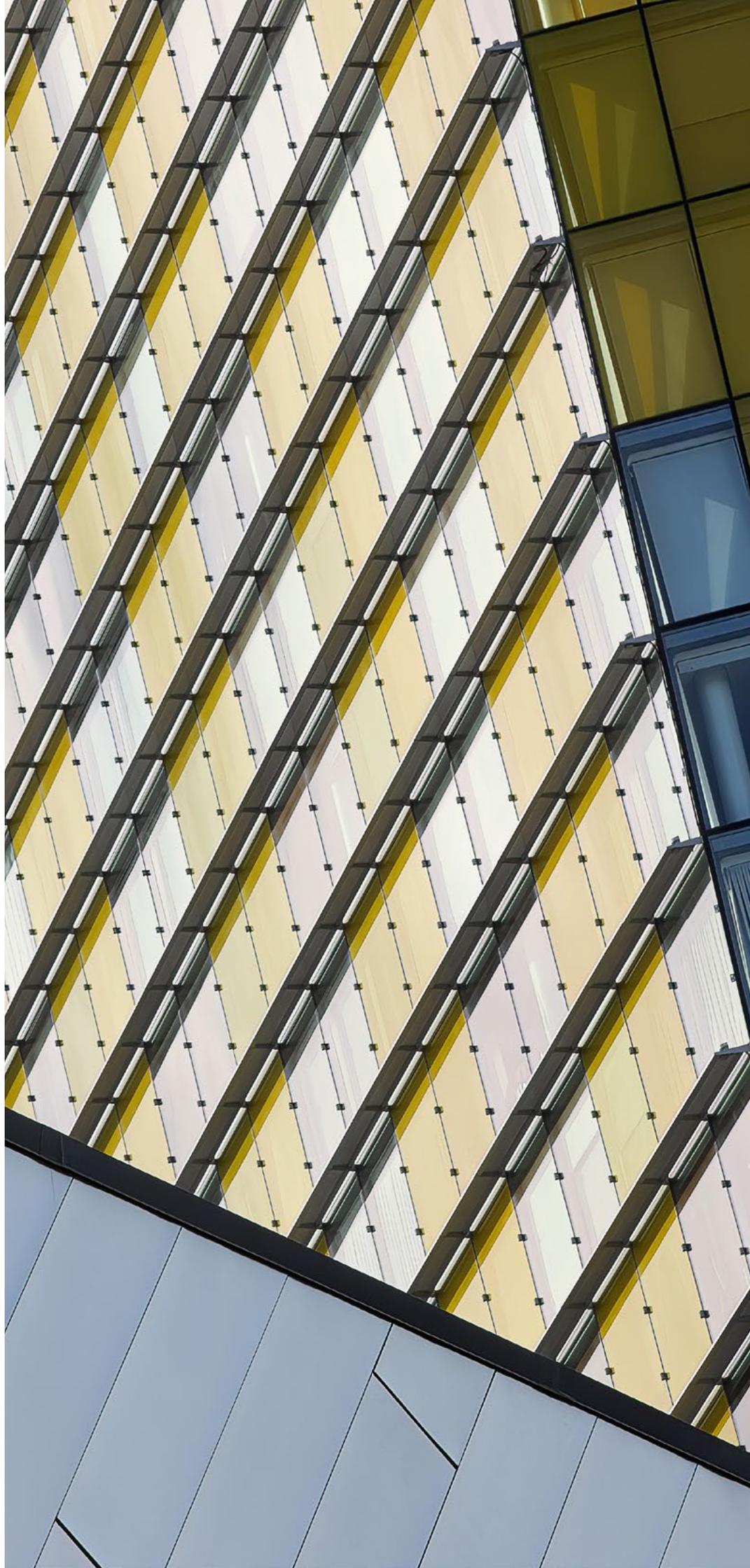


# Architectural Technology Journal

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# AT Awards 2023 close in June and July

The AT Awards opened for submissions and nominations on 6 February 2023 for the following Awards:

- Excellence in Architectural Technology
- Student Awards for Excellence in Architectural Technology
- Emerging Talent in the Technology of Architecture
- The Chartered Architectural Technologist of the Year
- Gold Award

Full details and application forms can be found on the website. Winners will be announced and presented at the AT Awards event on 20 October 2023.

The AT Awards are recognised as the premier accolades that demonstrate outstanding achievement in Architectural Technology and celebrate the technology of architecture.



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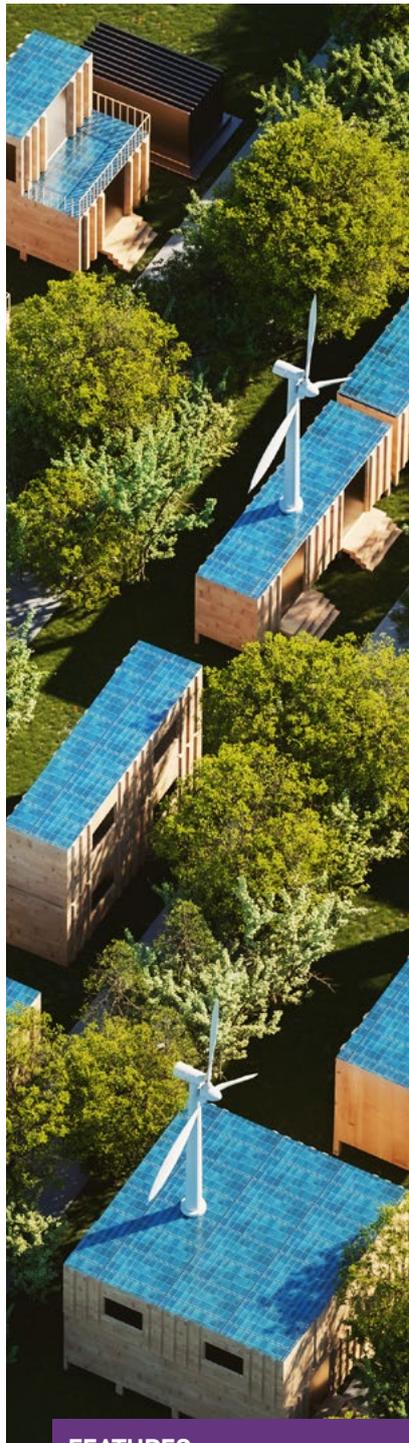
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## Editor's welcome



60 years ago in 1963, *Summer Holiday* was a smash hit for Cliff Richard, the year after the publication of a monumental survey for the AT discipline; *The Architect and His Office*. I mention both to commence my welcome as we reach the summer season once more, and to note Dan Rossiter's article, on page five, which addresses the 'A' word!

This edition has several articles which focus on prominent health issues within the built environment sector, and it is important that these are not overlooked. As well as addressing these health matters, mental wellbeing should not be brushed aside and as a reminder, the Architects' Benevolent Society (ABS) has great free support for this. Please do get in touch with them if you need help or assistance. Our very own President Elect, Eddie Weir PPCIAT MCIAT, is President of the ABS and has the dual role of being an advocate and ambassador for both the work of the ABS and the Architectural Technology community. We thank him for his continued dedication and selfless work.

The AT Award categories, which have varying deadlines, will start to come to a close over the next few months. Please do consider entering a project or nominating an individual who you think deserves recognition within the discipline, profession or for their work for the Institute. You can find all the information you need at: [architecturaltechnology.com/awards.html](http://architecturaltechnology.com/awards.html).

It is great to be receiving communication from members and affiliates looking to contribute and write for ATJ. If you have any ideas for an article, would like to showcase your work or have an opinion piece, then please do get in touch – this is your *Journal* and a fine way to honour your work and the discipline. My contact details are on page three and I very much look forward to hearing from others.

What were blue skies have now turned to pouring rain, all part of the ever-changing climate and there are several articles looking at achieving net zero and retrofitting which all work towards trying to reduce emissions and futureproof the planet for the challenges ahead.

I end with a quote to consider, "For me, design is like choosing what I'm going to wear for the day – only much more complicated and not really the same at all." – Robynne Raye.

Until autumn.

A handwritten signature in black ink, which appears to read 'A. Endacott'. The signature is fluid and cursive, with a long horizontal stroke at the end.

Adam Endacott  
Editor



# The 'A' Word

Words by Dan Rossiter FCIAT, Vice-President Technical

The relationship between Architectural Technology professionals and the word 'architect' is an interesting one. As members and affiliates will know, the term 'architect' is a protected title within the UK via the Architects Act:

**A person shall not practise or carry on business under any name, style or title containing the word 'architect' unless he is an [ARB] registered person.**

Members and affiliates should therefore be aware that any misuse of the word 'architect' (i.e. those who are not on the register of architects) would be unlawful.

However, outside of the UK, 'architect' is not restricted by statute and is often generically as a descriptive term to describe the function performed. For example, within Standards, such as ISO 6707-2, an international standard for construction vocabulary, defines an architect as:

## architect

**person who designs buildings and superintends the carrying out of building works**

**Note 1 to entry:** In certain countries, there are limitations on the use of the title 'architect'.

This means that, for some standards which have been adopted by BSI within the UK, there are references to 'architect' which are intended to extend beyond the limitations of UK regulation.

To help clarify this, Gareth Sewell FCIAT and Dan Rossiter FCIAT met with representatives from RIBA and BSI to agree a foreword that can be used on such standards. This foreword states:

**The UK committee notes that this standard uses the term 'architect' to mean 'person who designs buildings and superintends the carrying out of building works', as defined in Subclause 3.8.24 of BS ISO 6707-2:2017 Buildings and civil engineering works — Vocabulary — Part 2: Contract and communication terms, and advises users that this includes professionals beyond those protected by the Architects Act. As such, professionals such as Chartered Architectural Technologists are covered by the term 'architect' in this standard.**

To date, the term 'architect' has only been identified within informative parts of a standard such as its examples. However, it is hoped that having a pre-agreed foreword will reduce any ambiguity around the intention behind the use of the term within international and European standards that BSI adopt.

As such we hope this will empower members to:

- use British Standard which use the term 'architect' without concern;
- highlight these facts should a challenge occur; and
- inform the Technical Department at CIAT (technical@ciat.global) should you identify a British Standard which does use the term 'architect' without this foreword in place.

As the global membership qualifying body for Architectural Technology, with Chartered Architectural Technologists able to undertake the design and management of all project types, we are keen to ensure that national good practice accurately reflects our ability to perform these functions. ■

# Asbestos and you

Words by the Health and Safety Executive (HSE)

Those in the built environment sector across Great Britain are being warned about the hidden dangers associated with asbestos.

The warning comes as part of the Health and Safety Executive's Asbestos and You campaign targeting people about the personal risks from asbestos that still exist in properties across the country today.

Around five thousand people a year die from asbestos related illnesses and asbestos can still be found in buildings built or refurbished before the year 2000. HSE is warning despite the ban on its use, many buildings still contain asbestos, and it is still a serious risk to anyone exposed to it at any age.

Tim Beaumont, HSE's acting head of construction policy sector, said: "Asbestos can be found in things like Artex, cement boards under eaves, garage roofs, old bath panels, boiler houses and fires and even mortar between bricks can contain asbestos.

"There is no known safe level of asbestos exposure but that's not to say it can't be managed safely.

Asbestos is only dangerous if not maintained in a safe condition or if physically disturbed without the right measures in place to control exposure to fibres.

From the 1950s until 1999, asbestos containing materials were used extensively in the construction and maintenance of buildings in Great Britain.

When materials that contain asbestos are disturbed or damaged, fibres are released into the air. If these fibres are inhaled, they can cause serious diseases such as mesothelioma, asbestos related lung cancer, asbestosis and pleural thickening. These diseases will not affect you immediately as they often take a long time to develop, but once diagnosed, it is often too late to do anything.

It can take 20 to 30 years before symptoms appear. Symptoms include shortness of breath, persistent cough, wheezing, extreme tiredness, pain in your chest or shoulder and in more advanced cases, swollen fingertips.

If asbestos cannot be safely managed, it should be removed by a licensed asbestos contractor. Where present, asbestos should be closely managed by those responsible for the building.

Find out more about the Asbestos and You campaign, and visit HSE's website for further guidance on asbestos.

## HSE targets construction workers' lung health with nationwide inspection campaign

Failure to prevent life-threatening diseases caused by dust at work is unacceptable, says the HSE, as it gears up for a summer targeting construction sites across Great Britain.

Supported by HSE's *Dust Kills* campaign, which provides free advice to businesses and workers on the control measures required to prevent exposure to dust, the inspections throughout the summer will focus on respiratory risks from exposure to dust.

Each year in the construction industry, there are thousands of preventable cases of irreversible lung disease due to past exposure to dust at work. These diseases often have a life-changing impact and can result in an early death.

HSE's chief inspector of construction, Michael Thomas, said: "Every year we see construction workers die from diseases caused or made worse by their work. This is unacceptable in the 21st century, when occupational lung disease is preventable.

"We are urging employers and workers to take the necessary precautions today to protect their long-term lung health, to avoid them and their families suffering from the devastating impact that can result."

Starting on Monday, 15 May 2023, the inspections, part of a respiratory health intervention initiative, will specifically focus on dust control, checking employers and workers know the risks, plan their work, and are using the right controls.

Inspectors will be checking the control measures in place to protect workers from inhaling construction dusts including silica (Respirable Crystalline Silica/RCS) and wood dust. They will also gain assurances that asbestos containing materials have been identified and removed or managed where necessary to prevent or reduce exposure.

The primary aim of the inspection initiative is to ensure workers' health is being protected. However, if safety risks or other areas of concern are identified, inspectors will take the necessary action to deal with them. ■

For more information visit the Work Right campaign page.

# We Build The Future launch sun-safe and skin cancer prevention campaign

Built environment cancer charity, We Build The Future, has launched a sun-safe campaign to help reduce the risk and incidence of skin cancer amongst people working in the built environment industries.



Construction workers are at a heightened risk of developing skin cancer due to over exposure to UV radiation and account for 44% of occupational skin cancer diagnosis and 42% of occupational skin cancer deaths each year – despite construction workers making up only 8% of the workforce. We Build The Future’s sun-safe campaign is a preventative campaign intended to help reduce the risk and incidence of skin cancer amongst people working in the built environment industries. Its aim is to promote sun-safe practices on every building site.

The sun-safe project will:

- Promote awareness of UV risk amongst built environment industry workers and employers
- Provide access to simple advice on how to reduce UV risk
- Campaign for sites and offices to adopt safe practices to reduce UV risks
- Promote access to information and advice for people who are worried about skin cancer.

As part of the campaign, We Build The Future have teamed up with Melanoma UK and Rainbow Signs and will be offering sun-safe site boards to employers and main contractors. Using a simple traffic light system to indicate daily UV risk, the sun-safe site boards are positioned in a prominent location on site and the risk

indicator checked and updated by site managers on a daily basis after checking Met Office data for the location. The site boards also provide simple advice on how to reduce UV risk, and features QR links to further advice and support through Melanoma UK.

Commenting Richard Harral, founder of We Build The Future said: “Rates of skin cancer are rising faster than any other cancer in the UK. With 86% of all skin cancers the result of over-exposure to UV radiation from the sun, the majority are preventable. Our Sun-safe Campaign is about prevention, detection and awareness, with the site boards a clear and visual way to highlight the risk of sunlight and help try and change attitudes and behaviours. We urge construction site owners, employers and employees to take advantage of this innovative safety initiative.”

We Build The Future works to improve support and advice for people who work in the construction and built environment sector who face the challenge of dealing with cancer in their lives. The charity raises money to fund research which can help accelerate improvements in the prevention, detection and treatment of cancer, and also runs initiatives to promote health and wellbeing across the industry to help reduce the risk of people developing cancer in the first place.

For further information, or if you are interested in signing up or sponsoring the sun-safe campaign please get in touch at [getinvolved@webuildthefuture.org](mailto:getinvolved@webuildthefuture.org) ■

## We Build The Future

We Build The Future was registered as a charity in December 2017. It was founded by Richard Harral following the death of his father from bladder cancer in 2016.

We Build the Future has three specific objectives:

- To support people who work in the construction and built environment sector who face the challenge of dealing with cancer in their lives.
- To fund research which can help accelerate improvements in the prevention, detection and treatment of cancer
- To promote health and wellbeing and cancer awareness in the construction and built environment sector in order to help reduce the risk of people developing cancer in the first place

Further details can be found at: [www.webuildthefuture.org](http://www.webuildthefuture.org)

# Building product information: improving carbon awareness

Words by Lee Jones, Head of Manufacturer Solutions, NBS and Acting Head of Sustainability, Byggfakta Group

Pressure to reduce the impact of climate change is now at crisis-point and industries across the board are considering how to reduce their environmental impact. Perhaps, no more so than the construction sector – responsible for circa 40% of all global CO<sub>2</sub> emissions, it represents a significant piece of the carbon reduction ‘puzzle’. Whilst efforts are underway, the decarbonisation of the built environment is still falling short of its potential, in part due to a common pitfall – a lack of reporting on carbon metrics, driven by a lack of regulation.



With the clock ticking, it is through digital innovations, such as building product information and specification tools that it can deliver greater accuracy around carbon reporting. So, what can be done?

## Lacklustre carbon reporting

As it stands, the level of commitment to sustainability and carbon reporting is patchy amongst construction and architectural firms. In NBS' Sustainable Futures Report for example, [thenbs.com/sustainable-futures-report-2022/], just 4% of respondents said that all projects in the last twelve months had been net-zero, and over half had not worked on a single net-zero project within the same time period.

The study also showed that 38% of companies measure on sustainability for most projects and 42% for some projects. Whilst the numbers represent a sizeable chunk of the industry, it is clear that information siloes and gaps in sustainability reporting are still common place. Yet without a more comprehensive system of measurement, the true scale of the issue remains unknown. After all, how can the industry ensure progress unless it knows its starting point?

## A deeper understanding

Why the scale of sustainability metrics is being underreported is a complex question – and one that takes into account myriad factors, not least the lack of regulation. However, what is clear is that the digital development of the industry, in particular, the take up and growing appetite for building product information, is helping significantly when it comes to measuring the carbon output of projects.

Central to modern specification methods, building product data is helping specifiers to obtain greater knowledge on the environmental credentials and carbon output of products and systems.

Increasingly, specifiers see requests for calculations around building materials and embodied carbon. As demands grows, digitally supplied building product information has the potential to meet these demands, giving detailed information on the carbon associated with products and materials within the design phases – where sustainability has the biggest impact.

Coupled with the rise of information platforms, where designers source and choose products and materials from a comprehensive product database, specifiers can obtain accurate and detailed information on their carbon performance at the click of a button. The result is better decision making, where ‘carbon breakdowns’ are made easily accessible for quicker, more efficient and importantly, more accurate sustainable specification.

## Increasing the chances

Investing in these processes now is vital to future progress. I believe that over time, the ability to obtain ‘carbon breakdowns’ will not only become more sophisticated, but the process more streamlined. In order to get there, we must start the ball rolling as soon as possible. Delaying it will only harm our chances.

It is common sense to recognise that time-strapped specifiers will be more inclined to report on carbon metrics if processes are easier to manage – and this is where specification platforms, and by extension



1 <https://architecture2030.org/why-the-building-sector/>



construction data, comes into its own. Adopting digital methods on a larger scale will only help to improve the technology available, increasing the chances of more thorough reporting on metrics.

#### **Two-way street**

That is not to say that the responsibility lies entirely with specifiers and the functionality of digital platforms. To increase carbon reporting, there also needs to be greater input from manufacturers. This includes taking an upfront and honest approach to their environmental credentials, so that specifiers can be sure the calculations are correct. To do so, manufacturers must continue to invest in digitally supplied building product information – ensuring it is in a form that suits specifiers and is amenable to their needs.

It also highlights the importance of accuracy around the life cycle analysis of products and how this can work in favour of manufacturers. If a specifier is able to access vital information with ease and understand the sustainability of a product at face value, it is more likely to be specified.

Equally, those manufacturers that supply environmental product declaration information digitally, are also set to benefit, as offering transparent information improves the chances of specification, particularly as carbon credentials are increasingly a deciding factor.

#### **Do not stall the inevitable**

Faced with a tough economic climate, it would be easy to delay change, however, the possibility of legislation, and the climate emergency demand otherwise. The 2023-25 embodied and whole life carbon implementation plan, as part of the Future Homes Standard, is a step in the right direction but awareness is needed on the potential of building product information and its ability to assist in the accurate and consistent measurement of embodied and whole life carbon.

As we find ourselves on the knife edge of climate disaster, we must now put our trust in construction data and understand that carbon reporting is not just another box ticking exercise, it could help determine the future of our planet. ■



# Planning Portal (England and Wales) update

Words by Scott Alford, Head of Business Development, Planning Portal

Planning Portal is excited to launch its new location plan feature, this will mean a process change for applicants when creating and submitting applications. From a practical point of view, we are keen that members and affiliates are aware as it will be a process change and the new service will be an integrated feature when making applications.

## What is the new location plan service?

The new location plan service will allow applicants to easily draw the application site 'red line' boundary on a map, after finding the site address using the postcode search (or the location by entering a grid reference). Alternatively, the applicant can upload a GeoJSON file. This new service can be used as an alternative to purchasing a location plan elsewhere, offering an easy, integrated solution.

Once the application is submitted, the Local Authority will receive this boundary information as location data (GeoJSON format). The shift from 'documents' to 'data' is a key tenet of UK government's objective to digitise and standardise planning processes nationwide.

However, until the legislation is changed and Local Authority systems can utilise the data, Planning Portal will also automatically create a location plan PDF, showing the boundary and meeting all current policy requirements that will also be received by the Local Authority as a separate supporting document.

By introducing this feature to the Planning Portal, everyone benefits from a consistent process.

For users, they can draw the site boundary as part of their application journey on the Planning Portal using our simple tool – saving time and therefore money, on each application, or upload their own file. As an additional benefit, planning professionals can retrieve a copy of their location plan as a PDF or data file, for uploading directly into their own systems.

Local Planning Authorities receive information in a standard way for each application, which is checked against legislative criteria – reducing the likelihood of an invalid location plan. The method also reduces the manual effort involved in re-plotting the site location, and the user's process is the same for every application, regardless of which Local Authority receives it. We know from our experience, and the introduction of our payment service specifically, that this standardised approach brings greater efficiencies for all.

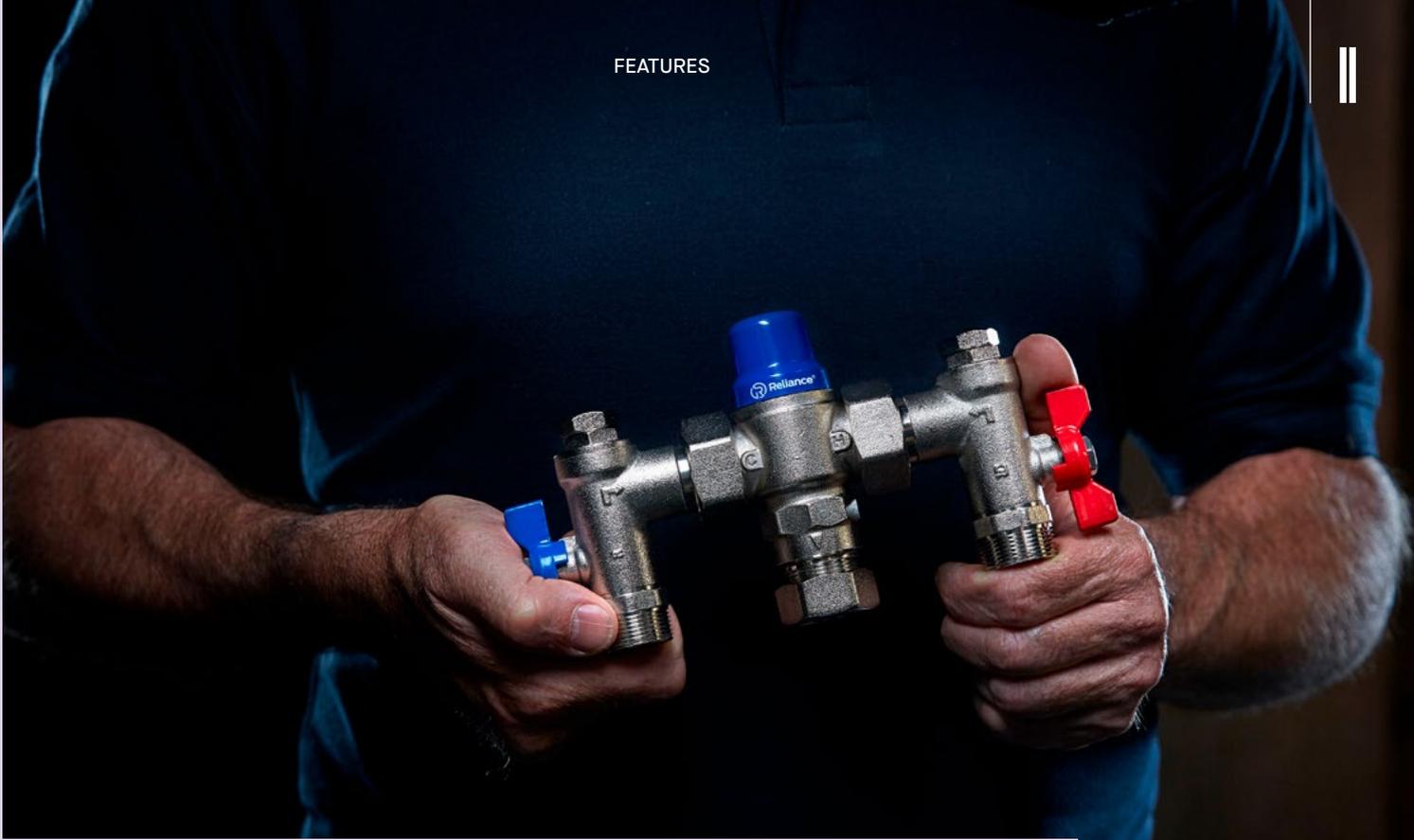
More details can be found at [www.planningportal.co.uk/services/professional-portal/location-plan](http://www.planningportal.co.uk/services/professional-portal/location-plan)

The current service charge to make an application will be increased with inflation as usual and a small additional amount added to cover the cost of the new feature. The amount for the new feature is comparable to existing costs for purchasing this data elsewhere and will allow us to cover the costs of providing the service, including Ordnance Survey licensing and royalties for use of their maps. A small amount of profit from the service is used for ongoing improvements.

A key benefit of the service is that we will use OS as the base map who has a relationship with Local Planning Authorities to share data through the Public Sector Geospatial Agreement (PSGA). Using OS means an uplift in the costs but should mean a smarter and more efficient submission process for all. It also means we can pass the digital location plan file (in GeoJSON format) to LPAs to ingest in their planning systems when currently they are manually plotting this from a PDF plan. This will save them resources in time and staff and should help reduce invalidations due to location plan issues that affected c.22% of submissions.

You will be aware of DLUHC's planning data platform ([planning.data.gov.uk](http://planning.data.gov.uk)) where they are looking to set national standards for LPAs to publish their local plans. As part of this we can then look to build up on our current technical foundations and the new location plan feature to facilitate greater integration with these national and local designations to better inform the planning submission process and the required documentation. ■

The location plan feature has been available since 2 May 2023, for all applications in England that require a location plan.



# The Real-Life Efficiency Heroes: Solutions Making Buildings Greener and More Efficient

Words by Richard Bateman, Product Marketing Manager, RWC

The UK Government is dedicated to reaching Net Zero by 2050; however, the British housing stock is among Europe's least energy efficient.



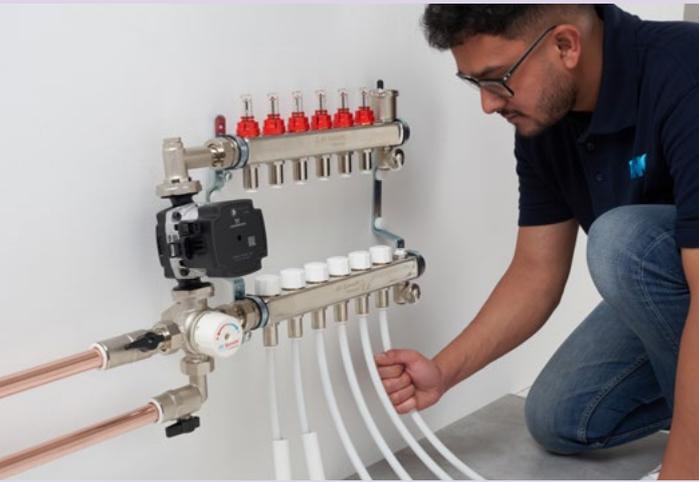
Leaky pipes or an energy hungry heating system are silently crossing swords with the UK's efforts to become a more energy efficient country overall. Here Richard looks at heroic solutions that are set to fight back against these silent inefficiencies and make our homes more environmentally friendly.

With the UK Government taking increasingly grander steps towards making the country a greener and more environmentally friendly place to live, the importance of having energy efficient buildings, both domestic and commercial, is becoming ever more apparent. We want to showcase RWC's real life efficiency super-heroes that are putting their powers to good use in fighting off inefficiency.

## Keeping an efficient low profile

Increasing the efficiency of the UK housing stock requires innovative solutions that can be easily installed, and the JG Lowfit underfloor heating range by JG Underfloor are more than equipped to play this part. A low-profile system is perfect for retrofit situations, as it can be installed with minimal disruption to the existing floor, as nothing must be stripped back or removed except for the floor covering. Additionally, the system is designed to minimise the effect on the overall floor height build up, without compromising heat output.

Underfloor heating systems (UFH) are a great way to make buildings more energy efficient, as they can sufficiently heat a room while running at between the temperatures of 35°C and 45°C, compared to the roughly 70°C required for radiators. This means, that they can be



powered by gas boilers and low temperature heat sources such as ground and air source heat pumps.

JG Lowfit offers many benefits to installers. The system's castellated floor panels are extremely easy to lay and cover. Similarly, since the JG Lowfit system's manifolds feature both 12 and 15mm push-fit connections they do not require reducers to attach to the UFH system itself. This makes for a more efficient installation for installers themselves, meaning the system can be up and running and saving customers energy in a quick and easy fashion.

**Staving off lesser-known causes of inefficiency**

Joining the army of efficiency heroes, the next solution to highlight is a whole group of efficiency fighters: Reliance Valves' range of temperature control valves. Temperature control valves can go a long way towards making buildings more sustainable. The chief among them being Reliance Valves' range of thermostatic mixing valves (TMVs), including the Easifit TMV 2/3 which is approved for domestic, commercial and healthcare applications.

Despite Reliance Valves' thermostatic mixing valves being best known for their ability to protect end users from scalding, their ability to save energy and improve the overall efficiency of a building's plumbing system cannot be overstated. Heating up and supplying hot water makes up a large proportion of a building's overall energy consumption, and so any steps that can be taken to make hot water last longer has a bigger impact than you might think.

Installing a temperature control valve, at the point where hot water is generated and allowing it to mix a cold-water supply has a number of benefits.

Firstly, this allows for water to be stored at extremely high temperatures, such as in an unvented hot water cylinder, a tempering valve such as the Heatguard Tempering Valve from Reliance Valves, for example, can withstand water as hot as 99°C. This water can then be mixed with a cold water stream and cooled down to around 55°C to come out of the shower or tap. This increases the amount of hot water available over a longer period.

Additionally, in the case of commercial buildings, a thermal balancing valve can help maintain the temperature of a building's circulatory hot water system, which means that valves such as end point TMVs do not take in too high of a temperature, meaning that they will have a much longer lifespan. Equally this means that larger buildings such as hospitals can have optimum levels of hot water output, which is extremely important at a

time when every penny counts. Moreover, this increased control of water temperatures creates potential savings too – just one more step towards making our homes more energy efficient overall.

**Ultimate protection with leak detection**

When it comes to inefficiencies in the modern home or building, there is no greater culprit than leaks. Indeed, leaks can cause plumbing or heating systems to not work as intended, add to the ever-growing quantity of wastewater, and call for installers to come out to make costly repairs. However, the MultiSafe Leak Detection System from Reliance Valves is the perfect solution to swoop in and save the day.

The leak detection system does exactly what it says on the tin, it detects leaks in the plumbing system, in turn shutting off the water supply and sending a real-time alert to the building owner or whoever has access to the technology. This allows for identification of potential failures and in turn the ability to have them fixed quickly before any further damage is done. Conserving as much water as possible is an additional feature of this super powered system. By the monitoring of water usage patterns, the system enables users to identify any areas where they could potentially conserve water. The positive effect this system therefore has on cost and to the environment, brings the utmost peace of mind to both building and homeowners, who can be sure their property is not negatively contributing to the growing sum of wastewater in the UK.



**Efficiency heroes unite to ensure environmental excellence**

These are RWC's top recommendations for the best solutions to fight back against those silent inefficiencies that are currently slowing down the UK's larger environmental efforts. Equipped with these efficiency heroes, each home or building should be well on its way to creating a more environmentally friendly future for us all. ■

To learn more about RWC and its family of brands, please visit [reliancevalves.com](http://reliancevalves.com) or [jgspeedfit.com](http://jgspeedfit.com).



# Time to retrofit to secure a net zero future

Words by the Insulation Manufacturers Association (IMA)

If the UK is to have any chance of achieving its net zero carbon target by 2050, the existing building stock will have to be improved considerably with a comprehensive retrofit plan to improve thermal performance, reduce energy consumption and upgrade heating systems.

It is well known that Britain's housing stock is some of the oldest and poorest performing in Europe. With nearly six million houses built before 1919 the challenge before us is quite daunting as a good proportion of the UK's 29 million homes will need at least some improvement to reduce the 17 percent of total carbon emissions that comes from housing.<sup>1</sup>

## Regulatory updates

Whilst higher standards for energy efficiency are being introduced for new build housing – the new and updated Part L of the Building Regulations for England came into force in June 2022, followed by new energy efficiency updates in Scotland and Wales in November and December 2022 and the Future Homes Standard for 2025 will require all new homes and other buildings to be built to ultra-high levels of energy efficiency, there is little to promote and deliver the improvements needed for existing buildings.

The Government has a vague aim of upgrading existing homes to EPC C by 2035, but only where 'practical, affordable and cost effective'. This will require more than

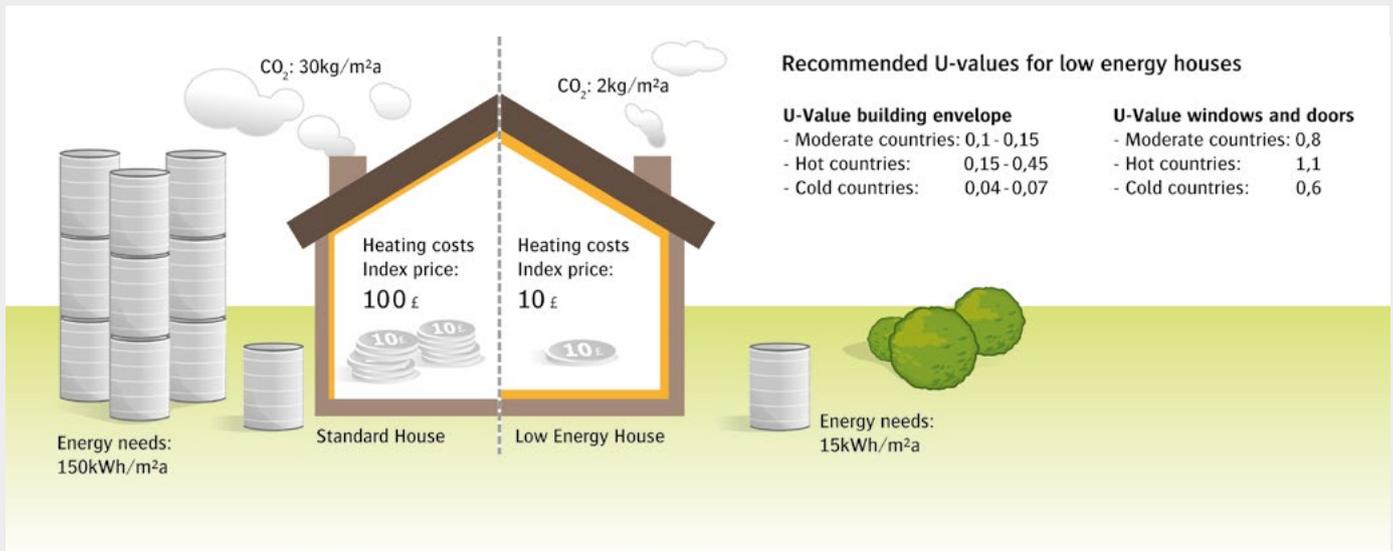
15 million homes in England to be upgraded over the next twelve and a half years, but with no real strategy in place it is difficult to see how this can be achieved.

The Heat and Building Strategy published in 2021 expands on the detail of heat in buildings, but there is little on improving energy efficiency, reducing demand or the essential policy needed to support any largescale approach to mass retrofitting.

If we are to move to a net zero carbon country by 2050 (2045 in Scotland), it will be vital to make improvements to homes and other buildings to reduce emissions. This means installing a whole range of energy saving measures; from better insulation and more efficient appliances, to replacing fossil fuelled boilers with low carbon alternatives such as heat pumps.

## The role of insulation

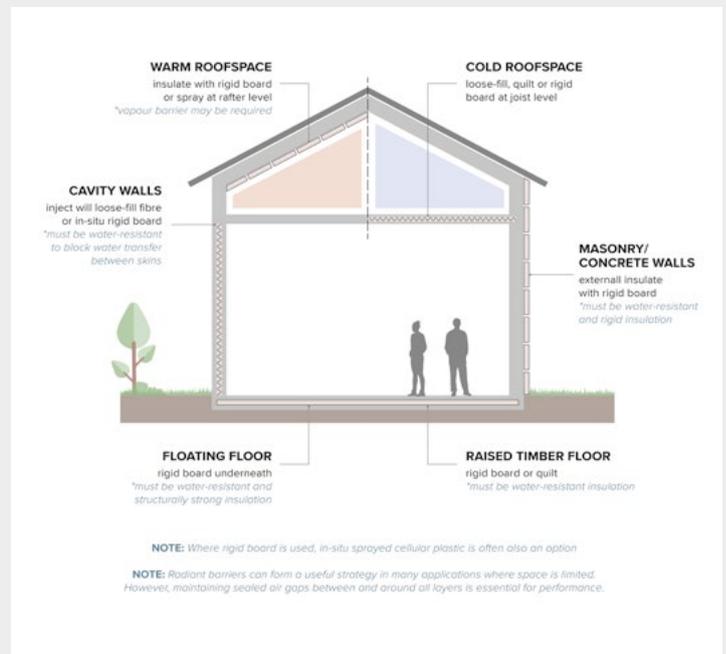
The role of PIR and PUR insulation in upgrading our poorly performing housing stock and ensuring a sustainable future cannot not be underplayed. Good insulation is essential and is one of the simplest and most cost-effective ways to reduce energy demand and cut CO<sub>2</sub>.



The lower the U-values in walls, floors and roofs, the less heat that is lost, resulting in enhanced thermal performance which in turn will help to deliver the standards required.

Highly effective and incredibly versatile, PIR and PUR insulation solutions are available in a range of forms including boards and blocks, cavity injected, composite panels, as well as spray and panel insulation. This with lambda values as low as 0.021 W/mK, PIR insulation performance can be achieved with less thickness than other commonly used insulation materials. Its exceptional insulating properties, high strength and light weight means it is used widely across residential, commercial and refurbishment projects.

Retrofitting insulation such as high-performance PIR is a valuable instrument in reducing heating demand, cutting CO<sup>2</sup> emissions whilst addressing fuel poverty and improving comfort and wellbeing. Whether using internal or external insulation, it is vitally important the UK's housing stock is raised to an acceptable standard by making the fabric of the building as energy efficient as possible. Only then will we be able to provide a long-term asset that reduces energy usage and can be confidently passed on to future generations. ■



For more information about IMA visit [www.insulationmanufacturers.org.uk](http://www.insulationmanufacturers.org.uk)

**Insulation Manufacturers Association (IMA)** is the Trade Association that represents both the Polyisocyanurate (PIR) and Polyurethane (PUR) insulation industry in the UK. Its members manufacture rigid insulation that provides around 40% of the total thermal insulation market in the UK. IMA's membership comprises all of the major companies in the industry, including manufacturers of finished PIR and PUR insulation products, as well as suppliers of raw materials and associated services.



# The Old War Office: Modern piping solutions to old problems

Words by Victaulic

When undertaking retrofits of heritage buildings, maintaining the integrity of the structure is paramount. Structural constraints, limited access and the risk of damage to existing building features all serve to hamper the success of any heritage retrofit. These obstacles were acutely present in the luxury conversion of the Grade II\* listed Old War Offices, Sir Winston Churchill's base during World War II, to one of London's landmark hotels. Planning and preparation were crucial for this project, where many factors concerning the building's preservation needed to be considered.

## The right pipe joining method from the start

Engineer, Aecom, and contractor, STUCKTOR UK LTD, were tasked with the design and installation of the HVAC piping system for this monumental building transformation to 120 hotel rooms, 85 residences and 11 restaurants and bars.

Their primary concern was the lack of adequate blueprints for the existing OWO infrastructure. Without access to detailed drawings of the existing piping system, it became increasingly clear that problems, like potential pipe collisions, could arise during the design and, more importantly, during the installation phase, which could impact both construction efficiency and the project deadline.

The second challenge stemmed from the large amount of trench work that needed to be carried out in confined spaces, another area where the team had identified potential installation problems that could have repercussions on the time spent on the job.

With these core challenges in mind the team needed a pipe joining solution that would fit the following criteria:

- offers an easier installation process than welding and flanging, which would have been nearly impossible in the trenches; and
- provides the adaptability required for any potential surprises onsite, enabling the team to reroute pipe work more efficiently.

They turned to Victaulic to deliver such solutions.

## New solutions

With the time and space constraints of the OWO conversion and the lack of detailed drawings, it became immediately clear that welding and flanging the piping system was not even an option and that another pipe joining method was required.

Victaulic's grooved mechanical piping system was an ideal solution. A mechanical joint consists of four elements: grooved pipe, the coupling housings, a pair of nuts and bolts and the rubber gasket. The piping connection is





secured by a coupling which houses a resilient, pressure-responsive elastomer gasket. The coupling housing fully encloses the gasket, reinforcing the seal and securing it in position as the coupling engages into the pipe groove. Only two nuts and bolts are needed to secure the self-restraining joint. The mechanical joint creates a triple seal due to the design relationship between groove, gasket and housings, which is enhanced when the system is pressurised.

The lighter weight, smaller size yet higher integral strength of grooved components compared to welded or flanged systems, make them ideal for projects that are tight on space and time. In addition to increasing installation speed, eliminating the need for hotworks brings greater onsite safety, especially in confined space installations, where the pipe fitters are even more exposed to welding fumes.

Installing a mechanical joining system, which provides a union at every joint, also allows for simple field correction of any alignment errors, minimising schedule disruptions onsite. Moreover, since grooved products are considerably smaller in footprint compared to flanges, pipes can be installed closer to each other. Through their two-bolt structure, the ease of installation and 360-degree rotation capabilities, projects using grooved products install up to ten times faster than flanging and welding and simplify onsite corrections.

"It is about working smarter not harder", adds Nik Van Den Broek, sales engineer at Victaulic, "With all the confined spaces, like tunnels, underground trenches, and small access areas, Victaulic's couplings, fittings, and valves made light work of the piping installation. Due to the nature of this project, retrofitting a heritage building, structural uncertainties and clashes with other services were inevitable. Victaulic allowed Strucktor the ability to easily rectify onsite without the need for hotworks."

#### On the job

Time spent on the jobsite is a critical cost and risk factor, leading contractors to prefabricate parts of the piping system offsite as much as possible and even bringing in fabricated pump skids. Unfortunately, due to the confined

spaces, the large number of stairs and the mechanical rooms being in the building's basements, this was impossible to do for the OWO retrofit. However, Victaulic was still able to offer solutions that helped to save time, space, and reduced risk on site. This was done by supplying modular Vibration Isolation Pump Drops for the mechanical rooms.

The pump drops combine all required pump dressing components into manufactured, ready-to-install units to connect the pump to the header. Unlike traditional pump builds that treat each valve, fitting and accessory as independent components, these pump drops provide a factory-tested, single-SKU assembly of products and are easy to handle and help to save on installation time. Unlike flanged pump builds, no specialty flex connectors or rubber bellows are required, which are the weakest part of a mechanical room installation. By utilising a combination of rigid and flexible couplings to assemble the units, the Pump Drops are value-engineered to isolate and attenuate vibration caused by pumps and other components in the system, reducing excess noise and stress on pipe joints. The suction diffuser, installed on the inlet side of the pump drop, also enabled the team to connect the pipework closer to the pump at a 90-degree angle, avoiding the long pipe run required when using a welded system, and saving space.

Installing pump drops successfully enabled the crew to cut down labour time and realise efficiencies even without a fully prefabricated model. Subsequently, the contractor was able to have the mechanical areas finished well in advance of the deadline, staying ahead of the construction schedule.

Costin Antonescu, Operations Manager at Strucktor UK LTD, added "It has definitely been a positive and productive experience working with Victaulic at the OWO. We received continuous support, like training, site visits, and recommendations about prefabricated solutions, throughout the entire duration of the project. Victaulic solutions have been the best option for us at OWO, helping us to increase productivity and lower the execution time and labour costs."



#### Retrofit-for purpose

As urbanisation becomes more and more gripping, the challenges associated with brownfield retrofits will undoubtedly become commonplace. Future conscious, innovative solutions must become the mainstay of the construction industry, particularly as the industry must increasingly navigate space limitations. Consulting engineers and contractors need reliable, cost-effective solutions today which can meet these constraints whilst preserving the integrity of the existing heritage structures. ■

# Third-party certification: what it means when you specify it

Words by Rob Firman, Technical and Specification Manager, Polyfoam XPS

Designers and specifiers, as well as contractors, installers, and building owners/managers, all rely on the claims put forward by manufacturers to do their jobs to the best of their ability. Safe, comfortable, healthy buildings that comply with regulations depend on manufacturers making statements that are accurate and verifiable.



## What is third-party certification?

Independent, third-party certification for construction products is intended to give confidence that claims made about them are justified. External assessment provides reassurance that a manufacturer's products 'do what they say on the tin'.

Different certification types cover different aspects of a manufacturer's operations, from product performance and environmental impact, to management processes and responsible sourcing.

This article looks at a variety of certifications and accreditations, explaining what they are and what they demonstrate. As will become clear throughout, it is important to engage with manufacturers to understand the scope of the certification they hold and how it can be applied to the specific requirements of individual projects.

For example, just because a product is BBA certified does not mean its certificate covers the intended design of a particular building.

## CE marking

Many accreditations and approvals are voluntary. They exist to give manufacturers a route by which they can back up claims about their products, and set themselves apart from manufacturers who choose not to achieve the same certification.

The CE mark is not voluntary. For manufacturers to be able to sell their products in certain regions, the products must have the CE mark affixed. The mark acts as an

indication that, no matter where they are manufactured, the products have been produced to a common technical standard.

The manufacture of extruded polystyrene (XPS) insulation, for instance, is covered by the harmonised standard EN 13164. The procedures outlined in the standard allow manufacturers to conform to the Construction Products Regulations and affix the CE mark.

Like similar standards for other insulation types, EN 13164 covers core product characteristics. It is compulsory to declare test results for certain characteristics of the product. The declaration of others is at the manufacturer's discretion, depending on the product's intended end use. Products are not expected to meet a particular level of performance for any characteristic.

Declarations of Performance (DoPs) are a compulsory element of harmonised standards and CE marking, and must be available on manufacturers' websites. A product's DoP shows the declared results for the characteristics covered by the standard.

A consequence of the UK leaving the European Union was the intention that the CE mark would no longer be recognised for construction products in the UK. That is currently scheduled to come into force from the beginning of 2025 – though it must be doubted whether the change will happen at all. UK Conformity Assessed (UKCA) marking started at the beginning of 2021, and carries no weight in Europe.

## BBA certificates

A CE or UKCA Mark does not establish whether a product is fit for purpose. While they tell you it has been manufactured to an agreed standard, it does not provide information as to whether the product is suitable for a particular application. That is where Agrément certification comes in.

To be issued with an Agrément certificate, a product is tested and assessed in relation to its intended use. In the UK, the majority of Agrément certificates are issued by the British Board of Agrément (BBA). Indeed, the generic term 'Agrément certificate' is often used interchangeably with 'BBA certificate'.

A BBA certificate can be particularly important for new products that have no track record, or for products that have no harmonised standard. In both cases, an Agrément

certificate may be the only way to be accepted by specifiers and installers, as it offers reassurance that the product is suitable for the use for which it is offered.

For more established products, a BBA certificate effectively acts as a 'stamp of approval'. It gives confidence and reassurance that the product is designed for its intended use.

Sometimes a product is part of a system. In such cases, the BBA certificate also demonstrates that products work together to meet the agreed assessment criteria for a complete system.

### Environmental product declarations (EPDs)

An environmental product declaration communicates environmental impact. EPDs are internationally recognised, and should be independently verified to ensure they meet applicable standards.

For construction products, life cycle assessment (LCA) is carried out, and assumptions are made about the environmental impact at different stages of that life cycle.

There is increasing demand for construction products to have EPDs. However, there can be a misconception that simply specifying a product that has an environmental product declaration means it is a sustainable choice. An EPD does not describe whether a product is 'sustainable' or not.

You can read more about EPDs in our in-depth article published in issue 142 (Summer 2022) of AT Journal.

### BES 6001 responsible sourcing certification

Transparency is core to ethical business practices, and responsible organisations are actively seeking to measure themselves against available benchmarks. Responsible sourcing certification shows that a manufacturer understands their supply chain and knows the origin of the materials they're using, thereby supporting a more sustainable approach to material use.

Assessment and certification under BES 6001 are carried out by an independent third party, and the standard's requirements span three different areas.

*Organisational management deals with how the company operates. It starts with having a responsible sourcing policy, and demonstrating legal compliance (locally, nationally and internationally). Management systems must be in place for quality and managing suppliers.*

*Management of sustainable development covers a variety of social, economic and environmental factors. Manufacturers have to demonstrate they have policies and targets in place for each, report results accordingly, and that third parties assess the manufacturer's performance.*

*Supply chain management looks at material traceability, environmental management systems, and health and safety management systems.*

BES 6001 also looks at social impact on the local scale. Requirements for managing sustainable development cover employment and skills and local community engagement – a much wider range of positive impacts than might be first expected.

### ISO standards for different management systems

Having management systems in place means organisations follow documented policies to help them operate in a consistent way. Using defined processes creates an auditable trail of information that can be used to help ensure the organisation is meeting its obligations, or to identify areas for improvement.

Accreditation to recognised ISO management system standards demonstrates that an organisation's processes meet a widely-accepted, independent benchmark. It is possible to operate management systems and not be certified. However, specifications for some construction projects state that manufacturers should have certification in place.

#### • ISO 9001

Sets out requirements for quality management systems (QMS). The standard emphasises leadership within organisations and puts a focus on managing risk, so that the QMS can be used as a basis for making sustainable business improvements.

#### ISO 14001

Sets out requirements for environmental management systems (EMS), which support a more efficient use of resources. Among a range of potential advantages, a certified EMS can help organisations to serve customer needs, lower overall environmental impact, and improve business performance.

#### ISO 45001

Sets out requirements for occupational health and safety (OHS) management systems. An OHS system supports a safer working environment for anyone in and around the business. A system needs to be management-led, ensuring that OHS is part of the culture of an organisation.

#### ISO 50001 and energy management systems

ISO 50001:2018 sets out requirements for energy management systems. A certified system typically supports greater energy resilience within a business, which might be desirable to save money, improve sustainability, comply with legislation, or all three.

As part of creating an energy management system, a business has to choose what energy use it wants to cover. It is a requirement to address the 'significant' energy uses of the business. After that, an organisation can choose which areas of energy use to focus on.

Being related to energy and reduced energy use, there is overlap between ISO 50001 and ISO 14001, though energy use is just one component of sustainability and environmental impact.

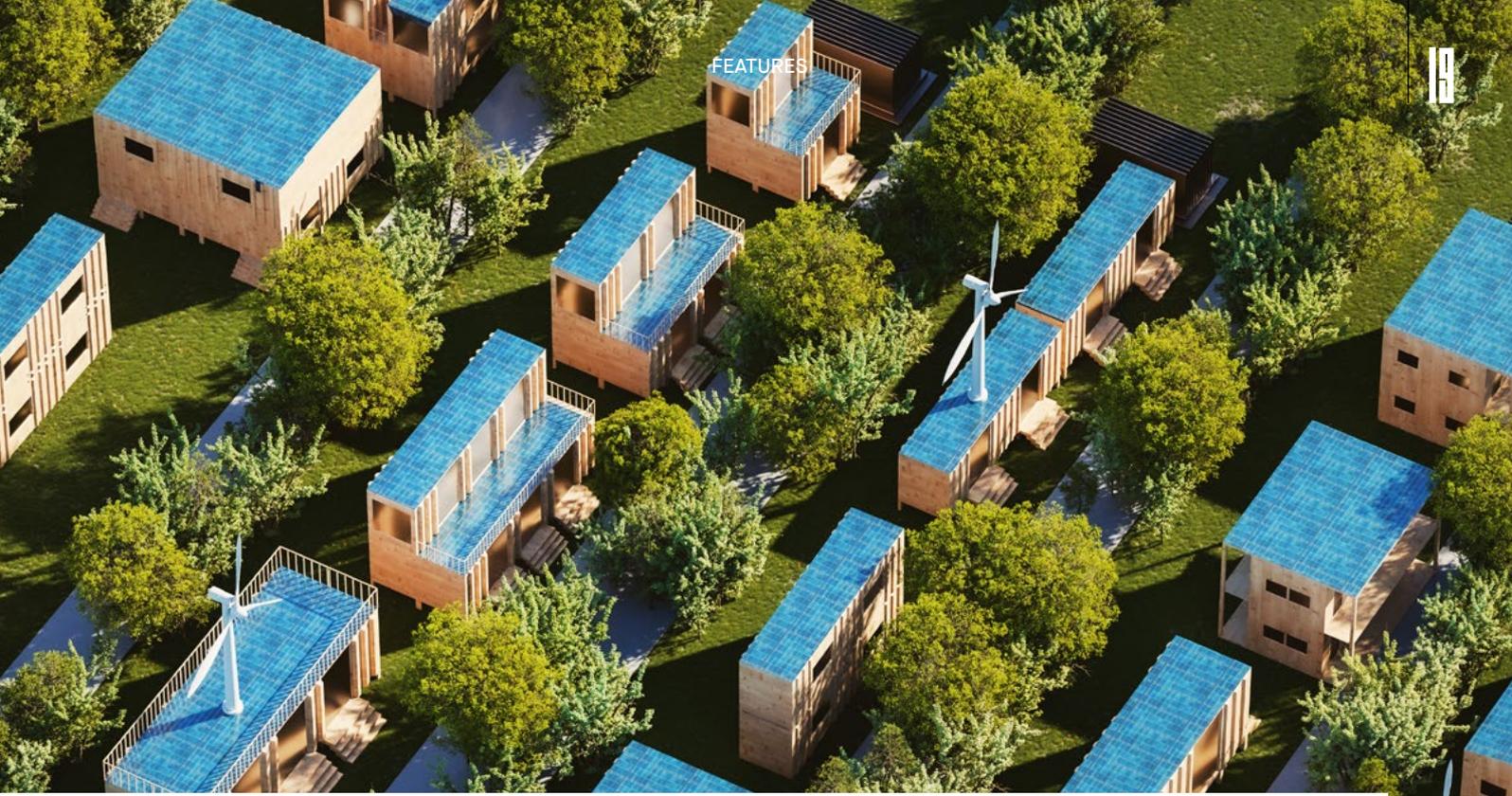
#### The Code for Construction Product Information (CCPI)

The CCPI is aimed at manufacturers of construction products and sets out 11 clauses that need to be met. The intention is for manufacturers to demonstrate their commitment to providing product information that is clear, accurate, up-to-date, accessible and unambiguous.

At the time of writing no organisation has yet been assessed under the CCPI, so no company or organisation can claim to be compliant.

According to the CCPI consultation report, the designers who responded seemed to be broadly in favour of the CCPI. Many of their responses centred on manufacturers offering specific types of information – especially around sustainability and environmental impact.

In other words, there is a demand for information on sustainability that is not currently being met. However, the objective of the CCPI was never to make manufacturers provide specific types of information, suggesting something of a disconnect. ■



# How net-zero architecture is transforming the construction industry and how you can make the most of it...

Despite the scope of these intentions, a change of this magnitude still requires a shift in how the construction industry as a whole operates. Whilst we are still a long way from reaching these targets, however, the industry certainly looks to be moving in the right direction. From incorporating new and innovative design features such as green roofing, to minimising wastage, and more, there are no shortage in the availability of solutions that are working towards the transition to a net-zero economy.

Words by Sarah Kauter, Managing Director, Construction PR

## What is net-zero architecture?

In order to be classed as net-zero, a building has to be able to counterbalance any carbon emissions produced throughout its lifetime. This not only includes the embodied carbon produced throughout the construction phase, but also throughout its entire lifespan, and of course, its demolition. This means that just trying to minimise carbon dioxide production throughout the construction phase will likely not be enough. Any excess emissions will also have to be offset with innovative designs and sustainable technologies to the point where more carbon is absorbed than is released into the atmosphere.

## Net-zero strategies

### Efficient energy usage

Regardless of whether you intend to power the building through solar panels, or tap into geothermal pockets with a heat pump, the first point of call prior to these implementations should always be to ensure the building is running at optimal efficiency, and that the design minimises unnecessary energy usage. One of the most effective ways of doing this is by reinvigorating existing insulation within the walls, floors and ceilings. Not only does this improve heat retention throughout the winter, but also keep it cooler throughout the warmer parts of the year – significantly reducing the need for non-renewably powered heaters and air conditioners.

### Renewable energy sources

Once assuring optimal efficiency, additional renewable technologies can then be incorporated. More often than not, this will include solar panels – the UK’s most common renewable energy source – with a typical home system saving over a tonne of carbon dioxide each year. With approximately 85% of UK homes heated predominately by gas, however, achieving carbon neutrality in this area remains a challenge. Fortunately, the installation of gas boilers into new homes is banned from 2025 onwards, leaving low-carbon heating sources such as ground source heat pumps (GSHPs) as the most preferable solution.

Despite being used since the dawn of man, another renewable heating source which has returned in popularity is biomass – where wood, plants, and other organic matter is burned to heat homes, or is connected to central heating and hot water systems to fuel the entire building’s heating requirements. As the burning of this plant matter produces less carbon than what is absorbed throughout its lifespan, assuming that new seeds and saplings are planted in their place, biomass burning can be an entirely sustainable energy source.

### Optimal orientation

**Solar panels, for example, operate more efficiently when facing south. You are also going to want to take other factors such as natural shade and lighting into account, as both can have a considerable influence on energy usage.**



Whilst it is easy to get distracted by all the latest sustainable tech, it is often the simplest changes which prove to have the greatest impact. Regardless of what you are looking to install, if you want to

ensure these devices are operating at the greatest efficiency, then the orientation of the building is key in minimising excess energy usage. Solar panels, for example, operate more efficiently when facing south. You are also going to want to take other factors such as natural shade and lighting into account, as both can have a considerable influence on energy usage. Lighting, for example, accounts for between 17% and 20% of a home’s total energy consumption. These figures can be cut significantly by addressing this within the design stage, taking the building one step closer towards net-zero.

### How can you benefit beyond net-zero architecture’s environmental impact?

The relationship between carbon emissions from the construction industry and global warming is no secret. Whilst the objective of transitioning towards a net-zero economy should always be its ecological impact, early adoption of these sustainable technologies and techniques enables businesses to gain a significant competitive advantage as regulatory bodies begin to become more demanding in their commitments towards net-zero.

The market for green building is only on the up and is expected to reach a value of \$563.91 billion by 2027. For businesses already investing in sustainability training or renewable energy technology installation, for example, you will be spared the unexpected time and costs which tighter legislation would otherwise impose upon you, all whilst being able to highlight your extensive experience in sustainable construction. Whether you showcase this distinctively on your website, plaster it all over your social media channels, or reach out across the industry directly, positioning yourself as an industry leader in sustainable construction looks to be crucial for the decades to come. ■



# Your go-to-guide for specifying valves for large commercial buildings

From the plant room to the appliances and outlets, there is a lot that goes into creating a specification for a plumbing system in large commercial buildings. Valves are an important, but often overlooked, part of this puzzle. Eric shares his advice on everything that a specifier needs to know when working on plans for large commercial buildings.



Words by Eric Winter, EMEA Director of Product Development (Valves), RWC

When planning the plumbing system for a large commercial building, there is a lot that specifiers will need to consider including the demands for each building, complying to all necessary regulations, and any maintenance requirements.

Then there is also the challenge many specifiers are facing, which is making our buildings more energy efficient and economical in the long term. All these factors will play an important role when specifying the right plumbing fixtures and fittings that will be needed, including the valves.

From leisure centres to hospitals to schools and high-rise apartments, here is your guide on specifying valves for large commercial buildings.

## From PRVs to TMVs, six valves to consider in your specification

When working on a commercial property, there are many valves that you will come across that are also used in a domestic setting. These include pressure reducing valves (PRVs) and thermostatic mixing valves (TMVs), but there are also valves that are designed specifically for large multi-occupancy buildings, like the Tenant Valve. Here

are the most common valves you should consider in your next specification:

### Pressure reducing valves (PRVs):

These valves work by reducing a high inlet pressure to a safer, lower pressure at the outlet. Water pressure in the UK can vary from 1 bar to 20 bar, so PRVs are important to ensure the risk to plumbing systems is minimised. In large commercial buildings, high pressure is often needed to allow for water to travel around the systems, but this pressure would damage outlets so PRVs are needed to reduce the pressure at point of use.

### Thermostatic mixing valves (TMVs):

Whatever hot water system you are planning, TMVs are key to ensuring the water is kept at a safe temperature to prevent scalding while also allowing the system to be kept at a high enough temperature to help prevent the build-up of harmful Legionella bacteria. In most commercial buildings, TMV2 approved valves need to be specified, but for buildings in the healthcare sector like hospitals, a TMV3 approved valve is required.

**Tenant Valves:**

Designed specifically for use in large commercial buildings like apartment complexes, it combines an isolating valve, approved as a stop valve, a PRV, with an integral strainer, a patented dual reading pressure gauge, water meter carrier and a double check valve in one small and compact unit.

**Thermal balancing valves (TBVs):**

These valves regulate the flow rates in hot water systems depending on the temperature, to ensure that a balanced water temperature is available when and where it is needed throughout the building. It is important to maintain a consistent temperature in a circuit, as balancing the water temperature prevents Legionella growth and helps avoid heat spikes that could damage other plumbing components or cause scalding.

**Backflow prevention valves:**

To keep our water supply sanitary and safe, it is important that backflow is prevented. These valves help by protecting plumbing systems from contamination, from either back pressure, or back siphonage.

**Ball valves (isolation):**

In a large building, there will be situations where the water supply to fixtures needs to be isolated to allow for repair and maintenance. Ball valves allow this work to be done quickly and easily.

When you are specifying valves for commercial buildings, it is particularly important that you have a thermal balancing valve. In larger systems, hot water is always circulating, because the point of use is often a long way from where the hot water is stored. So, without this the

end user may have a long wait for their hot water, and areas of the building can become stagnant leading to a higher risk of bacteria developing in the water system. But this circulation needs to be controlled, which is where thermal balancing valves come in.

**Hospitals to high rises – the varying valves by usage**

When you are working on large commercial buildings, for the most part, you will need to specify the same valves regardless of building use. However, there are a few exceptions. When you are specifying a hospital or a healthcare building, you will need to specify TMVs that are compliant with the TMV3 scheme.

In healthcare settings, it is also important that you specify Anti-Legionella valves. These valves that connect to an expansion vessel prevent stagnation. This also helps to prevent Legionella growth, so you need to specify the valves in buildings occupied by people more vulnerable to Legionella.





The other building types that you need to consider specific valves for are high-rise buildings. In these properties, you will likely need to specify PRVs. This is because you need high-water pressure at the bottom of the building, so it can make it to the top. For example, if you start at 15-16 bar, you are going to get 2-3 bars at the top of the building. But this means on the lower levels, you need to have good pressure control, so you do not damage the infrastructure of the building.

#### Regulations to remember

When you are specifying valves in large commercial buildings, the products need to comply with water regulations. This means they need to be WRAS, KIWA or REG4 approved. For pressure reducing valves or backflow prevention valves, these need to comply with European and British Standards, for the pressure reducing valve this is BSEN1567.

For commercial buildings, it is also recommended that you comply with either the TMV2 or TMV3 schemes depending on the property usage. For most commercial buildings, like leisure centres or schools, it is best practice to follow the guidance set out in the TMV2 scheme. This sets out the standard for the installation, commissioning, and maintenance on TMVs.

The requirements for the TMV3 scheme are higher than TMV2, as it is designed to regulate valves for use in healthcare. These valves differ as they go through extra testing to ensure performance based on the NHS's HTM64 -D08 specification. This specification includes a requirement for valves to maintain constant water temperature, irrespective of varying hot and cold water supply conditions, and to fail-safe in the event of an interruption in either the hot or cold water supplies.

#### Installation considerations to bear in mind

When you are specifying any building, no matter how large or small, you need to consider whether the valves need to be serviced, any ongoing maintenance requirements needed on the surrounding pipework.

For valves that need to be serviceable, it is best practice to also include an isolation valve so the product can be serviced easily. For valves that include an integral strainer, this will need periodic maintenance.

You also need to consider the related pipework you need for the plumbing and heating system. In the case of a PRV, it is recommended that you have five times the pipe diameter both upstream and downstream of the valve, so if you have a 2-inch valve you should have a 10-inch straight line before any elbows to stop noise. You also need to make sure you size your valves correctly to reduce noise. For example, it is best not to put a 2-inch valve where a flow rate of a 1-inch valve can do.

For PRVs, specifying the right valve is particularly key, as you need to consider the pressure reduction ratio. It is generally a 10 to 1 ratio, so a 16 bar inlet pressure can reduce to 1.6 bar. You also need to correctly size a PRV to suit the flow rate of the water pressure passing through it, not the inlet pipe size, as this can lead to over-sizing. This can have adverse effects on the system, such as undesired noise and damage to the PRV seat. ■

#### Top 3 things to think about when specifying valves

##### 1. Consider the end uses:

When you are sizing valves, you need to specify enough quantity, and the right size, for the building. So, if it is a hospital, or a leisure centre, then you need to consider how many outlets there will be in the building. But you do not want to oversize the valve, you should base it on the maximum simultaneous flow that is likely, rather than all outlets being used at once.

##### 2. Staging PRVs:

PRVs are important valves in many large commercial buildings, but it can be difficult to get the specification and installation correct. This is where PRV staging comes in. On a floor of a commercial building, there will be an initial PRV which will take the mains pressure and reduce it. There might then need to be another PRV further down the system, to reduce the pressure so it can be used at the outlet.

##### 3. Preventing backflow:

Keeping our water supply sanitary and safe is key for any buildings, but particularly commercial where there will be people coming and going every day. Specifying the right valves is key to this.

To find out more about RWC's range of Reliance Valves, please visit: [www.reliancevalves.com](http://www.reliancevalves.com)



# Considering Passivhaus influence – too ambitious or now the norm?





The need to decarbonise existing housing stock and ensure the sustainability of new homes has resulted in increased scrutiny on product and component specification. Taking this into account, this article explores how this tightening legislation is leading to a shift in thinking around Passivhaus principles, and the role of windows in ensuring thermally efficient buildings.

Words by Russell Hand, Head of Product Management and Technical, REHAU Windows



The sustainability of the UK's building stock remains under constant review as sustainability continues to move from a preference to a priority for new and retrofit properties. This drive towards decarbonising the nation's buildings is key to legislation such as the Future Homes Standard (FHS), which has uplifted standards around Part F and Part L of the Building Regulations for properties in England and Wales.

These parts cover ventilation and energy efficiency respectively and will continue to have a major impact on the work of Architectural Technologists with new and existing buildings. Specifically, having come into effect in June 2022, the rigorous energy efficiency requirements codified in Part L aim to cut new home carbon emissions by 31%, and 75-80% by 2025.

#### More rigorous standards

What is notable about the FHS is that it is only the beginning of the push towards more sustainable housing. As already established, new buildings will have to meet even stricter emissions standards by 2025, and consultations are scheduled for spring to discuss what additional steps or uplifts can be implemented after this date. Indeed, in March, the UK Green Buildings Council welcomed the FHS as a 'golden opportunity to deliver zero-carbon, climate-resilient homes,' further highlighting the major role it will play in realising sustainable building design<sup>1</sup>.

Yet the scale of the challenge for Architectural Technologists and other built environment professionals cannot be underestimated. To say nothing of the new properties that will be required to house the UK's growing population – which is expected to rise from 67 million in 2020 to 74 million by 2060 – the nation's existing building stock also poses its own challenges<sup>2</sup>.

Namely, many UK properties are now very old. According to Statista, most of England's housing stock is owner-occupied and built before 1919, with the same report also noting that the largest share of social housing was constructed between 1945 and 1980<sup>3</sup>. Considered alongside Environmental Audit Committee warnings that the built environment accounts for 25% of the UK's greenhouse gas emissions, the scale of the task ahead of building designers is clear if the UK is to meet FHS specifications, and wider net zero targets<sup>4</sup>.

#### New design approaches

Given this significant legislative pressure associated with both new builds and legacy stock, it is unsurprising that new approaches and design principles are being considered. It is in this context that Passivhaus principles has grown in popularity, with membership of the UK

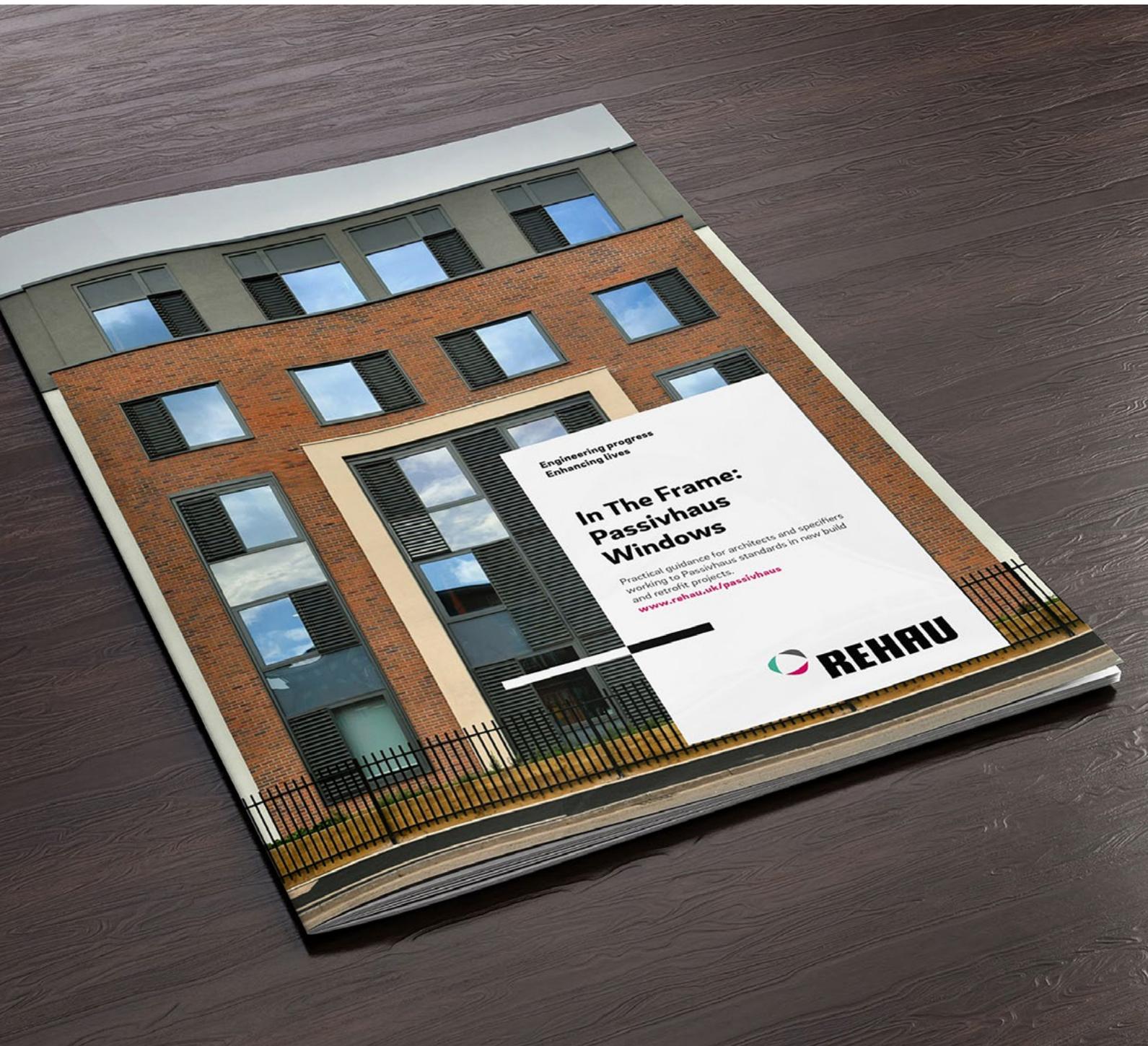
Passivhaus Trust doubling between 2020 and 2022 alone<sup>5</sup>. The performance ratings informing the concept has also made great strides among lawmakers. The Scottish Government, for instance, has announced plans for all new buildings to a Scotland-specific standard equivalent to Passivhaus<sup>6</sup>. As environmental and building design legislation becomes more demanding, it is worth exploring the use of materials and design principles underpinning the concept, and how it applies to architectural technologists.

A low-energy design standard developed in Germany, Passivhaus has long been seen as a 'gold standard' for ensuring the thermally efficient and sustainable buildings. Buildings constructed with Passivhaus principles in mind achieve thermal comfort by post-heating and post-cooling

fresh air without additional recirculation, meaning an almost constant temperature is maintained. As such, all components involved in Passivhaus-informed project should be able to achieve outstanding thermal performance to ensure these conditions are not disrupted.

#### A useful barometer

The design principles and material specifications set out in the Passivhaus standard have previously been associated with high-end, new-build property developments. But given the tightening of building standards, it is advised that building technologists consider it as a useful barometer to measure building performance against. Even if a project cannot reach Passivhaus's demanding criteria,



**While the construction of 8,500 properties certified to the standard is something to be celebrated, the fact it is hard to achieve should not deter project specifiers and stakeholders.**



the concept and its principles should not be disregarded – instead, they should serve as a best-possible reference point to benchmark component performance against.

This mindset can be seen in the creation of 'EnerPHit', a Passivhaus certification for retrofit projects. As upgrading existing buildings will be key to reducing emissions, these new standards – which are slightly more relaxed than the original Passivhaus principles – demonstrate an ambition to make the principles underpinning the certification more accessible.

Yet with over 1,500 builds now Passivhaus-certified in the UK and 7,000 further homes in planning, under construction or complete, there is clearly space a larger rollout among existing

properties EnerPHit can help prompt<sup>7</sup>. It is also with this in mind that building design professionals should again consider the wider accessibility of Passivhaus principles. After all, while the construction of 8,500 properties certified to the standard is something to be celebrated, the fact it is hard to achieve should not deter project specifiers and stakeholders. Instead, the sector should widen the concept's scope and explore how its principles can be applied more widely to make the millions of built and yet-unbuilt UK properties more energy-efficient.

#### Framing the debate

Consequently, focus must be paid by Architectural Technologists to the different components of a project and their effect on the thermal performance and air circulation of finished structures. Of these, windows stand out as vital to achieving the levels of airtightness, insulation and overall efficiency required in a Passivhaus property.

As already established, perhaps the most important thing for these building design professionals to note is that windows do not have to be certified by the Passivhaus Institute as adhering to Passivhaus principles to work successfully within a build. However, certain factors must be considered, including specific frame junction points, and the specification of certain materials such as PVCu and PVCu-aluminium, selection of double or triple-glazing and argon, krypton or even Vacuum insulated glazing options.

Additionally, Architectural Technologists should consider specific frames, profiles and overall systems when looking to best follow Passivhaus principles, and how different transoms and mullions can help accommodate higher wind loads. Finally, attention must be paid to solar gains and heat losses enabled by frames.

More specifically, building design professionals should be advised that neither of these factors should be minimised or maximised in the pursuit of performance levels similar to Passivhaus certification. The focus instead should be on optimising solar gains to ensure comfortable and efficient surroundings. Working closely with project consultants to source glass suppliers that can reduce the possibility of overheating – which is defined in the Passivhaus standards as exceeding 25°C – is therefore highly recommended.

#### Best guidance

Indeed, access to technical expertise should be a vital consideration for all aspects of a Passivhaus-inspired build. The complex design principles involved with specific materials and frames means that building designers should look to involve window specialists as soon as the design stage in any particular project. Doing so can help reduce risks associate with incorrect, costly specification and provide greater ease towards achieving certification.

It is with this in mind that REHAU has launched its latest report for architectural and specification professionals. The guide, *In The Frame: Passivhaus Windows*, explores how Passivhaus's underlying principles can influence windows specification in greater depth, highlighting technical aspects Architectural Technologists should be aware of. It also provides further advice for improving building efficiency in line with Passivhaus standards – even without full certification – across both new and retrofit properties.

In conclusion, the increasingly rigorous sustainability standards set out in current and upcoming building legislation means demanding certifications such as Passivhaus are becoming more influential in building design. To best futureproof new properties and the large quantity of existing homes requiring thermal efficiency upgrades, Architectural Technologists should therefore regard these standards as an informative benchmark against which they can best futureproof their projects, and work closely with suppliers to do so. ■

To access the REHAU Passivhaus guide, visit:

[https://window.rehau.com/uk-en/passivhaus?utm\\_medium=feature&utm\\_source=pr&utm\\_campaign=passivhaus&utm\\_content=housingassociation&utm\\_term=trafficdriving](https://window.rehau.com/uk-en/passivhaus?utm_medium=feature&utm_source=pr&utm_campaign=passivhaus&utm_content=housingassociation&utm_term=trafficdriving)

- [1 https://ukgbc.org/news/future-homes-standard-is-a-golden-opportunity-to-deliver-zero-carbon-climate-resilient-homes/](https://ukgbc.org/news/future-homes-standard-is-a-golden-opportunity-to-deliver-zero-carbon-climate-resilient-homes/)
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- [3 https://www.statista.com/statistics/292252/age-of-housing-dwellings-in-england-uk-by-tenure/](https://www.statista.com/statistics/292252/age-of-housing-dwellings-in-england-uk-by-tenure/)
- [4 https://committees.parliament.uk/committee/62/environmental-audit-committee/news/171103/emissions-must-be-reduced-in-the-construction-of-buildings-if-the-uk-is-to-meet-net-zero-mps-warn/](https://committees.parliament.uk/committee/62/environmental-audit-committee/news/171103/emissions-must-be-reduced-in-the-construction-of-buildings-if-the-uk-is-to-meet-net-zero-mps-warn/)
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- [6 https://www.passivhaustrust.org.uk/news/detail/?nid=1176](https://www.passivhaustrust.org.uk/news/detail/?nid=1176)
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# Building sustainability in stainless steel

Words by Jörn Teipel, Lead Technical Manager, Outokumpu

As designers focus on sustainability, careful choice of stainless steel can help to control carbon footprint and contribute towards BREEAM or LEED certification, this article aims to explain how to achieve a sustainability advantage.

Stainless steel is a durable and long-lasting material for façades, interiors and other applications. With considered procurement, the material can enable designers to reduce carbon footprint.

This may seem counterintuitive. After all, the steel industry is responsible for around five percent of global CO<sup>2</sup> emissions. In addition, stainless steel has a higher carbon footprint than carbon steel on average as it contains various alloying elements like nickel, molybdenum and chromium for optimum performance in its large field of applications.

However, leading stainless steel producers have already implemented technology and procedures to significantly reduce carbon footprint. In addition, it is possible to use sophisticated control and monitoring to certify architectural grades with an even lower footprint.

## Cutting the average carbon footprint

Even though stainless steels from different suppliers may be identical in terms of chemistry and mechanical properties, their carbon footprints may be radically different. That is because of variation at the steel mills, and differences in the energy mix used to power melting, annealing and rolling processes under Scopes 1 and 2. It also relates to embodied energy in raw materials such as alloying elements under Scope 3. These are often the

largest contributor to carbon footprint.

It is essential to understand the contribution of emissions under all three scopes as the market is complex. For example, Outokumpu with its own ferrochrome mine, counts chromium production under Scope 1, whereas suppliers that source it externally would put chromium under Scope 3.

Improvements in production and sourcing have made it possible for us to achieve a carbon footprint of 1.8 tons of CO<sup>2</sup> per ton of crude stainless steel, measured as an average across our entire production.

This is significantly lower than the European average, which is 2.8 tons of CO<sup>2</sup> per ton, according to a 2021 report by the Carbon Disclosure Project (CDP). Outokumpu's low carbon footprint is made possible by using a high percentage of recycled scrap as raw material, which significantly cuts emissions as processing scrap requires significantly less energy than raw virgin ores.

Using scrap also enables the use of Electric Arc Furnace (EAF) technology, which can be powered by low-carbon electricity. This compares to the traditional steelmaking technique of using a blast furnace fuelled by coal or coke to process virgin ores.

Therefore, scrap cuts overall energy consumption and enables a switch to clean energy with no loss in product quality. Stainless steel can be recycled an infinite number



of times while preserving its mechanical and chemical properties. This contrasts with aluminium, where it is not always possible to remove contaminants during recycling, which can impact the material's properties. As a result, architectural aluminium for aesthetic cladding tends to be entirely based on virgin material.

**Product-specific carbon footprint**

Greater control and measurement in the steel mill is enabling designers to cut carbon footprint further.

While many suppliers publish carbon footprint data, it is typically based on average data from across their entire portfolio. This conceals a variation in carbon footprint between different grades. The carbon footprint of a stainless steel product depends on the production route, processing steps and the level of alloys such as nickel, molybdenum and chromium.

Architectural stainless steels such as grade 316L have relatively low alloying content, so can contain a high percentage of scrap material. In contrast, other industries need highly-alloyed grades so that equipment can withstand exposure to corrosive chemicals such as acids, alkali and seawater.

In general, the higher the alloying content, the higher the carbon footprint. Therefore, as they usually specify relatively lean alloys, architects can source material with a lower carbon footprint than the average figure.

This relies on a new type of certification that has been possible since November 2022, when we became the first producer to issue certificates with a product-specific carbon footprint when delivering material. The methodology for this is based on the ISO 14067 standard for carbon footprints. It uses measured production data over a 12-month rolling average and covers Scopes 1-3.

**In general, the higher the alloying content, the higher the carbon footprint. Therefore, as they usually specify relatively lean alloys, architects can source material with a lower carbon footprint than the average figure.**



Because it is based on a 12-month rolling average figure, it is difficult to put an exact figure on the potential saving as this will vary. However, we have been able to produce grade 304L as cold rolled product with a product-specific carbon footprint of 1.4 tons of CO<sup>2</sup> per ton of stainless steel. Being cold rolled, this covers cradle to gate processes across the full scopes 1-3. This is significantly less than our average figure of 1.8 tons of CO<sup>2</sup> per ton of stainless steel in crude form (that has not been hot and cold rolled).

This could make a significant difference to a large façade project, which may require more than 1000 tons of stainless steel.

**Demand full transparency**

It is also worth being aware of another drawback when working with carbon footprint data. Sustainability certification is developing fast. Although the standards are helpful in providing a structure to calculate and certify environmental impact, there is room for interpretation in the standards. Different data sources and assumptions can be applied.

This can create a false comparison, therefore it is not always possible to directly compare data from two manufacturers, even if their data have been calculated using the same methodology.

It is possible to get round this by requesting the underlying data and an explanation of the methodology and assumptions that were applied. Consulting engineers can use this to rework data from multiple producers so that they can be compared on a like for like basis.

**The next step: emissions-minimised stainless steel**

The next step in cutting emissions is a new breed of emissions-minimised stainless steel, such as our Circle Green product line. Its carbon footprint is only eight percent of the global average (or around 50 percent less than our average). This is made possible by optimising emissions at every step of production from sourcing of raw materials, through the stainless steel melt, energy production and transport.

The first batch of emissions-minimised product was delivered to Fiskars Group, the design-driven cookware brand, in June 2022. In the long term, the vision is to develop a product line to satisfy rapidly growing demand for sustainable products from consumer facing industries including consumer products, appliances and automotive, as well as in architecture.

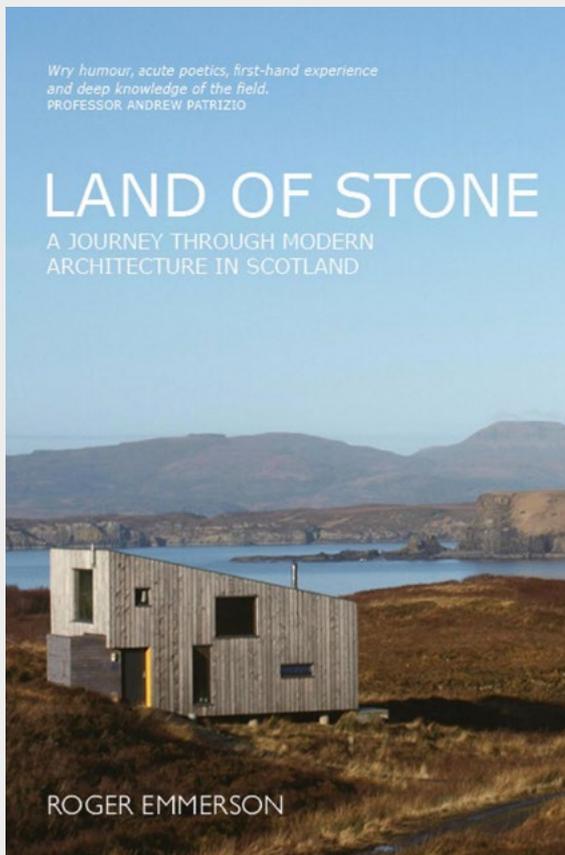
**Good design and longevity**

Ultimately, the most important factor in sustainable construction is longevity. People value buildings that are beautiful, durable and fulfil their needs.

As a material, designers can use stainless steel to create façades that last through its excellent corrosion resistance and mechanical strength. A study by Yale University in 2015 found that stainless steel products in buildings and infrastructure have an average lifetime of 50 years and that 85 percent of this is collected for recycling into new products at the end of its life.

Stainless steel offers designers choice in terms of textures, colours and surface finishes. However, its durability also provides control over the future of their buildings. That means they can be certain that the surface finish will remain in near-pristine condition for many decades, like the spire of the 1930 Chrysler building in New York. ■

# 'Stonily grey and strange of aspect' and 'fairytale' – the story of Scotland's unique sense of architecture explored in new book



'Hybrid, ubiquitous, low-brow, high-brow, conflicted and thus deeply plural.' This is how Professor Andrew Patrizio describes the Scotland explored by architect Roger Emmerson in his new book on the nation's modern architecture.

This contradictory nature is evident when you compare the words of Karel Čapek and Louis I Khan. Playwright Čapek (who is credited for introducing the word 'robot') deemed Scotland's architecture 'stonily grey and strange of aspect', whereas famed American architect Khan found it simply 'fairytale'.

Emmerson's book *Land of Stone: A Journey through Modern Architecture in Scotland* does not dwell on the superficial elements of architectural design. Instead, it gives far more focus to the ideas and inspirations that drove Scotland's city-builders and designers.

Emmerson explores how modernity itself shaped the designers who shaped the nation in turn. He examines the role played by external forces and events, the developments of theory, philosophy and politics across Europe and the world, and how they intersected with Scotland's own unique view of itself and its own cultural identity.

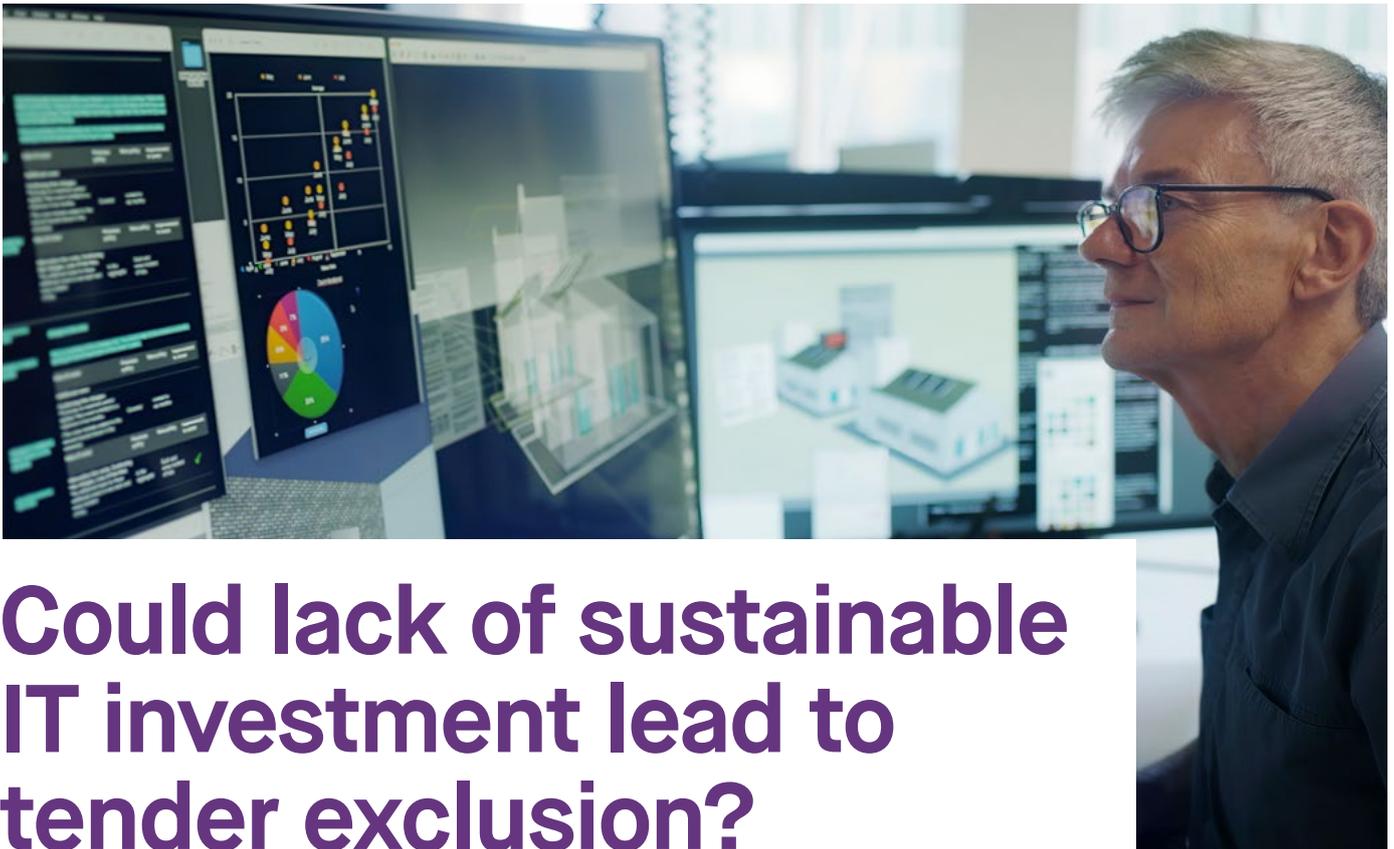
What makes Scottish architecture Scottish? What ideas drive Scottish architecture? What has modern architecture in Scotland meant to the Scots? Ever since the 'granny-tops', rattling and clanking in the wind to draw smoke up the tenemental flues from open coal fires, caught his attention as a three-year-old, architecture and its many parts, purposes, processes and procedures has fascinated Roger Emmerson. For him, architecture has always had profound significance. In *Land of Stone* he seeks to disengage widely-held conceptions of what a Scottish architecture superficially looks like and to focus on the ideas and events – philosophical, political, practical and personal – that inspired designers and their clients to create the cities, towns, villages and buildings we cherish today.

**Land of Stone: A Journey through Modern Architecture in Scotland** by Roger Emmerson 9781804250167  
Royal Paperback. £25.00

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## About the author

Roger Emmerson was born in Edinburgh and attended Leith Academy. He studied architecture under Sir Robert Matthew at the University of Edinburgh and under Professor Isi Metzstein at the Glasgow School of Art, graduating from there in 1982. He has worked in London, Newcastle upon Tyne and, mostly, Edinburgh, running his own practice, ARCHImedia, from 1987 to 1999 while concurrently teaching architectural design at Edinburgh College of Art when he was also visiting lecturer at universities in Venice, Lisbon, Stockholm, Copenhagen and Berkeley. Since 2000 he has worked extensively in the fields of architectural conservation, housing, education and the leisure industries throughout the UK, retiring from architectural practice, although not architecture, in 2016. He is married and lives in Edinburgh close to his four children, their partners and his seven grandchildren. He devotes his free time to writing, painting and playing guitar.



# Could lack of sustainable IT investment lead to tender exclusion?

Words by Keith Ali, Managing Director, Creative ITC

With growing environmental, social and governmental concerns, there is an industry-wide drive towards more sustainable design and build practices. But the role of enterprise technology – in exacerbating the problem and contributing to the solution – gets overlooked. This article aims to explain how smarter IT choices can help architectural firms to stay ahead of the ESG curve.



The impact of the built environment on climate change is widely acknowledged. Buildings account for 40% of global energy consumption and a third of greenhouse gas (GHG) production. Moreover, cement and concrete manufacturing emissions have doubled in 20 years, accounting for 8% of global CO<sub>2</sub>.

Architecture firms know they have a pivotal part to play in delivering a lower carbon future. Architects Declare is among those calling for real change. Carbon offsetting is increasingly discredited as a form of greenwashing. Quite rightly, there is rising pressure on architecture, engineering and construction (AEC) organisations to provide clear evidence of the benefits of their ESG policies. Last year, two UK ESG disclosure laws became mandatory and other governments are doing likewise.

These warning shots herald greater change. Public tender requirements are growing tougher and stiffer widespread stipulations are expected, with the potential to damage non-compliant firms' bottom lines. Exclusion from tenders looms unless firms can substantiate their sustainability claims.

## Delivering change from the inside out

Although design and construction practices are evolving, working practices within AEC organisations themselves remain overlooked. Legacy IT has hampered operational efficiency across the industry for years, but the fact that outdated IT infrastructure is also a massive CO<sub>2</sub> generator is not well known. Enterprise technology accounts for 1% of global GHG emissions: equal to half the emissions from aviation and shipping and the total produced by the UK.

But implementing sustainable IT is not merely about reviewing infrastructure for carbon reduction; it is also about transforming working practices, operations and solution efficiency.

Unfortunately, many architecture firms are not practicing what they preach. It is common for designers and engineers to work on bids for eco-friendly projects on power-hungry CAD workstations, not using renewable energy sources. When operations start, project teams repeat that behaviour many times over. 60 traditional workstations running for twelve hours produce around 48,000kg of CO<sub>2</sub>eq<sup>1</sup> – the equivalent of driving seven times around the Earth in a family car.



### IT teams hold the key

There are a number of steps IT teams can take to make a tangible difference to their firms' environmental impact. Adopting Desktop-as-a-Service is one way to contribute to ESG goals, for example by using VDIPOD, a purpose-built VDI platform tailored for AEC applications. Hosted from data centres using 100% renewable energy, it offers architecture firms a path to net zero with metrics and an audit trail to simplify ESG reporting. Compared to traditional CAD workstations, AEC companies deploying the service use 81.7% less energy with an 89% renewable power model (one VDI server supporting 60 laptops/thin clients) and CO<sub>2</sub>e reduced by up to 43%<sup>2</sup>.

A multi-award-winning international architecture studio migrated over 400 employees to VDIPOD, already achieving a 90% reduction in kilowatt hours per person and a three-fold increase in renewable power use. These benefits are set to grow as the platform is rolled out to Asia, Canada and the US.

Savvy architectural practices can also reduce their environmental impact by transitioning to an Infrastructure-as-a-Service (IaaS) model. With fully-managed IaaS, infrastructure responsibility moves to the service provider, along with power consumption and carbon footprint. IT teams can lower energy consumption, cooling costs and decommissioned equipment waste by migrating data, applications and IT services to the cloud, as they no longer need on-premise technology. Cloud providers can also improve sustainability and ESG scores by using intelligent virtual machines and containers to reduce data centre server numbers.

Global engineering company SNC-Lavalin is working with Creative ITC to transition from sixteen global data centres to three. "One of the biggest benefits we've already seen in our carbon footprint is we've reduced storage by 69%. We've reduced electricity by 53% and floorspace by 45%," said Steve Capper, Group CIO of SNC-Lavalin.

### Unlocking future value

Sustainable managed IT solutions like DaaS and IaaS can help companies dramatically reduce their carbon footprint and positively impact ESG scorecards. Architecture firms can now take advantage of a new breed of MSPs with the expertise to help them unlock the greatest value from transitioning to futureproof IT infrastructures, adopting new technologies and improving their working practices.

When looking to transition to the cloud and engage an MSP, always scrutinise their ESG credentials and industry experience to ensure you achieve the greatest impact on sustainability goals. With hyperscalers increasingly under fire for lack of environmental controls and under-used resources, it is worth considering smaller cloud providers. Creative data centres run at around 90% utilisation and achieve a power usage effectiveness ratio of 1.2 compared to an industry average of 1.8. Creative's private cloud solutions are hosted from Equinix-powered data centres, which operate on 100% clean, renewable energy.

The connection between ESG aims and business value is clear. As well as helping meet environmental goals, architecture firms adopting best practice will reap financial and operational rewards. As ESG tender requirements increase, they will have greater bid opportunity and fewer regulatory interventions. Sustainable firms outperform their industry peers on profitability and EBITDA, and enjoy top-line growth, increased productivity and reduced costs. Publicly owned high achievers are also likely to see better equity returns, lower downside risk and higher credit ratings.

Business and IT leaders should keep these benefits front of mind and leave no stone unturned to transform their architectural firms for the better. Future success – for their firm, the wider industry and the planet – depends on it. ■

1 Calculations based on Dell research and 60 devices used over a 12-hour period.

2 Calculations based on standard Dell high graphic workstations, Supermicro VDI servers and Dell XPS laptops. All calculations were accurate as of vendor technical specs 2023.





# Specifying efficient water systems for residential new build developments

Water is our most precious natural resource, which is why sustainable water practices should be at the forefront of every building design project. With recent global crises highlighting how fleeting our water supply is, this article looks at how modern technologies from RWC can make for more water efficient residential new build developments.



Words by Eric Winter, EMEA Director of Product Development, RWC

Most parts of the UK experienced severe droughts in recent summers, and a country that is usually proud of its lush green hills was left bare and burnt. Preserving water as best we can is one effort that the entire country is having to make to ensure that livestock and local food produce can continue to be grown at home.

So, what can individuals in the UK do to help conserve water and use our natural resources more efficiently? One obvious answer lies in our plumbing and heating systems. With leaky water pipes and poor water usage across the UK wasting enough water to fill 1,262 Olympic-sized swimming pools every day, specifying best practice water systems is key to preserving this precious resource.

This is why manufacturers like RWC are continuing their efforts to create innovative products and offer solutions, so that the existing stack of water inefficient buildings are not added too. Solutions such as the JG Speedfit and Reliance Valves ranges ensure specifiers have the best tools at their disposal to design water-preserving systems.

## Preserving water from the start

Three billion litres of water are lost to leaks every day in the UK, in fact, a single leak can lose up to 1400 litres in 24 days. Not only are these leaks environmentally damaging but escaped water can be equally damaging to a building's structure.

Of course, fixing existing leaks is always priority number one, but designing plumbing systems so that they do not occur in the first place should be the goal that specifiers and designers set out to achieve. While there is never a 100% chance of preventing leaks, using a system with a reduced number of joints, or with an easier installation can reduce the chances of leaks happening as much as possible.

Plastic push-fit fittings, such as those in the JG Speedfit range, are entirely flame- and tool-free, which reduces any issues that can arise from soldering. The plastic fittings feature a collet with stainless steel teeth and an O-Ring inside each fitting, which grabs on to the pipe and creates a tight, waterproof seal, this design



reduces installation errors and the chances of leaks from occurring from the start.

#### Controlling water flow at point of use

In addition to leaks, one of the leading causes of water wastage in residential commercial buildings is poor pressure control and, in turn, valve failure. Therefore, pressure control valves, such as pressure reducing valves (PRV), should be a key consideration when it comes to specifying a new building's plumbing system.

However, with designers opting for taller buildings to reduce urban sprawl, space is becoming a premium, especially in plumbing cupboards. And so, whilst the UK building regulations give recommendations for a building's maximum flow rates, installing the required infrastructure to achieve them, is becoming a more difficult task.

The specification of the right pressure controlling valves, can speed up construction processes, too. For example, tool-free and space saving solutions, such as the 312 Compact Series PRV from Reliance Valves, lead to a much easier installation and ensures that the system is controlled and protected.

The valve is equipped with JG Speedfit's push-fit connections, meaning that installing the valve can be done without the need for tools. Similarly, with all the working components being contained within one cartridge, the valve can be quickly and easily serviced.

#### Fewer joints, fewer chances of leaks

For multi-occupancy buildings, not only is water being used at a much higher rate, but it is being demanded from more outlets, too. As with any building, specifiers must consider the intricacies of the products and technologies they are introducing into the building, ensuring that they are easy to install, maintain, and repair. However, with multi-occupancy buildings requiring a larger amount

of infrastructure, due to the demands of each resident, space is again a frugal asset.

Each individual residence is required by water regulations to have an isolating valve (stop valve) and a double check valve fitted at the entrance to the property. It is common at the same time to fit a water meter, and a pressure reducing valve, in the same space, to create an optimal plumbing system.

The installation of four valves per flat or apartment requires a lot of time and space, and because there are so many connections to be made, there is a greater risk that one will be made improperly, leading to unwanted leakage. By considering a combination valve instead of a chain of four different valves, specifiers will not only be saving space in the cupboard, but they will also enable faster installation times, while reducing leak potential, which can save tons of precious water.

Reliance Valves' Tenant Valve Plus brings together five functions into a singular self-contained unit that can control and monitor water supply in multi-occupancy buildings. It incorporates a composite, scale resistant ball type isolating valve, which is also WRAS approved as a stop valve, a pressure reducing valve, double check valve, a patented dual reading pressure gauge, and a connection point for the optional addition of either a primary or secondary water meter.

#### Specifying efficient water systems

With water becoming an ever more stringent resource, efficient usage and preventive measures are key to supporting our combined efforts to preserve as much water as possible, at every point of use. By specifying best practice water systems in our buildings, we are one step closer to stopping water wastage. ■

To learn more about RWC and their family of brands, please visit [reliancevalves.com/family-of-brands](http://reliancevalves.com/family-of-brands)

# Connect and broaden your organisation's engagement with the Architectural Technology community by joining CIAT

Your organisation is invited to become a part of the Architectural Technology world by joining the Institute's Affiliate Group Body Corporate (AGBC) scheme. This new scheme allows your organisation to support and engage with the discipline and profession of Architectural Technology in collaboration with the Chartered Institute of Architectural Technologists (CIAT), as the regulatory and professional body for the discipline.

The AGBC allows you to create a new business-to-business relationship, or take your existing relationship, with the regulatory and lead body in Architectural Technology to the next level!

#### Why be part of the AGBC Scheme?

Being part of the AGBC Scheme will demonstrate your body corporate's commitment to the highest professional and ethical standards in Architectural Technology – an additional promotional tool for your organisation. It will also allow you to connect and develop through access to the AT CPD Register, a subscription to AT Journal, the My CIAT portal and much more.

#### Can my body corporate be part of the AGBC Scheme?

The AGBC is inclusive and accessible to all who wish to join, engage with and support the discipline, profession and Institute. This is a great opportunity for your body corporate to grow your relationship with CIAT – and to develop your legal entity with our support and resources.

#### How do I register our interest?

The AGBC Scheme launched in summer 2022. We invite you to register your interest by emailing our Membership Department – [membership@ciat.global](mailto:membership@ciat.global)

#### Costs

There is a £100 application fee for all packages. Subscription packages for 2023/24, which run from 1 May to 30 April, are:

Size of organisation	Bronze package	Silver package	Gold package
10 employees or less	£250	£550	£750
11-249 employees	£300	£600	£800
250+ employees	£400	£700	£1,150

Find out more by visiting [architecturaltechnology.com/joining/agbc.html](https://architecturaltechnology.com/joining/agbc.html)



# UK'S largest built environment event makes welcome return to capital with record visitors

The UK's largest event for the built environment, UK Construction Week (UKCW) London made a welcome return to ExCeL, with visitor numbers up 6% from last year.

The show included a star-studded line-up of high-profile names including Lord Callanan, Mark Thurston (HS2), architect and Channel 4 presenter George Clarke, BBC presenter Victoria Derbyshire, and BBC journalist and presenter Simon Jack.

Co-located with Concrete Expo and The Offsite Show, UKCW London celebrated culture change in construction with three days of debate and discussion from top speakers across seven stages, with issues covered including Net Zero, sustainability, offsite manufacturing, mental health, and improving diversity and inclusion.

With over 10,000 products on display from over 300 exciting exhibitors including Rointe, Kingspan, Google, Sevadis, HP, Celsa UK, Houzz Pro, Hanson Plywood and many more, the multi award-winning show attracted a wealth of overseas exhibitors from as far afield as Australia, China, India, Norway, Turkey and the UAE.

Show highlights included:

- Construction Sport's pre-show sustainability 'regatta' at Royal Victoria Dock, featuring vessels built using only construction waste materials, to demonstrate the power of team work to promote mental well-being
- An array of high-profile speakers, including government ministers Lord Callanan and Nusrat Ghani, and MP Caroline Nokes

- A myriad of exclusives and showcases, including the UK launch of HP SitePrint - a robotic layout solution for quick, accurate and easy construction site layouts.
- Shining a spotlight on the unsung heroes and talented professionals in the construction industry, the Role Models Campaign, now in its sixth year, saw Barbara Akinkunmi, Founder, Girls Under Construction, Alan Dalton, Lead Mentor, Volunteer It Yourself CIC and Mariola Vieggas-Trimble, Design & Technical Lead, Southwark Council announced as the 2023 shortlist

Nathan Garnett, UKCW event director, said after the show: *"The extent to which the London show has grown since its debut last year is testament to not only the appetite for construction professionals to meet and interact in real life, but it shows how the industry has really bounced back since the pandemic. See you all in Birmingham in October!"*

*"There's so much breadth and depth at UK Construction Week London - you can see technology and change right in front of you, from electrical vehicles to construction safety to AI driven project tools. It's totally different every year; reading a website is one thing, but seeing something in real life is another thing."*

Dates for the next two UKCW shows have already been announced: UKCW Birmingham will take place at the NEC from October 3-5 2023; UKCW London returns to ExCeL from May 7-9 2024.

**Registration for the Birmingham event is now live:**  
<https://ukcw-birmingham-2023.reg.buzz/cab-pr>

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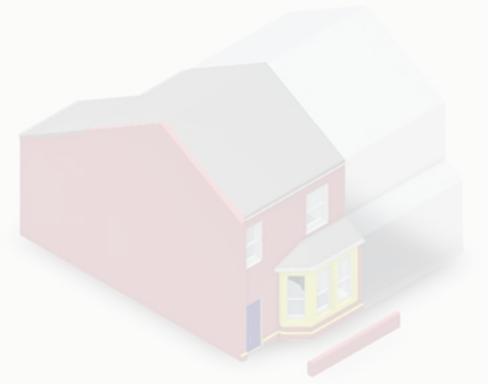
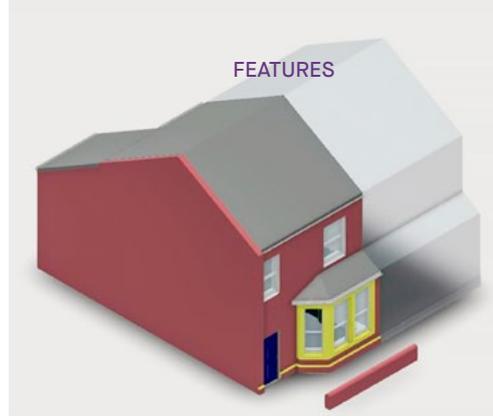
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# There's no BIM like home Part 18

Words by Dan Rossiter FCIAT, Chartered Architectural Technologist

*AT Journal* continues its exclusive access to serialise Dan's blog on how he used BIM to produce an information model of his home.

During the development of my information models, I have considered a lot of different aspects, including mindful modelling, open data and producing with purpose. However, these information models are not the only deliverable I should be concerned with. I will also need to produce documentation, such as COBie and, more importantly, drawings.

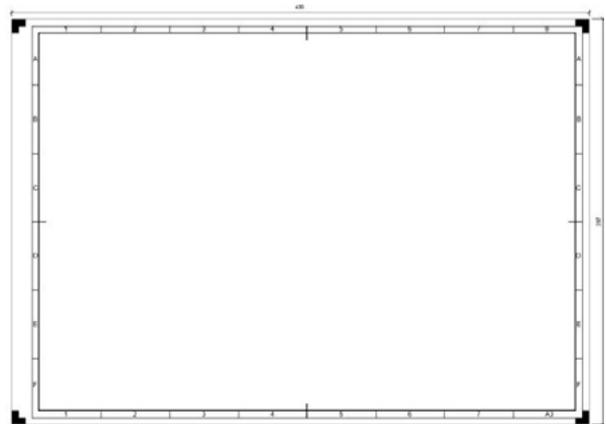
To produce objects for my information models, there are standards such as the BS 8541 Series, to produce COBie there are standards such as NBIMS 4.2 and BS 1192-4, but what about for producing drawings? In fact, there are a lot of supporting standards that cover the various elements of drawing production including:

## Paper sizes:

As I wanted to create several drawings including plans, elevations, and sections, I needed a readily available paper size so I chose A3. A3 is a standard size, 297x420mm, specified within ISO 216. The beauty of the A-series is that they are easily scalable; doubling in size as you go up the series. This is because they are based on  $\sqrt{2}$ . Now that I have chosen my paper size, I need to define my drawing border.

## Drawing border:

There is an international drawing border specified within ISO 5457. It states that the drawings space for an A3 sheet is 277x390mm; giving 20mm clearance on the left to allow for filing and 10mm of clearance on the remaining sides. It also states that drawing borders should have centre lines, a grid system and trim markings; which when combined, look like this:



Now that I have a drawing border, I need to add a title block.

## Title block

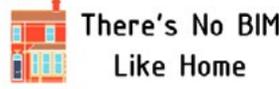
There is an international set of title block fields within ISO 7200. ISO 7200 covers all document headers and title blocks, meaning that it is applicable to anything from drawings and calculation sheets to splash screens and metadata. It states that the following fields are mandatory:

- Legal owner;
- Identification number;
- Date of issue;
- Segment/sheet number;
- Title;
- Approval person;
- Creator; and
- Document Type.

In addition to these, I also want to include several of the optional fields including project name, document revision, document status, and technical reference from an expanded list within EN 82045-2 which specifies metadata for document management. This will not only allow me to comply with ISO 7200, but also capture additional information that I wish to share.



Now how should I arrange these fields? Originally, I had created a horizontal title block but ISO 9431 states that the title block space is also used for text notes. Wanting to keep this space to a minimum, I have produced a vertical title block to the minimum specified width of 100mm.

Rev	Details	Date	Sign
Project			
Legal Owner  			
Title			
Document Type		Purpose	
Identification Number		Status	Revision
Date of Issue	Scale	Created by	Checked by
		Approved by	Sheet

Now that I have a title block, I just need to add my text notes.

**Space for notes**

The space for notes on drawings is specified within ISO 9431. ISO 9431 states that there should be a space, the length of the title block, for three kinds of notes:

- Explanations (notes that help read the drawing);
- Instructions (notes on how to use the drawing); and
- References (notes on supplementary drawings and documents).

Under explanations, I have added a note on general tolerances as specified within ISO 2768, a note on dimension units as specified within ISO 129-1 and a note on symbols as specified within BS 8541-2. Under instructions, I had added 'do not scale', however I am aware that many planning authorities do not accept drawings with this note. Because of this I have instead used 'Responsibility is not accepted for values obtained in scaling from this drawing'. Under references, I have included a schedule of relevant drawings.

**Font**

There is an international font for CAD drawings specified within ISO 3098-5. As you are no doubt aware, no annotation is complete without a good font, for CAD there is no font better than the ISOCF fonts. These fonts are Sans-Serif.

Putting all of these elements together, I get the following super-ISO title block:



Now that I have put all of these standards together, I am able to complete my drawings; producing the following for Tÿ Digidol:

- 7001-BBH-ZZ-ZZ-DR-A-00101: Existing Ground and First Floor Plans;
- 7001-BBH-ZZ-ZZ-DR-A-00201: Existing Front, Rear and Side Elevations;
- 7001-BBH-ZZ-ZZ-DR-A-00301: Existing Section AA;
- 7001-BBH-ZZ-ZZ-DR-A-25601: Door and Window Schedules; and
- 7001-BBH-ZZ-ZZ-DR-A-40601: Kitchen Assembly Drawing.

N.B. All of these international standards are also conveniently summed up in a single British Standard, BS 8888.

There we have it, by thinking about how to produce my drawings, I have been able to apply several international and national standards to produce an internationally consistent drawing border and title block. This is a big help towards the completion of PLQ2.5!

The purpose of the architectural model has been purely to create the other deliverables so it is OK if that is a little rough around the edges. There are limitations on renaming system families and other little quirks I cannot seem to get past using the software in its default form. From the native model I have produced the drawings as well as my FM handover IFC model which was then used to generate my COBie file. What is important is the quality of the deliverables.

But what is important to remember is that this is not an exercise to show off a perfect model, it is an exercise to locate and fix anything that I have missed that will adversely affect how the deliverables impact on how I undertaken my model purposes.

If I have avoided causing these issues then these items will be authorised and I will have produced a native model, COBie, and a number of PDF deliverables to BIM Level 2 that satisfy both my Employer's Information Requirements, and BIM Execution Plan. Fantastic.

And there we have it, subject to scrutiny I have now completed the deliverables associated to my architectural model. This means that once these items have been approved and authorised, I will have completed PLQ2.5 for my architectural information!

Now that I have the architectural information out for review, I need to publish my mechanical and electrical models... To be continued in the next issue.

@DRossiter87



# Working as a BIM Co-ordinator

Spatial Dimensions Measured Survey Company specialise in providing accurate and comprehensive survey solutions for various projects, from small residential properties to more significant commercial developments.

Words by Antonio Paya Camino ACIAT, BIM Co-ordinator, Spatial Dimensions

The Lancaster West Estate project highlights Spatial Dimensions commitment to delivering exceptional survey solutions regardless of size or complexity. Whilst providing support and assistance with delicate humanitarian themes and sustainability challenges.

The Grenfell Tower fire in 2017 was a tragic event that claimed the lives of seventy-two people and left many more displaced. The disaster exposed issues with the safety and conformance of the estate. Understandably, residents called for change. The residents pressured the government and local authorities to take action and ensure that a similar event would never happen again. As a result, the estate is undergoing a regeneration project to transform it into a model social housing estate for the 21st Century.

The Royal Borough of Kensington & Chelsea split the project into six lots. Architects Karakusevic Carson, Penoyre & Prasad and ECD won the contracts, which saw 40 residents representing every block, helping select the winning bidders. Residents were involved in choosing the design teams and ensured they heard their voices and considered their needs.

All six lots appointed the Spatial Dimensions team. Time was of the essence. The 17-acre estate required laser scanning and topographical and utility surveys. It was responsible for producing survey drawings and accurate 3D BIM models. These deliverables assisted with the retrofit design, planning consents and creating tender packages for contractors.

The team surveyed the externals and common areas of all 700 homes across the site to conduct the laser scanning. Including a large number of internal flats and houses that were vacant or occupied. The topographical

and utility surveys were also a massive undertaking. With the estate spanning 17 acres.

The team gathered all data, post-processed it and created point clouds of the estate. The data helped the design team familiarise themselves with the layout and aid the redesign process.

Finally, the Spatial Dimensions team delivered a master BIM LOD300 Revit model of the six lots with mechanical, electrical, plumbing, and structural information. All deliverables were within budget and on time, with regular review meetings with each architect.

The project was challenging. The sensitive nature of the Grenfell fire meant that the team had to work with stakeholders who were understandably emotional and concerned about the estate's future. There were also tight deadlines for the production of the survey results. These deadlines also added to the pressure on the team to deliver on time.

However, the project will have a significant positive impact on the community. The estate's regeneration prioritises the buildings' safety and comfort. The new estate will provide a more sustainable and secure environment for residents.

The Spatial Dimensions team played a crucial role in this project, conducting laser scanning and topographical surveys and delivering a master BIM LOD300 Revit model of the estate.

In conclusion, the Grenfell Tower fire in 2017 was a tragedy that exposed issues with the safety and regulation of the estate. The subsequent regeneration project is challenging but a vital undertaking to ensure that a similar disaster will never happen again. ■

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# Subscription Renewal 2023/24 | Reminder

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Kevin Crawford PCIAT



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**WHAT IF I CHOOSE TO NOT TO RENEW?**

If you decide to not renew, you will be lapsed on 10 November 2023. Membership or affiliate re-instatement after 10 November 2023 for the 2023/24 period will incur a £25/€30 fee.

# Join the AT community on Discord

We are delighted to invite you as a member or affiliate to join the newly launched **Architectural Practices Forum** established by a group of members for members, affiliates and the wider likeminded community.

As members of CIAT we understand the importance of staying connected and up-to-date with the latest industry developments through all stages of our careers.

The **Architectural Practices Forum** on the Discord platform offers free discussion on a wide range of topics, from construction detailing to marketing campaigns and all aspects of Architectural Technology, architecture and running an architectural practice. Our aim is to create a friendly and professional community where members and affiliates can share thoughts, ideas, experiences and offer advice of how we can all further our careers and grow our practices.

We have carefully chosen to release the Architectural Practices Forum on the Discord platform as it offers real-time chat and if desired audio and video capabilities, you will be able to connect with others in the Architectural Technology community like never before.

We welcome members and affiliates of all ages, experience and background and would be delighted if you would join us. You can access the Architectural Practices Forum on the discord platform via your internet browser or by installing the discord app.

We look forward to seeing you on our Architectural Practices Forum Discord channel!

## FAQs

**How did it come about?** Over a zoom CPD! yes that is really how it happened, a few of us exchanged messages and then the discord group was born.

**Why do we need it?** To create a useful single point of communication between all members and affiliates regardless of location, age and experience.

**Who will it appeal to?** Architectural Technology professionals are welcome to join. We would also like to extend this to all professions in the likeminded wider community and would be very welcome to apply to join.

**Who would the Architectural Practice Forum benefit?**

- Business growth, you could be the best AT in the world with years of experience but do you know how to run a business?
- All members and affiliates to share the wealth of experience across the whole of community, imagine the number of collective years' experience that could be utilised

**What is discord?** It may have reputation as something for gaming geeks, but its more than that it essentially a versatile forum platform.

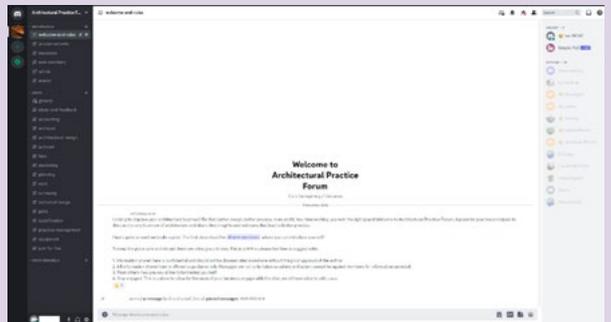
**How is it different to social media?** Discord is different from social media, and messaging apps as it can be grouped by subject with great flexibility and works well on a desktop. At the moment we have established some topic areas, but it really could expand into many more if that is what those joining want. It could include discussion subjects such as AT marketing, practice growth and winning desirable work, student discussions, professional progression, running your own practice, qualifying as a Chartered Architectural Technologist, software and web development.

**The potential**

Any group is only as good its participants, for it to grow and develop into something special it needs good people to participate, we believe all should get as much out as they put in.

**The future and future proofing**

At the moment we are running on the discord platform because we believe this is the best method available at the moment, but really if this does really grow there is no reason why this could not migrate to new technology as these come available, The sole purpose of the Architectural Practices Forum for communications within the likeminded AT community.



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# OFFSITE EXPO

## The Offsite business opportunity of the year

As one of the first and largest dedicated exhibitions of its kind in the UK, OFFSITE EXPO is leading the way in promoting the technologies that are transforming the built environment.

Targeting 4,000 plus visitors, OFFSITE EXPO will be taking place on 19-20 September 2023 at the Coventry Building Society Arena. Providing the ideal setting for exhibitors, this centrally located venue with ample free parking and a hotel on site, is within two hours' drive of 75% of the UK's population.

#### Maximise offsite exposure

"This will be our third year at OFFSITE EXPO, and we keep coming back as we get such a good response" said Paul Cashman, BDM from British Offsite. "We find the organisation in terms of logistics and installing our feature builds is absolutely superb. This event provides access to potential clients from all over Europe. Last year we met developers, designers and housing associations – so it is excellent exposure to the wider offsite world."

Come September the arena will be totally transformed. Two-storey feature builds and full-size modules will rise above the exhibition floor alongside an array of panelised light steel frame, precast and timber structures together with pod and prefabricated MEP solutions from leading UK and international offsite manufacturers.

But it is not only modern methods of construction on show, pioneering technology forms a major part of the event. Presenting promotional opportunities to align your latest innovations with a highly targeted and receptive audience, OFFSITE EXPO is also the preferred exhibition platform for those involved in augmented and virtual reality together with the latest digital design and construction technologies.

#### Offsite Connect Buyers & Specifiers Forum

Exhibiting companies will have an exclusive opportunity to participate in the unique Offsite Connect Buyers & Specifiers Forum. Offering major business development prospects, those with the 'power to procure products and systems' will gather in the forum and exhibitors will be able to book one-to-one meetings with major contractors, developers, designers, specifiers and purchasing managers.

#### Leading the debate

A major draw for visitors, the OFFSITE EXPO Masterclass Theatres will feature presentations and panel debates focusing on the technologies that redefine the way buildings are designed and constructed. In partnership with the Offsite Alliance, the Spotlight on Offsite Theatre is the place to gain valuable insight and get to grips with emerging trends from a host of industry pioneers who are leading the debate in the offsite arena.

#### Be part of the UK's most dynamic offsite construction event

Register your £FOC place at:  
<https://offsite-expo-2023.reg.buzz/ciat>

To find out more go to: [www.offsite-expo.co.uk](http://www.offsite-expo.co.uk)



# AGM 2023

## Notice of the Annual General Meeting 2023

**Notice is given that the Annual General Meeting of the Chartered Institute of Architectural Technologists will take place on Saturday 11 November 2023 for the following purposes:**

- To consider the Annual Review.
- To consider the accounts and balance sheet as at 30 April 2023.
- To re-appoint the Auditors and authorise Council to fix their remuneration.
- To receive and debate the Resolution(s).
- To announce the results of the election of members to the Council and Regional and Centre Committees.

Tara Page  
Chief Executive  
May 2023

CIAT, 397 City Road, London, EC1V 1NH, UK

## FAQs

### What is the AGM?

The Annual General Meeting (AGM) is the yearly business meeting for the Institute, which is required to comply with the Laws of the Institute (please see the formal notice published here).

### Where is the AGM being held?

The AGM will take place at the Park Regis Hotel which is within easy travel Birmingham New Street Rail Station and Birmingham Airport. The provisional timing for the day is 10:30 – 15:30, however, the AGM agenda and actual timings for the day will be confirmed in September, following the Council meeting (once the business for the AGM is known). The AGM business will be conducted in the morning. A conference is scheduled for the afternoon with more details to be confirmed.

### Friday evening social charity evening, hosted by the West Midlands Regional Committee

The West Midlands Regional Committee is in the process of arrange a social charity evening. All members and affiliates (whether they are delegates or not) can choose to attend at their own cost. This is event is self-funding, including the hotel accommodation for the Friday night.

**Who attends the AGM?**

The meeting is Chaired by the President who is supported by the Honorary Secretary, Honorary Treasurer and Vice-Presidents. Each Region/Centre has representation at the AGM, which is its Councillor and Voting Delegates, who have been elected to represent the membership by the Regional/Centre Committee. Non-members who attend are the Auditor, to present the accounts, the Chief Executive and support staff.

**Can I attend the AGM?**

Any member or affiliate can attend the AGM but you must register your attendance. As a member or an affiliate you may take part in any debate but cannot vote. The vote has been delegated to the Voting Delegate from the Region/Centre.

**How do I register to attend?**

Please register your attendance by emailing [j.rowlands@ciat.global](mailto:j.rowlands@ciat.global)

**If I am a Past Chairman or President, do I still need to register to attend?**

Yes, Past Chairmen and Presidents will be invited and will need to register to attend the AGM.

**Will I receive papers for the meeting?**

All members and affiliates who have registered to attend the AGM will receive a set of papers electronically before the meeting takes place.

**How is the vote taken?**

Only Voting Delegates can vote and they are voting on behalf of their Region/Centre, as delegated by the Regional/Centre Committee. The vote will be via a show of hands to ensure that the vote is recorded fairly and correctly.

**How is my vote represented?**

Your vote is delegated to your Regional/Centre Committee. You will need to contact them directly and details can be found here: [ciat.org.uk/membership/regions-centres-aspiration.html](http://ciat.org.uk/membership/regions-centres-aspiration.html)

**How are the Voting Delegates elected for my Region?**

In the first quarter of each year, the Chief Executive advises Regions on the number of Voting Delegates they are entitled to elect to represent the view of their Region. All Voting Delegates must be Chartered Members and all Chartered Members in the Region must be informed of the election of Voting Delegates to ensure fairness.

As agreed by Council, the breakdown is based on membership as at 1 March in any year. A Region is entitled to:

Member numbers	Voting Delegates
100	1
100+	2
350+	3
700+	4

**How are Voting Delegates elected for my Centre?**

In the first quarter of each year, the Chief Executive advises Centres on the number of Voting Delegates they are entitled to elect to represent the view of their Centre. All Voting Delegates must be Chartered Members and all Chartered Members in the Centre must be informed of the election of Voting Delegates to ensure fairness.

Centres 01 and 03-07 elect one Chartered Member who will have the necessary number of votes according to the Centre's membership, with, where appropriate, multiple votes.

The Republic of Ireland Centre's number of votes is based on the Regional model and will have its number of Voting Delegates based on the member number in the Centre.

**What are the Resolution(s)?**

The AGM will receive and debate the Resolution(s) put forward, these are typically changes to the Laws of the Institute.

**What is the process for Resolution(s) for consideration at an AGM?**

Regions/Centres who wish to table a Resolution(s) for consideration at the AGM must submit their Resolution(s) in the prescribed format to the Chief Executive in line with the timetable issued to the Region/Centres in the first quarter of each year. For this year, the deadline is 28 August 2023. For further information please contact the Chief Executive's Office, [j.rowlands@ciat.global](mailto:j.rowlands@ciat.global).

The Chief Executive will receive and present the necessary papers for Council's consideration, in consultation with the Regional/Centre Councillor, and the Council will take a decision on whether to place the matter before the AGM, as an Institute Resolution and handled in the same way as any other Council recommended Resolution.

Individual members, other than members of the Regional/Centre Committee, also have the right to put a proposal to be considered at the AGM. Any such member may approach their Regional/Centre Committee for consideration of their views. The member should be invited to the Committee meeting for that specific item of business. If endorsed by the Region/Centre Committee, the proposal would then become a Region/Centre submission. This must also be on the prescribed format.

Alternatively, the member may approach the Chief Executive direct with a request for a proposal to be considered. The Chief Executive issues the notice of an AGM together with the timeframe for submitting Resolution(s) for an AGM in line with the Laws of the Institute.

**When are the Resolution(s) published?**

The Resolution(s) are published in September following the autumn Council meeting. These are circulated to all members and affiliates by email. ■

**If your question has not been answered please contact the Chief Executive's Office by emailing [j.rowlands@ciat.global](mailto:j.rowlands@ciat.global)**

# Become a Fellow, FCIAT

**Fellow Membership, FCIAT, complements the 'Chartered Architectural Technologist' professional qualification and is an acknowledgement of a Chartered Member's significant contribution to and/or excellence in Architectural Technology.**

## **Benefits include:**

- The designation, FCIAT which sits alongside the protected descriptor 'Chartered Architectural Technologist'.
- It is an acknowledgement of your contribution to and/or excellence in Architectural Technology from your Institute and peers.
- Distinction within Architectural Technology.
- Additional external recognition and eminence from colleagues, peers, clients and employers.
- It forms part of the continued profile-raising of Architectural Technology as a discipline and profession.
- It offers the opportunity to be involved with, and represent the Institute within your area of excellence and/or significance.
- It enables you to be part of the built environment community of Fellows.

Fellow Membership is an accolade which awards the FCIAT designation and is recognition that demonstrates your significant contribution to and/or excellence in Architectural Technology. It is not an additional demonstration of competence or an elevated level of qualification to your Chartered Architectural Technologist, MCIAT status.

## **Who can apply for Fellow Membership?**

All Chartered Architectural Technologists are eligible to apply and can aspire to become a Fellow Member should they choose to do so.

Visit our website to apply or if you have any queries, contact James Banks, Membership Director, [j.banks@ciat.global](mailto:j.banks@ciat.global)



# Elections in September – nominees standing

In the spring issue of *AT Journal*, we showcased the manifestos for those standing for election at Council in September.

**Here is a reminder of the positions and the candidates standing:**



## **Honorary Secretary**

Nominated candidate: Gordon J Souter MCIAT



## **Vice-President Education**

Dr Ashok Ganapathy Iyer FCIAT  
Paul Laycock MCIAT  
Masoud Sajjadian FCIAT



## **Vice-President Practice**

Dan Clements MCIAT

Candidates gave a presentation at the Council meeting held on 11 March to Regional and Centre Councillors to support their manifestos and to allow the opportunity for questions. We encourage you to liaise with your local Region, Centre or aspirATion about these. The full manifestos can be read on the website at: [architecturaltechnology.com/member-homepage/honorary-officer-elections.html](http://architecturaltechnology.com/member-homepage/honorary-officer-elections.html)

If you would like to pose your own questions to the candidates or would like to find out more from them, there are two Hustings to be hosted by the Institute in the summer – information on how to register will appear in AT Weekly.

N.B. These events can only be attended by CIAT members and affiliates, and you must register in advance. The full protocol for attendance will be provided in advance of the event.

The campaign trail continues and here is a summary of the key dates:

**Campaigning by candidates including Hustings:  
Election at Council: 9 September 2023**

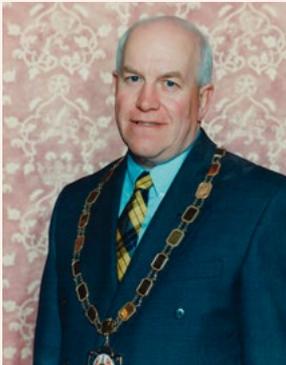
**Assumption of position:  
11 November 2023, close of 2023 AGM**

# Obituary

## Richard H Houseago PPBIAT

11/11/1944 – 19/04/2023

Words by Adam Endacott, Editor



With the passing of time, it is sadly inevitable that the Institute will say fond farewells to senior and prominent members who have served selflessly in a voluntary capacity to help shape the discipline, profession and Institute. Richard Houseago was most certainly one of these and made a distinct difference to the AT community since joining

in 1965, making his own initial professional journey at the same time as the Institute was, when Richard joined as a student member in the Norfolk and Norwich Chapter. He would remain an active participant until retiring in 2011, having relocated to the Yorkshire Region, and received the Gold Award in 2002 in recognition of his work.

Richard was fundamental in forming and setting up the Channel Islands Region in 1991 (formerly known as Southern) and was a devote advocate for the Region. Amongst Regional positions, Richard was Regional Councillor twice, first in 1978-80 and second in 1991-96. He was Vice-Chairman (without portfolio) in 1980-81 before taking on the Honorary Officer role of Vice-Chairman Technical during 1981-83. The pinnacle came when he was elected President Elect in 1996 and then served as President from November 1997 to November 1999. During his tenure as President, most notably the Institute launched its first website, he initiated and oversaw the review of the structure, management and operation of the Institute and worked with the CIOB following the signing of the Memorandum of Understanding. He also found time to serve on Conduct, Practice and Technical Committees.

In his last years, Richard was diagnosed with Alzheimer's and whilst he is no longer suffering, a fine man and character has left us with a legacy that members and affiliates enjoy today. Our thoughts are with his widow Margaret and family.

Here are some extracts from Richard's Gold Award citation:

Richard has been instrumental over the years of both ensuring the survival of the Channel Islands Region and has encouraged others to become more deeply involved both in the Region and at Council than they probably

would have done. He was successful in helping the local Highlands College to set up construction programmes and helped out by providing some part time lecturing.

Locally Richard has been involved with several committees within the construction industry over the years, not least as a consultant to the Planning Department, ensuring that CIAT was a leading player with all areas of the construction industry within the Region.

### Tributes

A great man and many happy memories of him during the 1990s.

**Bob Kay MBE PPBIAT MCIAT**

Richard was always level-headed, and a stalwart of his Region. He was a great asset to the institute.

**Paul Burton PPBIAT PPCIAT FCIAT**

My first encounter with Richard was the day in December 1971 when I went for my job interview in the architectural practice that was in the same building as his. He and two others stood in the doorway taking the mickey out of me in my school uniform climbing the stairs. I came to know him as he later worked for a kitchen design company and then in 1985 he encouraged me to join the Channel Islands Regional Committee, pushed me to be Councillor and the rest as they say is history. I very much have him to thank for a career in the Institute that I never ever set out to do.

**Barry Le Beuvant PPCIAT FCIAT**

Really deeply saddened to hear this news. Richard was a staunch member of the Institute and a welcome voice in my day as Regional Councillor for Northern Ireland and then during my tenure of the post of Honorary Secretary and I would like to have my sincere condolences recorded. I always counted Richard as one of the chaps who could be relied upon to provide wise counsel and a steady hand in any decision-making process and he provided a great addition to any debate at hand.

**Ian Gault MCIAT**

Whilst I hadn't spoken to him for some time, we were friends on Facebook and enjoyed watching his travels, he never seemed to age. It was a pleasure to have known him.

**Paul Le Tissier MCIAT, Channel Islands Region**

## Membership news

### Chartered Architectural Technologists

We would like to congratulate the following who successfully attended their Professional Interview and are now Chartered Architectural Technologists, MCIAT:

032973	Ethan Dunbobbin	Northern, 01
032757	Patrick Back	Yorkshire, 02
033418	Callum Firth	Yorkshire, 02
031069	Chelsea Holgate	Yorkshire, 02
032510	Rachel Keir	Yorkshire, 02
031688	Darren Nelson	Yorkshire, 02
026694	Samuel Trevor	Yorkshire, 02
030397	Joshua Banks	North West, 03
033721	Aaron Labaton	North West, 03
029149	Thomas Lindley	North West, 03
026417	Nathan Panayi	North West, 03
027634	Jack Smith	East Midlands, 04
029300	Sam Spencer	East Midlands, 04
027271	Anil Kumar	West Midlands, 05
023720	Emma Bomken	Wessex, 06
030037	Bushra Ahmed	Central, 08
014538	Richard Clarke	Greater London, 09
031037	David Jimenez Molina	Greater London, 09
027050	Ty Milsom	Greater London, 09
024676	Daryl Stallabross	Greater London, 09
023179	Matthew Ash	South East, 10
031271	Maisie Durrant	South East, 10
036647	Daniel Scarsbrook	South East, 10
029074	Tom Dryburgh	Scotland West, 13
013434	Allan Johnson	Scotland West, 13
032315	Andrew Maggs	Scotland West, 13
030425	Jordan McNeilage	Scotland West, 13
031488	Aaron Watt	Scotland West, 13
028777	Elliot Dickson	Scotland East, 14
030311	Henry Patterson	Scotland East, 14
021111	Colin Young	Scotland East, 14
036108	Karol Dempsey	Republic of Ireland, C2

### Welcome back

We would like to welcome back the following Chartered Architectural Technologist:

028863	Brendan McMullan	Northern Ireland, 15
017966	Barry Reynolds	Republic of Ireland, C2
029632	Alan McIntyre	Middle East & Africa, C7

### Fellow Members

We would like to congratulate the following Chartered Architectural Technologists who successfully completed their application and are now Fellow Members, FCIAT:

019079	Iain Jones	Yorkshire, 02
020619	Mark Howarth	East Midlands, 04
013658	Clive Robertson	East Anglia, 07
017490	Adam Newell	Greater London, 09
025222	Genevieve Wells	South East, 10
023646	Stephen Knightley	Western, 12

### In memoriam

We regret to announce the death of the following members and affiliates:

004482	Roger Roberts	Western, 12
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## CIAT and CIOB sign renewed Memorandum of Understanding

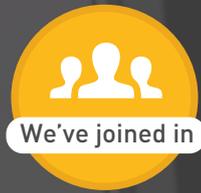
CIAT and the Chartered Institute of Building (CIOB) renewed their longstanding Memorandum of Understanding (MoU) in April. The MoU has been in place since 1997 and demonstrates the two bodies' close alliance and commitment to collaboration and shared good practice.

As well as strengthening the links between the disciplines of Architectural Technology and Construction Management, the objectives of the MoU are to provide an enhanced service to support members' professional needs through joint development, commitment and action for the betterment of the built environment and society. The MoU also provides for a reciprocal membership arrangement providing a 25% reduction on the standard rates for those aspiring to obtain dual membership\*.

Tara Page, Chief Executive, said "I am so pleased to renew the longstanding agreement between CIAT and CIOB, which underpins the strong link between our organisations and the disciplines and professions they represent. This will allow us to enhance and capitalise on our shared knowledge and expertise, to improve industry standards, promote good practice, increase opportunities and develop services to our members and affiliates".

Caroline Gumble, Chief Executive of CIOB said "this MoU not only confirms our joint commitment to collaborate and share our knowledge, seeking to improve and strengthen the disciplines from which our members are drawn, but also to promote dual membership, with discounts offered to members of either institute if they would like to apply for professional membership of the other institute".

**\*25% reduction is offered by the second Institute joined**



“The UK needs to build; there is a shortage of skilled workers and the workforce we have lacks diversity”

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