



SoPHE Newsletter

society of public health engineers

Issue 10 | Winter 2026

Water Systems

CPD

This month's CPD article, provided by ZIP Water. Simon Hastings, their technical manager explores the sustainable use of Point of Use water heaters and achieving compliance.

TM 70 Launched!

As the culmination of years of development between the SoPHE technical committee, Aliaxis & Heriot Watt, CIBSE have launched TM70 which sets out new guidance for drainage design in high rise buildings.

News

Thought Pieces

Partnered Manufacturers



Message from the Chair

Mike Carter

Arup



Welcome to the winter edition of our SoPHE newsletter. What an amazing year we have had as a society, with many outstanding events held throughout the year and many plans already in place for the coming year in 2026.

In March of 2025 we held what is now our annual symposium at the Institute of Mechanical Engineers, where we discussed the topic of water scarcity and water neutrality. The event was a significant success, with 110 delegates attending for the day. Our Industrial Associates also provided insight into forthcoming technologies with many represented at the forum, either speaking during the conference, or providing technical guidance in the breakout spaces, during and after the event.

The great news is that the next technical forum is now open for booking and we are hoping the event will continue to build on the success of last year. The conference this year **'Beyond Compliance: Engineering Public Health Systems That Perform'** will focus on the circular economy, water circularity and water safety. It should be a fabulous event. The technical forum as last year will be split into four distinct topics through the day:

Circular Economy, Water Circularity & Public Health Engineering - Reimagining the Public Health Engineering Circular Economy and its role in Future-Proofing Water & Health Systems

Circular Public Health Engineering and Water Safety Planning - Embedding Water Safety

Planning within 'Circular' Public Health Engineering

Engineering Under Examination - When Compliance Isn't Enough: Engineering Judgement Beyond Long-Held Assumptions

Mind the Gap - Bridging Design and Installation for Real-World Performance

The conference is being held on March 26th, we do hope you are able to attend. Sign up is simple. [Click here to sign up!](#)

A significant achievement in 2025 was the launch of the new re-imagined SoPHE brand. The aim being to enhance an already well-established brand, aligning it with the need for increased awareness of Public Health Engineering and its role in the built environment. The ever-changing global environment continues to create extreme climatic conditions from drought to floods. The need to increase awareness of the importance of water as a natural resource is therefore paramount. As Public Health Engineers it is essential that our engineering systems are designed to ensure water is available for all, providing sustained health and wellbeing for future generations, whilst using technology to drive the continued enhancement and efficiency of our systems.



We also launched the new CIBSE tall buildings drainage design guide (TM70). This has been developed to provide much needed industry guidance for the public health engineering industry. The document was created by our own SoPHE Technical Committee led by Jassim Daureeawo in collaboration with Professor Michael Gormley at Herriott Watt University.

Our plumbing centre of excellence continues at pace with events and competitions well attended throughout 2025. Our Industrial Associates Chair, Paul Marsden has more detail on this within the journal. With the successes through the year, I am pleased to announce that we are planning similar events, CPDs and competitions through 2026, so please look out for future Event Bright invitations.



Finally, the year ended with another fabulous event at the Royal Lancaster hotel with over 320 friends and colleagues attending. The event marked the launch of the reimagined SoPHE brand as mentioned earlier, as well as celebrating the 21st anniversary of the SoPHE London Dinner. This event followed excellent events in Manchester and Bristol, as well as our societies summer networking event and our SoPHE YEN event.

Overall, a fantastic year for our society and I would like to take this opportunity to thank both the CIBSE staff together with the many SoPHE volunteers whose contributions ensure our society not only succeeds in all areas but also continues to grow. We are aiming to set the bar even higher for 2026.

Wishing everyone a really prosperous 2026

Letter from the Editor

Amanda Stanley

Hoare Lea



Drawing to the end of one year and stepping lively into the next, we find ourselves in a fast and changing world where plumbing and public health are at the pinnacle of

importance, where water scarcity is of great importance.

The government is putting great importance on the lack of knowledge in the industry of what is needed, and this program is put together in creating a registry of trained individuals to offer some competence.

Get accredited and become water literate, We need water literate heroes to help create a wave of change. That's why the government have been able to secure funding so that the first 2000 places on our course cost nothing.

Follow the link below to view the course dates and book onto one that works for you, whether that's online or in-person. The course has proven incredibly popular, with 100 individuals now fully accredited as Water Literate, so make sure you book before the 2000 fully-funded spots are all taken!



We are busily starting to lay deeper foundations with likeminded organisations and will proceed into the coming year and following years to help widening the understanding of water risks, solutions and knowledge sharing with organisations like the Water Management Society (WMSoc). The networking, skill sharing and education, heritage including backing charities both here and worldwide with unwavering principles with the Worshipful Company of Plumbers (WCoP).

On tools expertise with recognised design methods with the Chartered Institute of Plumbing & Heating Engineers (CIPHE) and finally but shall not be limited to The Water Reuse Association who are offering staggering facts about lost potential.

We look forward to a mutually beneficial collaboration to drive the industry forward to our greatest challenge to date, let's see what the future will bring.

We at SoPHE must thank all our members and especially those in the Steering, and sub-groups who with out you would not be possible, and a big thanks you of the Industrial Working Group (IWG) who without your assistance, we could not do any of the great things we have achieved thus far.



Water Literacy Programme

SoPHE are delighted to invite you to their 2026 Technical Conference 'Engineering Beyond Compliance'

Time: 9:00-16:45 Conference. 17:00 onwards networking drinks

Date: 26 March 2026

Location: One Birdcage Walk, London SW1H 9JJ

Session 1: Circular Economy, Water Circularity & Public Health Engineering

*Reimagining Public Health Engineering Circular Economy and Its Role in Future-Proofing
Water & Health Systems*

This session will define how circular economy principles can be applied to Public Health Engineering while protecting hygiene, safety, performance, and resilience, establishing clear boundaries between acceptable innovation and unacceptable public health risk.

Session 2: Public health Engineering and Water Safety Planning

Embedding Water Safety Planning within 'Circular' Public Health Engineering

This session will demonstrate how formal Water Safety Planning embeds hygiene, safety, and risk control into building design, providing a rigorous, structured framework to manage water safety from concept through operation.

Session 3: Engineering Under Examination

When Compliance Isn't Enough: Engineering Judgement Beyond Long-Held Assumptions

This session will challenge long-held Public Health Engineering assumptions by examining real-world performance, failure modes, and emerging technologies, strengthening professional judgement where compliance alone is insufficient to manage risk and complexity.

Session 4: Mind the Gap

Bridging Design and Installation for Real-World Performance

This session will explore how gaps between design intent, installation practice, commissioning, and operation lead to underperforming systems, and to identify practical actions designers can take to improve buildability, verification, and long-term performance.



Message from the IWG Chair

Paul Marsden
Grundfos



For many of our Industrial Associate members January is when the clock resets and we look forward to another year of opportunities.

Within the society there are many opportunities and throughout 2026 there are plans in place that build upon previous events as well as some new ideas.

Events such as the Technical Conference, the YEN competition and the YEN social evenings. The 2026 Technical Conference is set for Thursday 26th March. I would encourage all IA members interested in becoming involved to look out for details of the sponsorship opportunities, due to be announced in the coming weeks.

Over 100 engineers attended last year having the opportunity to listen to a series of presentations as well as engaging with the sponsors, understanding how they and their products were able to help address the issues raised by the conference topics.

In the last Newsletter I said work needed to be enjoyable as well as rewarding and the networking drinks after the Conference ensured that day ticked both boxes.

The 2025 SoPHE YEN competition 1st and 2nd place winners, Saskia Verkaik and Harry Robiatti, will soon be heading to Ghana working with Village by Village on some

exciting projects. A great opportunity for them and we are looking at an event, once they have returned, for them to present on their experience.

The winners prize for this years YEN competition will again be a trip to Ghana with Village by Village.

For all of our young engineers interested and up for a challenge, keep a look out for further details to be announced late spring confirming the date of the competition, to be held in June.

To all our IA members and especially our new members I would encourage you to take up on the many opportunities, both technical and social that SoPHE offers.

And across the Country.

The South West region are to hold another Technical/Social evening later this year and the Midlands region are planning a similar, inaugural, event. Likely to be around Autumn. By all means make contact with me if you would like to understand more about these events, or Ki Beard for the South West Event and Lutz Johnen for the Midlands event.

Our committee are always looking at what it can do to improve the benefits of membership and so would welcome any feedback you might have. If you have any thoughts I can be contacted at sophe@cibse.org.

And for now, to all the engineers, in particular the younger generation, I encourage you to continue to engage with our Industrial Associates, and to challenge us. The experience and expertise we are able to offer will help you design solutions and systems that can minimise the impact upon our environment.

I wish you all an enjoyable and successful 2026!

21st Anniversary Annual London Dinner

Jack Batley
CIBSE

On 6th November 2025, the Society of Public Health Engineers celebrated the 21st Anniversary of its annual London Dinner at the Royal Lancaster Hotel, London. The evening was attended by over three hundred individuals from across the public health engineering industry.

As well as bringing together industry peers, one of the highlights of the night is the presentation of the Young Engineers award, based on the activity at the SoPHE YEN/Plumbing Centre of Excellence Annual Plumbing Competition, held earlier this year at London South Bank Technical College's impressive new campus. SoPHE YEN competed with and against College learners in practical hands on and fault finding activities, with the aim of bridging the gap in students' learning from domestic to commercial installations.



This year, first place went to Saskia Verkaik, with Harry Robbiati picking up second place, Raveena Carahaa third and Juliana Santos as highly commended. This year, in collaboration with our chosen charity Village by Village, the prize for both Saskia and Harry will see them flying out to Ghana to help the charity, working on real life projects. This prize was made possible by additional money pledged by the following Industrial

Associates: Geberit, Teekay Couplings Ltd, Stormsaver LTD, Grundfos, Polypipe Building Services, European Vacuum Drainage Systems, Aquilar Ltd, Horne Engineering Ltd, Hydrotec (UK) Limited, JA Brooks Mechanical Services LTD. On the night, due to the generous contributions of attendees, we were able to raise £2950 as an additional donation to assist Village by Village with their crucial work.



This year's SoPHE Honorary Fellowship was awarded to SoPHE stalwart Michael Darvill. Michael has been involved with SoPHE for over 20 years, starting his involvement as the first Industry Working Group Chair and he has been lead organiser of the Dinner since stepping down as Chair in November 2018. It was a fitting occasion celebrating his commitment to the Society at the 21st Anniversary as without his efforts, the SoPHE London Dinner would not be where it is today.

The night was also an opportunity for the Society to launch its brand new logo. The new logo encapsulates the simple idea of a drop of water, whilst symbolising two hands clasped together in partnership. We are immensely proud of the brand design and hope it becomes synonymous with the idea of water conservation in the built environment.

We would like to thank our Industrial Associates for their continued support and generosity, without which, the event would not be possible.

SoPHE Northern Dinner 2026

We are pleased to inform you that we will be returning to the Midland Hotel in Manchester, for this year's 14th Northern Celebration Dinner on Friday 8 May.

SoPHE Industrial Associates have the opportunity to make this year's Celebration Dinner another memorable occasion.

[BOOK NOW](#)



2025 Award Winners

Mike Darvill **Honorary Fellow**

Receiving this recognition and being made an Honorary Fellow is deeply meaningful, but I've never viewed it as something earned alone. It reflects the collective effort of everyone who has been part of my 40-year journey in the construction industry: the mentors who taught me more than they realise, the colleagues who grew into lifelong friends, and the younger professionals who remind me daily how quickly our sector evolves — and how much there always is to learn.

Four decades have passed in what feels like a moment. The work has been challenging, surprising, and at times a little chaotic, but one thing has remained constant: the people. Their commitment, passion, and belief in the value of what we build together have kept me inspired from the start.

I'm truly grateful to the Society of Public Health Engineers for this honour, to my colleagues for their unwavering support, and to the wider community that continues to make this industry such a stimulating place to belong.

This recognition is something I'll truly cherish.



Saskia Verkaik

1st Place in YEN Plumbing Competition

I'm delighted to have come first place in the SoPHE PCE/YEN annual plumbing competition. It was great to be challenged on the hands-on side of Public Health. I really appreciated the unique opportunity to learn from college students and manufacturers on how our designs as engineers could be improved by considering the practicalities of installing PH systems. Special thanks to Sanjay and the team for organising and running a great event! Thank you as well to SoPHE and Village by Village for the opportunity to volunteer in Ghana – I'm really looking forward to getting involved in some of the important work Village by Village do.



Harry Robbiati

2nd Place in YEN Plumbing Competition

This year, I had the opportunity to take part in the PCE/YEN Annual Plumbing Competition – a fun, hands-on event designed for young engineers and students. The day involved a series of practical activities including plumbing problem-solving, hand-skills tests, and practical fault-finding challenges. Each engineer was paired with a student, which created a great collaborative environment and allowed us to combine our knowledge from different backgrounds. I was delighted to finish in second place, which I'm very proud of.

As part of the competition prizes, both first and second place receive the opportunity to travel to Ghana with SoPHE's chosen charity, Village by Village, to see first-hand the work they do to deliver education and public health systems. I am incredibly grateful to have been given this opportunity and look forward to supporting the charity's ongoing help during the trip.

I was kindly hosted by BLÜCHER for the SoPHE 21st anniversary dinner on Thursday at the Royal Lancaster Hotel. It was a great

event which brought together engineers, manufacturers, and supporters from across the industry to celebrate over two decades of progress in public health engineering. It was a fantastic evening filled with networking, shared experiences, and recognition of the work being achieved across the profession. Overall, the plumbing competition, the upcoming Ghana trip, and the anniversary dinner have all been very rewarding experiences. They've strengthened my passion for public health engineering and reinforced the value of staying connected with the wider SoPHE community as I continue to develop in my career.



Juliana Santos - Commendation for Plumbing Competition

This year I was awarded a commendation for the annual SoPHE Plumbing Skills Competition for Young Engineers. During the competition, I had the chance to work together with a plumbing student and put in practice concepts learned through my career as a Public Health Engineer. The Plumbing Competition was a great experience to get to know other young engineers and plumbers and to be in touch and learn from manufacturers. Winning the commendation was a great mark in my career this year and a result of my own efforts as well as training and support from my coworkers and mentors in Hoare Lea. For next year, I intend to chase every opportunity to network and engage into industry events as I believe this is the best way to keep updated and to put myself forward.

This year's winners will be going to Ghana to spend a week with Village by Village. Read all about the good work that they do below.



Point-of-Use Hot Water, Perfected: Practical, Compliant and Carbon-Aware Solutions with Zip Water

Simon Hastings
Zip Water

The Evolving Hot Water Landscape

Hot water delivery has shifted from a background service to a strategic element of building design. Today's systems must balance three priorities: Energy efficiency, user safety, and water hygiene, while fitting within ever tighter plant footprints and meeting increasingly stringent regulatory expectations.

Centralised stored systems still have a place in high-demand environments, but their long distribution pipework, standing heat losses and intensive maintenance often conflict with low-carbon design and space-saving requirements. As the sector moves towards decentralised, energy-conscious infrastructure, point-of-use (POU) systems, particularly instantaneous electric models, are emerging as the next generation of safe, efficient, and compliant hot water delivery.

Why POU Matters Now

POU systems produce hot water directly at or near the outlet, eliminating the need for extensive return loops or trace heating. This design minimises purge waste, reduces heat loss and sharply lowers the risk of stagnation and Legionella. For projects that must demonstrate carbon savings, lower running costs, or reclaim plantroom space, POU offers an effective solution: less distribution means less energy, less water waste, and fewer hygiene risks.

Ideal for intermittent or localised applications such as office washrooms,

school kitchens, cleaners' sinks and healthcare touchpoints, POU systems are equally effective in retrofit settings, where they provide a low-impact way to modernise hot water provision without major construction work.

The Technical Case

Centralised systems remain effective for continuous high-throughput demands but require pumps, expansion loops and significant plant space, all of which add cost and contribute to heat loss. POU storage heaters reduce distribution losses but retain stored volume, bringing associated controls and maintenance. In contrast, instantaneous electronic POU systems heat water on demand, are compact and efficient, and carry negligible purge volumes. Because water is not stored at elevated temperature, they are classed as low risk under HSE guidance for Legionella control.



Compliance Comes First

For building services professionals, regulation underpins every specification decision. In the UK, several frameworks guide best practice: Part L of the Building Regulations emphasises energy efficiency and conservation of fuel and power – an area where instantaneous POU systems directly contribute by eliminating distribution losses.

Part G (G3) governs hot water safety; any unvented storage heater over 15 litres must be installed by, or self-certified through, a competent person scheme.

The Water Supply (Water Fittings) Regulations 1999 require that every component in contact with water meets strict quality standards, known as Regulation 4 compliance. Certification can be demonstrated through WRAS, Kiwa KUKReg4 or NSF Reg4 testing, confirming that fittings are safe and do not contaminate the water supply. Meanwhile, HSE L8 and HSG 274 Part 2 set the expectations for Legionella management, identifying instantaneous POU systems as low-risk due to their minimal dwell volume and high turnover.

Why Zip Water

Few manufacturers align more closely with these standards than Zip Water. With more than 75 years of engineering innovation, and the backing of the Culligan Group, Zip combines technical precision with global compliance expertise. The Zip InLine range of electronic instantaneous water heaters has been developed specifically to meet the UK's toughest design and regulatory benchmarks. Every InLine system is founded on four principles: Precision, hygiene, efficiency and compliance. Products are independently tested and certified through WRAS, Kiwa Reg4 and NSF Reg4, guaranteeing conformity with Regulation 4 of the Water Supply Regulations. Instantaneous heating supports Part L efficiency goals and aligns with the Future Homes Standard by removing standby losses. Advanced electronic control maintains

steady outlet temperatures without overshoot, reducing scald risk and minimising the need for aggressive thermostatic mixing. With no stored volume and minimal dwell time, each unit helps eliminate Legionella risk in full accordance with HSE L8 guidance.

Compact, wall-mounted and available in multiple outputs, the InLine range fits easily into new build and retrofit projects alike, offering specifiers the flexibility to match power rating, flow rate and site electrical capacity with precision.



Practical Benefits in Operation

For building owners and facilities managers, the benefits are tangible. Instantaneous systems cut energy consumption and carbon emissions, simplify maintenance, and remove the need for return pumps and discharge pipework. Shorter pipe runs reduce water waste, while freeing valuable plantroom space for other services. Most importantly, each Zip InLine unit arrives with built-in regulatory confidence, delivering performance that is efficient, compliant and ready for audit.

Safety, Hygiene and User Protection

Two key risks dominate hot water design: Microbiological growth and scalding. Instantaneous POU systems inherently reduce both: no stored volume means bacteria have no opportunity to develop, while electronic control ensures safe, stable outlet temperatures. Where mixing is required, BuildCert-approved TMV3 valves should be installed and included in maintenance regimes.



Specification Made Simple

Selecting the right POU system begins with understanding the application. Specifiers should assess peak and simultaneous demand, seasonal cold-water temperatures, and site electrical capacity to determine the correct kW rating. The heater should be sited as close to the outlet as practical - ideally with no more than three litres of downstream pipework, to limit heat loss and stagnation risk. For unvented storage units over 15 litres, Part G regulation still applies. Finally, ensure that TMVs are compliant and scheduled for regular testing within FM plans.

When considered early, these steps help avoid oversizing, ensure full compliance, and guarantee safe, efficient operation throughout the life of the system.

Reflections

For SoPHE members and building services professionals, instantaneous POU systems present a practical route to meeting tightening energy, water and hygiene standards. By combining precise electronic temperature control, retrofit flexibility and independently certified compliance, Zip Water provides a specification-ready answer for projects where safety, sustainability and simplicity must coexist.

Further resources: Zip Water's RIBA and CIBSE-accredited CPD, Energy-Efficient Hot Water, explores POU design, Regulation 4 compliance and installation best practice in detail. Enquire now to book your session or visit zipwater.co.uk for product information.



Fellowship Profiles: Don Barron

Don Barron

Donald Barron Consultancy Ltd

I served a 5 Year Plumbing Apprenticeship (1956 to 1961), with John Mowlem. Then, as a Plumbing Engineer, for Contractors. In 1964, I joined Norman and Dawbarn, as PH Engineer, working for the World Bank on Hospitals and Schools, in Africa'. In 1968, I joined Ehrlich and Wilson as a Partner. In 1970, I opened an office in Johannesburg, RSA. This was closed, but we stayed on in 'Joburg'. I worked for the Anglo-American Mining Co, as an Infrastructure Design Engineer, I then joined Foster Wheeler, (Pipe Support/ Stress Engineer) on Power Stations. We then returned to the UK.

Joining Ove Arup in 1978, I worked on many prestigious projects worldwide. My career spanned over 30 years. After opening an office, in Boston, Mass, I became an Associate Director. In 1995, I was the PH team leader on the BERTS (Bangkok Elevated Road and Rail Project). This comprised, 30 Km of elevated Road, Intercity/ light Suburban Railways, with 30 Stations and shops along the entire route, directly beneath the structure. Unfortunately, this Project was abandoned.

Working with Ken Hatter, Ian Fellingham and other Senior Industry Leaders, in 1988, we formed the SoPHE. This is now a successful Specialist Group within CIBSE.

In 2002, I moved to Arup Project Management, working as the Lead Technical Advisor to Funders, on the Financing (PFI) of Hospitals, Schools etc. I retired from Arup in 2008, and joined Buchanan Hartley Environment, as a Technical Director, before starting my own Consultancy in 2023.



I am extremely fortunate that I have achieved wide recognition during my career. Initially by passing my City and Guilds, leading to my becoming a Chartered Engineer (Fellow) of the CIBSE, SoPHE, CIWEM. CWEM and CiPHE. In 2023, I became a Freeman of the City of London and a Liveryman of the WCoP and I then received the Guilds 'Master Plumber Award, in early 2025.

Tackling the Drainage Challenge in Tall Buildings: A New Evidence-Based Guide

Prof. Michael Gormley
Heriot Watt University



Tall buildings are an increasingly dominant feature of modern cities, yet the drainage systems that underpin their safe operation have often been designed using methods intended for

low- and medium-rise buildings. Current codes, such as [BS EN 12056](#), do not fully account for the unique pressures and airflow dynamics encountered as building height increases.

To bridge this gap, a new [Tall Building Drainage Design Guide](#) is being published, the product of extensive research at [Heriot-Watt University](#) and industry collaboration. The guide builds on laboratory experiments, full-scale rig testing, and more than [3,000 computational simulations using the AIRNET model](#), providing unprecedented insight into the behaviour of high-rise drainage systems.

Why is this important?

As buildings grow taller, [pressure transients](#), both positive and negative become more severe. If left unmanaged, these fluctuations can deplete trap seals, leading to the ingress of foul air and compromising sanitary integrity. Standard design codes underestimate the ventilation requirements for tall buildings, leaving systems vulnerable.

What will the guide offer?

- [Evidence-based recommendations](#) for pipe sizing and ventilation strategies.
- A [risk-based framework](#) that evaluates designs against pressure fluctuations,

Jassim Daureeawo
SoPHE, Technical chair



airflow ratios, trap seal losses, and building height.

- [Practical approaches to ventilation and pressure equalisation](#) that extend beyond current codes.
- [Performance boundaries and risk curves](#), demonstrating that risk escalates with height unless enhanced measures are introduced.

The AIRNET Advantage

At the heart of this guidance is the [AIRNET computational model](#), which uses the method of characteristics numerical approach to simulate multi-phase flows and pressure dynamics. Validated against experimental data, AIRNET allows designers to assess system resilience long before issues emerge on site.

Looking Ahead

The new guidance is a step forward in ensuring that the drainage systems in tall buildings are not only compliant but truly resilient. By grounding recommendations in empirical evidence and advanced modelling, it provides designers with the tools to [make informed, risk-based decisions](#) and to ensure safe, sustainable outcomes for building occupants.

As tall buildings continue to shape our skylines, this guide represents a milestone in the evolution of [Public Health Engineering](#), equipping our profession to meet the demands of height, complexity, and modern living.

SoPHE Northern goes to IHEEM

Malcolm Atherton
Water Consultants Ltd

Once again, SoPHE Northern have been present at the IHEEM Healthcare Exhibition & Conference which takes place over two days in October, at the Manchester Central Conference Centre. The Exhibition is free to attend & is the place for healthcare engineering and EFM professionals of all levels to discover the products & services to help them meet current and future challenges, as well as to take advantage of the free programme of Keynotes and Technical Seminars.

SoPHE continue to have a Stand space in which both SoPHE & CIBSE are promoted; this year, as well as representatives from the CIBSE Healthcare Specialist Group joining us, we also had representation from CIBSE North West Region as well as from the SLL Group.

The organisation of the Stand, & the principle manning of it, is undertaken by myself (Malcolm Atherton) as the SoPHE Northern



representative. I'm assisted over the two days by various engineers representing the above who volunteer their time to meet people - young engineers, students, Healthcare representatives, etc. - to explain what SoPHE, CIBSE & SLL are all about and (hopefully) get the younger ones to become members!!

At this year's event, we were visited by over 85 people who wished to know more about the organisations & how we "influence" things!! There were a couple of manufacturers, who used to be SoPHE Industrial Associate (IA) members, who now wish to re-apply!! There were also a few manufacturers who are considering joining as SoPHE IA members!

Next year's event takes place on Tuesday 13th & Wednesday 14th October 2026 (the Stand space has already been allocated!!); if you are in Manchester at the time & wish to help us man the Stand, meet some interesting people & have a laugh whilst doing it (boxes of chocolates are provided!!!), then please contact me on m.atherton@water-c.co.uk; it's great fun & a wonderful experience at meeting people of all ages!!



Revealing the Unseen Power of Water: Beyond the Tap

Sam Burgess
SDS



Water, the elixir of life, sustains existence in more ways than we often realise. While we commonly associate water with hydration, sanitation, and agriculture, its influence extends far beyond these realms.

From powering data centres to fuelling the production of electric vehicles (EVs) and nurturing crops like almonds, the significance of water in modern society is undeniable. However, as our reliance on water-intensive industries grows, so too does the strain on global water resources. In this article, we explore some of the lesser-known roles of water and examine how modern society's activities unwittingly contribute to increased water stress.

The Hidden Roles of Water:

1. Cooling Systems for Data Centres:

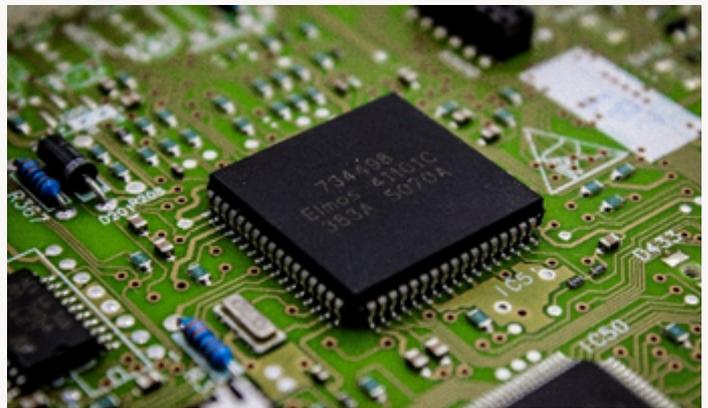
Behind the screens of our digital world lie vast data centres, tirelessly processing information to keep our modern lives running smoothly. Yet, these data behemoths generate immense heat, requiring sophisticated cooling systems to prevent overheating and equipment failure. Enter water, the unsung hero of data centre infrastructure. Water-cooled systems efficiently dissipate heat, ensuring optimal performance and longevity of equipment. However, this reliance on water raises

concerns about the environmental impact and sustainability of data centres, particularly in water-stressed regions.



2. Semiconductor Manufacturing:

In the heart of semiconductor fabrication facilities, water plays a crucial role in the production of microchips and electronic components. From cleaning silicon wafers to facilitating chemical reactions, ultra-pure water is indispensable in ensuring the quality and reliability of electronic devices. As global demand for electronics continues to surge, so does the demand for water in semiconductor manufacturing, exacerbating water scarcity issues in key manufacturing hubs.



3. Electric Vehicle (EV) Production:

As the world shifts towards sustainable transportation, the production of electric vehicles has emerged as a promising solution to curb carbon emissions. However, the

manufacturing process for EVs relies heavily on water-intensive activities such as battery production and vehicle assembly. From electrode fabrication to battery cell formation, water serves as a vital component in ensuring the performance and efficiency of electric vehicles. Yet, the environmental implications of water usage in EV production remain a pressing concern, highlighting the need for sustainable practices and water-efficient technologies in the automotive industry.



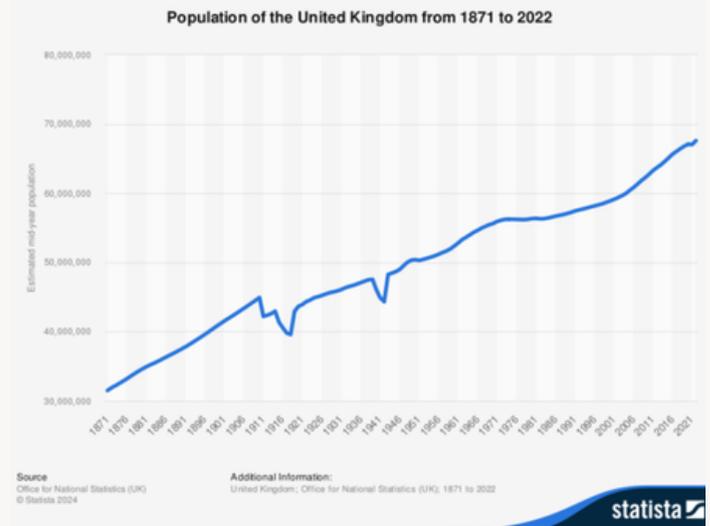
4. Agriculture, including Almond Production:

Water is the lifeblood of agriculture, sustaining crops that feed and nourish billions of people worldwide. One notable example is almond production, which has witnessed a surge in demand due to its nutritional value, and versatility. However, almond cultivation is notoriously water-intensive, particularly in regions like California's Central Valley, where the majority of the world's almonds are grown. The reliance on irrigation systems, coupled with prolonged droughts and dwindling groundwater reserves, has raised concerns about the sustainability of almond farming and its impact on local water supplies.



Modern Society's Contribution to Water Stress:

1. Rapid Urbanisation:



The relentless pace of urbanisation has placed unprecedented pressure on water resources, as burgeoning cities compete for limited supplies to meet the needs of growing populations. From residential consumption to industrial development, urban areas are significant contributors to water stress, exacerbating challenges related to water scarcity and pollution.

2. Agricultural Intensification & Dietary Diversification:

Intensive agricultural practices, including almond cultivation, account for a substantial portion of water usage worldwide. Irrigation systems, essential for crop production, often extract water from rivers, lakes, and aquifers, leading to depletion and degradation of freshwater ecosystems. Moreover, the use of pesticides and fertilisers in agriculture can contaminate water sources, further exacerbating environmental concerns and jeopardising human health.



3. Industrial Expansion:

The expansion of water-intensive industries, including manufacturing, energy production, and mining, has placed immense strain on water resources, particularly in regions already facing water scarcity. From textile dyeing to steel manufacturing, industrial processes require copious amounts of water, leading to increased competition and conflicts over water allocation.



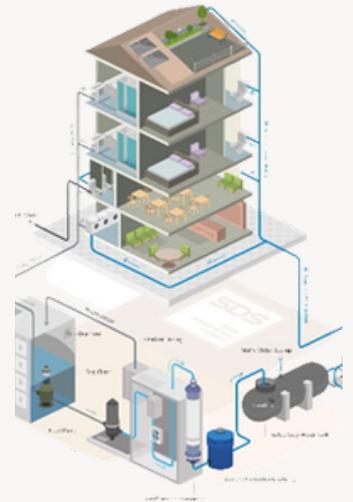
Addressing Water Stress:

To mitigate the impact of modern society on water stress, concerted efforts are needed at both individual and institutional levels:

1. Water Conservation: Implementing water-saving technologies and practices in households, industries, and agriculture can significantly reduce water consumption and alleviate pressure on water resources. Techniques such as drip irrigation, mulching, and soil moisture monitoring can optimise water usage in agriculture, while low-flow fixtures and appliances can help conserve water in residential and commercial settings.

2. Technological Innovation: Investing in water-efficient technologies, such as precision irrigation systems and drought-resistant crops, can help optimise water usage and promote sustainability in agriculture and other water-intensive industries. Additionally, advancements in wastewater treatment technologies enable the reuse of treated wastewater for non-potable purposes, reducing reliance on freshwater sources.

Rainwater harvesting systems capture and store rainwater for irrigation, landscaping, and other non-potable uses, while greywater recycling systems treat wastewater from sinks, showers, and laundry for reuse in flushing toilets and outdoor irrigation.



3. Policy Reform: Enacting policies and regulations that promote responsible water management, including water pricing mechanisms, pollution controls, and watershed protection measures, can incentivise sustainable water practices and safeguard freshwater ecosystems. Governments can also encourage water reuse through incentives, rebates, and regulations that require the implementation of water-efficient technologies and practices in various sectors.

4. Public Awareness: Raising awareness about the importance of water conservation and the interconnectedness of water, energy, and food systems can foster a culture of responsible water stewardship and inspire collective action. Educational campaigns, community outreach programs, and partnerships with stakeholders can empower individuals and organisations to adopt water-saving practices and support sustainable water management initiatives.

In conclusion, water's significance extends far beyond its conventional uses, playing a critical role in powering modern industries, sustaining agriculture, and nourishing ecosystems. By embracing innovative technologies, implementing effective policies, and raising public awareness, we can address water stress and ensure the long-term sustainability of our water resources. Through collaborative efforts and collective action, we can create a resilient and water-secure future for generations to come.

Worshipful Company of Plumbers

Amanda Stanley

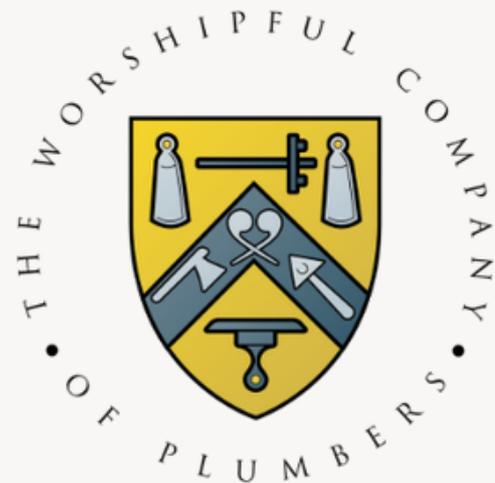
Hoare Lea



Immediate Past Master Charlie Brooks

The Worshipful Company of Plumbers aims to support and make a difference within the ancient industry of plumbing. We assist and support charities and trainees, partner our industry through affiliations, and work closely with the Lord Mayor and the City of London.

As his year as Master draws to a close, Charles Brooks looks back with gratitude and pride on an extraordinary 12 months for the Worshipful Company of Plumbers. From royal encounters and historic presentations to lively Company events and charitable achievements, it has been a year rich in fellowship, tradition, and progress.



To the installation of the new Master Sandra Raine what looks to be a very busy schedule I as a newly approved Freeman I look forward and finding myself so proud in being part of a company which has been running since 1886 and how I can assist in the companies many worth wild causes from education to charities.



Master Sandra Raine

The control of legionella – fact or fiction?!

Malcolm Atherton
Water Consultants Ltd



An introduction to Legionella – brief background history
Legionnaires' disease (Legionella) was first identified following a large outbreak of pneumonia among people who attended an American Legion Convention at a hotel in Philadelphia in 1976.

A previously unrecognised bacterium was isolated from lung tissue samples & subsequently, named Legionella pneumophila.

According to the Health & Safety Executive (HSE), the disease is an uncommon but serious disease! It forms part of a group of similar diseases collectively known as Legionellosis. The other forms, e.g. Pontiac Fever, have similar symptoms but is not as serious as Legionella.



What does it look like & who/how do you normally catch it?

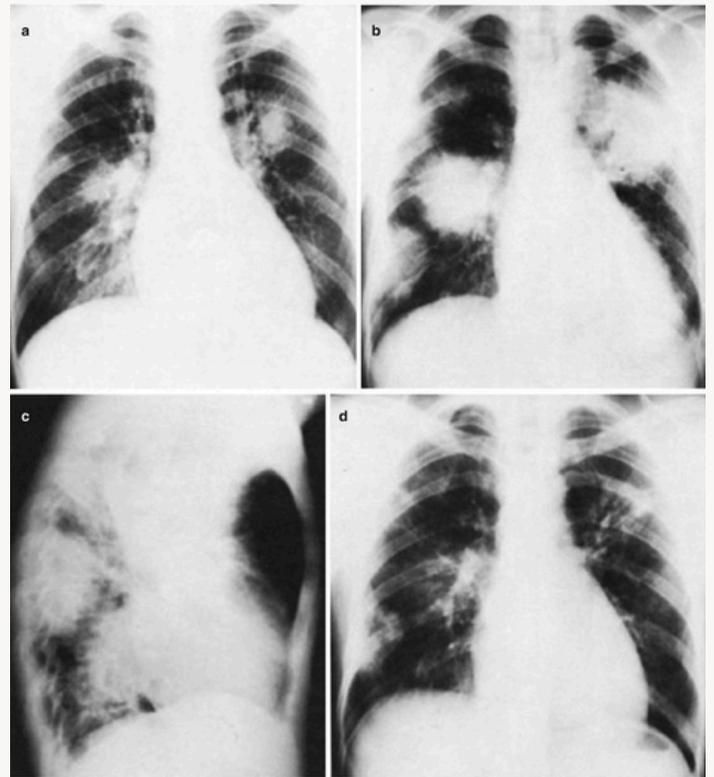
It's normally contracted by inhaling legionella bacteria, either in tiny droplets of water (aerosols in which it can survive up to 2 hours at a relative humidity of 65%), or in droplet nuclei (particles left after water has

evaporated) contaminated with legionella, deep into the lungs.

Person-to-person spread has not been documented, although one case exists in Brazil from 2015.

Initial symptoms include high fever, headache & muscle pain. You may develop a dry cough & most suffer difficulty with breathing. About a third of patients infected also develop diarrhoea or vomiting & about half become confused or delirious.

It can be treated effectively with appropriate antibiotics, provided it's diagnosed early enough!

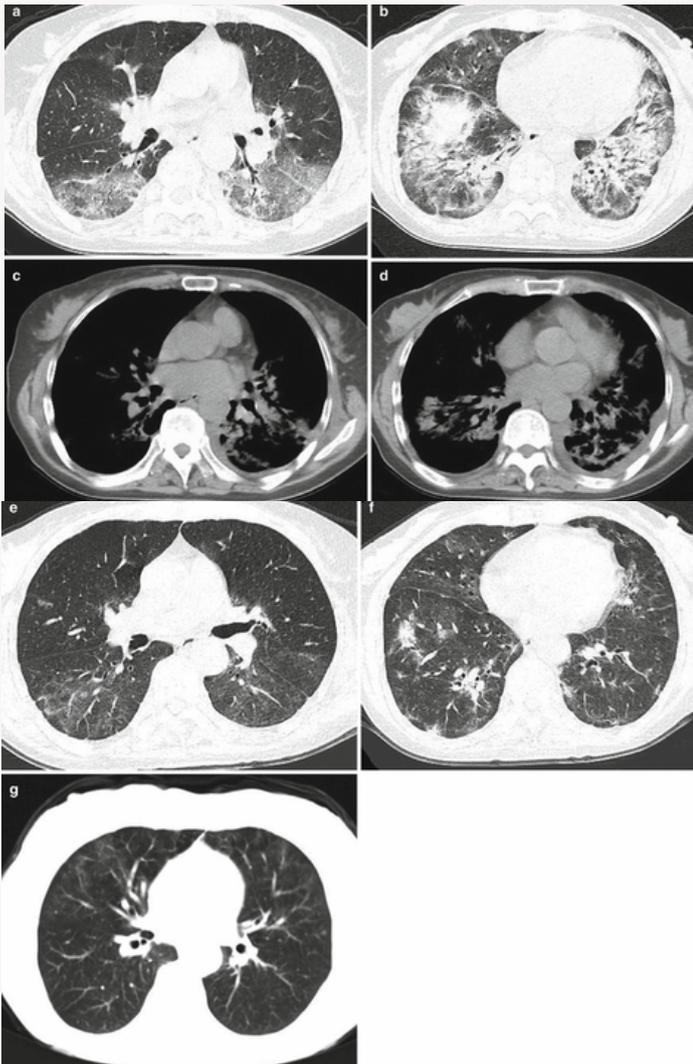


Legionella pneumonia. (a) At day 4 after the onset, chest X-ray demonstrates congestive heart failure. (b) At day 9 after the onset, chest X-ray demonstrates obvious flakes of shadows in the left lung after treatment for congestive heart failure.

The incubation period for a person having contracted the disease is between 2 & 10 days but usually 3 to 6 days.

Not everyone who may be exposed to the bacterium will develop symptoms of the disease & those that don't develop the "full

blown” disease may only show signs of a mild flu-like infection.



Legionella pneumonia. (a-b) HRCT demonstrates multiple flakes of ground-glass opacities and consolidation shadows in both lungs, with internal air bronchogram sign. (c-d) Mediastinal window demonstrates both lung consolidation and a small quantity of arc-shaped liquid density shadows in both thoracic cavities. (e-f) Reexamination after 2 weeks treatment, HRCT demonstrates obviously absorbed lesions, with scattering patches and consolidation shadows in both lungs. (g) Reexamination after 2 months treatment, CT scanning still demonstrates ground-glass opacities in both lungs

The susceptible population includes immunosuppressed patients, men are more susceptible than women, those over 45 years old, smokers, alcoholics, diabetics, those with cancer or kidney disease & anyone with an impaired immune system. NOTE - just because you may “fall” within some or all of the above does not automatically mean that you’ll catch the disease; you’re simply more at risk at doing so.

Sources of waterborne infections

The following is a list of some of the areas where infections may occur; this is not exhaustive one & is in no particular order:- Showers, taps, cooling towers, spa baths & swimming pools, ice machines, bottled water dispensers, humidifiers in neonatal units, ornamental fountains, flushing toilets, hydrotherapy pools & birthing pools, dental units.

Legislation governing the control of Legionella

What Law / Legal requirement exists in relation to the control of Legionella?? A great number of people get this wrong!! It’s actually the Health & Safety at Work Act 1974 (“the HSW Act”) and the Control of Substances Hazardous to Health Regulations 2002 (COSHH).

With regards to what document gives advice on the requirements of the HSW Act & COSHH for Legionella control it’s The Approved Code of Practice L8, 4th Edition; published December 2013 by the HSE. The ACoP has special legal status in that, if you should be prosecuted for a breach of health & safety law with regards to Legionella control, & it’s proved that you didn’t follow the relevant provisions of the ACoP, you will need to show that you have complied with the Law in some other way or a Court will find you at fault.

Assisting with that advice are Technical Guidance documents HSG274 : Parts 1, 2 & 3 - Part 2 deals specifically with domestic water systems. Each Part deals with risk assessments; the specific role of the appointed competent person (known as the “responsible person”); control schemes & what they should include; the review of those control schemes; and duties & responsibilities of those involved in the supply of water systems including suppliers of services, designers, manufacturers, importers, suppliers & installers of water systems.

HSG274 Part 2 – some salient points!

The guidance is for dutyholders & employers, which includes those in control of premises, e.g. landlords & those with Health and Safety responsibilities to others, to help comply with their legal duties.

It gives practical guidance on how to assess & control the risks due to legionella bacteria, i.e. risk assessments and control measures / monitoring.

It deals with the types & applications of hot and cold water systems; provides information on the different types, design & use of systems available to supply water.

It deals with water system design & commissioning; in essence, the water systems should be designed, maintained & managed to comply with:-

CDM Regulations

Building Regulations & all subsequent amendments.

The Water Supply (Water Fittings) Regulations 1999 – more commonly referred to as The Water Regulations – and, for Scotland, the Scottish Byelaws

BS EN 806

BS 8558 : 2015

BS 8580-1 : 2019 & BS 8580-2 : 2022

In accordance with the Water Supply (Water Quality) Regulations 2018 or the Private Water Supply Regulations 2016 [Scottish & Wales equivalents!], the source and draw-off points of a water system must be **wholesome**.

The guidance also deals with the operation, inspection, water treatment, control programmes, microbiological monitoring, cleaning & disinfection, managing your duty (especially includes residential properties), and special considerations for Healthcare & Care Homes.



DIY Mixer Tap

SoPHE YEN: Charlie's Journey

Charlie Hill
Chapman BDSP

2014-2016

Level 2 NVQ in domestic plumbing & heating. After my GCSEs, I decided to start an apprenticeship instead of going to college full time like many of my friends.

2019

Change of direction to Public Health Engineering. After attending a get together, a family member suggested to me to look into joining the Building services industry.

2020

Joined the SoPHE YEN committee. Upon joining the industry I was introduced to CIBSE/SoPHE and became a general member helping with tasks. I went on to become chair in April 2024

2021 -2022

Various SoPHE social & technical Events.

Throughout my time in the industry so far I have aimed to get involved in anything and everything and would encourage others to too.

2024

Dissertation: Public Health Engineering - It's not Bog-Standard. Completing my degree and dissertation in 2024 was a big milestone. I also completed my EPA, IENG and ACIBSE applications.

My plan is to now continue to develop my technical knowledge and career.

2002

The actual apprenticeship begins! Since my Dad was a plumber, I would help out on jobs from a young age.

2016-2018

Having completed my NVQ level 2 I decided to continue to the level 3. This involved a more technical understanding of boiler breakdowns and schematic drawings that I really enjoyed.

2019

The official apprenticeship begins. Having found an MEP consultancy company that would support me with attending university part time I began my formal apprentice and professional career.

2021

The trickiest thing to manage whilst completing my part time university studies and full time working was balancing this. But luckily, I had a great group of colleagues/university friends.

2022

One of my favourite opportunities I was given during my apprenticeship was a secondment to a facilities management company working at the Cheese Grater. I completed a month's secondment completing various tasks such as routine maintenance & CAT B remedial works. This gave me great insight into the latter RIBA stages

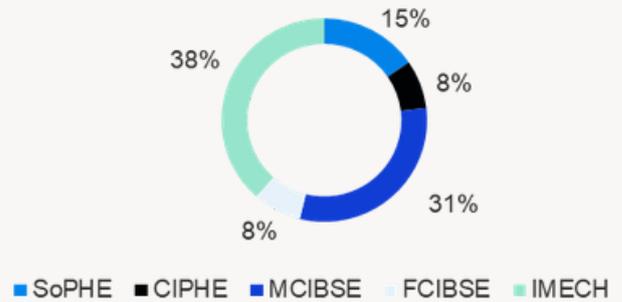


SoPHE UAE Update

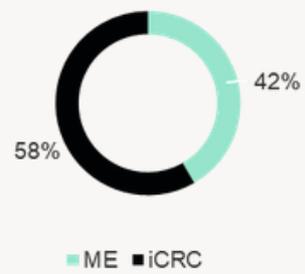
Giovanni Tauckoor
WSP



Mentorship - Overall



Mentorship - ME v/s GCC



2025 Standards & Guidance summarised

Jenny Thompson-Alexander RCDC

Last year, 15 years of SoPHE & Heriot Watt research culminated in the launch of CIBSE TM70: Tall building drainage design. This was the tip of the iceberg in standards which were updated or published in 2025. We have compiled a helpful list of some of the standards & guidance which have changed to keep you up to date. Please note this list is not exhaustive.

United Kingdom

- BS EN 13203-1:2025 & EN 13203-1:2025-*Gas-fired domestic appliances producing hot water – Part 1: Assessment of performance of hot water deliveries (Updated)*
- BS ISO 5667-27:2025 - *Water quality – Sampling – Part 27: Sampling of microplastics in water (New)*
- BS 8490:2025 - *Siphonic roof drainage systems (Updated)*
- BS EN 14972-17:2025 & EN 14972-17:2025 - *Fixed firefighting systems. Water mist systems – Test protocol for residential occupancies for automatic nozzle systems (New, BS 8458:2015 withdrawn)*
- UK Building Regulations Part T
- Future Standard for New Homes

United State of America

- CDC Legionella Toolkit *(Updated)*
- ASHRAE 90.1-2025 - commercial-building energy standard: Energy Standard for Sites and Buildings Except Low-Rise Residential Building
- 2025 NFPA 13 -*Standard for the Installation of Sprinkler System (Updated)*

Australia & New Zealand

- NHMRC's Australian Drinking Water Guidelines *(Updated)*
- 60/2025 - Victoria -Safe Drinking Water Regulations 2025 *(draft)*
- NZ -Local Government (Water Services) Act 2025 – 2025 No 42
- NZ -Local Government (Water Services) (Repeals and Amendments) Act 2025 – 2025 No 43
- NZ - Drinking Water Acceptable Solutions Notice 2025 – Notice No. 2025-sl4976

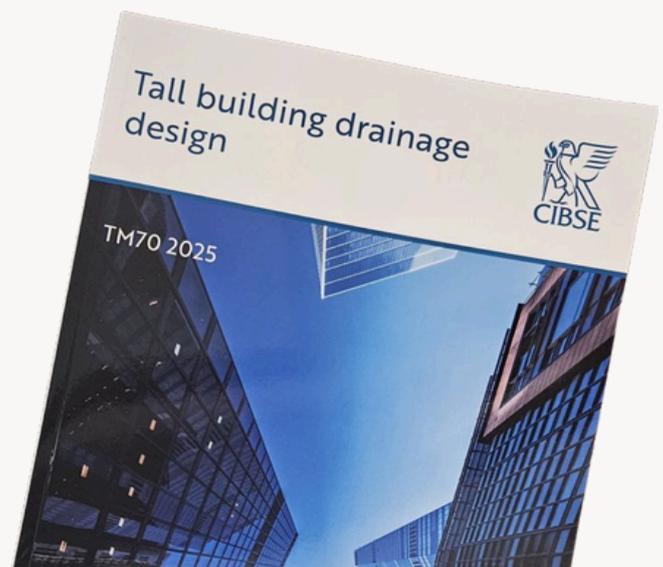
Singapore

- SCDF Fire Code 2023 – 2025 Amendment Circulars *(Updated)*
- Public Utilities (Regulated Works and WSI Design Works) Regulations 2025 *(Updated)*

United Arab Emirates

- Dubai Law No. (4) of 2025 -Water Regulations

It's looking to be an interesting year for the industry in 2026 as well. Keep an eye out for the expected updates to CIBSE Part G, BS EN 752:2017/A1 & CIPHE updates after the world plumbing conference for starters.



2026 Society Calendar

March

SoPHE Technical Evening (Manchester) : TM70
Launch - The Rain Bar, Manchester, 05/03/26

PCE Learners Skills Competition
Waltham Forest College, 14/03/26

SoPHE Technical Evening (Manchester) :
Rinnai UK Limited - The Rain Bar, Manchester,
18/03/26

SoPHE Technical Conference
Beyond Compliance
1 Birdcage Walk, 26/03/26

April

Annual AGM & IWG AGM
08/04/26 Email SoPHE@Cibse.org if you'd
like to be involved

May

Northern Dinner
Midland Hotel 08/05/26

SoPHE Technical Evening (Manchester) :
Xylem Water Solutions Ltd - The Rain Bar,
Manchester, 20/05/26

YEN Summer Networking
Details to be released



June

YEN PCE Competition
South Bank College 19/06/26

SoPHE Technical Evening (London)
BG6, Chapman BDSP, 10/06/26

Word Plumbing Conference
Birmingham NEC, 23/06/26 - 25/06/26

July & August

SoPHE Technical Evening (Manchester) :
details to be confirmed - The Rain Bar,
Manchester, 15/07/26

Summer Networking Event
London, Details to be released



September

SoPHE Technical Evening (Manchester) :
details to be confirmed - The Rain Bar,
Manchester, 16/09/26

South West Networking
Details to be released

SoPHE Technical Evening (London)
YEN Take over, Details to be released

October

YEN Graduate Networking
Details to be released

Aquality Site Walk & CPD
Kings Cross, Details to be released

iHEEM
Manchester Central Convention, 13/10/26

November

Annual Awards Dinner
Royal Lancaster, 05/11/26

SoPHE Technical Evening (Manchester) :
details to be confirmed - The Rain Bar,
Manchester, 18/11/26

Elemental London
Excel Centre, 25/11/26-30/11/26

December

SoPHE Technical Evening (London)
Health & Safety, Details to be released

[Go to our eventbrite to find more](#)

Local events and CPDs will be running throughout the year. Make sure you're signed up to the SoPHE mailing list as part of your CIBSE membership to stay informed. We also advertise events on our LinkedIn & Eventbrite.

SoPHE and CIBSE have a new look

We are proud to unveil our new logo. The new SoPHE logo encapsulates the simple idea of a drop of water, whilst symbolising two hands clasped together in partnership. We are immensely proud of the brand design and hope it becomes synonymous with the idea of water conservation in the built environment.

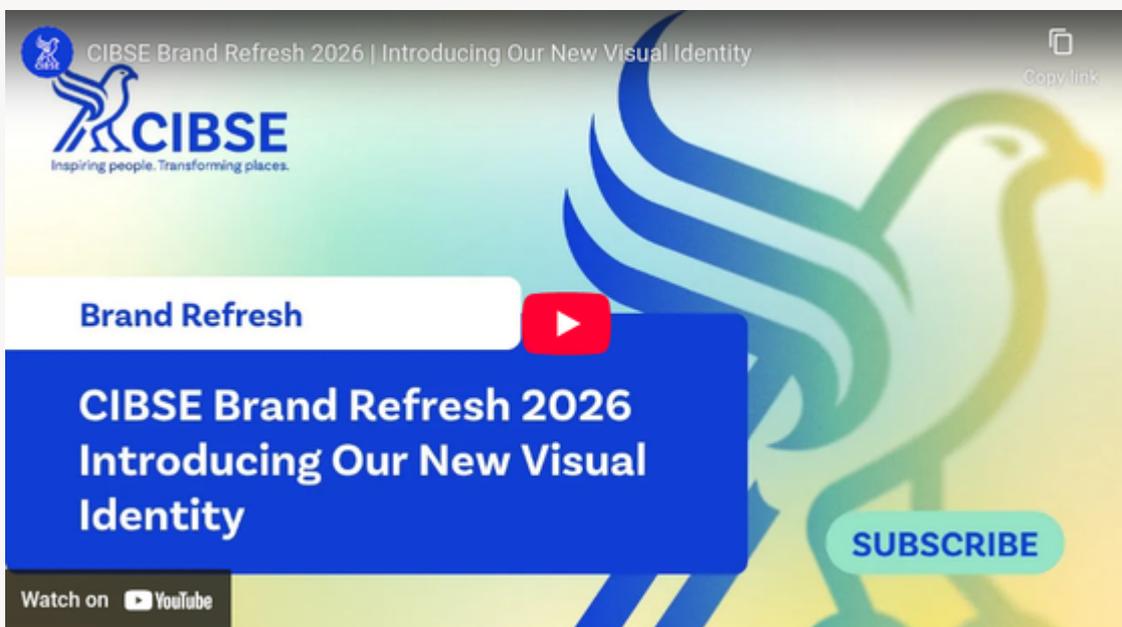
As public health engineering continues to reshape the world we live in, we're evolving too. Our refreshed brand represents not just a new visual direction, but a renewed commitment to driving excellence, collaboration, and sustainability within building services

At the start of 2026, CIBSE also launched its refreshed brand identity, marking a significant moment in its 129-year history and signalling a new era for how the institution presents itself to the world.

The refreshed identity strengthens CIBSE's global presence with a clearer, more contemporary visual language and refined messaging shaped through extensive member feedback and engagement. As the industry continues to tackle the challenges of energy efficiency, climate resilience and the transformation of the built environment, the new brand signals CIBSE's confidence, clarity and commitment to supporting the sector through this new chapter.

Over the coming days, CIBSE members, partners and the public will see the refreshed identity rolled out across the institution's digital platforms, publications and communications.

This new brand era honours CIBSE's long and distinguished heritage while presenting a confident, future-focused institution, one ready to lead, influence and support the building services profession across the world.





**Public health
engineering demands
continuity and trust.**

**Renew now to maintain
your member benefits.**

SoPHE would like to hear from you!

Our Spring Issue will be covering **Sustainability**.

If you have a thought piece that you would like to add to the newsletter or an advertisement that you'd like to place, please email sophe@cibse.org

Submission deadline for the Spring Issue will be 02.03.26.

