

**CIPHE**

[ciphe.org.uk](http://ciphe.org.uk)

The Chartered Institute  
of Plumbing and  
Heating Engineering

**Manifesto**

**Proud to be a Professional**

Founded in 1906, the Chartered Institute of Plumbing and Heating Engineering (CIPHE) is the professional body for the UK plumbing and heating industry.

A membership of over 7000 individuals is made up of practitioners, consultants, specifiers, designers, public health engineers, lecturers, trainers and trainees.

## Aims and objectives



### Public safety and health

To benefit and educate the public worldwide by:

- Defining and monitoring professional standards
- Compiling and publishing a list of competent persons
- Co-operating with professional, research and educational bodies.

### Research

To promote study, research and publication by:

- Encouraging research groups in building engineering services
- Supporting technical advances within the industry
- Publishing research and development papers.

### Education

To further education of the profession, worldwide by:

- Advocating technical training programmes with colleges and the industry
- Publishing technical guidance and supporting new and emerging technologies
- A commitment to lifelong learning and continued professional development in a rapidly evolving environment

### Membership

To raise the standards of individual members by:

- Setting basic standards and enabling progression through higher professional development
- Supporting career development working towards Chartered status for members
- Encouragement of Apprentice, Journeymen, Master Plumber Certificate and CPD programmes.

# Introduction



**With the beginning of a new parliament and the introduction of new parliamentarians, it is key that all understand the huge role the engineering community will play in the future success of the United Kingdom.**

The plumbing and heating industry underpins many key areas of Government policy, such as health, housing, energy and the environment. Education policy — especially in vocational subjects — will have a huge impact on the Government’s Industrial Strategy and our economic success going forwards.

There are many challenges ahead and it is clear that we are entering a period of significant change. The UK is going to need skilled, qualified and competent engineers in all disciplines, to achieve its domestic and international aims.

As the Professional Body for the plumbing and heating industry, and a registered educational charity dedicated to protecting the public health, the CIPHE is uniquely placed to give a voice to the industry, while upholding the interest of the general public, on matters that affect the very health and wealth of the nation.

To this end, the CIPHE’s manifesto outlines the main issues facing the industry and steps that should be taken by the next Government to deliver long-lasting societal benefits. I am sincere in my belief that CIPHE members represent the best of the plumbing and heating industry and, as such, will be extremely well placed to help tackle those issues head-on.

**Kevin Wellman**  
CEO, CIPHE

# Safety, health and welfare of the public

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The plumbing sector underpins the cornerstone of public health, with safe water and sanitation at its very foundation.

## The facts

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**53% of people** admitted to hospital for tap water scalds were either aged over 60 or under 9

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**68% rise** in Legionnaires' disease

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**2.5 million** households fuel poor

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**3 million** households water poor

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## Legionnaires' disease

Cases of Legionnaires' disease are on the rise. Legionella bacteria is the cause of the potentially fatal form of pneumonia, which is contracted by inhaling tiny water droplets. It has a death rate of around 12% and a seasonal rise in cases from June to October. Crucially, figures from Public Health England show an annual increase in Legionnaires cases between 2015 and 2018, with a 68% increase over the period peaking at 814.

## Scalding — prevention is better than cure

The Health and Safety Executive states around 20 people die from scalding each year and the elderly are five times more likely to receive a fatal burn or scald injury than the general population. Hot bath water continues to be responsible for the highest number of fatal and severe scalding injuries among young children. The Child Accident Prevention Trust calculates it costs £250,000 to treat one severe bath water scald. The British Burn Association puts the total annual cost to the NHS at £20 million.

## Fuel and water poverty

According to Government statistics approximately 11% (2.5 million households) are fuel poor and around 3 million households are unable to pay water bills. Lone parents with dependents make up 25.4% of the fuel poor, with fuel poverty being highest in the private rented sector. Under UK law, Water Companies are not allowed to switch off the water supply to domestic residences, however that does not prevent stressful enforcement actions over unpaid debt.

## Health risks of poorly maintained plumbing and heating systems

The Local Government Association 'Healthy homes, healthy lives' report attributes costs of at least £2.5 billion per year in treating people with illnesses caused by poor air quality, condensation, mould spores and compromised drinking water quality, linked to living in cold, damp and dangerous homes.

## Recommendations

- ✓ **Review, update and strengthen enforcement of the Water Regulations.**
- ✓ **Introduce further legislation around the installation and use of domestic hot tubs and spa baths.**
- ✓ **Introduce legislation requiring the use of Thermostatic Mixing Valves (TMVs) in all domestic dwellings.**
- ✓ **A public health campaign, increasing awareness and the ways to minimise the risks of scalding and Legionella.**
- ✓ **Policies to target the energy efficiency of dwellings in bands G–E.**
- ✓ **Tackle issues associated with poverty at source. Promote schemes to help the water poor, increase water efficiency in domestic properties and help the public cut down on water waste.**

# Environment

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The plumbing and heating sector is key to the environment and will play a huge role in the fight against carbon emissions, water waste and climate change.

## The facts

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**By 2050**

the UK to be carbon-free

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**100,000**

heating engineers  
to be retrained

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**Domestic water**

consumption has to  
drop from 140 litres  
per person to 100

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**29% of people**

globally have no access  
to safely managed  
drinking water

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## Future of heat

To tackle climate change, the UK has a legal commitment to be completely carbon free by 2050. That means the gas, oil and coal currently used to heat our buildings will need to be replaced with low carbon fuels or technologies. There are approximately 40 million buildings to de-carbonize. Currently, the industry does not hold the knowledge or skill for a neat transition to a low carbon economy. Approximately 100,000 heating engineers will need to up-skill.

## Consumer and installer education programme

Fossil fuels have been the mainstay of the heating industry for generations — the practical implications of retraining an entire industry are huge. However, it's not just installers who need to adapt to change; designers, manufacturers and the public will need to become familiar with new regulations and technologies. Consumers need protection from incompetent or rogue traders.

## Escape of water

The UK is set to hit water shortages within the next 25 years. While water companies need to make greater progress in managing and reducing waste in their own supply network, we all have a responsibility to cut water waste. The average person will have to reduce their consumption from 140 litres of water a day to 100 litres to have a meaningful impact on future shortages. The RISC Authority states that the cost of escape of water claims to the insurance sector has increased to over £1.6bn per annum. Most losses are a consequence of bad workmanship, resulting in poor installations.

## Global water challenge

According to the UN, billions of people are still living without safe water. Their households, schools, workplaces, farms and factories struggling to survive and thrive. In particular, marginalised groups — women, children, refugees, indigenous peoples, disabled people etc. — are overlooked or face discrimination, as they try to access and manage the safe water they need.

## Recommendations

- ✓ **Government must maximise the expertise of installer organisations, manufacturers and industry bodies to tackle the timescales and practicalities of transitioning to low carbon heating.**
- ✓ **The transition to low carbon heating requires a fit for purpose training and education programme for the industry and a general awareness campaign for the public.**
- ✓ **Water conservation has to be made a priority by the incoming government.**
- ✓ **Water Companies need to increase resources dedicated to fixing leaks and reducing waste.**
- ✓ **A sustained campaign should be introduced to change consumer attitudes towards water conservation and increase knowledge of schemes such as the Unified Water Label.**
- ✓ **Government support and investment in environmentally targeted projects, including conservation and harvesting of water.**

# Fit-for-purpose education system

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Those working in industry require a fit-for-purpose education system to attain industry-recognised qualifications and learn the skills and knowledge vital to their roles.

## The facts

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**85% of those**

operating in the industry work in companies of less than five individuals

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**£1bn overspend**

forecast for the Apprenticeship Levy in 2020 while delivering fewer apprenticeships

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## Funding

Apprenticeship starts have fallen by a fifth since the introduction of the Apprenticeship Levy in 2017. Additionally, the imbalance of funding available to the domestic plumbing and heating Trailblazer apprenticeship (compared to other subjects) is likely to impact negatively on the industry. While the CIPHE welcomes moves to allow non-levy paying businesses (SMEs/micro SMEs) accessing the apprenticeship service from 2020, financial support for SMEs still does not go far enough. At a time when gas as a heat source is being replaced, gas apprenticeships funding is disproportionate when compared against other routes.

## Apprenticeships

In England, the new Trailblazer Apprenticeships are a step in the right direction for the plumbing and heating industry, with a Level 3 equivalent qualification at its core. However, demand for apprenticeships continues to outstrip supply of employers. The UK domestic plumbing and heating industry is predominantly made up of sole traders and micro SMEs of five individuals or fewer, who need more support in taking on an apprentice. This same issue is likely to affect T Levels, when it comes to offering work placements to students.

## Post-qualification CPD regulation

Continuing Professional Development (CPD) plays a vital role in up-skilling the workforce and keeping them up-to-date with the latest best practice and regulatory/technological advances. Without regular, quality CPD, engineers fall behind their peers. However, as the industry is largely unregulated, there is no obligation for those outside of CIPHE membership, or Engineering Council registration to engage in, or record, CPD.

## Experienced worker recognition

There are many in the industry that have ‘grandfather rights’ — individuals who hold great skill and experience, but no formal qualifications. These engineers have a lot to offer the industry, however they are increasingly becoming marginalized. Changes to the CSCS scheme mean that the 60,000 holding industry accredited CSCS cards, will no longer qualify to hold a CSCS card by 31 December 2024. This will effectively block a number of skilled workers from UK construction sites from 2025.

## Recommendations

- ✓ **Further reform of the Apprenticeship Levy.**
- ✓ **Funding for Apprenticeships to be targeted at the anticipated future skills gap and**
- ✓ **Levels to be reviewed, with 16 to 18-year-olds funded from DfE budget.**
- ✓ **Further practical and financial support for sole traders and SMEs.**
- ✓ **Provide an achievable alternative route to recognition for experienced workers.**

# Regulation/ licensing

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The UK plumbing and heating industry is largely unregulated, meaning anyone can give themselves the title of 'plumber' regardless of qualifications, knowledge and competence.

## The facts

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**Approximately 200,000**

individuals are engaged in the UK plumbing and heating industry

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**£1.6bn paid out**

by insurers during the last twelve months for 'escape of water' claims. Prevention is better than cure

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## Water Regulations/ greater enforcement

UK Legislation is commonplace within the plumbing and heating industry through Building Regulations, Gas Safety Regulations and Water Regulations. While compliance with Water Regulations (Byelaws in Scotland) is required, there is generally a risk-based approach to inspection and enforcement. This results in enforcement being weak, with little evidence of resulting prosecutions due to contravention.

## Licence to practise

The CIPHE maintains accessible lists of qualified installers in plumbing, heating and renewables for the public benefit. However, the lack of publicised enforcement of Water, Building and Gas Safety Regulations is exacerbated by the fact that, with the exception of gas installers, anyone can establish a plumbing and heating business regardless of relevant and supporting qualifications. This has allowed a small, but undesirable rogue operator culture to arise, which puts public safety, health and welfare in jeopardy. The UK now sees more deaths each year due to poorly designed, installed and maintained plumbing systems than deaths caused by gas appliances.

## Minimising the black economy

An influx of counterfeit parts — especially in the heating industry — is putting the public safety at risk. Counterfeit parts are often made from inferior materials, will not have passed the vigorous testing and approvals process of genuine parts and rarely conform to European safety standards. Installation of non-genuine parts has consequences for everyone, from the installer (who is legally liable) to the public. Counterfeit parts may be unreliable, may not fit correctly or cause a system damage. In the case of a heating appliance, a catastrophic fail may lead to injury or death.

## Compliance health check

With fuel poverty, water poverty, the black economy, skills shortages and a lack of enforced regulation causing big problems in the industry, the CIPHE proposes to introduce a compliance health check. The health check will be similar to an MOT and will encourage consumers to have regular inspections of their plumbing and heating systems; this should prevent problems before they occur and ensure systems are working as efficiently and safely as possible.

## Recommendations

- ✓ **Vigorously enforce Water Regulations, Gas Safety Regulations and Building Regulations with prosecutions and heavy penalties for those who do not comply.**
- ✓ **Increase links between regulation enforcement and grass roots engineers.**
- ✓ **Recognise the skilled and professional part of the workforce. Bring in statutory licensing of plumbing and heating engineers.**
- ✓ **Introduce an evidence-based mandatory CPD requirement of 30 hours per year for those operating in the plumbing and heating industry.**
- ✓ **Further policing of the black economy to stop the trade in non-compliant parts.**
- ✓ **Introduce a compliance health check for homeowners and landlords.**

# Proud to be a Professional

**The Chartered Institute of Plumbing and Heating Engineering**

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