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Issue 189 January/February 2026

Safe as houses:
Landlords' gas safety record checks

Technical

Commercial flue systems: what you need to know

LPG cylinder safety

Gas Safe Update

Get ready to renew your registration

Digital licence cards

GAS safe® REGISTER

Editor's comment

Welcome back, after what I hope was a pleasant and restful holiday season. New Year is always a good opportunity to take stock of what has worked in the previous year, listen to the feedback and ideas from the people who use your services and to set out new and improved ways of working.

For example, the full report for 2025's Gas Safety Week is now available on Gas Safe Register's website and it makes for an interesting read, particularly when looking at the number of organisations who supported the week. It's fantastic to see how gas engineers and the industry got involved.

We know from your feedback how many of you value the insights of the Gas Safe Register Technical Team. But did you know they also produce a bi-monthly YouTube video where they discuss the key technical issues of the day? These Tech Talk videos are available on the Gas Safe Register YouTube page, where Episode 9 is now available – it's all about how the industry has changed as one of the team heads to retirement.

If you've checked your inbox, you may also have noticed another innovation – enews from *Registered Gas Engineer*. While this magazine is the perfect place for longer, in-depth reads, we know that sometimes you just want a quick summary of key information. And our new monthly email is just the place to find it.

Do let us know what you think at **editorial@registeredgasengineer.co.uk**: we really do want to know and value your feedback.

Scott Darroch,
managing editor

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Technical

Key

Get in touch | Illegal gas work | Gas Safe campaigns | Technical | Contact details | More information | Industry Standard Update | Policies | Safety Alert | Technical Bulletin

Are you ready to renew your registration?

Gas Safe Register has 10 useful tips to help you make sure your registration renewal is as smooth as possible.

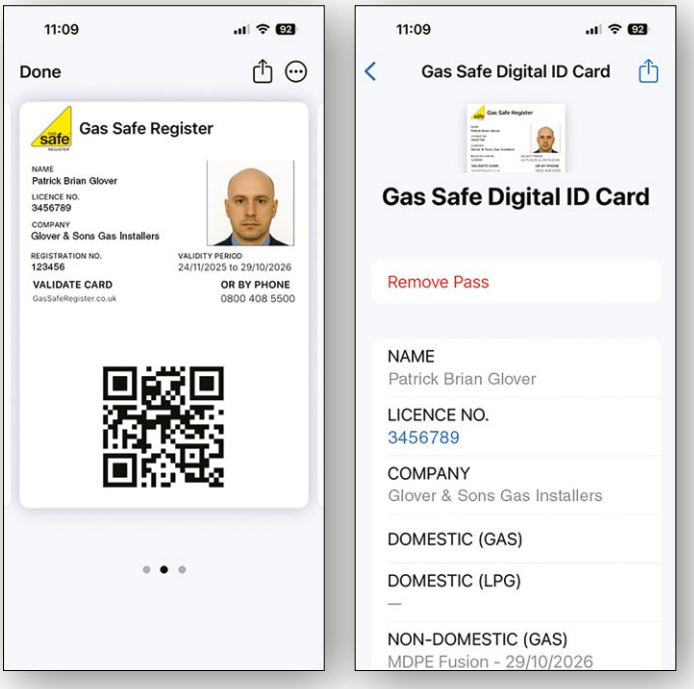
1 **Log-in details:** make sure you know the log-in details for your Gas Safe Register online account. If you haven't got an online account or you have forgotten your details, call the Customer Services team on 0800 408 5577.

2 **How do you know you need to renew?** When you have logged into your online account, you will see a yellow alert advising you to renew. Gas Safe Register will also email your invitation to renew eight weeks before your registration expires. Please make sure the email address the Register holds for you is correct. If your business usually receive communications in the post, this is how you will receive your invitation to renew.

3 **Licence card:** before you renew your registration, you must choose the type of licence card you want to receive. You will also be able to choose:
a. Both digital and physical cards (default option)
Engineers will receive both versions. A fee will apply for the physical card.
b. Digital card only
The cost is included in the registration and operative fee. The card will be emailed to the engineer (or to the responsible person if no engineer email is provided), along with how to add it to your mobile wallet. For Android mobile users, make sure you have Google Wallet enabled on your device. Once the card has been produced, you will also be able to download it in the My Account section of the website.
c. Physical card only
A physical card will be issued at an additional cost. Where a business logo has been provided, this will continue to be printed on the card.

4 **Check information:** make sure all your details are up to date. This includes your trading title, Companies House number (if applicable), contact details and engineers listed against your registration.

5 **Competencies:** check all your competencies and those of any engineers you employ are in date before you renew. Where core competencies (eg, CCN1



The front of the digital card is the same as the physical card. Your customers can scan the QR code to connect to Gas Safe Register's website to confirm that the licence card is valid.

The three dots connect to the back of the licence card, which shows a summary of work categories. A drop-down arrow reveals all the work categories in that section.

Once viewed, choose the arrow top left to view the rest of the work categories.

To return to the front of the card, choose the top left arrow.

or COCN1) have expired or will expire before the new registration start date, you will not be able to renew. Make sure you allow enough time for your certification body to notify Gas Safe Register that new competencies have been added or renewed: it can take six weeks for certification bodies to do this.

"Before you renew, you must choose the type of licence card you want to receive."

6 Change of trading title: if you need to change your trading title, please ensure you complete the change of trading title request via your online account under Business Details. Once you have submitted your request, Gas Safe Register will carry out additional checks, so do allow enough time for this to be completed before your renewal date. If you leave it until the last minute, you may not be able to renew in time and risk being removed from the Register.
Note: *Do not complete your renewal until Gas Safe has confirmed your change in trading title.*

7 Setting up a direct debit: you can pay your renewal fee by direct debit. In your online account, choose Business Details and select Direct Debit. Direct debits can be set up right up to your registration expiry date. You can choose to pay by 10 monthly instalments and select a payment date of 1st or 18th of the month or in full.

8 Renewing by direct debit: if you have already set up a direct debit, your registration will renew automatically and your certificate/licence cards will be issued based on the information held.

When you receive your renewal invitation, please ensure you have checked all your details are correct and choose the type of licence card you want your engineers to receive.

9 Renewing online: when you have checked that your details are correct and up to date, choose Renew Now. Once your payment has been processed, Gas Safe Register will email to confirm your registration has been renewed. You should receive your registration certificate and licence cards within 10-15 working days.

10 Renewing by phone: you can use the automated service at any time of day or night by calling 0800 408 5577. Make sure you have your Gas Safe four-digit PIN and registration number to hand.

You will be issued with a digital and physical licence card unless you have advised Gas Safe Register of your preference in advance. A fee will apply for the physical card. ■

Fees and more information

For the latest fees information, please check on www.GasSafeRegister.co.uk or contact Customer Services.

Renewal fees vary by method (online or non-web) and the number of engineers. Late renewals may incur penalties.

For further details or assistance, contact Customer Services or visit the Gas Safe Register website.

You can log in to your Gas Safe Register online account at: **www.GasSafeRegister.co.uk/sign-in**

Ad campaign under way

Gas Safe Register's 2025/26 winter ad campaign has kicked off and will run until late February 2026

The campaign continues to remind consumers to only use a qualified Gas Safe registered engineer and to increase awareness of the Register. This winter, it shows how consumers can breathe easy knowing they are in safe hands when they choose a Gas Safe registered engineer.

You can see this year's ads on commercial TV stations including ITV, Channel 4, Channel 5 and Sky News. You will also be able to hear them across key commercial radio stations, and see them in daily newspapers and magazines.

Online, Gas Safe Register will be running ads and sharing campaign updates on Facebook, Instagram and LinkedIn.

Tech Talk Episode 9

Episode 9 of the regular broadcast from the Tech Talk team is on available to watch on Gas Safe Register's YouTube playlist, along with all previous episodes.

Tech Talk is a regular video series designed to help you keep up to date with seasonal topics and technical updates relevant to you and your work.

From us to your inbox

Last month you might have seen the first *Registered Gas Engineer News* land in your email inbox.

This is a new monthly email from us to you. It's designed to sit alongside *Registered Gas Engineer* magazine and our website at registeredgasengineer.co.uk, as a new way to share gas safety information more frequently and in a new format.

The email includes news from Gas Safe Register and around your industry, links to the magazine digital editions, technical updates and the latest Tech Talk episode.

We'll send you this email regularly. If you don't want to receive it in the future, you can unsubscribe via the link at the bottom – but we do hope you will stay for a while.

As always, we welcome your feedback on this and what information you want to receive. So please do let us know at: **editorial@registeredgasengineer.co.uk**

update
from the Register

Gas engineer worked illegally after registration lapsed

A lapsed gas engineer has been given a suspended prison sentence after carrying out gas work illegally.

Teesside Magistrates' Court heard that Neil Burton, from Middlesbrough, had carried out boiler services in a home in Stockton-on-Tees in May 2021 and April 2022. Mr Burton had been Gas Safe registered until February 2021 but both his registration and qualifications had lapsed.

HSE, prosecuting, told the court that a review of the boiler identified both At Risk and Immediately Dangerous defects.

Its investigation further uncovered that Mr Burton, 41, also carried out gas work at a house in Middlesbrough in September 2022 and October 2023. The work included disconnecting a gas hob and installing a new one, as well as disconnecting a gas fire. As in Stockton-on-Tees, he carried out this work while not registered.

The court heard that HSE had issued him with a Prohibition Notice in 2015 for undertaking gas work while not competent and not registered.

Neil Burton, of Harrogate Crescent, Middlesbrough, pleaded guilty to breaching Regulations 3(1) and 3(3) of the Gas Safety (Installation & Use) Regulations 1998. He was given a six-month prison sentence, suspended for 12 months and ordered to complete 150 hours of unpaid work.

Fake fitter left gas escape at Cheshire home

An illegal gas fitter who falsely claimed to be Gas Safe registered and left unsafe work has been given a suspended prison sentence.

Chester Magistrates' Court heard that Scott Williams from Congleton carried out gas work at two properties in Cheshire between 2021 and 2023. The work resulted in a gas escape in one of the homes, leaving the householder without a working gas appliance for some time.

HSE, prosecuting, was alerted to his work by Gas Safe Register following its inspection at one of the properties. The inspection identified At Risk work on the installation. Further investigations found that Mr Williams had also carried out work at another property and that he had issued a Gas Safety Certificate using a false registration number.

Scott Anthony Williams of Galbraith Close, Congleton, pleaded guilty to seven breaches of the Gas Safety (Installation & Use) Regulations 1998. He was sentenced to a 12-month community order, requiring 240 hours of unpaid work. He was also ordered to pay costs of £2,000 plus a victim surcharge of £144.

HSE inspector Nicola Willcox said: "This was a deliberate breach of gas safety legislation that put people at risk."

If you find work that you think may have been carried out illegally, you can report it by filling in the "Report Illegal Gas Workers" form in the engineers' section of the Gas Safe Register website at: **www.gassaferegister.co.uk/gas-safety/concerns-reporting-illegal-gas-work/**

Alternatively, you can call on 0800 408 5577 or report concerns by email at: **nonreg@gassaferegister.co.uk**

We appreciate your continued support when it comes to reporting illegal gas work. If you have any questions or concerns relating to unregistered work, please do not hesitate to contact Gas Safe Register.

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Caught on camera

What's the worst gas work you've seen lately?
You can share your photos with the Gas Safe engineer community on our Wall of Shame by emailing us at: **editorial@registeredgasengineer.co.uk**

FROM
RICHARD SYRETT

Customers were having a new roof and the roofer helpfully made a 'repair' to the missing flue terminal. Good thing that Richard was there and fitted a new, correct terminal.

FROM
DAVID & MANDY SPELLING

An elderly customer had noticed the flame on her gas fire wasn't burning correctly. The surround had been cemented to the fireplace and hadn't been checked for 30 years.

They removed the fire and advised getting the chimney swept. The customer is going to get a new electric fire.

FROM
JAMES FLEMINGTON

Another photo that shows the importance of checking flues within voids. James was replacing a boiler and found this. He replaced it and added an inspection hatch.

FROM
IAN COOK

A 6mb drop was traced back to a leak on a compression fitting behind a kitchen unit that had been in place for more than a decade. Ian, who was carrying out a gas safety check, found no olive on one half of the elbow.

FROM
DEANO MOYLE

More flue woes, shared by Deano, who found this plumbing fitting on top of the bodged flue, blocking the air intake. Deano made the installation safe and replaced the flue.

FROM
PETER ABREY

Peter was quick to track down the cause of a suspected gas escape: the condense trap had cracked and was dripping, causing a hole in the copper pipe. Peter replaced the pipework in a new position as well as the trap.

Landlords' gas safety record checks: what you need to know

Gas Safe Register's Technical Team sets out the details of what gas engineers must carry out during a landlord's gas safety check, what's best practice, and how to fill in the record correctly.

The Gas Safety (Installation & Use) Regulations 1998 (GSIUR) give guidance on the minimum information that should be recorded and what tests should be undertaken.

What qualifications do I need to complete a LGSR?

You must hold all relevant appliance qualifications to enable you to carry out the relevant 26(9) checks for all appliances requested to be tested, by the landlord, at the property.

A visual inspection only is NOT satisfactory.

For example, if you are requested to complete a LGSR that includes a fire, you will need the additional HTR1 qualification to be able to carry out the checks specified. The same principle applies to all appliances.

What checks must I make?

Regulation 36 of the GSIUR clearly states the minimum work that must be carried out during a landlord's gas safety check and the information that must be captured so that the check complies with the regulations.

Within the regulations, 26(9) sets out the checks that shall be carried out:

- Visual inspection of the gas installation, appliance(s) location, terminal, chimney/flue route/position and signs of incomplete combustion
- Appliance operating pressure or heat input, or both where necessary. If it is not reasonably practicable to carry out either of these checks, then you can rely on the combustion analysis
- Ventilation is clear and sufficiently sized, etc
- Flue flow and spillage testing where appropriate for correct operation of flue
- All flame supervision devices and/or other safety controls for correct operation
- Investigate any evidence of unsafe operation of appliances.

You must take all reasonable steps to notify any defects to the landlord or responsible person. Follow Section 6, dealing with unsafe situations in IGEM/G/11.

What other checks should I carry out?

It is recommended that you carry out a tightness test, but this is not a legal requirement.

You should also check the gas meter/emergency control valve for accessibility in an emergency, for maintenance and for correct labelling.

Where specified in the appliance manufacturer's servicing and maintenance instructions, combustion gas analysis should also be carried out.

What about tenants' own appliances?

It is not a requirement to record a tenant's own appliance on a LGSR.

If a landlord requests a tenant's appliances are recorded on a LGSR, a **visual inspection only** should be carried out and no further

What information must be recorded?

- The date on which the appliance or chimney/flue was checked
- The address of the premises at which the appliance or flue is installed
- The name and address of the landlord or agent at which the appliance or chimney/flue are installed
- A description of the location of each appliance or chimney/flue that has been checked
- Any gas safety issues identified and any remedial action taken.
- This record must be retained until two further checks of the appliance or chimney/flue have been made or, if an appliance or flue has been removed from the premises, the record must be kept for a period of two years from the date of the last check
- Confirmation that all safety details are recorded and comply with (but are not limited to) Regulation 26(9) GSIUR
- Your name, signature and registration number.

Minimum visual checks to ensure compliance

Checks required	An appliance is encountered while working on another appliance	An appliance forming part of a tightness test	An appliance, when purging the system of air and relighting, following work elsewhere on the installation
Location	✓	✓	✓
Flueing	✓	✓	✓
Ventilation	✓	✓	✓
Signs of distress	✓	✓	✓
Stable/secure	✓	✓	✓
Flame picture		*	✓

✓ = Required * = Considered best practice

checks are required. Where a visual inspection only is carried out on tenant's own appliance, record 'N/A' in the 'safe to use' section on the LGSR.
Do not enter 'YES' because this assumes you have performed full 26(9) checks and do not enter 'NO' because it could indicate there is a safety issue.

Visual checks alone cannot confirm that an appliance or installation is safe to use.

If a visual inspection of a tenant's appliance finds it to be AR or ID, then 'NO' should be recorded in the 'safe to use' section on the LGSR and all safety defects added. Follow the Unsafe Situations Procedure, IGEM/G/11.

What if an appliance is unsafe (AR/ID)?
A LGSR is a record of your findings when you attend that property and should always be issued once all relevant checks have taken place.
If an appliance is found to be At Risk or Immediately Dangerous, you should follow IGEM/G/11.

The appliance, defect and any remedial action taken or required should be recorded on the LGSR and you should make the landlord aware of any safety defects.

It is recommended that landlords should keep a copy of all remedial work done to rectify defects with the LGSR.

How do I record defects?
You should only record defects that are gas safety issues. These are situations that are classified as At Risk or Immediately Dangerous, in accordance with IGEM/G/11.

Defects that are not related to gas safety should be communicated either verbally or via a job report or invoice but NOT added to the defects on the gas safety record. This is because doing so could potentially confuse the responsible person over what is safe and what is unsafe.

"If you believe a gas meter has been tampered with, you must follow the guidance in IGEM/G/11."

What if I start a check but find an appliance on which I'm not qualified to work?
You can only complete a LGSR for the appliances for which you hold the relevant qualifications. In this instance, another gas engineer holding relevant qualifications for the remaining appliance/s would need to complete another LGSR.

Do I need to complete a new record if I fit a new appliance?
No. If a gas safety record is currently in place covering the existing landlord's appliances, the record is still valid.

As an example, let's say the landlord has a boiler, cooker and a fire in a rented property. All appliances are owned by the landlord, so they are covered under Regulation 36.

The gas safety record check was completed in January but the landlord asks you to fit a new boiler in March. When you install the new appliance, you have a duty of care to carry out a visual inspection on the other gas appliances in that property, as per the table on minimum visual checks, to ensure their safe operation.

After installing the boiler, the property's cooker and fire are due to be tested and checked the following January, and the boiler in March. However, GSIUR does provide one-off flexibility to re-align the safety check the following January, with all three appliances on the same record.
Note: This can only apply to one appliance and the maximum period that the safety check can be extended is two months.

Landlords' gas safety record checks (continued)

How often should installation pipework be maintained?
Landlords have a duty to maintain the gas pipework in their properties. This is a separate and distinct duty from the annual safety check but can and should be undertaken at the same time.

There is no formal or legal requirement to keep pipework maintenance records. However, landlords would need to prove, if asked, that they have regularly maintained installation pipework from the meter – or emergency control valve in the case of an LPG installation – to the appliance, and have completed any required repairs.

If an internal meter outlet has been capped, what are the landlord's responsibilities?
Landlords still have a duty to maintain the installation pipework. This may include scheduled visits to check the meter installation for safety. No LGSR is required for the property.

Does a communal heating system in a block of flats require a LGSR?
Yes, it comes under Regulation 36 and a LGSR for the communal heating system should be displayed on a notice board in a central area.

Keep the expiry date

Landlords can arrange for gas safety checks to be carried out any time 10-12 calendar months after the previous gas safety check but still retain the original date as if the check had been carried out exactly 12 months after the previous check – much in the same way as car MOTs.
Note: The expiry date on a landlord's gas safety record must be preserved for 12 months, even when the check has been carried out earlier than this. The Register is aware that, in some instances, gas engineers carrying out a check a month before 12 months have elapsed are then incorrectly filling in the expiry date on 'next gas safety check due before' as just a month later, rather than 13 months ahead.

Gas Safe Register says: "Where the gas safety check is carried out less than 10 months or more than 12 months after the previous gas safety check, this will have the effect of 'resetting the clock' and the new deadline date will now be 12 months from the date of this latest gas safety check."

Some record pads include a facility to capture "next due date". There is no legal requirement for this date to be added to the record but if a landlord wishes it to be filled in with the following year's date, you should inspect the previous record to confirm the date on which last year's record was completed.

What if I suspect there has been tampering or theft of gas?
If you believe a gas meter has been tampered with or there has been theft of gas, you must follow the guidance in IGEM/G/11 if you consider it to be a safety defect and report it to the responsible person or landlord.

What should I do if the tenant won't allow access to the property?
It is the responsibility of the landlord to show they took all reasonable steps to comply with the law. The HSE provides guidance on landlords on what steps they should take, which includes:

- Making sure they keep a record of all correspondence with their tenants
- Leave the tenant a notice stating that an attempt was made to complete the gas safety check and providing their contact details
- Write to the tenant explaining that a safety check is a legal requirement and that it is for the tenant's own safety. Give the tenant the opportunity to arrange their own appointment. ■

"You should only record defects that are gas safety issues."

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Commercial flues

Gas Safe Register's Technical Team look at the most common factors that gas engineers need to consider when installing and working on commercial flue systems.

Flue construction
All materials used for flues need to be suitable for the safe operation of any connected appliance. In particular, the material shall be fit for purpose in terms of:

- **Mechanical strength**
- **Temperature rating**
- **Corrosion resistance**
- **Fire rating.**

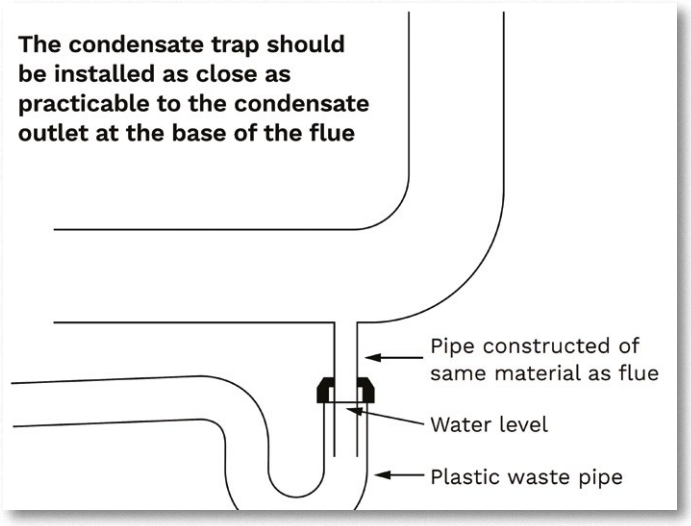
Flues are commonly made from aluminium, stainless steel, non-metallic or masonry-type materials. Where aluminium or non-metallic materials are used, you may need to consider the fire rating of the building. For example, if the flue passes through a wall or floor, this cannot reduce the fire rating protection in the event of a fire.

If using non-metallic flue components, you must always consult the manufacturer first. If this is an existing flue, careful assessment may be required to ensure that the integrity/durability of the non-metallic components will last the lifetime of the appliance to be installed.

Where an appliance can burn more than one fuel, the materials selected and flue construction need to consider the constituents and requirements of all fuels. A gas or oil-fired appliance must not be incorporated into a biomass flue system.

Purpose-designed sealable sample points must be provided to enable combustion analysis/smoke testing/leakage testing for commissioning and future maintenance of the appliance and flue system.

Flue routes
The route of any flue system should be designed to be as direct and straight as possible while ensuring that combustion products disperse safely and effectively. The use of



Source: BS 6644:2011

horizontal runs and 90° bends or elbows should be avoided on natural draught systems except those parts forming headers to common chimney systems.

The flue system shall be terminated in a position where the products of combustion will disperse safely into the environment and without causing a nuisance.

The flue should be supported adequately throughout its length. Any joints should preferably be installed in locations where they can be checked visually. Unlike domestic applications, this is not always practicable and you may need to use other methods to test the flue's integrity, such as smoke testing or leakage testing to confirm that it is complete and sound in construction.

When using single-wall flues, the adjacent combustible materials will need to be taken into account. The outer temperature shall not exceed 70°C and, for double-wall flues, the inner flue surface shall not exceed 250°C. Any combustible materials adjacent to the flue must not be subjected to temperatures exceeding 65°C.

Where a flue pipe is designed to enter a masonry flue (brick-built chimney), the entry needs to be angled upwards at least 45° and not protrude into the chimney beyond its inner face or, if less than this, the entry shall not reduce the ability of the flue to exhaust safely and correctly.

Connection shall not be made within or terminate below 250mm from the base of a masonry flue. The design should consider an access panel to inspect the base of the flue.

If you are installing a new appliance, using an existing masonry type, the flue will need to be suitably lined.

CONDENSATION

Non-condensing boilers

Condensation in flues is quite common upon initial start-up of the appliance. If you suspect condensation could happen at other times during normal operation, then the flue designer may need to ensure that they factor in way to dispose the condense to a drain.

Where condensation within the flue is present other than at initial start-up, also use an insulated flue, such as a double-walled flue. Double-walled or otherwise insulated flues should be used where any sections of the flue route are exposed.

Condensing boilers

Flue components, including any liners used in a masonry chimney, need to be resistant to condensates and corrosion. The design must incorporate a way to drain the condensate and have an internal diameter of not less than 22mm. A condensate trap should be installed as close as practicable to the condensate outlet at the base of the flue.

Condensate pipework shall be protected against frost and be corrosion-resistant and it should not permit leakage of combustion products or condensate into any building or plant room.

The condensate will need to flow easily to a drain by means of a slope of a minimum 2.5°. The system shall prevent the emission of combustion products from any condensate drain, particularly those relying on water seals, which may dry out.

Any horizontal condensate pipe shall be supported adequately to prevent sagging and installed so that condensate always flows towards the drain.

"The route of any flue system should be designed to be as direct and straight at possible."

Commercial flues (continued)

OPEN-FLUE BOILER FLUES:

Type B

Where an open-flue boiler is to be fixed to an existing flue system, first ensure the boiler is suitable. Unless stated otherwise, the cross-sectional area of the flue natural draught system shall not be less than the flue outlet of the boiler.

ROOM-SEALED BOILER FLUES:

Type C

The flue system shall be assembled and installed in accordance with the manufacturer's installation instructions. The flue terminal(s) shall be positioned externally so as to allow the dispersal of products of combustion and the intake of air.

Flue termination

A terminal shall be fitted for any flue if the diameter is less than 170mm, or as specified in the manufacturer's instructions.

Flue terminal positions for fanned or natural draught flues shall be clear of obstructions and clear of any opening into a building, for example, a window, a door, air inlet, etc. The minimum clearance from horizontal and vertical flue terminals to openings into a building will first be referenced in the manufacturer's instructions, but information can also be found in Figure 7 of IGEM/UP/10 and is based on the heat input of the appliance(s).

"A terminal shall be fitted for any flue if the diameter is less than 170mm, or as specified in the instructions."

Mechanically assisted flues

Where a flue is to be mechanically assisted, manufacturers should be consulted beforehand. This is to determine the appliance suction conditions and limitations to ensure the appliance can operate safely without any negative effects.

The resistance of the flue shall be calculated by the flue system designer and the fan should be sized to ensure the full volume of combustion products is removed from the connected appliance(s) under all wind conditions. When a flue is mechanically assisted, safety interlocks will need to be designed into the installation to ensure that the appliance will not operate if the fan fails under fault conditions.

Consideration should also be given to changing suction conditions, which may occur due to modulation of the burners. This can sometimes include the use of automatic flue dampers to ensure the flow is always correct.

Fan diluted flues

Fan dilution systems are generally designed by specialist flue businesses. These systems pull in fresh air to dilute the products of combustion being produced by the gas appliance(s). These allow for more flexibility in placement of the appliances and their terminations. It also helps reduce emissions. They can reduce the initial costs by reducing the need for large complex flue routes and terminations in a commercial property.

"The flue should be supported adequately throughout its length."

It is not recommended to install/design fan dilution systems above 2MW net heat input because the separation distances between inlet and outlet louvres may become excessive and difficult to comply with. Fan dilution systems are designed to ensure the products of combustion are diluted to give the following maximum levels:

- CO_2: 1%
- CO: 50ppm
- NOx: 5ppm.

Duct diameters should be selected to ensure duct velocity is 6m/s-8m/s. The preferred design is for the air intake to be taken directly from outside. Only in exceptional circumstances, where taking air directly from outside is impractical, may air for dilution may be taken from within the plant room, provided that:

- The additional air is accounted for within the appliance installation space ventilation.
- The natural high and low ventilation openings shall be at least 0.5 times the extract fan rating (m^3/s).
- Taking air from within the appliance installation space does not affect the safe operation of the appliance(s) or combustion performance.

"Double-walled or otherwise insulated flues should be used where any sections of the flue route are exposed."

- Louvres providing ventilation to the plant room are connected directly to outside air and combustion products are not capable of re-entering the plant room, with discharge grilles being on a different wall from the air inlet grilles.

Manual flue dampers
Any damper or stabiliser must be made of suitable grade stainless steel. Manual flue dampers are only permitted in cases of common and fan-diluted flues and must be locked in position.

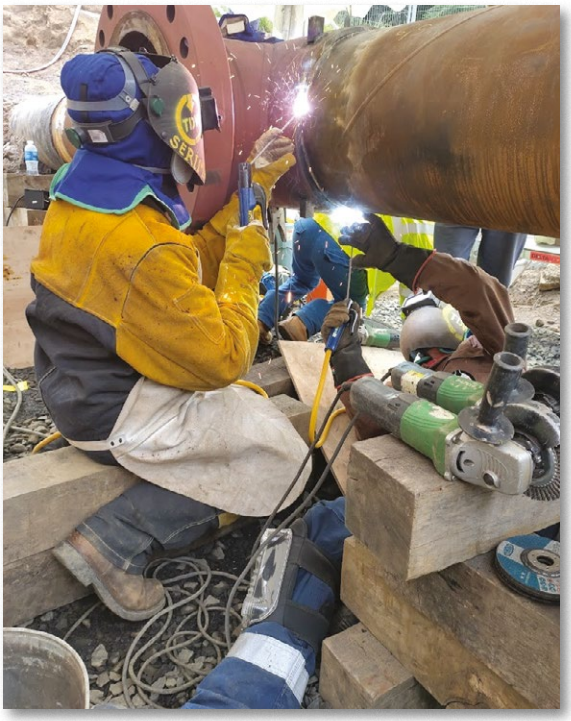
Any control or balancing damper must not be able to block the flue by more than 75% of the cross-sectional area. Manual flue dampers are not permitted to be installed into a masonry chimney. A position indicator should be fitted to each flue damper.

Automatic flue dampers
Automatic flue dampers shall not be installed unless they are specifically allowed by the boiler manufacturer's installation instructions. Where one is fitted, it must incorporate the necessary safety devices and interlocks.

A flue damper shall only be fitted in the secondary flue unless the appliance uses a forced draught burner and does not have a flue break. A flue damper shall not be fitted into the common flue of multiple or combined appliance installations and should be located so they can be easily removed for inspection, repair or maintenance.

Failure of a flue damper in the correct open or closed position shall lead to a lockout condition, preventing the operation of the appliance. ■

Bibliography
***1. BS 6644: 2011** – Specification for installation & maintenance of gas-fired forced convection air heaters for commercial & industrial space heating (2nd & 3rd family gases)*
***2. IGEM/UP/10 Edition 4 with amendments March 2016 & February 2017** – Installation of flued gas appliances in industrial and commercial premises*



Hot works being carried out on the pipeline

Gas network could carry hydrogen, trial concludes

The UK's gas network can be repurposed to transport hydrogen, writes SGN, which has successfully completed a pioneering project in Scotland.

The LTS Futures live trial proved that the same infrastructure that delivers energy to millions of households and businesses today can play a bigger role in cutting carbon emissions in the future, marking a milestone in the journey to net zero.

The project focused on the high-pressure Local Transmission System (LTS), a 11,600km pipeline network that brings gas from the national system to homes, businesses and industries in local communities. It aimed to answer a key question: can the same techniques that maintain and operate natural gas networks today be used on live hydrogen pipelines in the future?

To help answer that question, a representative 30km stretch of the LTS pipeline between Granton, near Edinburgh, and Grangemouth was safely repurposed to carry hydrogen.

Blueprint for the future

LTS Futures will create a blueprint for repurposing the whole LTS to hydrogen.

SGN's specialist team successfully completed important engineering tasks, proving they can be performed on high-pressure pipelines transporting hydrogen. These operational tasks included:

- Hot works: welding and drilling into the live pipeline to create a new connection.
- Flow stopping: isolating the flow of hydrogen in the pipe.

Did you know?

The LTS Futures pipeline route was chosen because it's representative of the UK's LTS. The pipeline navigates through rural land and crosses key infrastructure such as rail, road and rivers.

These are both key activities for operating and maintaining gas pipelines safely and this is the first time these techniques have been undertaken in a live trial on a hydrogen pipeline in Great Britain.

Tony Green, Chief Strategy and Regulation officer, said: "This landmark project is a major milestone for SGN and the wider energy sector, showing that the UK's gas infrastructure can be

repurposed for a net-zero future. It demonstrates both infrastructure and workforce readiness for hydrogen, with our skilled engineers gaining vital experience through the live trial. Collaboration has been crucial, and working closely with INEOS and other partners has turned a complex concept into a success.

"The gas network remains vital, meeting 40% of primary energy demand and powering key industries. We are already on the journey towards decarbonised gas by increasing the amount of green gas in the network. Hydrogen presents a further opportunity to deliver low-carbon energy solutions, and this project is an important step in demonstrating that the LTS network can support hydrogen playing a key role in the UK's future energy mix."

Colin Pritchard, INEOS Grangemouth Sustainability director, said: "We were pleased to be able to play our part in its success. INEOS-sourced hydrogen from our existing processing plant was delivered to SGN to enable the project to take place." ■

Hot stuff

The live trial established procedures for carrying out hot works such as welding and hot tapping on hydrogen pipelines. One example was attaching a new tee fitting (T-shaped connector) to an existing pipeline by welding and drilling into it, all while the system continues to operate.

By completing hot works with hydrogen flowing, the project was able to test the necessary procedures successfully and confirm how the equipment performs when working with hydrogen.

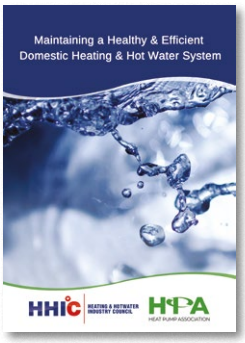
Flow stopping temporarily blocks the flow of gas in a pipeline so that work can be carried out safely without shutting down the whole system.

Water treatment for hot water systems: new guidance

HHIC and HPA have published updated guidance to include boilers, hybrids and heat pumps.

Maintaining a Healthy & Efficient Domestic Heating & Hot Water System has been developed by HHIC and the Heat Pump Association to ensure best practice across both boiler and low-carbon heating systems.

The guidance outlines best practice procedures for cleaning, flushing, protecting and maintaining domestic heating systems. It provides clarity on compliance with BS 7593:2019+A1:2024 and the new standard BS 9593:2024 for assessing the performance of chemical inhibitors, ensuring systems operate efficiently and reliably, whether they are powered by a boiler, heat pump or hybrid set-up. The guidance also looks at alternative approaches to corrosion protection of heating systems.



HHIC director Stewart Clements said: "This updated guidance supports heating engineers with clear, practical steps for maintaining system health, helping to ensure that every installation delivers optimal performance and aligns with current regulations and standards.

"Our collaboration with the HPA has ensured that this advice applies equally to both boiler and heat pump systems as the market evolves."

The guidance also highlights the importance of Benchmark Online, which provides a digital record for installation and servicing, so that heating engineers can track key data such as inhibitor concentration and water quality.

You can download the guidance at: **hhic.org.uk/uploads/6904A36486490.pdf**

Do you know the water rules?

The Water Supply (Water Fittings) Regulations and Byelaws have applied for more than 25 years but are sometimes overlooked. Jonathan Samuel, managing director of Water Regs UK, has a reminder.

The regulations are designed to prevent contamination, waste and misuse and apply to all fittings connected to a public water supply, including pipes, valves, taps, cisterns and appliances. It's a legal requirement to make sure our water supplies remain safe to drink.

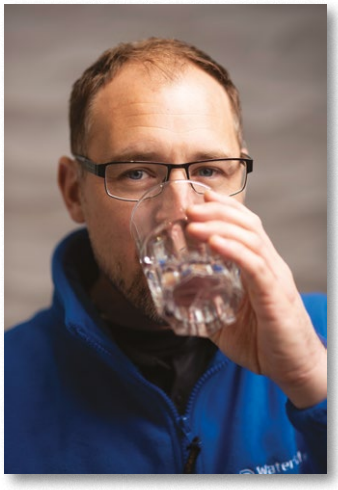
While 99.97% of water supplied in England and Wales in 2024 met quality standards, and 99.92% in Scotland, in some cases almost half the samples that failed were linked to poor plumbing, such as incorrectly fitted appliances or non-compliant fittings.

WaterSafe, the national register of approved plumbers and water professionals, is encouraging Gas Safe registered engineers to make sure they are qualified and compliant in these regulations.

"The use of lead solder in drinking water systems has been banned since 1987."

The key requirements

- Water fittings must be of an approved design and material that will not contaminate water
- Installations must prevent backflow and back-siphonage, which could allow pollutants into the potable water system
- Certain works – such as installing unvented hot water systems or large baths – require notification to the local water company before installation
- Fittings must be tested for compliance, eg, through British Standards or approved through schemes such as WRAS Approvals, NSF or KIWA certification.



Water companies enforce the regulations and carry out inspections of new and existing installations to check they are being met. Where breaches are found, they must be remedied. It's a criminal offence to breach the regulations and offenders may face prosecution.

Lead-free solder campaign

Compliance with the regulations and byelaws has been brought into sharp focus through WaterSafe's lead-free solder campaign. The use of lead solder in drinking water systems has been banned under the regulations since 1987, however, a recent WaterSafe survey revealed:

- 50% of plumbers still occasionally use lead solder when jointing pipework supplying hot or drinking water
- 94% continue to carry lead solder in their toolkits, creating a risk of accidental contamination.

Lead dissolves in drinking water and poses serious health risks, particularly to young children and pregnant women. It can cause developmental issues and long-term health problems.

About WaterSafe

WaterSafe is the national register for approved plumbers, water supply pipe installers, water services specialists and plumbing businesses.

The register is made up of four UK approved contractor schemes – the Water Industry Approved Plumbers' Scheme (WIAPS), the APHC, CIPHE and the Scottish and Northern Ireland Plumbing Employers' Federation (SNIPEF). Members of these schemes can join WaterSafe free.

WaterSafe is supported and promoted by all UK water companies and drinking water regulators, as well as organisations such as Citizens Advice and the NHS. Around 8,000 installers carry the scheme's stamp of approval. ■

You can read about the regulations and byelaws at:
www.waterregsuk.co.uk/regulations

LPG cylinder safety: a reminder

Liquid Gas UK issues a timely update on the importance of choosing and using the right cylinder for indoor heating.

Both propane and butane cylinders are widely used for outdoor applications, including patio heaters, BBQs and portable stoves.

But it's essential for users to know which gas cylinder is safe for indoor versus outdoor use, especially as the use of indoor heaters increases in winter.

George Webb, chief executive of trade association Liquid Gas UK, said: "Knowing which cylinder to use and following proper safety guidelines is crucial to keeping families safe and warm this season."

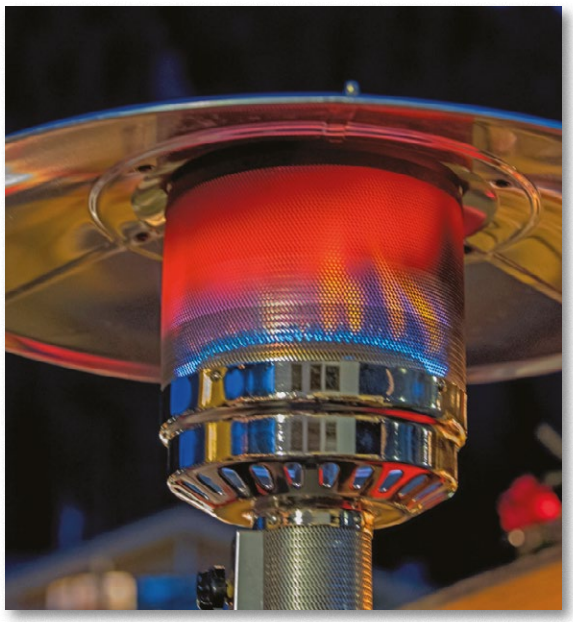
Propane must be used outdoors only. Using and storing propane cylinders indoors can cause significant safety risks, such as the possibility of fire hazards or explosions, and can contribute to poor air quality.

Butane is safer for use indoors with portable heaters, or appliances inside caravans, which are specifically designed to house the cylinders.

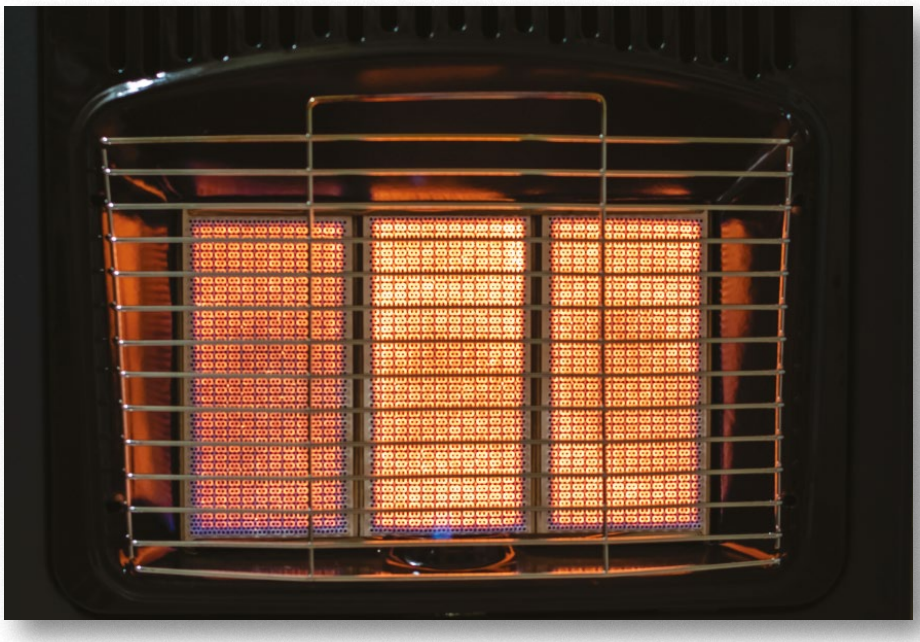
It is important to follow the manufacturer's instructions and ensure adequate ventilation when using butane indoors.

Cylinders are often colour-coded: orange for propane and blue for butane. But this is not always the case. Always check labels and don't rely on gas bottle colour alone as this may differ depending on the supplier.

"Propane and butane are both safe, reliable energy sources when used correctly. But confusing the two, or failing to follow basic guidance, can lead to unnecessary risks," said George. ■



Propane must only be used outdoors, for patio heaters and outdoor stoves



Butane can be used safely indoors with cabinet heaters and other appropriate appliances

More safety guidance and answers to common questions at: **www.liquidgasuk.org/faqs**

Balancing the benefits of heating controls

Steve Mist from Resideo examines the importance of radiator balancing and how heating controls can help provide flexible comfort and efficient heating performance.

Balancing a heating system has often been done by touch, with engineers guessing the balancing by feel and adjusting the lockshields accordingly. A more involved and accurate method has been to use differential thermometers and adjust either the lockshield valves or the flowsetting ring on the thermostatic radiator valves (TRVs).

The aim is to ensure that all radiators reach the same temperature at roughly the same time. This can be a time-consuming task because tweaking one radiator can impact the balance of others adjusted previously.

In many cases, a heating system may never have been balanced properly to begin with and, in others, renovation work can throw it off. Even something as simple as removing radiators for painting or replacement can alter the system's flow dynamics.

But there are helpful solutions for this task. A TRV balancing app can help you to find the correct valve settings without complex calculations, saving time and supporting a more consistent heating experience for homes.

The app works by selecting the type of valve for the radiator. From there, you can choose the radiator type as part of the overall heating system. Enter the inlet temperature, outlet temperature and pressure differential and choose the type of radiator (number of panels) and number of fins. Each radiator type correlates to a number. The height and width of each radiator will also need to be specified.

Use the key

Finally, once the data has been added, the app will show the presetting and KV (flow rate) for the valve. Then simply use a balancing key to adjust the setting on the lockshield valve or the flowsetting ring on the TRV.

> **"An unbalanced heating system will see some radiators warmer than others."**

Balancing heating systems is important because an unbalanced heating system will see some radiators warmer than others, which is frustrating for homeowners who may find themselves constantly adjusting the thermostat.

With the introduction of heat pumps, balancing the system correctly has become far more critical for maximum efficiency because an unbalanced radiator system can lead to uneven heating and higher energy use.

Control options

Heating control upgrades have a role to play too. TRVs help to improve the adaptability of the heating system to different household needs and requirements. Zoning may be relevant or it might be time to consider controls that adapt to daily routines.

Advanced smart controls with zoning capabilities provide comprehensive room-by-room temperature management. Look for customisable zones so that users can heat specific rooms to desired temperatures. Because the TRVs can connect wirelessly, installation is non-invasive and ideal for retrofits.

Get smart

For those not interested in zoning but still wanting smart features, smart thermostats using geofencing technology adjust the home's temperature based on the user's smartphone location. They also allow for programmable schedules to help reduce energy waste.

TRVs with inbuilt differential pressure control react and adapt the flow as other TRVs begin to close down when they are starting to reach the set point. ■

www.resideo.com

Radiators: why compliance matters

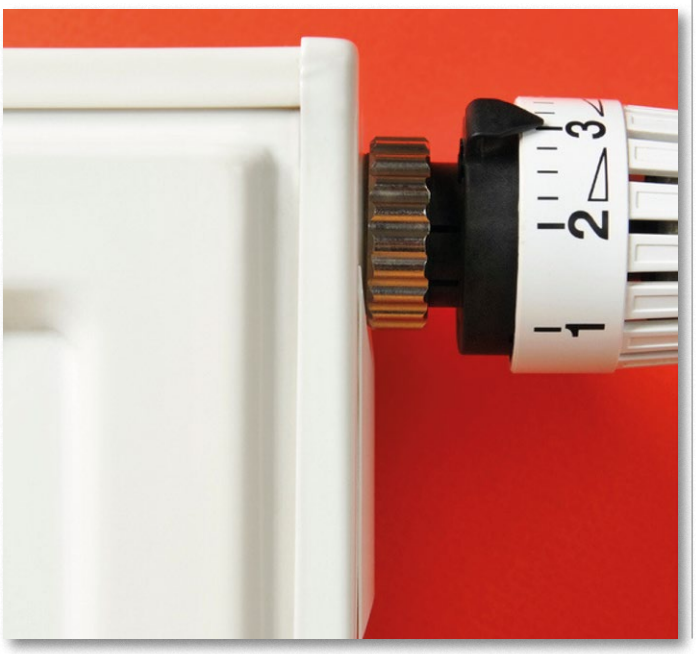
Heating engineers and consumers should check that radiators comply with the regulations and don't exaggerate their heat output, writes the Manufacturers' Association of Radiators and Convectors (MARC).

Some radiators are being advertised with exaggerated heating claims, leading to overstated heat outputs that could leave householders cold, out of pocket and wasting energy.

The Manufacturers' Association of Radiators and Convectors (MARC) is urging gas engineers and consumers to check the specification on heat output when buying radiators. It says some retailers are using non-standard figures, which make their radiators appear to provide more heat output than they really do.

What's the problem?

Manufacturers must legally declare the heating output of radiators using Delta T 50 (ΔT50) for standard heating systems and Delta T 30 (ΔT30) for low-temperature systems. Delta T reflects the difference between the water temperature in the heating system and the target ambient room temperature.



The law requires that all radiators are supplied with a Declaration of Performance (DoP) to show they have been tested by an independent laboratory and that the heat outputs declared are accurate. This ensures that heating engineers can accurately size the radiators and heating system.

However, some manufacturers are declaring the heat output of radiators at Delta T 60 (ΔT60) or higher. This exaggerates the radiator's heat output.

> **"Exaggerated heat output claims could lead to the wrong size radiators."**

What's being done about it?

The Manufacturers' Association of Radiators and Convectors (MARC) is reminding all manufacturers (or those deemed to be a manufacturer for own-brand/white label), distributors, wholesalers and resellers that they have legal obligations under the Construction Products Regulation 2011.

Failure to comply with these regulations, particularly by declaring the heat output of radiators at Delta T 60 and not meeting the other legal requirements, misleads consumers and risks investigation by the Office of Product Safety and Standards (OPSS) and other regulatory bodies.

Andy Phillips, chair of MARC, emphasised: "Complying with the Construction Products Regulation and adhering to BS-EN 442, by providing values for Delta T 50 and Delta T 30, is crucial not only for regulatory compliance but also for ensuring that consumers get the level of heating they expect. Using Delta T 60 values or higher is in breach of the Construction Products Regulation and also undermines the integrity of our industry."

MARC is urging manufacturers to ensure that the information in their product literature and advertisements is both accurate and compliant with the Construction Products Regulation 2011.

Why it matters

Exaggerated claims could lead to the wrong size radiators, causing:

- Higher energy bills because households turn up the boiler or heat pump to stay warm
- Colder homes because radiators cannot deliver the heat that is needed to properly warm the room
- Heat pumps appearing to underperform, when the real issue is radiators that are not the correct size for the room and the type of heating system
- Increased carbon emissions.

Andy Phillips, Chair of MARC, added: "Consumers deserve radiators that do the job they are promised. Advertising radiators using mis-stated figures is misleading and can leave people cold while paying higher bills. The heat output should be stated at Delta T 50 and Delta T 30." ■

Help your customers stay safe and warm

How can you help your customers stay cosy and energy efficient this winter? Mark Krull, managing director of Logic4training, has some answers.

More than 2 million households have planned to keep their heating off this winter to save costs, according to a Uswitch survey – that's up a whopping 22% on last year. Some people, especially those living alone, are turning to alternatives and often unsafe or inefficient ways to stay warm.

With so many people tempted to cut back, gas engineers play a crucial role in helping their customers stay warm, safe and informed.

Great customer service

It's always worth taking the time to understand what your customers want and what their concerns are. It builds trust and can be what turns a good heating engineer into a great one. Strong interpersonal skills, respect for people's homes and budgets and giving valuable advice beyond the immediate job all contribute to a positive experience. And it will bring more business, repeat customers and the ability to command better prices.

Turn it down, not off

Many assume that cutting bills means cutting heat: however, this is not necessarily the case. According to the Energy Saving Trust, turning down the thermostat by just 1°C could result in a saving of up to 10% on energy costs.

For combi boilers, lowering the flow temperature to 60°C can help the boiler condense more consistently, saving energy while maintaining a comfortable living space. And you can reassure your customers that it can be adjusted if rooms don't reach temperature they need.

Other simple tips include:

- Using timers and thermostats properly instead of leaving the heating on
- Turning down TRVs in unused rooms
- Bleeding radiators and maintaining correct system pressure
- Avoiding unsafe alternatives, such as unflued heaters and using ovens for warmth.

The key message is that savings can be made by optimising heating systems, rather than switching them off. Cold homes only lead to more problems, including damp, condensation and ill-health.

Prevent heat loss

Fabric improvements often make the biggest difference:

- Loft insulation: many properties still fall short of the recommended 270mm
- Draught-proofing: lag gaps around doors, windows and loft hatches
- Cylinder insulation: many hot water cylinders remain unlagged or poorly wrapped, wasting heat.

Make heating season work

Winter demand is a chance to strengthen your relationships. Energy-focused service reminders – a short email or text with practical tips – can prompt bookings. Adding a simple efficiency check to routine servicing shows your commitment to saving energy. ■

> **"Cold homes only lead to more problems, including damp."**

AI tools such as ChatGPT can streamline your marketing and admin. Why not try:

- Drafting seasonal email campaigns
- Writing blog posts and social content
- Creating simple FAQs or customer leaflets.

But make sure you review any AI-generated content for accuracy and give it a good edit so that it reflects your tone of voice and speaking style.

How fuel poverty impacts annual servicing

Bethany Christmas, specification manager at FireAngel, looks at the growing link between fuel poverty and missed servicing – and the importance of CO alarms as a vital safety net.

Fuel poverty remains widespread. Government data shows that around 11% of households in England, approximately 3 million homes, were in fuel poverty in 2023[1]. The situation is even more pressing elsewhere in the UK, with about one-third of Scottish households, 14% in Wales and one-quarter in Northern Ireland affected. Millions of households are still struggling to afford adequate heating and energy-related maintenance.

The reality for many families is that servicing the boiler or other gas appliances feels like a cost that can be postponed. But the consequences of delay can be serious. A Project SHOUT survey of heating engineers found that seven in ten had seen more customers put off their annual service due to cost, while almost half reported an increase in dangerous appliances compared with three years ago.

"Seven in ten heating engineers have seen more customers put off their annual service due to cost."

Skipping a service not only puts safety at risk but also reduces efficiency and may invalidate the appliance warranty.

In homes where a service has been delayed, a correctly sited CO alarm provides an essential layer of protection. They are not a replacement for proper maintenance but they offer a vital safety net, particularly for sleeping occupants or those who may not recognise early symptoms of CO poisoning.

For heating engineers, the message to customers needs to be clear: annual servicing remains the best way to keep appliances operating safely, maintain efficiency and protect any warranty. When households face financial difficulties and cannot book a service straight away, engineers can still help them reduce risk by fitting or checking CO alarms, advising them to keep ventilation clear and emphasising that any alarm activation requires switching off appliances, ventilating the property and calling the National Gas Emergency Service without delay.

Gas engineers can also point vulnerable households towards local authority schemes or gas network programmes such as those funded by the Vulnerability and Carbon Monoxide Allowance, which may help with the cost of safety measures.

The evidence points to a growing challenge of more households postponing servicing and more unsafe appliances. Gas engineers have a crucial role in countering this trend by reinforcing the value of regular servicing, making sure every home with a fuel-burning appliance has a working CO alarm, and helping those in hardship find legitimate sources of support. ■

www.fireangel.co.uk/trade

[1] *https://assets.publishing.service.gov.uk/media/67e51e2cbb6002588a90d5d5/annual-fuel-poverty-statistics-report-2025.pdf*

Legislative, Normative & Informative

The Gas Safe Register Legislation & Standards Document List

Date issued: 1 January 2026

Introduction
This document defines all documents recognised by Gas Safe Register as being Legislative, Normative (gas standards) and Informative reference documents.

Some documents may only be available as hard copy documents but the majority are available to download either via Gas Safe Register's engineer website, or from the organisation or body promoting the document. In some cases, the document is only available for purchase from the organisation or a recognised supplier.

Hierarchy of legislation and standards
In this document list, the hierarchy of documents within the following tables is defined in order of significance.

Detailed first are those Statutory Acts, or regulations that are legally enforceable. These are followed by a recognised list of documents known as 'second tier' documents. This series of documents provides practical guidance on ways to comply with the functional requirements of regulations. This guidance is not law but provides information that, if followed correctly, will ensure legal obligations have been met. Where someone chooses to depart from this guidance, they will need to ensure that the method chosen provides equivalent or better standards of safety than the relevant published guidance. The guidance provided within appropriate second-tier documents will be used to assess compliance.

The next tier of documents is gas industry standards that are aimed specifically at the installation, commissioning or maintenance of gas equipment (pipework, appliances, etc). These are known as Normative Documents and are referred to as 'Gas Industry Standards'. These documents, in conjunction with any available manufacturer's instructions, will be used by Gas Safe Register to assess compliance.

Finally, the remaining listings provide details of links to other available information, which is useful to help enable registered businesses to comply with their obligations and assist them in carrying out their day-to-day activities. These are referred to as Informative Documents.

1. Hierarchy of documents
Legislation
In this section the listed documents are those brought to the Statute Book by an Act of Parliament and are referenced as Statutory Instruments (SI) or equivalent. These are the law in the respective countries as stated and must be followed. The SI Reference number (or equivalent) is preceded by the year of it being added to the Statute Book, ie, the Gas Safety (Installation and Use) Regulations 1998 has an SI Number of 1998:2451. Regulations are in general written in a format that provides high-level requirements.

Documents supporting legislation
These documents provide practical guidance on ways to comply with the functional requirements of the Regulations. For the Building Regulations, these are outlined in a series of Approved Documents (AD) published by the appropriate government department responsible for the Regulations.

The ADs that currently apply to gas work are:

- A Structure
- B Fire safety
- F Ventilation
- G3 Hot water storage
- J Heat producing appliances
- L Conservation of fuel and power
- M Access to and use of buildings
- P Electrical safety in dwellings.

Each document contains general guidance on the performance expected of materials and building work in order to comply with each of the requirements of the Building Regulations and practical examples and solutions on how to achieve compliance for some of the more common building situations.

2. Gas Industry Standards
In this section are included all the Gas Industry Standards published by the three current Standard Setting Bodies, which are:

- British and European Standards (BSI)
- Institution of Gas Engineers and Managers (IGEM)
- Liquid Gas UK (formerly known as UKLPG)

One Standard is published by National Caravan Council (NCC).

3. Documents under review
When published, if it is known that the three-month validity period coincides with a period of time in which a standard being revised is out for public comment, the final date for comment will be included.

Gas Safe Register will use best endeavours to keep the documents under review as up to date as possible but the Register is **NOT** responsible for reviewing, revising or updating industry standards. Where a registered business or industry stakeholder has an enquiry about revisions to guidance documents, these enquiries should be directed to the relevant Standard Setting Body.

Comments on draft standards can be submitted via:

- British and European Standards (BSI)
- Institution of Gas Engineers and Managers (IGEM).

4. Links to online documents
When viewing this document online, hyperlinks are active, so that you can open the document and then be read or it for later use. However, all saved documents will be considered as uncontrolled versions, and you should check that you are referencing the current version.

5. Inspections undertaken by Gas Safe Register
When Gas Safe Register inspects work undertaken by registered gas businesses in Great Britain, Northern Ireland and the Isle of Man and Guernsey, in the first instance it will assess against the manufacturer's installation instructions. Where these are not available or relevant, it will inspect against the criteria as specified within legislative documents and relevant gas industry standards.

However, it is recognised that, due to the differences of individual legislation used in different geographical areas, there will be some differences in application. While conducting inspections, due regard will be taken of the requirements of all appropriate guidance.

6. General
This Gas Safe Register Document will be updated and republished on, or about the following dates each year:

- 1 January
- 1 April
- 1 July
- 1 October.

If you identify an error in this document or you are aware of reference documents that may be useful that you think should be added to future editions, please email: **technical@gassaferegister.co.uk**

BSI, IGEM and Liquid Gas UK develop and publish guidance with the help of industry in the form of committees. Gas Safe Register does not hold any responsibility for the development and publication of this type of guidance document. Where registered businesses and stakeholders have questions regarding these guidance documents, these should be directed to the relevant Standard Setting Body.

7: LEGISLATION

Health and Safety Legislation

Health and Safety at Work etc Act 1974 (GB)

The Management of Health and Safety at Work Regulations 1999 (GB)

The Workplace (Health, Safety and Welfare) Regulations 1992 (GB)

Health and Safety at Work (Northern Ireland) Order 1978

Health and Safety at Work etc Act 1974 (of Parliament) (As applied to Isle of Man)

The Construction (Design and Management) Regulations 2003 (As applied to Isle of Man)

The Health and Safety at Work (General) (Guernsey) Ordinance, 1987 As Amended, Version 7 September 2020

Gas Safety Legislation

The Gas Safety (Installation and Use) Regulations 1998 (England, Scotland & Wales)

The Gas Safety (Installation and Use) Regulations (Northern Ireland) 2004

Gas Safety (Installation and Use) Regulations 1998 as amended & applied by the Gas Safety (Installation, Use and Management) (Application) Order 2021 (As applied to Isle of Man)

The Health and Safety (Gas) (Guernsey) Ordinance, 2006 As Amended Version – May 2016

Safe Work with Gas Systems & Appliances, Approved Code of Practice – Health & Safety at work (Jersey) Law, 1989 – 1 February 2021

The Gas Appliances (Safety) Regulations 1995 (As applied in the United Kingdom)

The General Product Safety Regulations 2005

The Gas Safety (Management) Regulations 1996 (As applied in Great Britain) (AMD 2023)

The Gas Safety (Management) Regulations (Northern Ireland) 1997

The Gas Safety (Rights of Entry) Regulations 1996 (as applied to Great Britain)

The Gas (Northern Ireland) Order 1996, Schedule 5 (Powers of Entry, etc)

Gas Safety (Rights of Entry) Regulations 1983, as applied by the Gas Safety (Application) Order 1996 (Isle of Man)

Part 7 of The Health and Safety (Gas) (Guernsey) Ordinance, 2006 As Amended Version May 2016

Reporting of Injuries, Diseases and Dangerous Occurrences (RIDDOR)

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR) (GB)

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (Northern Ireland) 1997

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1999 (RIDDOR) (Isle of Man)

The Health and Safety at Work (General) (Guernsey) Ordinance, 1987 (includes RIDDOR-type reporting)

Building Legislation

Building Regulations (England and Wales) 2010

Building and Buildings, England & Wales, The Building Regulations &c (Amendment) Regulations 2015

Building Regulations &c (Amendments) (Wales) Regulations 2013

Building Standards (Scotland) Regulations 2004

Building (Scotland) Amendment Regulations 2010

Building (Scotland) Amendment Regulations 2011

Building (Miscellaneous Amendments) (Scotland) Regulations 2013

Building (Scotland) Amendment Regulations 2022

Building Regulations (Northern Ireland) 2012

The Building (Guernsey) Regulations 2012

Building Bylaws (Jersey) 2007

Building Regulations 2014 (Isle of Man)

Construction (Design and Management) Regulations 2015 (Great Britain)

The Construction (Design and Management) Regulations (Northern Ireland) 2016

The Construction (Design and Management) Regulations 2003 (As applied to Isle of Man)

Building Control (Approved Documents) (No. 2) Order 2019 (As applied to Isle of Man)

Other Legislation

The Workplace (Health, Safety and Welfare) Regulations 1992

The Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) (GB)

Control of Substances Hazardous to Health Regulations 2002 (COSHH) (GB)

The Pressure Equipment (Safety) Regulations 2024

The Pressure Equipment (Amendment) Regulations 2015 (UK)

The Pressure Systems Safety Regulations 2000 (GB)

Control of Asbestos at Work Regulations 2002 (GB)

Control of Asbestos at Work (Northern Ireland) Regulations 2003

The Control of Asbestos Regulations (GB) 2012

The Control of Asbestos Regulations (Northern Ireland) 2012

Managing asbestos (Isle of Man)

HSE Guernsey – Management of Exposure to Asbestos in Workplace Buildings and Structures – ACOP

HSE Guernsey – Control of Asbestos – ACOP 2017

The Electricity at Work Regulations 1989 (GB)

Electricity At Work Regulations (Northern Ireland) 1991

Note 1: *Further information on ordinances in Guernsey at:* ***www.gov.gg/hseguidance***

Note 2: *Further information on legislation in the Isle of Man at:* ***https://pabc.gov.im/building-control/building-control/***

8: DOCUMENTS SUPPORTING LEGISLATION

Key Approved Documents to the Building Regulations (England)

Approved Document 7: Materials and workmanship

B: Fire Safety – Volume 1: Dwelling houses

B: Fire Safety – Volume 2: Buildings other than dwelling houses

F: Ventilation Volume 1: Dwellings

F: Ventilation Volume 2: Buildings other than dwellings

G: Sanitation, hot water safety & water efficiency (2016 edition)

J: Combustion Appliances & Fuel Storage Systems

L: Conservation of fuel and power – Volume 1: Dwellings

L: Conservation of fuel and power – Volume 2: Buildings other than dwellings

Second-tier documents to the Building Regulations (England)

Code for Sustainable Homes & Technical Guide December 2014

Building Energy Performance Assessment

Key Approved Documents to the Building Regulations (Wales)

B: Fire Safety – Volume 1: Dwellinghouses

B: Fire Safety – Volume 2: Buildings other than dwellinghouses

F: Ventilation – Volume 1: Dwellings

F: Ventilation – Volume 2: Buildings other than dwellings

G: Sanitation, hot water safety & water efficiency (2018 edition)

J: Combustion Appliances & Fuel Storage Systems

L: Conservation of fuel and power – Volume 1: Dwellings

L: Conservation of fuel and power – Volume 2: Buildings other than dwellings

Second-tier documents to the Building Regulations (Wales)

Code for Sustainable Homes & Technical Guide December 2014

Building Energy Performance Assessment

Key Approved Documents to the Building Standards (Scotland) Regulations (Domestic)

Scottish Technical Handbook (Domestic)

Section 2 – Domestic Fire

Section 3 – Domestic Environment

Section 6 – Domestic Energy

Building Energy Performance Assessment

Key Approved Documents to the Building Standards (Scotland) Regulations (Non-Domestic)

Scottish Technical Handbook (Non-Domestic)

Section 2 – Non-Domestic Fire

Section 3 – Non-Domestic Environment

Section 6 – Non-Domestic Energy

Second-tier documents to the Building Standards (Scotland) Regulations

Scottish Government Guide to the Condensing Boiler Installation Assessment

Building Energy Performance Assessment

Key Approved Documents to the Building Standards (Regulations) Northern Ireland

DFP Technical Booklet C: 2012 – Site preparation & resistance to moisture

DFP Technical Booklet E: 2012 – Fire Safety

DFP Technical Booklet F1: 2022 – Conservation of fuel & power in dwellings

DFP Technical Booklet F2: 2022 – Conservation of fuel & power in buildings other than dwellings

DFP Technical Booklet K: 2012 – Ventilation

DFP Technical Booklet L: 2012 – Combustion appliances & fuel storage systems

DFP Technical Booklet P: 2012 – Sanitary appliances, unvented hot water storage systems and reducing the risk of scalding

Building Energy Performance Assessment

Key Approved Documents to the Building Regulations Isle of Man (IOM)

B: Fire Safety – Fire safety (2022 Edition)

F: Ventilation (2022 Edition)

J: Combustion Appliances & Fuel Storage Systems (2022 Edition)

L1: Conservation of Fuel & Power in Dwellings (2022 Edition)

L2: Conservation of Fuel & Power in Buildings other than Dwellings (2022 Edition)

Building Energy Performance Assessment

Key Approved Documents to the Building Bylaws (Guernsey) – Channel Islands

B: Fire Safety – Volume 1: Dwelling houses

B: Fire Safety – Volume 2: Buildings other than dwelling houses

F: Ventilation

J: Heat producing appliances & Fuel Storage Systems

L1: Conservation of Fuel & Power in Dwellings

L2: Conservation of Fuel & Power – Buildings other than Dwellings

Building Energy Performance Assessment

Key Approved Documents to the Building Bylaws (Jersey) – Channel Islands

Part 2 – Fire Safety

Part 3 – Combustion appliances and Fuel Storage Systems

Part 5 – Ventilation

Part 11 – Conservation of Fuel and Power

HSE Publications and other Approved Codes of Practice (Great Britain)

L21 – Management of Health & Safety at Work, Withdrawn (*see HSG65*)

L24 – Workplace health, safety & welfare (ACoP & Guidance) 2nd Edition

L25 – Personal Protective Equipment at Work

L56 - Safety in the Installation and use of Gas Systems and Appliances – Approved Code of Practice

L80 – A guide to the Gas Safety (Management) Regulations 1996

L108 – Controlling noise at work – The Control of Noise at Work Regulations 2005 – Guidance on Regulations

L122 – Safety of pressure systems – Pressure Systems Safety Regulations 2000 – Approved Code of Practice (Second Edition)

L138 – Dangerous Substances and Explosive Atmospheres. Dangerous Substances and Explosive Atmospheres Regulations 2002. Approved Code of Practice and Guidance

L143 – Control of Asbestos Regulations 2012 (ACoP) – The management of asbestos in non-domestic premises, and Work with materials containing asbestos (Second Edition) Incorporating previous L127

L153 – Managing health and safety in construction – Construction (Design and Management) Regulations 2015 Approved Code of Practice

HSG47 – Avoiding danger from underground services – Third edition 2014

HSG48 – Reducing error and influencing behaviour

HSG65 – Managing for Health and Safety Management – Third Edition – 2013

HSG85 – Electricity at Work – Safe working practices – Third Edition 2013

HSG97 – A step by step guide to Control of Substances Hazardous to Health (COSHH) assessment (*see also COSHH Essential Guidance publications*)

HSG137 – Health Risk Management – A practical guide for managers in small and medium-sized enterprises

HSG176 – The storage of flammable liquids in tanks

HSG210 – Asbestos Essentials – A task manual for building, maintenance & allied trades on non-licensed asbestos work (Free task sheets)

HSG213 – Introduction to Asbestos Essentials

HSG250 – Guidance on permit-to-work systems: A guide for the petroleum, chemical and allied industries

HSG253 – The safe isolation of plant and equipment (Second edition)

HSG261 – Health and safety in motor vehicle repair and associated industries

EH40 – Workplace Exposure Limits (2020)

INDG163 (rev4) – Risk assessment (A brief guide to controlling risks in the workplace)

INDG223 (rev5) – Managing asbestos in buildings (A brief guide)

INDG231 (rev1) – Electrical safety and you (A brief guide)

INDG258 (rev1) – Confined spaces (A brief guide to working safely)

INDG428 (08/09) – Inspecting and maintaining or replacing buried metallic pipework carrying LPG vapour

INDG223 (rev5) – Manage asbestos in buildings: A brief guide

INDG370 (rev1) – Controlling Fire and explosion risks in the workplace – A brief guide to the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)

INDG453 (rev1) – Reporting accidents and incidents at work A brief guide to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)

HSE AO – Advice on non-licensed work with Asbestos. Introduction to 'Asbestos essentials' task sheets

Control of Substances Hazardous to Health (COSHH) Essentials guidance publications

Guidelines on ventilation, thermal comfort and indoor air quality in schools

LAQM.TG(22) Local Air Quality Management – Technical Guidance

CAIS10 (Revision 3) – Ventilation of kitchens in catering establishments

CAIS23 (Revision 3) – Gas safety in catering and hospitality

Note 3: *Further asbestos-related guidance at:* ***www.hse.gov.uk/asbestos/information.htm***

Note 4: *Further Health and Safety Guidance (HSG) publications at:* ***www.hse.gov.uk/pubns/books/index-hsg-ref.htm***

HSENI Publications and other Approved Codes of Practice (Northern Ireland)

A guide to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (Northern Ireland) 1997

L56 Safety in the installation and use of gas systems and appliances – GB ACOP approved for use in NI

Memorandum of guidance on the Electricity at Work Regulations (Northern Ireland) 1991

Note 5: *Further information on Northern Ireland Approved Codes of Practice and guidance notes at:* ***www.hseni.gov.uk/publications***

HSE Publications and other Approved Codes of Practice (Guernsey)

Safety in the Installation & Use of Gas Systems & Appliances

The Health and Safety (Gas) (Guernsey) Ordinance 2006

The Organisation and Management of Health & Safety in Construction (Guernsey)

Reporting an Injury, Disease or Dangerous Occurrence (Guernsey)

Note 6: *Further information on Approved Codes of Practice and guidance notes for gas safety and other important issues at:* ***www.gov.gg/hseguidance***

9: GAS INDUSTRY STANDARDS

British and European Standards

BS 4163: 2021 + A1:2022 Health and safety for design and technology in educational and similar establishments. Code of practice

BS 3632: 2023 Residential park homes – Specification

BS 5440-1: 2023 Chimneys, flue pipes and ventilation for gas appliances of rated input not exceeding 70kW net (1st, 2nd and 3rd family gases). Design, installation, commissioning and maintenance of chimneys. Specification

BS 5440-2: 2023 Chimneys, flue pipes and ventilation for gas appliances of rated input not exceeding 70kW net (1st, 2nd and 3rd family gases). Installation and maintenance of ventilation provision for gas appliances. Specification

BS 5546: 2010 Specification for installation and maintenance of gas-fired water-heating appliances of rated input not exceeding 70kW net

PD 54823: 2016 Guidance for the design, commissioning and maintenance of LPG systems in small craft

BS 5864: 2019 Installation and maintenance of gas-fired ducted air heaters of rated input not exceeding 70kW net (2nd and 3rd family gases). Specification

BS 5871-1: 2005 Specification for the installation and maintenance of gas fires, convector heaters, fire/back boilers and decorative fuel effect gas appliances. Gas fires, convector heaters, fire/back boilers and heating stoves (2nd and 3rd family gases)

BS 5871-2: 2005 Specification for the installation and maintenance of gas fires, convector heaters, fire/back boilers and decorative fuel effect gas appliances. Inset live fuel effect gas fires of heat input not exceeding 15kW and fire/back boilers (2nd and 3rd family gases)

BS 5871-3: 2005 Specification for the installation and maintenance of gas fires, convector heaters, fire/back boilers and decorative fuel effect gas appliances. Decorative fuel effect gas appliances of heat input not exceeding 20kW (2nd and 3rd family gases)

BS 5871-4: 2007 Specification for the installation and maintenance of gas fires, convector heaters, fire/back boilers and decorative fuel effect gas appliances. Independent gas-fired flueless fires, convector heaters and heating stoves of nominal heat input not exceeding 6kW (2nd and 3rd family gases)

BS 6172: 2010 + A1:2017 Specification for installation, servicing and maintenance of domestic gas cooking appliances (2nd and 3rd family gases). Specification

BS 6173: 2020 Installation and maintenance of gas fired catering appliances for use in all types of catering establishments (2nd and 3rd family gases). Specification

BS 6230: 2011 Specification for installation of gas-fired forced convection air heaters for commercial and industrial space heating (2nd and 3rd family gases)

BS 6400-1: 2016 Specification for installation, exchange, relocation, maintenance and removal of gas meters with a maximum capacity not exceeding $6m^3/h$. Low pressure (2nd family gases). *Under review*

BS 6400-2: 2018 Specification for installation, exchange, relocation, maintenance and removal of gas meters with a maximum capacity not exceeding $6m^3/h$. Medium pressure (2nd family gases). *Under review*

BS 6400-3: 2007 Specification for installation, exchange, relocation and removal of gas meters with a maximum capacity not exceeding 6m³/h. Low and medium pressure (3rd family gases)

BS 6644: 2011 Specification for the installation and maintenance of gas-fired hot water boilers of rated inputs between 70kW (net) and 1.8MW (net) (2nd and 3rd family gases)

BS 6798: 2014 Specification for selection, installation, inspection, commissioning, servicing and maintenance of gas-fired boilers of rated input not exceeding 70kW net. *Under review*

BS 6891: 2015 + A1:2019 Specification for the installation and maintenance of low-pressure gas installation pipework of up to 35mm (R1¼) on premises

BS 6896: 2011 Specification for installation and maintenance of gas-fired overhead radiant heaters for industrial and commercial heating (2nd and 3rd family gases)

BS 7624: 2004 Installation and maintenance of domestic direct gas-fired tumble dryers of up to 6 kW heat input (2nd and 3rd family gases)

BS 7671: 2018 + A3:2024 Requirements for Electrical Installations

BS 7967: 2015 Guide for the use of electronic portable combustion gas analysers for the measurement of carbon monoxide in dwellings and the combustion performance of domestic gas-fired appliances

BS 7967-5: 2010 Carbon monoxide in dwellings and other premises and the combustion performance of gas-fired appliances. Guide for using electronic portable combustion gas analysers in non-domestic premises for the measurement of carbon monoxide and carbon dioxide levels and the determination of combustion performance

BS 8313: 1997 Code of practice for accommodation of building services in ducts

BS 8446: 2020 Installation and maintenance of open-flued, non-domestic gas-fired laundry appliances. Specification

BS 8660-1: 2011 Gas-fired micro-cogeneration appliances of rated thermal input not exceeding 70kW net. Specification for selection, installation, inspection, commissioning, servicing and maintenance of Stirling engine micro-cogeneration appliances

BS EN 721: 2019 Leisure accommodation vehicles. Safety ventilation requirements

BS EN 751-1:1997 Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water. Anaerobic jointing compounds

BS EN 751-2:1997 Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water. Non-hardening jointing compounds

BS EN 751-3:2022+A1:2023 Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water. Unsintered PTFE tapes and PTFE strings

BS EN 1775: 2007 Gas supply. Gas pipework for buildings. Maximum operating pressure less than or equal to 5 bar. Functional recommendations

BS EN 12327: 2012 Gas infrastructure. Pressure testing, commissioning and decommissioning procedures. Functional requirements

BS EN 50292: 2023 Electrical apparatus for the detection of carbon monoxide in domestic premises, caravans and boats. Guide on the selection, installation, use and maintenance

BS EN 15001-1: 2023 Gas Infrastructure. Gas installation pipework with an operating pressure greater than 0.5 bar for industrial installations and greater than 5 bar for industrial and non-industrial installations. Detailed functional requirements for design, materials, construction, inspection and testing

BS EN 15001-2: 2023 Gas supply systems. Gas installation pipework with an operating pressure greater than 0.5 bar for industrial installations and greater than 5 bar for industrial and non-industrial installations. Detailed functional requirements for commissioning, operation and maintenance

BS EN ISO 10239: 2025 Small craft. Liquefied petroleum gas (LPG) systems

BS EN 13410: 2001 Gas-fired overhead radiant heaters. Ventilation requirements for non-domestic premises

BS EN 1749: 2020 Classification of gas appliances according to the method of supplying combustion air and of evacuation of the combustion products (types)

BS EN 1949: 2021 Specification for the installation of LPG systems for habitation purposes in leisure accommodation vehicles and accommodation purposes in other vehicles

Institution of Gas Engineers and Managers Documents (IGEM)

IGE/UP/1 Edition 2 Strength testing/tightness testing/direct purging of industrial and commercial gas installations. *Under review*

IGE/UP/1A Edition 2 Strength/tightness testing/purging of small, low pressure industrial & commercial installations. *Under review*

IGEM/UP/1B Edition 3 Tightness testing and direct purging of small Liquefied Petroleum Gas/Air, NG and LPG installations. *Under review*

IGEM/UP/1C Strength testing, tightness testing and direct purging of Natural Gas and LPG meter installations

IGEM/UP/2 Edition 4 Installation pipework on industrial and commercial premises

IGEM/UP/3 Edition 3 Gas fuelled spark ignition and dual fuel engines. Under review

IGEM/UP/4 Edition 4 Commissioning of gas fired plant on industrial and commercial premises

IGEM/UP/6 Edition 3 Application of compressors to natural gas fuel systems

IGE/UP/7 Edition 2 with amendments October 2008 Gas installations in timber framed and light steel framed buildings.

Note 7: *IGE/UP/7 – Edition 2 with Amendments is available free at:* ***www.igem.org***

IGE/UP/9 Edition 3 Application of Gas systems to Gas turbines and supplementary and auxiliary fired burners

IGEM/UP/10 Edition 4 with amendments March 2016 & February 2017 Installation of flued gas appliances in industrial and commercial premises. Under review

IGEM/UP/11 Edition 3 Gas installations for educational establishments

IGEM/UP/12 Edition 3 Application of burners and controls to gas fired process plant

IGEM/UP/16 Edition 2 with Amendments November 2023 Design for natural gas installations on industrial and commercial premises with respect to DSEAR

IGEM/UP/17 Edition 2 Shared chimney and flue systems for domestic gas appliances

IGEM/UP/18 Gas installations for vehicle repair and body shops

IGEM/UP/19 Edition 2 Design & application of interlock devices/ associated systems in gas appliance installations in catering

IGEM/UP/19 Edition 2 Supplement 1 Guidance for gas engineers to the application of relevant sections of IGEM/UP/19 in catering establishments

Note 8: *IGEM/UP/19 Edition 2 Supplement 1 is available free at:* ***www.igem.org***

IGEM/GL/8 Edition 4 Reporting and investigation of gas-related incidents. *Under review*

IGE/GL/9 Guidance for large gas consumers in dealing with natural gas supply emergencies. *Available free at:* ***www.igem.org***

IGE/TD/4 Edition 5 Polyethylene (PE) and steel gas services and service pipework

IGEM/G/1 Edition 3 Defining the boundaries between the network, primary meter installation and installation pipework

IGEM/G/4 Edition 2 Definitions for the gas industry. *Under review*

IGEM/G/5 Edition 3 with amendments April 2023 Gas in multi-occupancy buildings. *Under review*

IGEM/G/6 Edition 2 Gas supplies to mobile dwellings

IGEM/G/7 Risk assessment techniques

IGEM/G/10 Non-return valves

IGEM/G/11 Edition 2 with amendments July 2022, June 2024 and July 2025 Gas industry unsafe situations procedure

Note 9: *Available free at:* ***www.igem.org***

IGEM/G/11 Supplement 1 Responding to domestic CO alarm activations/reports of fumes after attendance by the emergency service provider or the Liquified Petroleum Gas supplier

Note 10: *Available free at:* ***www.igem.org***

IGEM/G/13 with Amendments August 2023 Domestic supply capacity and operating pressure at the outlet of the meter

Note 11: *Available free at:* ***www.igem.org***

IGE/GM/4 Edition 3 Flow metering practices. Inlet pressure exceeding 38 bar and not exceeding 100 bar

IGE/GM/5 Edition 4 Electronic gas meter volume conversion systems. *Under review*

IGEM/GM/6 Edition 3 Non-domestic meter installations. Standard designs

IGEM/GM/7A Edition 2 Electrical connections for gas metering equipment

IGEM/GM/7B Edition 2 Hazardous area classification for gas metering equipment

IGEM/GM/8 – Part 1 Edition 2 Design

IGEM/GM/8 – Part 2 Edition 2 Location, housings and compounds

IGEM/GM/8 – Part 3 Edition 2 Fabrication, installation, testing and commissioning

IGEM/GM/8 – Part 4 Edition 2 Operation and maintenance

IGEM/GM/8 – Part 5 Edition 2 Notices and labels

IGEM/IG/1 Ed 2 Standards of training in Gas Work

Note 12: *Available free at:* ***www.igem.org***

IGEM/IG/1 Supplement 1 Non-domestic training specification

Note 13: *IGEM/IG/1 is available free at:* ***www.igem.org***

IGEM/SR/25 Edition 2 Hazardous area classification of natural gas installations. Under review

IGEM/SR/29 Edition 2 Dealing with gas escapes

IGEM/H/1 Edition 2 Reference Standard for low pressure hydrogen utilisation

Note 14: *IGEM/H/1 is available free at:* ***www.igem.org***

Liquid Gas UK Codes of Practice (CoP)

UKLPG – LPG Technical Fundamentals

CoP 1 Part 1 Bulk LPG Storage at Fixed Installations – Design, Installation and Operation of Vessels Located Above Ground (October 2017)

CoP 1 Part 2 Bulk LPG Storage at Fixed Installations – Vapour Off-take Small Bulk Propane Installations (March 2021)

CoP 1 Part 3 Bulk LPG Storage at Fixed installations – Examination and Inspection (April 2020)

CoP 1 Part 4 Bulk LPG Storage at Fixed Installations – Buried/ Mounded LPG Storage Vessels (January 2021)

CoP 7 Storage of Full and Empty LPG Cylinders and Cartridges (2021)

CoP 17 LPG vessels: Preparing for and Removing from Service (2025)

CoP 22 Design Installation and Testing of LPG Piping Systems (2025)

CoP 24 Part 3 Use of LPG Cylinders – Use of LPG for Commercial Catering Events, Street Food and Mobile Catering (September 2017)

CoP 25 LPG Central storage and Distribution Systems for Multiple Consumers (June 2018)

CoP 32 LPG systems in Leisure Accommodation Vehicles and Road Vehicles with Habitation – Post Delivery Inspection, Commissioning and Maintenance (December 2020)

CoP 33 Use of LPG Cylinders (July 2023) (Replaces COP 24-part 1/5/6)

GN 2 A Guide for Cabinet Heaters Servicing (March 2002)

10: OTHER INFORMATIVE DOCUMENTS AND USEFUL REFERENCES

Liquid Gas UK Consumer Guidance Sheets (CGS)

MCGS O1 Mobile Bottled Gas Heaters and Condensation

CGS 03 The Use of LPG Cylinders Indoors

CGS 04 LPG Patio Heaters – Safe Use

CGS 05 LPG Hose and Tubing for use with Vapour Offtake Cylinders

CGS 20 Camping Safely

CGS 22 Owning your own LPG Storage Vessel

CGS 25 LPG Installation Record and Documentation

CGS 28 Safe Use of Propane and Butane Cylinders and Cartridges

CGS 37 Guidance for Private Ownership and Filling of 'Freestanding' Liquified Petroleum Gas (LPG) Cylinders

CGS 39 Regulators – Safe Use

Note 15: *Liquid Gas UK Consumer Guidance Sheets (CGS) are available at:* ***www.liquidgasuk.org/domestic/consumer-guidance-sheets***

Other Industry Procedures/ Documents

SDW/172 Specification for kitchen ventilation systems 2nd Edition (incorporates addendum April 2020)

IGEM/G/11 Edition 2 with amendments July 2022 and June 2024 The Gas industry unsafe situations procedure (GIUSP). This can be viewed by logging into your Gas Safe Register online account or at: ***www.igem.org***

All Technical Bulletins For further information, see TB 1000. These can be viewed by logging into your Gas Safe Register online account

All Gas Safe Register Safety Alerts These can be viewed by logging into your Gas Safe Register online account

All Gas Safe Register Industry Standard Updates These can be viewed by logging into your Gas Safe Register online account

Note 16: *Gas Safe Registered businesses can find up-to-date access manufacturer's instructions/ information for a wide range of heating appliances notably boilers and warm air heating appliances on the HHIC's website.*

11: ACCESS TO INDUSTRY STANDARDS FROM GAS SAFE REGISTER

The Industry Standard numbers below are those included in the list of current Industry Standards available on a subscription basis to the majority of Gas Safe registered business. To subscribe, log into your Gas Safe Register online account and choose Standards Subscriptions. Choose and pay for a one or three-year subscription and then you will be able to access the Normative Documents.

BS 5440-1: 2023 Chimneys, flue pipes and ventilation for gas appliances of rated input not exceeding 70kW net (1st, 2nd and 3rd family gases). Design, installation, commissioning and maintenance of chimneys. Specification

BS 5440-2: 2023 Chimneys, flue pipes and ventilation for gas appliances of rated input not exceeding 70kW net (1st, 2nd and 3rd family gases). Installation and maintenance of ventilation provision for gas appliances. Specification

BS 5546: 2010 Specification for installation and maintenance of gas-fired water-heating appliances of rated input not exceeding 70kW net

PD 54823: 2016 Guidance for the design, commissioning and maintenance of LPG systems in small craft

BS 5864: 2019 Installation and maintenance of gas-fired ducted air heaters of rated input not exceeding 70kW net (2nd and 3rd family gases). Specification

BS 5871-1: 2005 Specification for the installation and maintenance of gas fires, convector heaters, fire/ back boilers and decorative fuel effect gas appliances. Gas fires, convector heaters, fire/back boilers and heating stoves (2nd and 3rd family gases)

BS 5871-2: 2005 Specification for the installation and maintenance of gas fires, convector heaters, fire/ back boilers and decorative fuel effect gas appliances. Inset live fuel effect gas fires of heat input not exceeding 15kW and fire/back boilers (2nd and 3rd family gases)

BS 5871-3: 2005 Specification for the installation and maintenance of gas fires, convector heaters, fire/ back boilers and decorative fuel effect gas appliances. Decorative fuel effect gas appliances of heat input not exceeding 20kW (2nd and 3rd family gases)

BS 5871-4: 2007 Specification for the installation and maintenance of gas fires, convector heaters, fire/ back boilers and decorative fuel effect gas appliances. Independent gas-fired flueless fires, convector heaters and heating stoves of nominal heat input not exceeding 6kW (2nd and 3rd family gases)

BS 6172: 2010 + A1 2017 Specification for installation, servicing and maintenance of domestic gas cooking appliances (2nd and 3rd family gases). Specification

BS 6173: 2020 Installation and maintenance of gas fired catering appliances for use in all types of catering establishments (2nd and 3rd family gases). Specification

BS 6230: 2011 Specification for installation of gas-fired forced convection air heaters for commercial and industrial space heating (2nd and 3rd family gases)

BS 6400-1: 2016 Specification for installation, exchange, relocation, maintenance and removal of gas meters with a maximum capacity not exceeding $6m^3/h$. Low pressure (2nd family gases)

BS 6400-2: 2018 Specification for installation, exchange, relocation, maintenance and removal of gas meters with a maximum capacity not exceeding $6m^3/h$. Medium pressure (2nd family gases)

BS 6400-3: 2007 Specification for installation, exchange, relocation and removal of gas meters with a maximum capacity not exceeding $6m^3/h$. Low and medium pressure (3rd family gases)

BS 6644: 2011 Specification for the installation and maintenance of gas-fired hot water boilers of rated inputs between 70kW (net) and 1.8MW (net) (2nd and 3rd family gases)

BS 6798: 2014 Specification for selection, installation, inspection, commissioning, servicing and maintenance of gas-fired boilers of rated input not exceeding 70kW net

BS 6891: 2015 + A1 2019 Specification for the installation and maintenance of low pressure gas installation pipework of up to 35mm (R 1 ¼) on premises

BS 6896: 2011 Specification for installation and maintenance of gas-fired overhead radiant heaters for industrial and commercial heating (2nd and 3rd family gases)

BS 7624: 2004 Installation and maintenance of domestic direct gas-fired tumble dryers of up to 6kW heat input (2nd and 3rd family gases)

BS 7967: 2015 Guide for the use of electronic portable combustion gas analysers for the measurement of carbon monoxide in dwellings and the combustion performance of domestic gas-fired appliances

BS 7967-5: 2010 Carbon monoxide in dwellings and other premises and the combustion performance of gas-fired appliances. Guide for using electronic portable combustion gas analysers in non-domestic premises for the measurement of carbon monoxide and carbon dioxide levels and the determination of combustion performance

BS 8446: 2020 Installation and maintenance of open-flued, non-domestic gas-fired laundry appliances. Specification

BS EN 721: 2019 Leisure accommodation vehicles. Safety ventilation requirements

BS EN 12327: 2012 Gas infrastructure. Pressure testing, commissioning and decommissioning procedures. Functional requirements

BS EN 15001-1: 2023 Gas Infrastructure. Gas installation pipework with an operating pressure greater than 0.5 bar for industrial installations and greater than 5 bar for industrial and non-industrial installations. Detailed functional requirements for design, materials, construction, inspection and testing

BS EN 15001-2: 2023 Gas supply systems. Gas installation pipework with an operating pressure greater than 0.5 bar for industrial installations and greater than 5 bar for industrial and non-industrial

installations. Detailed functional requirements for commissioning, operation and maintenance

BS EN 1949: 2021 Specification for the installation of LPG systems for habitation purposes in leisure accommodation vehicles and accommodation purposes in other vehicles

BS EN ISO 10239: 2025 Small craft. Liquefied petroleum gas (LPG) systems

BS EN 13410: 2001 Gas-fired overhead radiant heaters. Ventilation requirements for non-domestic premises

Institution of Gas Engineers and Managers Documents (IGEM)

IGEM/UP/1 Strength testing/ tightness testing/direct purging of industrial and commercial gas installations.

IGEM/UP/1A Strength/tightness testing/purging of small, low pressure industrial & commercial installations

IGEM/UP/1B Tightness testing and direct purging of small Liquefied Petroleum Gas/Air, NG and LPG installations

IGEM/UP/1C Strength testing, tightness testing and direct purging of Natural Gas and LPG meter installations

IGEM/UP/2 Installation pipework on industrial and commercial premises

IGEM/UP/3 Gas fuelled spark ignition and dual fuel engines

IGEM/UP/4 Commissioning of gas fired plant on industrial and commercial premises

IGEM/UP/6 Application of compressors to natural gas fuel systems

IGEM/UP/7 Gas installations in timber framed and light steel framed buildings

IGEM/UP/9 Application of Gas systems to Gas turbines and supplementary and auxiliary fired burners

IGEM/UP/10 Installation of flued gas appliances in industrial and commercial premises

IGEM/UP/11 Gas installations for educational establishments

IGEM/UP/12 Application of burners and controls to gas fired process plant

IGEM/UP/16 Design for natural gas installations on industrial and commercial premises with respect to DSEAR

IGEM/UP/17 Shared chimney and flue systems for domestic gas appliances

IGEM/UP/18 Gas installations for vehicle repair and body shops

IGEM/UP/19 Design & application of interlock devices/associated systems in gas appliance installations in catering

IGEM/GL/8 Reporting and investigation of gas-related incidents

IGEM/GL/9 Guidance for large gas consumers in dealing with natural gas supply emergencies

IGEM/TD/4 Polyethylene (PE) and steel gas services and service pipework

IGEM/G/1 Defining the end of the Network

IGEM/G/4 Definitions for the gas industry

IGEM/G/5 Gas in multi-occupancy buildings

IGEM/G/6 Gas supplies to mobile dwellings

IGEM/G/11 Gas industry unsafe situations procedure

IGEM/G/11 Supplement 1 Responding to domestic CO alarm activations/reports of fumes after attendance by the emergency service provider or the Liquified Petroleum Gas supplier

IGEM/G/13 Domestic supply capacity and operating pressure at the outlet of the meter

IGEM/GM/4 Flow metering practices. Inlet pressure exceeding 38 bar and not exceeding 100 bar

IGEM/GM/5 Electronic gas meter volume conversion systems

IGEM/GM/6 Non-domestic meter installations. Standard designs

IGEM/GM/7A Electrical connections for gas metering equipment

IGEM/GM/7B Hazardous area classification for gas metering equipment

IGEM/GM/8 – Pt 1 Non-domestic meter installations. Design. Flow rate exceeding 6m^3h-1 & inlet pressure up to and not exceeding 38 bar

IGEM/GM/8 – Pt 2 Non-domestic meter installations. Location, housings and compounds for flow rate exceeding 6m^3h-1 and inlet pressure up to and not exceeding 38 bar

IGEM/GM/8 – Pt 3 Non-domestic meter installations. Fabrication, installation, testing and commissioning for flow rate exceeding 6m^3h-1 and inlet pressure up to and not exceeding 38 bar

IGEM/GM/8 – Pt 4 Non-domestic meter installations. Operation and maintenance for flow rate exceeding 6m^3h-1 and inlet pressure up to and not exceeding 38 bar

IGEM/GM/8 – Pt 5 Non-domestic meter installations. Notices and labels for flow rate exceeding 6m^3h-1 and inlet pressure up to and not exceeding 38 bar

Liquid Gas UK Codes of |Practice (CoP)

CoP 1 Part 1 Bulk LPG Storage at Fixed Installations – Design, Installation and Operation of Vessels Located Above Ground (October 2017)

CoP 1 Part 2 Bulk LPG Storage at Fixed Installations – Vapour Off-take Small Bulk Propane Installations (March 2021)

CoP 1 Part 3 Bulk LPG Storage at Fixed installations – Examination and Inspection (April 2020)

CoP 1 Part 4 Bulk LPG Storage at Fixed Installations – Buried/ Mounded LPG Storage Vessels (January 2021)

CoP 7 Storage of Full and Empty LPG Cylinders and Cartridges (2021)

CoP 17 LPG vessels: Preparing for and Removing from Service (2025)

CoP 22 Design Installation and Testing of LPG Piping Systems (2025)

CoP 24 Part 3 Use of LPG Cylinders – Use of LPG for Commercial Catering Events, Street Food and Mobile Catering (September 2017)

CoP 25 LPG Central storage and Distribution Systems for Multiple Consumers (June 2018)

CoP 32 LPG systems in Leisure Accommodation Vehicles and Road Vehicles with Habitation – Post Delivery Inspection, Commissioning and Maintenance (December 2020)

CoP 33 Use of LPG Cylinders (July 2023) (Replaces COP 24-part 1/5/6)

GN 2 A Guide for Cabinet Heaters Servicing (March 2002)

Digital support becoming front-line response

Digital tools are now a standard part of how heating engineers prepare for and manage the winter surge in boiler and heating breakdowns.

Research by City Plumbing found than more than 60% of heating engineers say they use online platforms to identify and source boiler spares and one-third say they are open to doing so in the future.

More than half (57%) are already using digital tools to diagnose problems with boilers and heating systems.

The data, taken from research with 500 heating and plumbing installers as part of the *Taking the Temperature* report, found that digital support is fast becoming a front-line response to increasing customer demand, helping engineers narrow down likely faults, confirm compatible parts and cut the risk of repeat visits.

Diagnostic tools

The findings also challenge the belief that it's only bigger firms that use digital tools. More than half (56%) of sole traders already use digital platforms for spares as well as online diagnostic tools for boiler and heating breakdowns.

A further one-third of smaller firms say they would consider using them. These figures rise to 59% for spares tools and 65% for boiler diagnostics in businesses with 10-49 staff.

The pressures behind this shift are reflected elsewhere in the research. More than 84% of engineers say that fast access to spares is more important to them than in previous years, with rising customer expectations and tighter job turnaround times likely drivers. ■

Find spares, fix faults

City Plumbing's SparesFinder service helps heating engineers get hold of what they need quickly using a searchable database of 20,000-plus spare parts from more than 160 manufacturers.

Fault Finder, which City Plumbing customers can trial free for 30 days, has a diagnostic database of 13,000+ gas, electric and oil boilers, to help identify issues and the parts needed. **cityplumbing.co.uk/spares**

Sole trader or limited company: what's best?

Should you take your business to the next level and become a limited company? Gas Engineer Software looks at why it may be suitable – and how to do it.

Every heating and plumbing business evolves. Almost all start as sole traders before the workload grows, perhaps a second pair of hands joins the team or the accounts start to feel more complicated than they used to.

At this point, many consider incorporating the business and taking it up a level. But how do you know if this is the right choice for you?

What's the difference?

As a sole trader, *you* are legally your business.

You have full control, keep all business profits as income and are fully responsible for all debts. You'll need to complete a self-assessment tax return every year.

> **"Incorporating your business can provide an additional layer of protection."**

Some of the benefits include:

- Less administrative work
- Lower accountancy fees
- Simplicity and clarity.

If you incorporate a limited company, it becomes its own legal entity.

Your business can own assets, make profits and incur debts separate from your personal finances. Instead of being the business, you become an employee (and director) of that company. Limited companies do have additional responsibilities, such as annual accounts, corporation tax filings, director duties and stricter record-keeping.

Some of the benefits include:

- Limited liability, so your personal assets can't be put up as collateral
- Tax efficiency when you start earning more
- Professionalism, for domestic customers and larger contracts.

If you incorporate your business, you could pay less in tax.

Sole traders pay income tax and National Insurance on their profits. It's simple but higher tax bands kick in when you start earning more.

Limited companies, on the other hand, pay corporation tax on profits. Directors can then take a combination of salary and dividends, which are taxed differently.

You're taking on more risk

If you find yourself planning to take on bigger jobs and contracts, hire staff or take out a loan for a better van, incorporating the business can provide an additional layer of protection.

Sole traders can employ people but running a team becomes more streamlined under a limited company. Paying staff, handling pensions and managing tax through payroll fit naturally in the structure of a limited company. ■

Steps to incorporate your business

1. **Choose your company name**
   You can keep the same company name you currently have with Limited or Ltd at the end, as long as it's available.
2. **Register with Companies House**
   This will formally incorporate your business and can be done online very quickly.
3. **Open a separate business bank account**
   If you haven't already done so, you'll need to open a separate business bank account for the limited company.
4. **Update Gas Safe Register**
   Because you will be listed as one of the directors of your new limited business, you can keep and transfer your existing Gas Safe registration number. However, you must inform Gas Safe Register.
5. **Inform HMRC**
   You need to register for corporation tax and set up PAYE to pay your own salary.
6. **Update your insurance**
   Your public liability insurance will need to be updated.
7. **Notify everyone else**
   Update your details with suppliers, your website, business cards and any software subscriptions.

‘Include hybrids in Boiler Upgrade Scheme’

Hybrid heating technology is a lower-cost, lower-disruption solution to lower-carbon heating for UK homes than heat pumps alone. Here Worcester Bosch shares new findings from its research.

A new trial has found that hybrid heat systems can effectively heat hard-to-treat older homes, providing 94% of the heat required, according to a research project by Worcester Bosch and the University of Salford.

The study, which took place at the university’s Energy House Lab, involved a full-scale reconstruction of a pre-1920 end-of-terrace home in a highly controlled environment that could simulate different outdoor temperatures ranging from -3°C to 16°C.

A ‘bivalent parallel system’ was installed, where a heat pump and boiler run in parallel via a smart hybrid manager. The heat pump acts as the primary heat source, with the boiler adding supplementary heat to meet demand when the outdoor temperature drops. This enables efficient heat delivery, particularly during winter peaks when demand is at its highest.

At all external temperatures above 7°C, the heat pump handled 100% of the heating requirement. Even in colder weather (down to -3°C), it still contributed more than 70% of the total space heating, with the boiler modulating in parallel to provide a boost when needed. The boiler never operated independently to meet the full heat demand.

Additionally, CO_2 emissions were cut by 1,270kg compared with boiler-only operation – around 77% of the carbon savings of a full heat pump installation.

Worcester Bosch is urging the government to include hybrid heat pumps systems in the Boiler Upgrade Scheme, with installations qualifying for a grant of £3,750 (half the current amount available for heat-pump only installations).

It says including the systems in this grant funding would:

- Support a widely applicable technology that builds on the established boiler population to significantly increase the adoption of heat pump technology in homes
- Provide an affordable, lower-carbon option for households that may not be able to finance a full heat pump installation
- Grow the number of installers familiar and confident with heat pumps.

CEO Carl Arntzen said: “Lowering the carbon emissions of the UK’s homes is a shared goal that requires a range of effective and accessible solutions. The findings from our work with the University of Salford are clear: bivalent parallel hybrid heat pumps are a practical and highly effective technology.

“We believe government recognition and financial support for hybrid heat pumps presents an opportunity to make the transition to lower-carbon heating faster, fairer and more effective. It offers a practical and accessible stepping stone on the journey to net zero for millions of households.” ■

“Lowering the carbon emissions of the UK’s homes is a shared goal that requires a range of effective and accessible solutions.”

You can read the white paper Hybrid Heat Pumps Win: Helping to achieve UK climate targets at: **www.worcester-bosch.co.uk/hybrid-heat-pumps-win**

Boiler Upgrade Scheme adds more technologies

The Boiler Upgrade Scheme has been expanded to include air-to-air heat pumps and heat batteries.

The scheme currently gives a grant of £7,500 towards the cost of installing an air source or ground source heat pump, which can keep homes warm during the winter.

Now it also gives a £2,500 discount on installing an air-to-air heat pumps, which can provide heat in winter and cool air in summer.

It's the first time air-conditioning units have been eligible for government funding.

The grants are available to all households, and form part of the government's £13.2 billion Warm Homes Plan.

The typical cost of installing an air-to-air heat pump in a flat or small house is around £4,500, says the government.

Additionally, households will be able to claim £2,500 off the price of heat batteries, which can store heat overnight for use during the day.

The additions to BUS come alongside a consultation on the role that alternative heating systems could play, such as storage heaters, infrared panels or renewable liquid fuels.

More choice

Minister for Energy Consumers Martin McCluskey said: "With heat pumps more popular than ever, we want to make sure as many people as possible can benefit, especially those in flats or small homes without central heating, so they have greater choice when upgrading their property."

The government says it will provide grants to support heat batteries when appropriate product, design and installation standards have come into force. It's also exploring different purchase options for heat pumps, including the possibility of leasing them. ■

The consultation on alternative low-carbon heating solutions closes on 10 February 2026. You can read it and comment at**: www.gov.uk/government/consultations/exploring-the-role-of-alternative-clean-heating-solutions**

Mapping the road to 2030

As we look ahead to 2030, we can already see a fast-evolving market where new technologies, regulations and customer expectations will reshape what it means to be a skilled heating professional, writes Griff Thomas from GTEC Training and Heatly.

The next decade will bring some of the biggest changes since condensing boilers were first introduced. The skills landscape is shifting and gas engineers are in a unique position to lead the UK's decarbonisation efforts: but they need the right training infrastructure and support to upskill at pace.

Forecasts consistently show that all low-carbon heating technologies will see steep growth over the next five to 10 years.

Government targets are aiming for hundreds of thousands of heat pump installations every year by 2028. Conservative estimates suggest the workforce will need to triple to meet expected demand. Crucially, gas engineers already have the core skills in system design, heat loss and hydronics that underpin good heat pump work.

By 2030, hybrid systems that pair heat pumps with existing boilers are expected to form an important bridging technology. These installations require a broad understanding of both gas and heat pump systems.

Engineers increasingly need a working understanding of building fabric, insulation and heat loss. Whole-home retrofit knowledge will become a baseline requirement, not a specialist discipline.

Broader skillset

To thrive in the 2030 market, gas engineers will need a multi-layered skillset that balances traditional expertise with new competencies. Key areas will include heat pump design and installation, low-temperature heating system design, hydrogen safety and appliance knowledge, controls optimisation, energy efficiency and retrofit awareness, electrical competencies for low-carbon technologies and digital tools for diagnostics, modelling and commissioning.

Gas expertise is not being abandoned but expanded. Future heating engineers will be comfortable working across technologies and using their expertise to choose and install the right solution for each property.

If installers are to transition at scale, the sector needs a training ecosystem that makes upskilling accessible, high-quality and financially viable. This means ensuring a national network of purpose-built training centres that provide hands-on experience with working heat pumps, hydrogen-ready boilers, hybrid systems and modern controls, not just classroom theory.

Training will need to be modular and flexible because heating engineers can't take weeks off work. Short, stackable modules will help them build competencies gradually while still managing their businesses.

Clear, portable qualifications and government-backed incentives for training will be essential. Where training aligns with national policy goals, support should follow. Schemes like the Heat Training Grant have helped but longer-term government funding is essential. Manufacturers, training providers and accreditation bodies need to work together to ensure that training reflects real-world installations and emerging technology trends. ■

The road ahead

For many gas engineers, the rapid move toward low-carbon heating can feel daunting. But I believe what lies ahead is the biggest opportunity the trade has had in decades. Households will still need reliable heating systems and experts who can design, install, commission and maintain them. The technologies may change but the foundational skills of gas engineers will remain in high demand.

By 2030, the most successful engineers will be those who embrace low-carbon skills early and those who see their role widening from gas engineers to heating professionals equipped for a low-carbon future.

The road ahead is clear: the low-carbon future will be built by today's engineers and now is the time to start the journey.

skillsandtraining

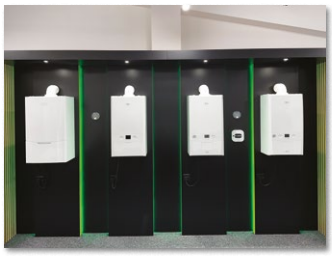
Ideal Heating opens new centre in Portishead

Ideal Heating is opening its fifth Expert Academy training centre, a new purpose-built facility in Portishead, near Bristol. Developed in partnership with James Hargreaves Plumbing Supplies, the centre brings hands-on training to heating engineers in the South-west of England.

The site is just off the M5, providing easy access from Cardiff, Worcester, Reading and Exeter. It provides a range of courses, from nationally recognised qualifications in air source heat pumps and hydronic system design, to domestic product training on Ideal Heating's latest solutions. Many of the courses are subsidised or fully funded.

The facility features fully operational heat pump |systems and thermodynamic training rigs for practical, hands-on experience.

Training and design services director Andrew Johnson said: "This fantastic new facility will make it easier for heating professionals across the



South-west to access our award-winning training and build their knowledge in low-carbon technologies.

"It's another important step in expanding our national training network and supporting the growing number of installers who are ready to make the move to heat pumps."

Martin Healy, national branch director at James Hargreaves, added: "Training and supporting installers is so important, and this facility takes that to the next level."

Ideal Heating's Expert Academy network has more than 30 locations nationwide, including its flagship centres in Hull, Leeds, Luton and Scotland. **www.expert-academy.co.uk**

Upgrade for London Colney facility

Carrier Solutions UK has refurbished its London Colney training centre. The enhanced and extended facility is set to provide education and hands-on experience with the company's equipment.

The training centre will serve as a key regional hub in the company's growing network of training facilities. These are being developed to ensure engineers in any location can train on Carrier Solutions UK products.

The multi-brand company of Carrier, Toshiba and Viessmann solutions includes residential and commercial boilers, air-to-air and air-to-water heat pumps, VRF systems, controls and specialist equipment for industry certifications .

The London Colney refurbishment is part of the

organisation's programme to expand access to high-quality training. "[It] reflects our ongoing commitment to supporting both cooling and heating engineers with the very best training environments, no matter where they are in the UK," said David Dunn, Managing Director, UK&I, Carrier CSE-R Europe.

London Colney joins Carrier Solutions UK's training academy in Stockport and the TQ Training Centre in Wakefield, with further sites planned.

Lutterworth location for Smart Energy

Smart Energy Training is to open a new assessment centre in Leicestershire this month (January 2026), providing qualifications for new recruits as well as upskilling those already in the industry.

It's offering 50% off any training course booked for January or February at the Turnpike Close centre in Lutterworth, including gas, plumbing and renewable energy training courses.

There will be an open day on 30 January to look around the new facility, take part in competitions, meet the trainers and take advantage of exclusive course discounts.

You can find out more and sign up at: **www.smartenergytraining.co.uk/lutterworth-open-day-registrations/**

Vaillant adds to Unistor high-recovery cylinders

Vaillant has expanded its Unistor cylinder range with new standard diameter cylinder models, to create a comprehensive range from 150 litres to 300 litres.

The standard size cylinder range includes a 40 litre buffer that can be positioned above or below the cylinder and provides installation flexibility as part of a heat pump system.

The standard high-recovery Unistor cylinders come in pre-plumbed and onsite plumbing options and, as with the slimline counterpart, provide efficient hot water suitable for both heat pump and boiler heating systems.

For customers not quite ready to move to a heat pump, fitting the cylinder now will enable them to upgrade if they choose to.

The standard model is narrower than its predecessor and can be suitable for new-build projects. It has accessible, front-facing labelled connections and a choice of external (pure) or internal (plus) expansion.

Mark Wilkins, Technology & Solutions Portfolio director, says: "Specifying the correct hot water cylinder is an important component of delivering an effective, high performing and long-lasting hot water system.

"The addition of the new standard range takes the Vaillant offer to 34 model options, meaning individual specification need can be catered for across the standard and slimline range.

www.vaillant.co.uk

Compact circulator from Navigator

Navigator MSL has launched the Magblu™ Thorsys 8M heat pump circulating pump. The high-efficiency pump delivers an 8.1 metre head and 3.6m^3/h flow rate, making it suitable for renewables installations.

With a compact 135mm body, the Thorsys 8M provides output in a compact form, suitable for tight spaces. It features nine-speed control, quiet operation and energy efficiency. It also combines intelligent control, robust construction and easy installation, says the company.

www.navigatormsl.com

Cover up pipework with Talon skirting covers

Whether you're finishing a new build or upgrading a lived-in space, Talon's skirting covers are a quick, professional way to conceal pipes neatly along walls or skirting boards.

Available in direct-to-wall or over-skirting options, the covers are made from tough, white PVC. They're easy to clean, resistant to everyday knocks and rated to UL94 V-0 flame spread, making them suitable for almost any project, from new

housing developments to refurbishments and commercial interiors. They can clip over Talon's hinged clips, with no extra tools needed.

Installers can choose from 2.5m or 3m lengths, both with a finish that's resistant to mild alkalis and acids. A full range of accessories includes fixing brackets, inside and outside corner covers, flat corners and stop ends, for a continuous, professional line around the room.

Once fitted, they leave no gaps, giving the appearance of a custom-built finish without the cost or labour of bespoke joinery.

www.talon.co.uk

High temperatures with Baxi's HP60

Baxi's HP60 heat pump provides high operating temperatures and simplified commissioning, suitable for installers working on residential projects.

The air source heat pump can be integrated with solar PV battery systems. It also supports Baxi's ASHP control options and its ASHP pre-plumbed cylinder, reducing the need for onsite pipework and wiring. The controllers are OpenTherm-compatible.

The HP60 has outputs from 4kW–13kW, high-temperature capability up to 75 °C at -10 ° C outside, and an A+++ efficiency rating at 35 °C across the range and at 55 °C for those up to 8kW.

Each outdoor unit comes with an integrated expansion vessel, water pump and includes DHW and energy monitoring.

It comes with a two-year standard warranty, with the option of enhanced cover. Installation earns Baxi Works points and £500 in cashback if installed, commissioned and registered by 30 April 2026.

www.baxi.co.uk/professional

productupdate

Baxi offset flue adapter speeds up boiler replacements

Baxi's offset flue adapter can save time and money on boiler replacement jobs. The adapter enables installers to use existing flue hole positions without having to re-drill or move boilers, which can combat misalignment issues when replacing standard size boilers with newer, more compact models.

It's suitable for use with all Baxi compact, combi and system boilers when replacing standard size boilers that require offset 'right' flue positions. As well as compatibility across the entire Baxi compact combi and system ranges, the simple add-on makes boiler swap-outs simpler, with less disruption for the homeowner.

Product manager Andy Speake said there could be up to 1.5 million boilers currently with an offset flue and that will need replacing with a modern, central-flue boiler.

He said: "The new offset flue adapter simplifies the replacement of legacy Baxi and Potterton combi and system boilers that had an offset flue position. We knew installers were finding it difficult to work around this and were resorting to makeshift fixings, which wasted their time and money.

"We know that retrofitting, especially in social housing, will continue to make up a large amount of the work in installers' diaries. This flue adapter makes those jobs easier and gives them one less thing to worry about."

www.baxi.co.uk

Worcester Bosch delivers new floor-standing boiler

The Greenstar 8000 F is the newest floor-standing gas boiler from Worcester Bosch. Both combi and regular models have outputs up to 50kW and have been designed with ease of installation in mind, says the manufacturer.

The boilers come with a pre-piping roller jig, enabling an easy switch-out from Worcester Bosch's previous ranges, the Greenstar CDi Highflow or FS CDi. They also include space for a 22mm Greenstar system filter in the combi model.

Homeowners can easily control their heating needs thanks to intuitive touch buttons and the ability to connect wireless controls.

The Greenstar 8000 F comes with a guarantee of up to 10 years and is compatible with most Worcester Bosch controls.

www.worcester-bosch.co.uk/professional/products/boilers/greenstar-8000-f-combi

Press here for Instantor R-Press

New pipework press fittings from Instantor are designed for high-pressure applications, up to 48 bar, including refrigeration, air conditioning, heat pumps (refrigeration side) and variable refrigerant flow systems.

The R-Press fittings provide clean, reliable joints without flames, resulting in quicker installations, less downtime and safer working conditions, especially in tight spaces.

The range comes with a 15-year warranty on completion of training.

www.instantor.co.uk

Updates for Hamworthy Varmax Mk2

Hamworthy Heating has updated its Varmax MK2 floor-standing condensing boiler range, designed to simplify installation and maintenance and minimise downtime.

Additions include a new touch-screen interface and an improved casing design for easier access to key components.

The boiler range features a durable, corrosion-resistant stainless steel heat exchanger, backed by a five-year warranty. It comes in six models for accurate heating system load matching, with outputs of up to 450kW from a single unit and the option to cascade multiple boilers for larger installations.

The Varmax MK2 includes a built-in flue gas non-return valve for optimal system efficiency and a simplified flue system and well-insulated construction to reduce standby losses,.

There is no requirement for a dedicated primary circuit and no minimum flow rate.

www.hamworthy-heating.com

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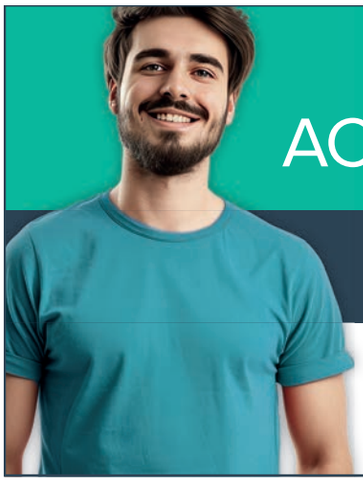

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