Gas safety law requires engineers to prevent danger, work safely, use proper protective equipment, operate tools correctly, and carry out gas work competently, making PPE a legal necessity under UK regulations.

Gas Safety (Installation and Use) Regulations 1998 require gas engineers to be qualified, Gas Safe registered, able to identify themselves, able to show their Gas Safe ID when asked, and to confirm the work, location and responsible person before starting; the Gas Safe Register's enforceable rules require engineers to carry their ID, present it on request, identify themselves, and explain the work being carried out, creating a single legal framework that ensures only competent, authorised engineers undertake gas work safely and with full accountability.

- **HSWA** demands safe working practices.
- **PPE Regulations** demand proper protective equipment.
- **PUWER** demands safe use of tools and equipment.
- **MHSWR** demands risk assessments that identify PPE needs.
- **GSIUR** demands prevention of danger during gas work.

Put on the required PPE

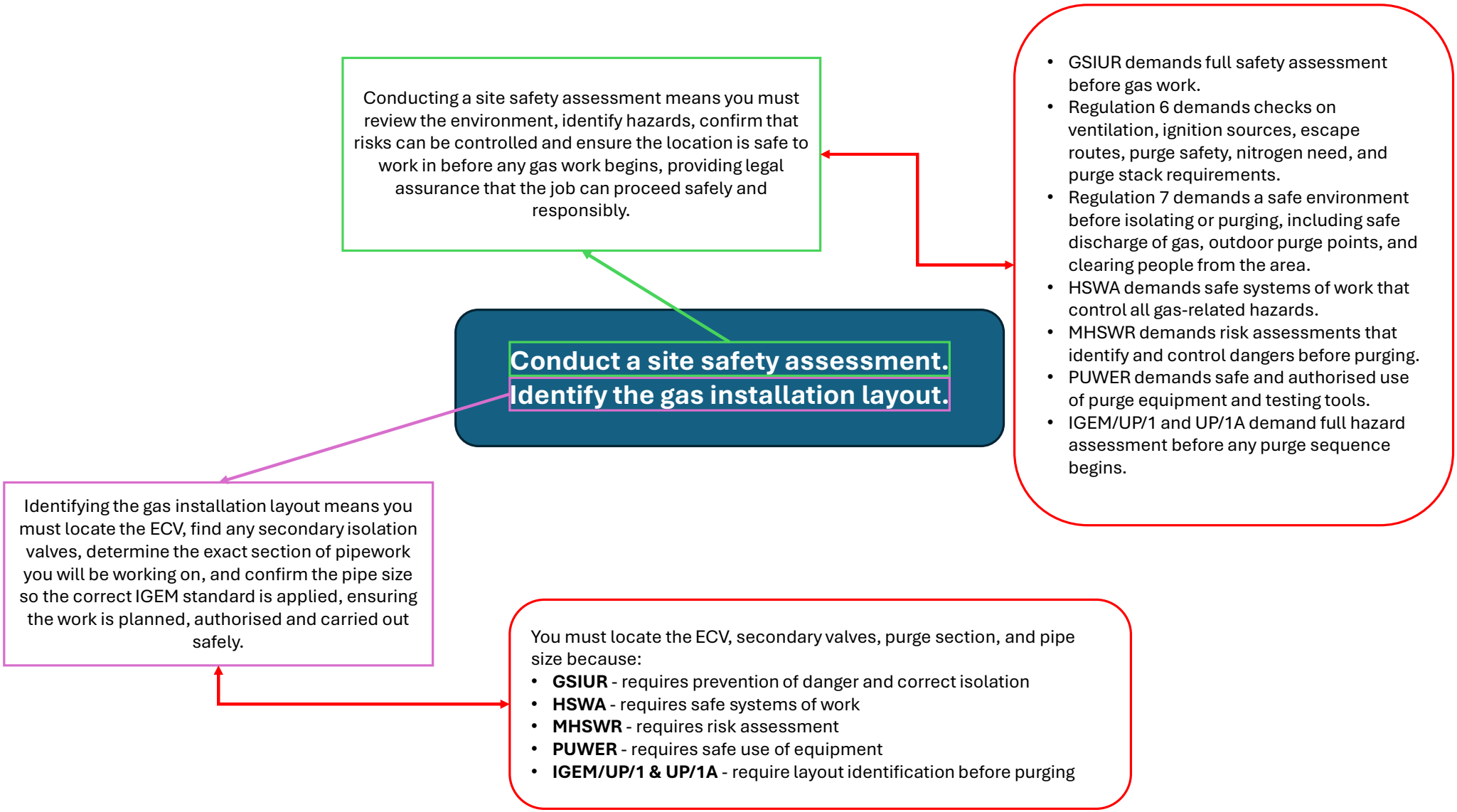
Present yourself to the client/duty holder

Obtain permission to work

- GSIUR demands qualified and competent gas engineers.
- Regulation 3 demands Gas Safe registration and proof of identity.
- Regulation 6 demands confirmation of the work being done.
- Regulation 7 demands confirmation of the location and responsible person.
- Gas Safe Registration Rules demand engineers carry and show their ID card.
- Gas Safe Registration Rules demand engineers identify themselves before starting work.
- Gas Safe Registration Rules demand engineers explain the work being carried out.

Obtaining permission to work means you must confirm that the job is authorised, that the responsible person has granted consent, you may only begin once permission has been clearly given, ensuring the work is legitimate, safe and fully accountable. Both for the gas and the electrical sides of your task.

- GSIUR demands competent and authorised gas engineers.
- Regulation 7 demands that the responsible person knows the work and authorises interruption of the gas supply.
- HSWA demands safe systems of work on commercial and industrial sites.
- MHSWR demands formal control measures for high-risk gas activities.
- PUWER demands controlled and authorised use of hazardous gas-related equipment.
- Permit-to-work systems demand written authorisation before isolating or purging gas on commercial or industrial premises. Domestic premises demand permission to work, even though a formal permit is not required.


Conducting a site safety assessment means you must review the environment, identify hazards, confirm that risks can be controlled and ensure the location is safe to work in before any gas work begins, providing legal assurance that the job can proceed safely and responsibly.
GSIUR demands full safety assessment before gas work.
Regulation 6 demands checks on ventilation, ignition sources, escape routes, purge safety, nitrogen need, and purge stack requirements.
Regulation 7 demands a safe environment before isolating or purging, including safe discharge of gas, outdoor purge points, and clearing people from the area.
HSWA demands safe systems of work that control all gas-related hazards.
MHSWR demands risk assessments that identify and control dangers before purging.
PUWER demands safe and authorised use of purge equipment and testing tools.
IGEM/UP/1 and UP/1A demand full hazard assessment before any purge sequence begins.
Conduct a site safety assessment.
Identify the gas installation layout.
Identifying the gas installation layout means you must locate the ECV, find any secondary isolation valves, determine the exact section of pipework you will be working on, and confirm the pipe size so the correct IGEM standard is applied, ensuring the work is planned, authorised and carried out safely.
You must locate the ECV, secondary valves, purge section, and pipe size because:
GSIUR - requires prevention of danger and correct isolation
HSWA - requires safe systems of work
MHSWR - requires risk assessment
PUWER - requires safe use of equipment
IGEM/UP/1 & UP/1A - require layout identification before purging

- Gas installations demand current measurement, not voltage-only testing.
- PME systems demand identification of diverted neutral current on bonded pipework.
- Equipotential bonding demands verification of actual current flow, not just voltage.
- Tracking at the service head demands immediate DNO reporting on 105.
- Toroidal current measurement demands clamping the main earth conductor to assess electrical energy.
- Shock assessment demands understanding parallel paths when pipework carries fault current.
- Arc-flash protection demands CAT 2 PPE.
- EAWR demands prevention of unexpected energisation during gas work.
- BS EN 50110-1 demands complete separation from live conductors before purging.
- BS EN ISO 14118 demands lock-off, tag-out, and prevention of unexpected start-up.
- GSIUR demands electrical hazard assessment before purging or disconnecting pipework.
- HSWA demands safe systems of work that consider current, not just voltage.
- MHSWR demands risk assessment of ignition energy using voltage × current × time.

This means you must understand whether current is flowing through the main earth cable, determine if that current is diverted neutral current and confirm the electrical safety of the installation before carrying out any gas work, ensuring hidden electrical risks are properly identified and controlled

Complete DNC/NDC/NET current detection and

Electrical isolations

You must gain permission to turn off the electricity from a person of authority.

Electrical isolations means you must ensure all sources of electrical energy are identified, made dead, locked off, proven dead, and secured against reconnection before any gas work begins, guaranteeing that no dangerous electrical energy can appear during the job and that the worksite is safe, controlled and legally compliant.

- Electrical isolations demand permission from the duty holder.
- EAWR demands authorised control before turning off electrical supplies.
- HSWA demands safe systems of work that prevent danger to others.
- BS 7671 demands correct circuit identification before isolation.
- BS EN ISO 14118 demands prevention of unexpected start-up through lock-off and tag-out. BS EN 60204-1 demands lockable isolation devices secured against reconnection.
- BS EN 50110-1 demands full isolation of all live conductors, including the neutral.
- GS38 demands correct voltage-proving equipment and proper test–prove–test procedure. CAT 2 PPE demands arc-rated protection against low-level arc flash hazards.
- Correct isolation demands proving dead, locking off, tagging out, and retaining the padlock key.

Confirming the installation is safe to work on means you must verify that no appliances are running, no vulnerable persons are at risk, no ignition sources or hot works are present and that the purge discharge point is safe and outdoors; ensuring the environment is controlled and legally safe before any gas work begins.

- GSIUR demands full safety checks before purging.
- Regulation 6 demands appliances off, ignition sources controlled, vulnerable persons protected and purge discharge outdoors.
- Regulation 7 demands safe working conditions that prevent gas escape and ensure outdoor discharge of purged gas.
- IGEM/UP/1 and UP/1A demand confirmation of appliance shutdown, ignition control, purge-zone safety and outdoor discharge points.
- HSWA demands safe systems of work that eliminate foreseeable danger.
- MHSWR demands risk assessment of all purge-related hazards.
- PUWER demands safe and controlled use of purge and testing equipment.

Confirm the installation is safe to work on

Prepare your purge equipment

Preparing purge equipment means you must ensure all required tools and safety devices are present, suitable, and ready for use including the gas analyser, purge stack or safe discharge point, ventilation equipment, communication equipment, LOTO gear, and tightness-testing tools, so the purge can be carried out safely, legally, and without creating danger.

- GSIUR demands full preparation of purge equipment before any isolation or purge.
- Regulation 6 demands gas analysers, purge stacks, ventilation equipment, communication devices, LOTO gear and tightness-testing tools.
- Regulation 7 demands safe discharge of gas outdoors and equipment that prevents accidental re-energising.
- PUWER demands suitable, maintained, and safely used purge and testing equipment operated only by competent persons.
- IGEM/UP/1 and UP/1A demand gas analysers, purge stacks, ventilation, communication equipment, LOTO and tightness-testing tools as mandatory purge controls.
- HSWA demands safe systems of work supported by correct equipment.
- MHSWR demands risk assessments and control measures that rely on having the right tools.
- If any required equipment is missing, you cannot legally begin the purge.

Briefing the client or duty holder means you must clearly explain who you are (again), what work will be carried out (again), how the gas will be isolated and purged and what safety restrictions apply, ensuring they fully understand the process and their responsibilities before any gas work begins.

- GSIUR demands briefing the duty holder before any isolation or purge. Regulation 6 demands communication about gas isolation, lock-off, outdoor purging and prohibition of appliance use or interference.
- Regulation 7 demands informing the duty holder of isolation, lock-off, outdoor discharge and restrictions on appliance operation/valve use.
- Gas Safe Register Rules demand clear explanation of the work, safety implications, and restrictions to the person in control of the premises.
- IGEM/UP/1 and UP/1A demand briefing on isolation, lock-off, outdoor purge discharge and non-interference before purging.
- HSWA demands safe systems of work supported by hazard communication.
- MHSWR demands risk-control communication with the responsible person.
- You must brief the client/duty holder because GSIUR, HSWA, MHSWR, Gas Safe rules, and IGEM standards all legally require it.

Brief the client / duty holder

Clear the work area

Clearing the work area means you must remove all staff and members of the public, eliminate ignition sources, and ensure safe access to both the ECV and the purge point, creating a controlled environment where gas work can be carried out safely and without danger.

- GSIUR demands clearing the work area before any isolation or purge. Regulation 6 demands removal of staff and public, elimination of ignition sources and safe access to the ECV and purge point.
- Regulation 7 demands keeping people out of the purge zone, controlling ignition sources, ensuring outdoor discharge and maintaining clear access to isolation points.
- IGEM/UP/1 and UP/1A demand a cleared purge zone, controlled ignition sources, and safe access to isolation valves and purge discharge points.
- HSWA demands safe systems of work supported by hazard control.
- MHSWR demands risk assessment and removal of foreseeable dangers.
- PUWER demands safe use of equipment in a controlled, hazard-free environment.

Confirming competence means you must ensure you are Gas Safe registered, qualified for the specific category of work, and authorised to carry out purging, proving that you meet the legal requirements before beginning any part of the purge process and guaranteeing that only a competent engineer undertakes the task safely and correctly.

- GSIUR demands competent and qualified gas engineers.
- Regulation 3 demands Gas Safe registration, correct purging qualifications and proven competence before any isolation or purge.
- Gas Safe Register Rules demand engineers work within their categories, hold the correct purging competencies and never carry out work they are not qualified for.
- IGEM/UP/1 and UP/1A demand purging to be performed only by trained, experienced and knowledgeable specialists.
- HSWA demands safe systems of work carried out by competent persons.
- MHSWR demands competent workers for high-risk tasks such as purging.
- If you are not competent, qualified, and Gas Safe registered, you cannot legally isolate or purge gas.

Confirm competence

You are now legally allowed to begin Step 1 of the purge procedure

Step 1 of the purge procedure means you have completed all mandatory pre-purge checks, confirmed competence, ensured the installation is safe, and prepared all equipment, allowing you to start the first operational actions, testing for DNC/NDC/NET current and locking off the gas main; in full compliance with the required standards.

- GSIUR demands correct legal entry into the purge procedure.
- Regulation 6 demands isolation of the gas supply, lock-off of the gas main, tightness testing and controlled initiation of the purge sequence.
- Regulation 7 demands secure isolation that prevents accidental re-energising and ensures safe discharge during purging.
- LOTO demands fitting a lock-off device, tagging the isolation point, and confirming all relevant persons know the supply is isolated.
- Safe-work requirements demand turning off at the ECV or designated valve, locking off and verifying that no one can interfere with the isolation.