
DEVELOPER GUIDELINES



WORKING STANDARDS, GROUNDWORKS,
INSTALLATION AND METERING



To report a gas emergency call:



Protect the gas pipe

It is imperative that gas mains and services are not damaged following installation and it is the responsibility of the developer to ensure that **all** contractors working on site are informed of the location of the gas mains and services.

Safe working

Only competent personnel should work on gas systems. The mains and services drawing should be on site at all times and updated to clearly show the installation progress. Please note that other Gas Transporters may have gas mains in the vicinity of the site. They should be contacted by the developer at an early stage in order to establish the location of any non Fulcrum mains that may be affected.

Emergency

Damage to live gas mains must be reported immediately to the national gas emergency number **0800 111 999** who will arrange for the Emergency Service Provider to attend site and make safe. Any damage to un-gassed pipes, no matter how slight, must be reported immediately to Fulcrum.

Client: _____

Project number: _____

Project name: _____

Your contact is: _____



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1. About these guidelines

THESE DEVELOPER GUIDELINES HAVE BEEN CREATED TO GIVE YOU CLEAR TECHNICAL INFORMATION AND ADVICE ABOUT ONSITE SAFETY, WORKING STANDARDS, GROUNDWORKS, GAS PIPE INSTALLATION AND METERING.

PLEASE READ THESE GUIDELINES FULLY BEFORE COMMENCING ANY GAS INSTALLATION WORKS ON SITE. IF YOU HAVE ANY QUESTIONS OR REQUIRE ANY FURTHER INFORMATION, SIMPLY CONTACT YOUR DEDICATED FULCRUM CONTACT FOR THIS PROJECT OR ONE OF OUR CUSTOMER SUPPORT TEAM ON **0845 641 3010**.

Visit **www.fulcrum.co.uk**
to learn more about our full suite
of products and services.

About us

Fulcrum has true national capability and unrivalled experience in operating in the utility connections market.

In addition to gas service and meter installation, we also provide:

- dual fuel connections
- a complete multi utility service
- outlet pipework (the pipework from the gas meter to your appliances)
- outlet inspection and maintenance
- gas disconnections
- consultancy services

Committed to excellence in health and safety

We are passionate about safety and our reputation is built upon the proven delivery of utility infrastructure projects to the highest safety and engineering standards. All of our projects are undertaken with due regard for the environment and the health and safety of all those involved.

2. On-site works: standards of service

FULCRUM CONTINUALLY STRIVES TO PROVIDE THE HIGHEST STANDARDS OF CUSTOMER SERVICE FOR ON-SITE CONSTRUCTION.

Fulcrum aims to achieve the following wherever possible:

Installation of gas services - 10 working days
(Minimum 5 services)

Installation of gas mains - 10 working days
(Minimum 50 metres)

Installation of gas meters - 10 working days after completion of service (Minimum 5 meters)

Off-site works - up to 40 calendar days
(Lead time depends on the status of the highways to be worked on and the local authority's requirements)

Where quoted

These standards of service are based on the assumption that all mains' trenches are pre-excavated and that service pipe, up to and including 32mm diameter, is pre-laid from the main to the meter position before the team arrives on site. **Under no circumstances should the client/developer install any pipe greater than 32mm diameter.**

Gas safety regulations

It is illegal for an unqualified person to install or modify a gas main, service or meter. Under no circumstances should a gas meter be re-located on site.

Damage to plant

When excavating in close proximity to installed gas mains, safe digging practice should be employed using hand excavation in accordance with HSE publication HSG47

“Avoiding danger from underground services.”

Free information is available from the HSE Infoline on **0845 345 0055** or the HSE website **www.hse.gov.uk**.

Amendments

Except where the contract states otherwise, any changes to the contracted agreements must be recorded on a project variation form and signed by both parties.

If you have any queries please call us on **0845 641 3010**.

3.

Competence requirements for ground workers involved in laying underground dead gas service pipes

Developer responsibilities

- The Developer must ensure that ground workers receive a copy of this technical guide and are properly instructed, and that they are competent to lay continuously coiled dead gas service pipe not exceeding 32mm diameter
- The Developer must ensure the ground worker has sufficient knowledge about safe working practices on site and that work is carried out safely, which includes the ground worker having appropriate method statements or information on safe working practices, e.g. HSE guides.

Competence requirements for ground workers

- It is essential that ground workers undertaking the laying of continuously coiled dead service pipe are properly instructed and competent enough to understand these rules and the guidance in the rest of this document
- A ground worker who is going to lay continuously coiled dead gas service pipe must be able to demonstrate knowledge and understanding of the following:

Safe working

- A ground worker must hold the appropriate CSCS site safety card(s)
- Work undertaken must satisfy the requirements of the relevant HSE guidance requirements, for example 'Safe Excavation'
- There is a large amount of stored energy in coils of pipe. If not unwound safely they can cause injury by suddenly uncoiling. Coils of pipe should be carefully restrained and unwound slowly
- NJUG guidelines as documented in this guide, must be followed.

Technical understanding

- Ground workers are only permitted to lay continuously coiled dead gas service pipe up to and including 32mm diameter
- Prior to laying the service pipe it is important to establish the most suitable line along which to lay the pipe, taking into account guidance given later

- The service pipe must be laid to the correct depth with appropriate finefill base and surround provided during backfilling of the trench to afford protection against any damage during final reinstatement, please refer to later sections for more detail
- The gas pipe must not be kinked, squashed or damaged
- Once the service pipe is laid, both ends should be left exposed at the meter box and the mains connection position at least 1 metre above ground with the ends sealed against ingress of water and contamination.



4. Audit regime

THE INSTALLATION OF ALL SERVICE PIPE MUST BE SUBJECT TO A SATISFACTORY AUDIT REGIME. THE RESPONSIBLE MANAGER, ON BEHALF OF THE DEVELOPER, MUST PROVIDE DOCUMENTARY EVIDENCE THAT GROUND WORKERS ARE SUBJECT TO REGULAR REVIEW TO ASSESS INDIVIDUAL COMPETENCE (AS OUTLINED ON PAGE 3) AND SATISFACTORY COMPLETION OF WORK ON SITE.

Our representative should be provided with evidence of the above, on request, when visiting site to complete the final connection work.

Prior to completing the final connection work, our representative will also undertake an audit/inspection on site to determine that the installation is fit for purpose and complies with our specifications. This will include for some or all of the following points:

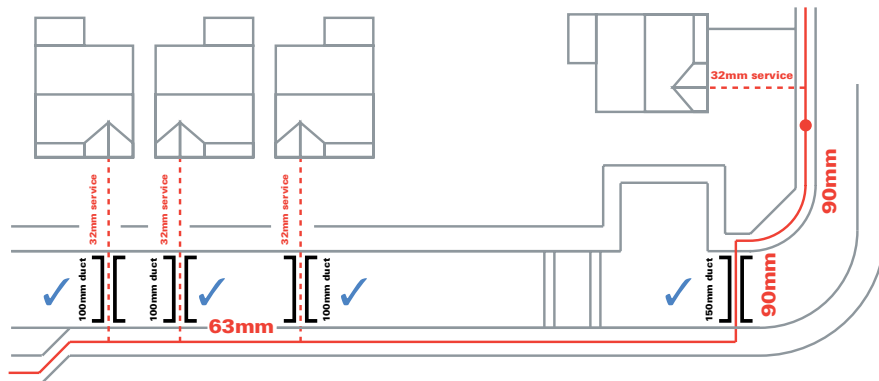
- Verification of Developer on site audit/inspection records for ground workers
- On site verification of ground workers by our representative
- 100% visual inspection of installed service pipe to assess compliance with this specification
- Excavating along the line of service pipe to confirm route, depth, finefill and marker tape
- Inspection and verification of Developer 'as laid' drawings on an as required basis'
- Inspection and verification of goods received notes for pipe and meter box delivery.



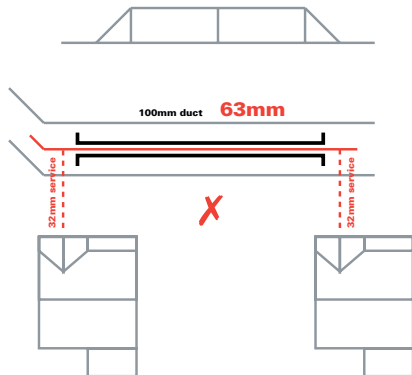
5. Duct provision for gas main /service road crossings

IT IS IMPORTANT TO EMPHASISE THAT DUCTING CAN ONLY BE USED FOR PERPENDICULAR CARRIAGEWAY CROSSINGS.

Only one pipe is allowed per duct. Where ducting has been installed for carriageway crossings, it is the Developer's responsibility to locate and provide access at each end of the crossing. The duct provided must be clear of obstructions. It is the Developer's responsibility to ensure that an approved type of utility ducting is provided. Plastic ducting should be yellow in colour and overlaid with gas marker tape. For service pipe, the duct used must be yellow and perforated along its entire length.



- KEY**
- Gas main —
 - Gas service - - -
 - Acceptable ✓
 - Acceptable (but must be recorded) ✓
 - Not acceptable ✗
 - Boundary —



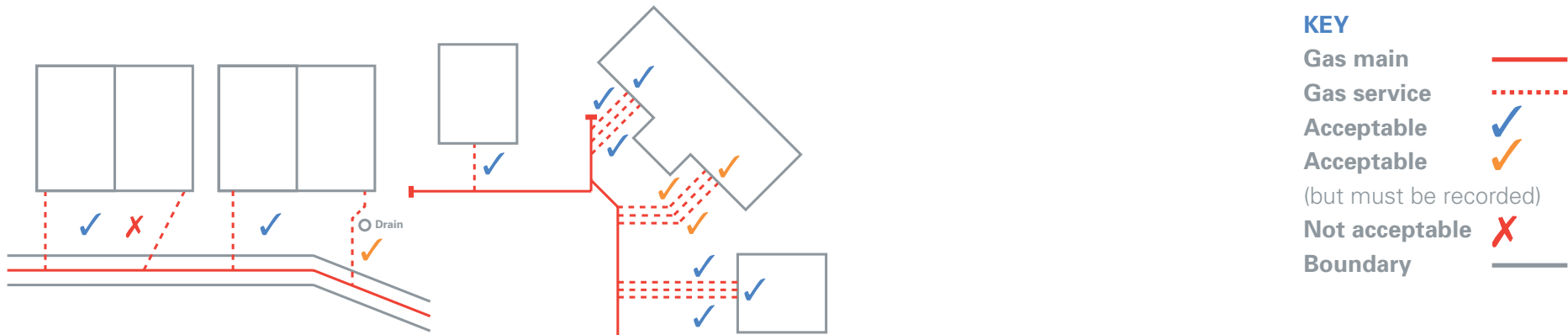
Note:

- BS4692 is a suitable standard for plastic ducting. The table below provides information on duct sizes
- Ducting for pipe sizes =>32mm should be verified with your Fulcrum contact. The table below provides information on duct sizes
- A draw cord should always be inserted
- The maximum length of service duct should be 30m, unless a longer length is agreed by the Fulcrum representative
- A Fulcrum operations representative should be contacted to agree duct sizes and depth etc.

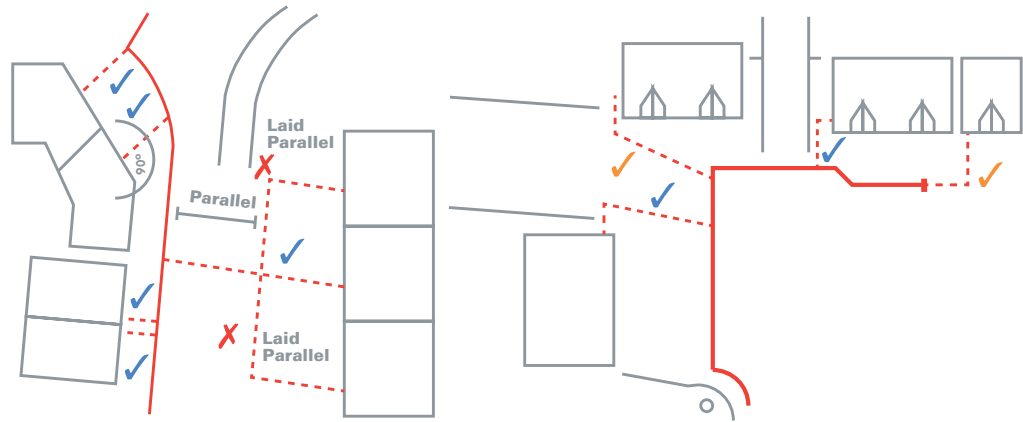
PE pipe size	Minimum duct size (internal diameter)
< 32mm	60mm (yellow perforated)
63mm	100mm
90mm	150mm
125mm	200mm

6. Gas service laying guidance

THE AIM OF THIS GUIDANCE IS TO HELP MAKE THE PRACTICE OF LAYING GAS SERVICE PIPES SAFER - THE ROUTE OF WHICH SHOULD MIRROR THAT ON THE DESIGN CONSTRUCTION DRAWING PROVIDED TO YOU.



Current industry practice is to ensure that the service pipe routes, as shown on the Fulcrum design construction drawing, take a straight line along a route that is as short as possible, and at right angles to both the building and the gas main. We must install and commission the services as per the current standards, Gas Transporter and legal requirements.



7.

- Gas services shall not run parallel to the gas main
- Where reasonably practicable, the service route should be perpendicular to the property and then take the shortest route possible to the gas main
- Service pipes should not be laid across third party land
- Services must terminate on the front facing wall or up to a maximum 2m along the gable
- When a gas service runs parallel to a dwelling, it must be a minimum of 250mm away
- Service routes which are not straight must be recorded by the developer on the 'as laid' drawing. The Fulcrum representative will provide advice on specific requirements
- Gas services are to be laid at an absolute minimum depth of 375mm (private termination point) with a slight fall to the main
- The gas service pipe is supplied by Fulcrum or its service provider and laid by the Developer
- The service pipe can be laid in the same trench as a water service, ensuring a clearance of 250mm is maintained between the two
- It is the Developer's responsibility to ensure that the required pipe size (25mm or 32mm PE) is laid to each plot - as shown on the Fulcrum detailed design drawing
- It is the responsibility of the person laying the service pipe to ensure that the pipe is in sound condition, free from kinks, cuts, blockages and laid to the correct depth of cover (please refer to the following sections for further guidance)
- It is the Developer's responsibility to provide a suitably sized 'channel' in any concrete raft footings to allow the service pipe to be fitted correctly
- At least 1m of service pipe should be left exposed at each end with both ends sealed to prevent ingress of water and foreign matter
- Do not install a service under the foundations of buildings, or under the base of walls or footings
- The service pipe must be laid with the minimum depths of cover with a sand/finefill surround of 75mm to prevent damage during final reinstatement as shown in Figure 1.

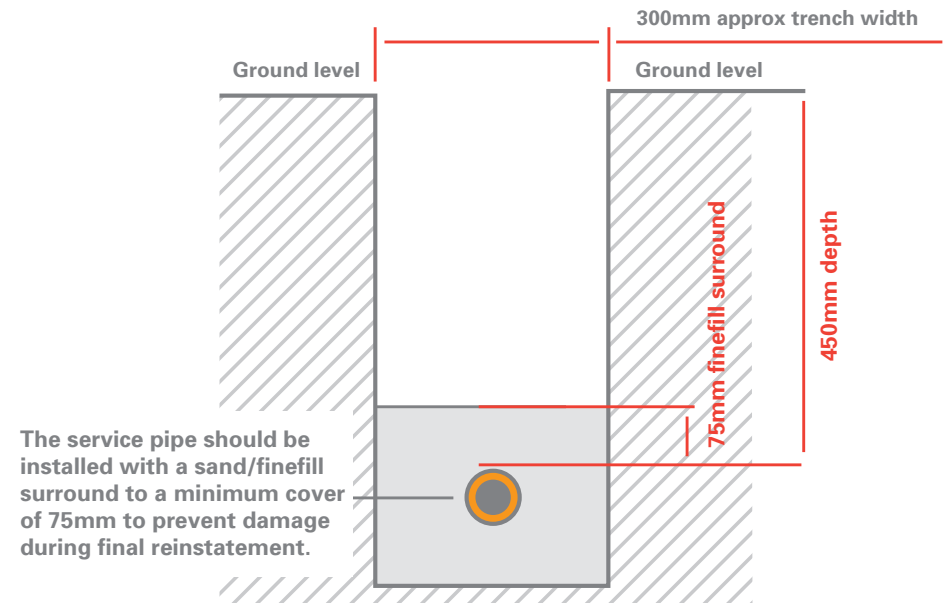


Figure 1 - Reinstatement of service pipe

8. Service isolation valves and valve box covers

A gas service pipe that incorporates an external isolation valve (indicated by the Fulcrum design construction drawing) will require a gas surface box. This will be supplied by the Fulcrum service provider, and it is the Developer's responsibility to install as part of the permanent reinstatement as shown in Figure 2.

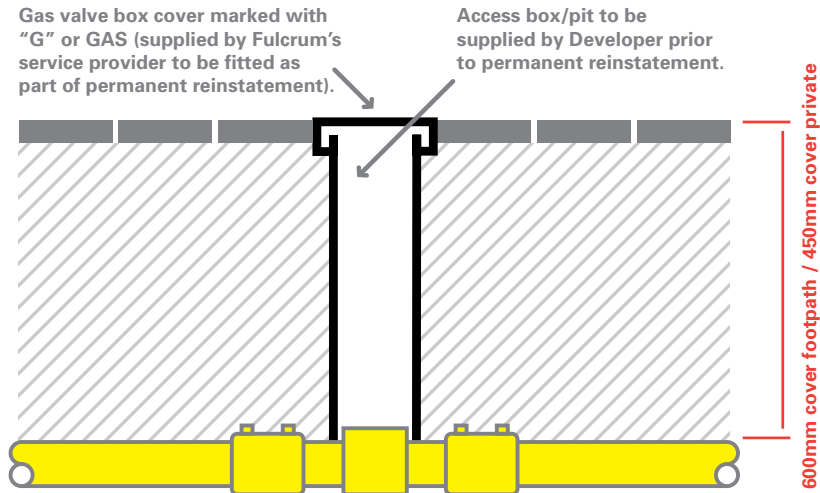
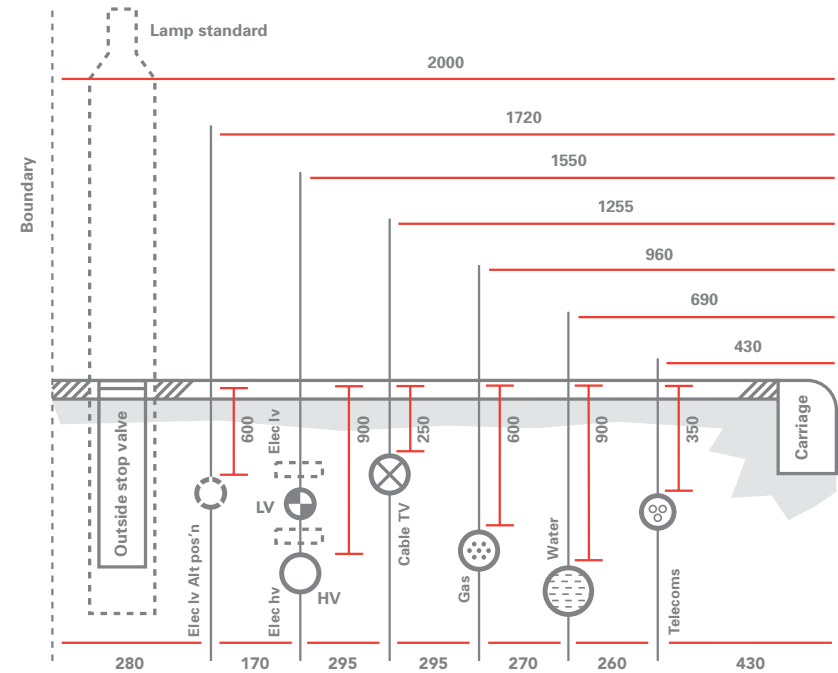


Figure 2 - Requirements for gas valve box to be fitted during permanent reinstatement

Recommended position of utilities' apparatus for new developments (NJUG)



Note: This drawing relates only to the positioning of gas. Other utilities have been included for illustrative purposes only. Requirements for the position of those utilities can vary by geography and confirmation must be sought from each adopting network for their individual requirements. Please contact us on **0845 641 3010** if you have any questions.

9. Excavation for gas mains and laying gas service pipes

Termination positions

(a) Property end

The pipe must be terminated at the meter box position for either flush fit or semi concealed or at the entry point for garage installation. The pipe ends shall be suitably sealed (see Figures 3 and 4).

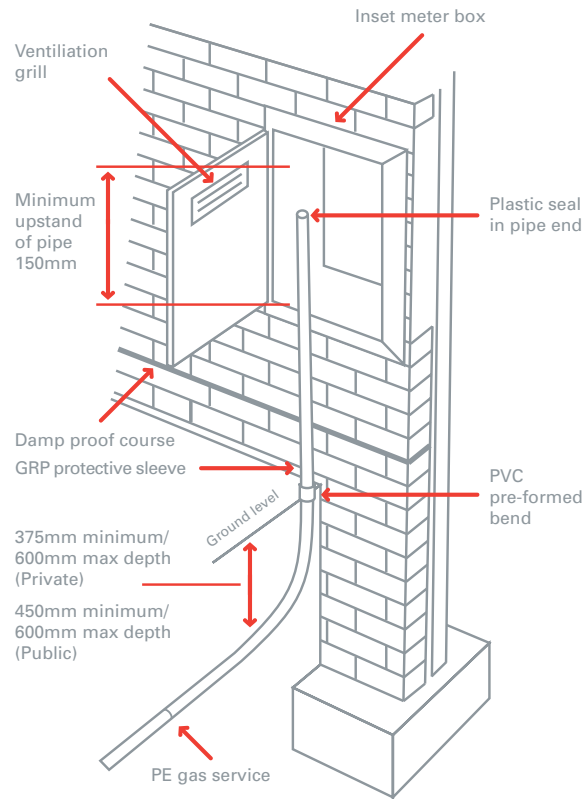


Figure 3 - PE service to built-in meter box

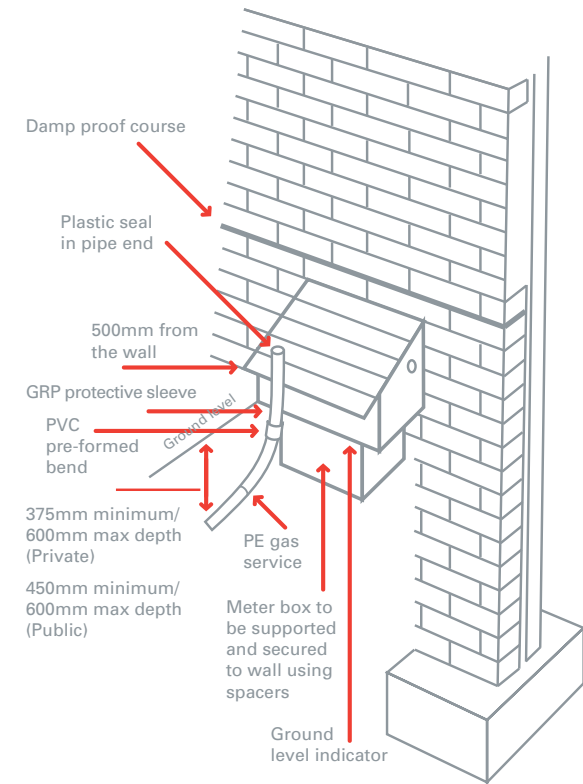


Figure 4 - PE service to semi-concealed box

10.

Note: When attending site to complete the connections our service provider operatives are not required to work under scaffolding unless it has been determined safe to do so. Therefore, it is the Developer's responsibility to set in place a safe system of work to ensure the safety of our operatives when working on site.

(b) Main end

The pipe must be terminated above ground over the line of the gas main and sealed with a plastic plug. It must be attached to a wooden post for location recognition (see Figure 5).

Note: Unless agreed otherwise in the contract, the client will excavate down over the gas main at the service connection point, to the soft fill over the gas main but not beyond the warning tape. Also, at the meter location, it is the responsibility of the client to remove any paving, tarmac or materials that cannot be easily excavated by hand from around the service pipe.

Backfilling

The service pipe must be backfilled with suitable excavated material or imported material such as sand. There must be a minimum of 75mm surround above the service pipe, and the pipe surround should not contain sharp stones greater than 18mm in size.

Excavation for gas mains

Fulcrum or its service provider is responsible for laying all gas mains in trenches pre-excavated by the Developer. The Developer is responsible for excavating trenches to provide a depth for cover of: Footpath = 600mm. Roads = 750mm (from the final finished surface level) and ensuring that excavated spoil is stored at a suitably safe distance from the trench sides. The excavation for the gas main must be in accordance with the gas mains route shown on the Fulcrum final design construction drawing and in line with earlier technical diagrams.

Note: It is the Developer's responsibility to provide and maintain a suitable barrier system to ensure the safety of site operatives and public from the dangers of open excavations on site. It will also be the responsibility of the Developer to provide any necessary trench support, based on the site specific risk assessment, to ensure the safety of operatives whilst working.

Backfill

Unless agreed otherwise in the contract it is Fulcrum's service provider's responsibility to cover the main with 250mm of suitable material. Where excavated material is deemed to be unsuitable by our service provider for bed and surround, it is the client's responsibility to supply enough suitable imported material for use as bed and surround. The Fulcrum service provider will place warning tape directly above the main at 250mm. The client is responsible for backfilling the remainder of the trench.

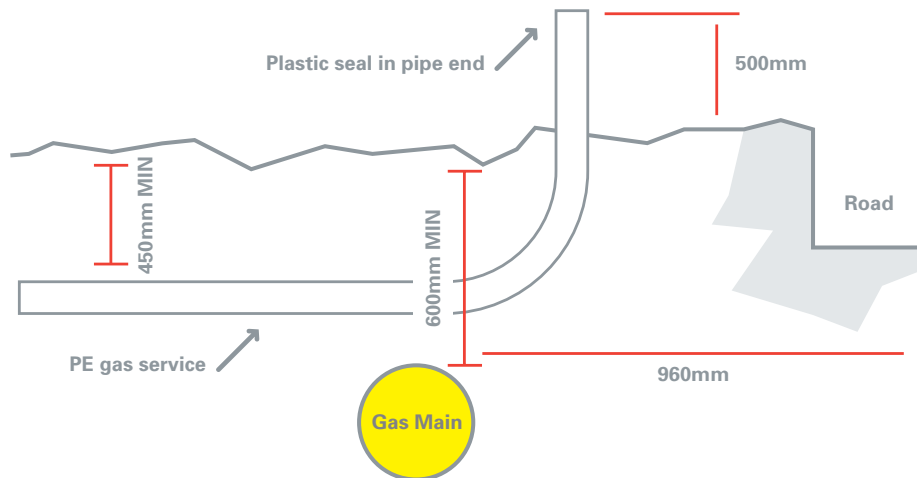


Figure 5 - Main end termination

11. Meter Point Reference Number (MPRN)

The Meter Point Reference Number (MPRN) is a unique number for each Supply Meter Point (SMP). The unique reference number is required by your nominated gas supplier to arrange for meter installation and to ensure correct billing in the future.

WARNING
GAS AT PRESSURE

Maximum Operating Pressure
 LP 75mbar MP 2bar IP/HP >2bar bar(specify)

For MP Meter Installations
 MP³⁵ MP⁵⁵ MP¹⁰⁵ MP¹⁹⁰ MP²⁷⁰

Service Design Energy Value kW

Service Design Flow Rate M³/HR OS TOID No.

Meter Point Reference Number (MPRN)
 - NEW SERVICE: apply MPRN adhesive label
 - RELAY SERVICE: write allocated MPRN in boxes

Installation Date DD MM YY

If Meter Bank give flat No. Property No. House Plot Unit

Syphon Fitted Yes No Service Governor Yes No Excess Flow Valve Yes No

Diameter 15mm 20mm 25mm 32mm
 More than one may be ticked 63mm >63mm mm Specify

Material ST PE Joint Service Yes No House No's To Primary Meters Service Isolation Valve Yes No

Lay Method More than one may be ticked
 Mined/Open Cut Builders Duct INSERTED 2/4in 1"at 1 1/4in 1 1/2in 2"at >2" Tee Replaced Live Insert

DISCONNECTED SERVICE
 Service Lateral Valve Service Isolation Valve Edl Disconnection House Entry Tee

Fulcrum is a trading name for Fulcrum Pipelines Limited. Registered in England No. 6009562

The Service Information Label (SIL)

The Service Information Label (SIL) is attached at the Emergency Control Valve (ECV) for the supply of the meter point (as shown below). This shows the allocated MPRN. The SIL must not be removed or altered in any way by the developer or their agents.



Correct location of the SIL at the ECV. This should not be removed or altered.

SIL showing the location of the MPRN and additional information for flatted property with a Meter Bank.

12.

Meter banks and flatted properties

When connecting the down stream pipework, your Gas Safe Registered installer should comply with the Gas Safety (Installation and Use) Regulations. The installer must ensure that the individual properties are connected according to the MPRN and address allocation shown on the Service Information Label. It is the Developer's responsibility to verify this and errors may result in costly rectification works. If you have any queries regarding this please contact us on **0845 641 3010**.

Meter installation

Where you have requested that we install the gas meters, you simply need to contact us with your preferred date for installation. Where you need to contact your nominated gas supplier to arrange a meter installation, they may require you to confirm the MPRN information outlined on page 11.

Method statement for gas, mains and services infrastructure

- We propose to install a low pressure (on occasion medium pressure, please see site plan for clarification) gas mains and service infrastructure system at the development
- Unless otherwise stated, the Developer will excavate, place a finefill bed, lay identification tape for services, backfill and reinstate all trench work within the site during the pipe installation process

- On acceptance of an all inclusive quotation, Fulcrum will carry out all required excavations for mains work in unmade ground only. Fulcrum will place finefill, lay identification tape and backfill the trench. Permanent reinstatement of any 'on site' surfaces is not included
- Unless otherwise stated, the Developer or his ground worker will install necessary road crossing ducts and gas service pipe as detailed in the construction plan
- Work will be carried out in accordance with Fulcrum Operating Procedures, Health, Safety Legislation and Company Codes of Practice, requirements of Health and Safety at Work Act 1974, Management of Health and Safety at Work Regulations 1999, Construction Design and Management Regulations 2007, Pipelines Safety Regulations 1996, Environment Protection Act 1990 and other specific regulations (e.g. Manual Handling, COSHH, First Aid, etc)
- All personnel involved in the execution of the work will be suitably trained and qualified to a standard adequate for the task involved
- Only materials and apparatus approved for the carriage of natural gas at the required operating pressure will be used
- Gas pipe stacks (e.g. for storage) must be made on sufficiently firm flat ground. Stacks shall be no greater than 1m high. When off loading PE pipes, under no circumstances should metal chains or slings be used or brought into direct contact with the pipe. Non-metallic slings or ropes should be used

- Pipes will be laid in trenching provided by the Developer. These trenches will be adequately supported and protected in accordance with the New Roads and Street Works Act 1991 and Health and Safety Legislation. The Developer will ensure the minimum depth of cover for gas apparatus, as in IGE/TD/3 and IGE/TD/4 will be adhered to on completion of the work
- Butt fusion or electro fusion joints will be used to join pipes. All beads from butt fusion joints will be removed and checked for quality. Only automatic butt fusion machines will be used
- Completed pipework will be pressure tested in accordance with IGE/TD/3 and IGE/TD/4
- Purpose built trailers shall be used to transport and handle coils of pipe on site. The restraining straps on coiled pipe should only be cut in strict accordance with the supplier's instructions
- The service provider will ensure the minimum depth of cover for gas, mains and associated apparatus, as indicated by NJUG guidelines, will be adhered to on completion of the work.

13.

Gas pipes

Cover

600mm minimum for mains in public footway

750mm minimum for mains in highway and grass verges

450mm minimum for services in public land (services =<32mm only)

375mm minimum for services in private land (services =<32mm only)

Pipes will be installed to allow sufficient clearance between each utility apparatus as indicated in NJUG. Completed pipework will be tested and commissioned in accordance with the relevant gas, authority procedures and documentation.

Plant, equipment and tools to be utilised on site

- 110 Volt Generator • 110 Volt Electrofusion Box • Slings • Small Tools
- Vans • Mini Excavator • JCB • Grab Wagon • Cable Locator • Winch
- Cable and Pipe Rollers • Radio Communications System • Road Breaker
- Wacker Rammer • Grundamat • Compressor • Pipe Trailer • Butt Fusion Machine
- De-watering Pump • First Aid Equipment • Tent • Pipe Clamps • Barrier and Signs.

Safety equipment available to operatives

- Safety Helmets • Safety Boots • Gloves • Eye Protection • Ear Defenders
- Fit for Purpose Overalls • Dust Masks • Fire Extinguishers • Signs and Barriers.

Advance planning

The Fulcrum engineer/qualified deputy responsible for the project, will visit site to inspect the proposed route and carry out a risk assessment with the responsible site engineer as appropriate.

Finished levels are to be confirmed and proposed mains route will be agreed with the responsible site engineer. Route to be marked out using permanent kerb lines where possible. The Fulcrum engineer will brief the technical requirements and provide copies of Fulcrum documentation. This meeting will be fully documented and signed by representatives of both parties.

Agree with responsible site engineer the following:

- Safe locations for parking of vehicles • Storage of pipework materials
- Vehicular access • Areas to be guarded and signing requirements where necessary

Any works in the highway must have New Roads and Street Works (NRSWA) notices in place.

Site preparatory work

- Application, where necessary, will have to be made through the relevant New Roads and Street Works notice procedure requested from Fulcrum head office
- Park safely, respecting the public and any occupied property
- Report to site manager and confirm the work to be carried out
- All utility drawings will be checked on site noting the location of other utility equipment
- Ensure the proposed route and finished levels are clearly defined
- Confirm locations and accessibility of gas pipe, water pipes and electricity carrying ducting.



14.

Confirming site specific safety matters

- Complete and record a site specific risk assessment
- Ensure all safety equipment is available and in good condition
- Agree safe materials storage location
- Locate, trace and sketch all other underground services
- Ensure operatives have electric plans prior to any excavating
- A cable locating survey will be carried out prior to and during excavation
- All apparatus will be marked before excavation proceeds
- Hand excavate where existing services are anticipated
- All work to comply with NRSWA where appropriate.

Execution of the works

- The excavation will be adequately supported and protected in accordance with all relevant legislation and the appropriate regional utilities policies and as stated in the New Roads and Street Works Act 1991
- The gas commissioning and purging procedures will be carried out in accordance with IGE/TD/3 and IGE/TD/4
- Public reinstatement of made up surfaces will conform to the relevant specification prescribed in the New Roads and Street Works Act 1991
- The developer will complete permanent reinstatement on site
- All surplus materials, belonging to Fulcrum, will be removed from site
- Ditched pipes are to be covered as soon as is practical with a finefill surround free of sharp stones
- No vehicles or plant to be driven or located adjacent to the trench wall
- Pre excavated material shall not be located within 300mm of the trench wall
- Ensure vicinity of work (with regard to other operations on site) will not cause a hazard.
- **A competent person will inspect all open excavations for safety and ground stability prior to allowing persons to enter or work in the excavation.**
- Gas main construction will be in accordance with IGE/TD/3
- Prepare and connect gas services in accordance with IGE/TD/4 Edition 4
- Where applicable, install gas meters (as per the supplier's instruction)
- Report to the Site Manager on a daily/per visit basis during the mains installation period and mark up 'as laid' drawings prior to departure from site. On completion of mains and services installations, the appropriate 'as laid' drawings shall be passed over to the relevant Gas Transportation company
- The preceding paragraphs relate only to works that can be foreseen prior to commencement on site. Any changes that may occur, namely: changes of materials, depth of cover or method of work, will be notified to Fulcrum, as soon as is practicable to do so.



GETTING IN TOUCH



Contact us and see how we can help you with your next project:

Telephone: 0845 641 3010

Minicom (for customers with hearing or speech difficulties)
0845 641 3061

Email: enquiries@fulcrum.co.uk

Website: Apply online or find out more at www.fulcrum.co.uk

Post:

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Sheffield Business Park
Sheffield
South Yorkshire, S9 1XH

