

Self Excavation Guidance and Responsibilities

Guidance for Domestic Service Alteration Customers who elect to dig and reinstate their own trench on private land

Underground services, particularly gas and electricity can be dangerous. Damage resulting from excavation, penetration or incorrect reinstatement can lead to injury or even death.

For any underground works you should always assume that underground services are present and treat all services as **LIVE**, despite their apparent physical condition. Accidents and injuries have happened because people have mistaken one service for another, e.g. black coated steel services with an electric cable, check before you act.

Safe work procedures

Customers requesting an alteration to the gas service pipe at their premises have the option to arrange a competent person/organisation to pre-excavate the route of the pipe across land in their ownership for a discounted charge. The discount in price will only be given once a customer has agreed to the “*Terms and conditions for the alteration of a service pipe and/or meter installation, where a customer elects to dig and reinstate their own trench on private land – domestic premises*”

Please ensure you fully understand the information provided in this guidance document.

For safety reasons Cadent has specific requirements which must be followed for ground works related to service alterations. Failure to follow these requirements may not only put safety at risk, but also lead Cadent to abort its visit to alter the service pipe creating a delay to your works programme, or require a variation of the contract; in either eventuality you will be charged at the appropriate rate. The specific conditions for ground works are set out in this document.

For a free download of our ‘*Safe Excavation*’ film and other safety publications, please visit <http://www.cadentgas.com>

You are responsible for arranging and appointing a competent person / organisation who can demonstrate to you their competence. Specifically they must:

- 1) Have experience in using utility maps and setting up site excavations safely (see more information below).
- 2) Carry out the works in accordance with safe digging practices and comply with the health and safety regulations and guidance including but not limited to:
 - HSE document HSG 47 “*Avoiding Danger from Underground Services*”
 - HSE document HSG 185 “*Be Safe and Shore*”
 - HSE construction information sheet “*Avoiding Dangers from Underground Services*”
 - The Pipe Safety Regulations 1996 and Approved Code of Practice and Guidance

The above documents can be downloaded for free, or a hard copy purchased, from the HSE website <http://www.hse.gov.uk/pubns/books/hsg47.htm> or purchase from Her Majesty’s Stationery Office (HMSO) outlets.

- 3) Trace the route of the existing service pipe with approved underground service detection / plant location equipment such as a CAT and Genny. See further information in the "Identifying the position of the existing gas service pipe" section below.

In addition the person/organisation you appoint is also responsible for ensuring that the excavation site is safely guarded and offers sufficient protection to any person who may have access to your property.

General

Please ensure that you fully understand:

- The competent person/organisation you appoint, can only excavate on your property (private land)
- If the route for your new pipe runs across land you don't own (excluding public roads/footways/verges), you will need permission from the landowner before work begins
- You cannot elect to self excavate if your property is a flat, maisonette or other shared residency building
- Cadent will excavate any public highways, roads, footpaths and/or verges if this is necessary
- The trench must be suitable and meet current laws
- Your competent person/organisation must not expose Cadent pipes or excavate within 1 metre of their anticipated location. Cadent will undertake this work
- Other utility providers must be contacted for guidance in respect of their apparatus e.g. electricity cables

If you prefer, Cadent will complete all work including any excavation and reinstatement work as part of the installation process. The discounted costing will not apply if Cadent complete all work. Please contact us on 0800 0745788 if you would like to make any changes to your quotation.

The route for the service pipe

Cadent will undertake a survey to assist you in planning this work and no excavations (in relation to a Domestic Service Alteration) should be undertaken until this has been completed. Any reasonable advice or guidance given by Cadent personnel must be strictly complied with.

- The trench must be excavated from the property wall at the point of the new meter position and terminate 1m from the existing live gas service pipe within your property boundary.
- The pipe must not be laid indoors or underneath any building, including garages, sheds, porches and conservatories etc.
- The pipe route must be a straight line (If the nature of the works does not allow this, any change of direction should be made at 90 degree angles and excavated to allow sufficient curvature for the required radial bend of the pipe being laid – please refer to page 3 'Specification for the trench')

Failure to comply with the above may result in Cadent having to excavate which will be charged at the appropriate rate.

In addition, the person/organisation you appoint is also responsible for ensuring that the excavation site is safely guarded and offers sufficient protection to any person who may have access to your property. Cadent cannot accept responsibility for ensuring the excavation is left in a safe condition for other property users.

Identifying the position of the existing gas service pipe

- Your appointed person/organisation must trace the route of the existing service pipe with approved underground service detection / plant location equipment such as a CAT and Genny.
- Where this is not possible, i.e. where the existing service is plastic, the competent person will need to estimate the route of the service pipe by taking a straight line from the existing meter location (or visible gas service entry point) to the nearest road. This should indicate the likely route of your service.
- Please be aware that these methods can only provide an indication of the route. Digging must still proceed with care as these methods cannot be wholly relied upon to ensure accurate plant location information and there may be other buried apparatus in the vicinity).

Specification for the trench

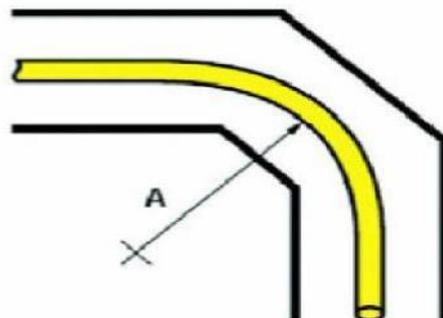
- The trench must be excavated from the property wall at the point of the new meter position and terminate 1 metre from the existing live gas service pipe.
- Make sure the pipe route is away from drains, manhole covers and other obstructions.
- Dig the trench in a straight line. Any bends should not exceed the permitted radii detailed in Table D8. The ducting should wherever possible be laid perpendicular (thus to maintain a predictable route) in a straight line to the meter position. Any bends should not exceed the permitted radii detailed in Table D8.

If it is necessary to lay pipe / ducting around bends, Table D8 should be followed to ensure that the minimum bend radius is not exceeded. Care should be taken to ensure that the PE pipe does not exceed the minimum bend radius (15x external diameter) see the below table

The minimum bend radii for pipes larger than 63mm diameter shall not exceed 15 x diameter

Pipe Diameter	Minimum Bend Radius
20mm	0.3m
25mm	0.4m
32mm	0.5m
63mm	1.0m

Table D8 – Minimum Bend Radius



Minimum bend radius - 15 x pipe outside diameter

Figure D3 – Minimum Bend Radius

- Dig the trench to a depth of 425mm (17") and between 200 and 300 mm wide (8" and 12").
- Make sure the bottom of the trench is level and free from all sharp materials that may damage the service pipe. In any ground containing sharp stones, you will need to dig a further 75mm (3") and fill this space with fine material, for example sand or stone dust to lay the new pipe on. Do not use cement-based materials as a fill material around the pipe. You can find more information on fill materials and grading in BS (British Standard) EN 12620: 2002. The soil you have removed through digging must be at least 300mm (12") away from the side of the trench.
- Lay gas pipes at least 300mm (12") from electricity cables and 250mm (10") from other utilities apparatus (for example, water, BT, TV cables, drains, and so on). These clearance distances apply along the entire length of the service pipe and must be taken into account when you are digging the trench.

If you are using scaffolding or similar temporary structures, the trench must be as far away from any of the vertical supports to reduce, as far as possible, the risk of collapse. Ideally, you should install ducting and reinstate the ground before putting up any scaffolding. We will **not** work beneath any scaffold or similar temporary structures if the trench is too close to any vertical supports or if other personnel are working overhead.

Making the Excavation Safe

- Please note that you are responsible for ensuring that the excavation site is safely guarded and offers adequate protection for any person who may have access to your property. This should be done through the use of an appropriate, protective barrier system. Cadent cannot accept responsibility for ensuring the excavation is left in a safe condition for other property users.
- Please ensure that all excavated soil is stored a minimum of 300mm (12") away from the side of the trench. This reduces the risk of debris falling in to the trench as well as reducing the stress on the side of the trench
- In order to ensure that the excavation is as stable as possible, please ensure that the vertical sides of the excavation are straight and that the edges are not undermined (Digging underneath the adjacent ground).

Specification for installation of ducting (as applicable)

If you are arranging to excavate the gas service trench and lay ducting in order to backfill and continue with your project, please contact us on: Tel: **0800 0745788** (charged at local rate if calling from a landline, mobiles may differ) or email gasconnections@cadentgas.com to confirm the specification and other requirements relating to the duct.

Specification for backfill and reinstatement of the trench

Cadent will lay soft material, e.g. sand over the service pipe to protect it from damage.

You are responsible for:

- Backfilling the trench, compacting the material, levelling and reinstating the surface materials and removing any spare material;
- Restoring the trench and any associated surfaces, such as driveways, paths, lawns, flowerbeds and specialist/ornate tiling and so on;
- Installing a "Gas Pipe Below" warning tape at least 75mm above the crown (top) of the gas service pipe during the backfill process;

- Making sure you do not use mechanical compaction equipment within 200mm (8") of the crown (top) of the gas service pipe. Compact the layers of backfill material by hand until you have achieved this depth of cover.

Specification for installation of ducting (as applicable)

If you are arranging to excavate the gas service trench and lay ducting in order to backfill and continue with your project, please contact us on: Tel: **0800 0745788** (charged at local rate if calling from a landline, mobiles may differ) or email gasconnections@cadentgas.com to confirm the specification and other requirements relating to the duct.

Access

You must provide access to sites and to our apparatus at all times. Please do not place any temporary structures (portakabins, portable toilets, silos and so on) or spoil heaps over our pipes as this may block access and cause too much loading on the pipes. For more advice, contact our gas plant protection team on **0800 688 588**.

Crossing our apparatus

You cannot place heavy construction plant, equipment, materials or allow heavy vehicles to pass over our apparatus unless you use specially agreed protective measures (in other words, you build reinforced crossing points). This is particularly important if you are planning to reduce side support or ground cover around the pipes by removing the surrounding earth, as this could damage the newly laid pipe (or pipes).

Safety

IF YOU CAUSE A GAS LEAK OR SMELL GAS

If you cause a gas leak, or suspect that gas pipe or equipment is leaking, you must take the following actions immediately:

- **Inform** the National Gas Emergency service immediately on **0800 111 999** (all calls are recorded and may be monitored)
- **Stop work** and get everyone away from the immediate vicinity of the escape.
- **Do not** attempt to stop the escape by filling the hole as gas may enter buildings.
- **Do not** attempt to operate any valves (unless directed by call centre staff to close emergency control valves at domestic properties)
- **Prohibit smoking** and extinguish all naked flames or other ignition sources for at least 15m from the leakage.
- If escaping gas is entering properties, advise the occupants to leave until it is deemed safe to return by Cadent staff. Damage to a service supplying a building may result in gas entering the building.
- **Prevent** any approach to the immediate vicinity of the escape.
- **Assist** Cadent Police or Fire Services as requested.

