

Inspecting and maintaining or replacing buried metallic pipework carrying LPG vapour

Advice for commercial and industrial users of LPG



This is a web-friendly version of leaflet INDG428, published 08/09. This replaces the previous leaflet published in 2006.

Introduction

This leaflet is aimed at commercial and industrial owners of liquefied petroleum gas (LPG) pipework. It highlights the issue of corrosion in buried metallic pipework, which is a major cause of leaks, and gives advice on replacement, maintenance and inspection.

Even though it is specific to LPG pipework, the information in this leaflet should be taken into consideration for any natural gas (mains gas) pipework you may own.

LPG is flammable and heavier than air, so if it collects in a low lying area, such as a drain, cellar or basement, it could ignite, resulting in a fire or explosion.

An LPG leak can go unnoticed for some time and therefore vapour is more likely to accumulate, increasing the potential danger of a fire or explosion. This build-up may be some distance away from the pipe.

- Where possible replace buried metallic pipework with pipes constructed to current standards using a material that is not subject to corrosion, for example polyethylene (PE).
- The alternative is to have the pipe inspected by a competent person on a regular basis and ensure that it is properly maintained.

Who is responsible for ensuring LPG pipework is inspected and maintained or replaced?

- You (or your company) have legal duties to ensure risks from dangerous substances are controlled.
- You (or your company) are responsible for ensuring that any LPG pipework is safe to use, even if the inspection and maintenance or replacement are carried out by a third party.
- You (or your company) should ensure that a procedure is in place for the inspection and maintenance of all gas pipework and that suitable records are kept.



Metallic pipework protected as it enters the ground

Inspecting and maintaining or replacing LPG pipework

- Inspection and maintenance or replacement needs to be arranged by the owner of the LPG pipework.
- The owner may not be the same company that owns the storage tank and/or supplies the gas.
- If you don't know who owns the LPG pipework, ask your LPG supplier.
- It's probably you!



Pipework protected from below ground to emergency control

Any work on an LPG installation and its pipework, whatever the nature, must be carried out by someone competent to do that type of work.

It is a requirement at commercial premises for gas work to be done by a 'Gas Safe' registered engineer. A visual check of the outside of the pipework is not considered gas work and therefore a 'Gas Safe' registered engineer is not necessary for this purpose.

Get it checked!

- **All LPG pipework, whether buried or not, should be inspected and maintained.**
- **Where practical, replace buried metallic pipes with pipes constructed to current standards using a material that is not subject to corrosion, for example polyethylene (PE).**
- A competent person should review the state of your pipework and establish for how long it can be used safely. The competent person should take account of how long it is since the pipework was last checked and what was done.



PE pipework protected from the last collar before entering the ground

Inspection and maintenance

- The inspection and maintenance strategy will depend on various factors including whether parts of the pipe are buried, the type of pipe (metallic or non-metallic), the type of corrosion protection, the age and condition of the pipe and whether people are likely to be affected if there is an incident.
- It should consider other factors, eg spaces within or under the building where gas could accumulate and whether the pipework is vulnerable to disturbance (from vehicle movements or excavations of buried services).
- It will require periodic excavation of the pipework to allow activities including visual checks of all or parts of metal pipes, leak tests of joints and pressure tests. (Remember a pressure/leak test will only tell you if the pipe is leaking at the time of the test.) The actual activities and how often they are carried out will depend on the site-specific factors above.
- A less stringent inspection strategy than that for metallic pipes can be applied to PE pipes.
- Disturbing LPG pipework (metallic and non-metallic) could increase the risk of a leak so this must be minimised.

Check!

Ask yourself:	Yes	No	Don't know
Are any parts of the LPG pipework buried?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is any buried pipework metallic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If metallic, does the pipework lack effective corrosion protection at any point along its length?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you or other people regularly use the area or live or work there?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you have answered yes (or don't know) to ALL these questions then you are advised to seek more information from your LPG supply company.

Further information

HSE priced and free publications can be viewed online or ordered from www.hse.gov.uk or contact HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA Tel: 01787 881165 Fax: 01787 313995. HSE priced publications are also available from bookshops.

For information about health and safety ring HSE's Infoline Tel: 0845 345 0055 Fax: 0845 408 9566 Textphone: 0845 408 9577 e-mail: hse.infoline@natbrit.com or write to HSE Information Services, Caerphilly Business Park, Caerphilly CF83 3GG.

This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

This leaflet is available in priced packs of 20 from HSE Books, ISBN 978 0 7176 6353 8. Single copies are free and a web version can be found at: www.hse.gov.uk/pubns/indg428.pdf.

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