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# Securing Safety of Bulk LPG Installations

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# The Incident



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Noon; 11 May 2004; ICL, Maryhill, Glasgow



# The Incident



- Corrosion of pipework elbow



- Also: Pitting of horizontal underground section

# The Incident

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## Findings – the immediate cause

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- Poor initial installation standards
- Pipe buried under yard at later stage
- Joints not corrosion protected
- Not maintained
- Pipe entered a basement – entry point not sealed

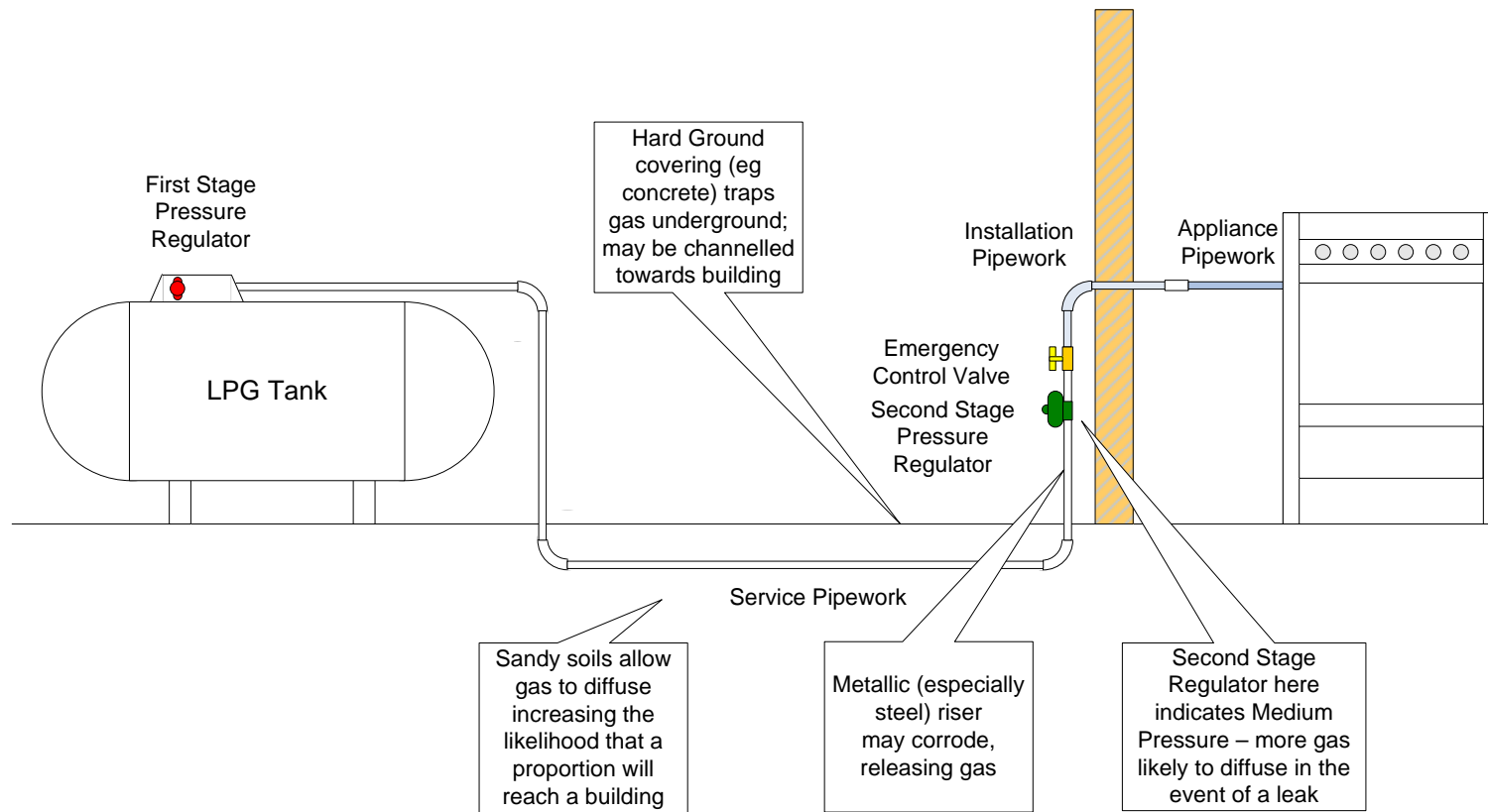
# The Regulatory, Public and Political Response

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- Successful prosecution on Health & Safety at Work Act charges
- Opened discussions with Trade Association UKLPG on developing a risk based service pipe replacement programme
- Massive distress and anger from the residents of Maryhill
- Public Inquiry agreed
  - Joint inquiry between UK Government and Scottish Executive
  - Chaired by Lord Gill
  - Public hearing September – November 2008
  - Report to be published July 2009

# Addressing the problem - typical pipework scenario with key risk factors



## Addressing the problem: the size of the problem

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- 60,000 Commercial and Industrial Installations
- Condition unknown but likely to have a greater percentage with metallic pipe
- Present across a range of sectors – many likely to be SMEs
- Likely that Lord Gill will recommend replacement with polyethylene (PE) pipes

# Addressing the problem: current and future activity

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- UKLPG are developing a risk based prioritised replacement programme
- Starting point is to gather information on users' LPG installations
- Information on this will be used in a computer model to give a ranking of relative risk
- Suppliers will then contact users who need to consider replacement of pipework from October 2009
- There will be an inspection campaign of LPG using premises focusing on those with the higher risks
- Intention to provide advice and guidance to users of LPG

## Currently available information and guidance

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### Commercial & Industrial users of LPG

- Pamphlet (Disseminated by LPG suppliers)  
[www.hse.gov.uk/gas/domestic/lpgpipework.pdf](http://www.hse.gov.uk/gas/domestic/lpgpipework.pdf)
- Infoline briefing
- LPGA Technical Memorandum TM84  
“Inspection and Maintenance of LPG Pipework  
at Commercial and Industrial Premises”  
<http://www.lpga.co.uk/LPGA.htm>

# Pamphlet for Commercial & Industrial users of LPG.



## Get it checked!

- All LPG pipework, whether buried or not, should be inspected, maintained and, when necessary, replaced.
- You should establish the length of time your pipe can be used safely. You can either:
  - identify when the pipework was last checked, what was done and when the next check is due; or
  - ensure someone competent draws up an inspection and maintenance strategy.
- The inspection and maintenance strategy:
  - will depend on various factors including whether parts of the pipe are buried, the type of pipe (metal or non-metal), type of corrosion protection, age and condition of pipe and whether people are likely to be affected;
  - should consider other factors eg spaces where gas could accumulate and whether the pipework is vulnerable to disturbance (from vehicle movements or excavations of buried services);
  - may consist of a number of activities, such as leak tests of joints, pressure tests, visual checks of all or parts of metal pipes including those that are buried. The actual activities and the frequency with which they are carried out will depend on the site-specific factors, as discussed above, and on how reasonable and practical they are to implement.
- Disturbing buried LPG pipework could increase the risk of a leak and this must be minimised.
- Remember a pressure/leak test will only tell you if the pipe is leaking at the time of the test.

## Check!

Ask yourself the following questions:

- |   | 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, live or work in the area?                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

If you have answered yes (or don't know) to ALL the above questions then you are advised to seek further information from [HSE Infoline](#)

**HSE Infoline**  
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Health and Safety  
Executive

## Checking LPG pipework

Industrial and commercial user responsibilities



## Proposed advice and guidance

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- Any formal guidance produced will need to consider the recommendations from the Gill Inquiry – this will take time
- HSE considers it important to provide some help to users as soon as possible in an easy to understand format
- Propose adaptation of the generic risk assessment developed for SMEs
- Aim to have available on HSE website (LPG page) by end of September in time for beginning of replacement programme

# Proposed advice and guidance

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- Intention is to centre the assessment around the installation diagram
- Will use this to highlight the various responsibilities of the user for different parts of the installation and link to any existing guidance
- Use the tabulated format in relation to the parts of the installation
- If time allows will aim to provide links to short video clips to show how to approach the problem

# Summary



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- If your members have buried LPG pipework please make them aware of this issue
  - If your members have received a survey request please ask them to complete and return it – its very important
  - If your members are approached about their pipework after the survey period (likely to be in September/October) then they should respond to their supplier
  - Please give your views/comments on the proposed approach to the generic assessment of LPG installation