

# Safety advice for emergency services attending gas escapes



**GAS TRANSPORTERS INCIDENT REVIEW PANEL**  
Oct 2009 v2

## Introduction

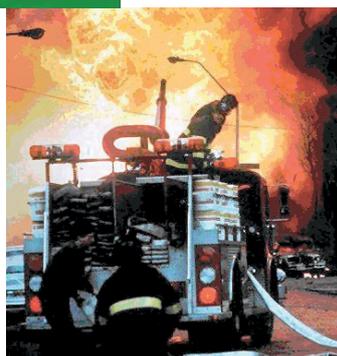
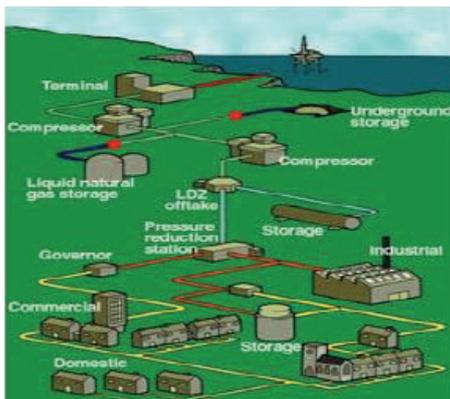
Emergency services are called upon to attend a variety of incidents involving gas mains, services and other apparatus. This leaflet is intended to provide clear advice on the measures to be adopted in dealing with gas escape incidents and to ensure site safety specifically in relation to:

- Actions required by Emergency services prior to Gas personnel arrival on site
- Actions required by Emergency services following Gas personnel arrival on site

Local gas networks operate at pressures ranging from the local transmission system (35bar) to medium pressure in the range 75 mbar - 2 bar and then to low pressure at below 75 mbar. The low pressure system provides supplies to consumer premises through service pipes which connect to meters at the consumer's premises. The meter regulator reduces the gas pressure for use at the gas appliance.

Gas mains are usually constructed using plastic, cast iron or steel materials in a range of diameters from 50mm to 1200mm.

Gas service pipes can be constructed of plastic or steel with typical diameter ranges of 20mm – 32mm [plastic] or ¾" - 1 ¼" [steel].



## Safety advice for emergency services prior to gas personnel arriving on site

The following guidance is provided for emergency services who are attending a site where there is believed to be a gas escape, prior to the arrival of Gas Network personnel. The possible scenarios are:

- There has been a reported explosion and there is a fire present
- There has been an explosion and there is no fire present
- There is a fire that appears to be caused by a gas escape
- There is a gas escape and there is no fire present

At this stage, the cause of the incident may not be certain, and therefore the following general guidance should be followed:

Request Gas Network Operator (GNO) attendance on site [Free Phone 0800 111999]. Ensure that the severity of the site circumstances are reported to the GNO to ensure that incident can be correctly prioritised.

Safeguard life and property.

Evacuate premises affected by the incident where:  
The occupant's safety is at risk or;

- Where persons are overcome by gas, vapours or products of combustion or;
- Where there are gas readings present or it is suspected that there is escaping gas within the building.
- If in doubt get them out.

Do turn off the gas supply at the meter.  
Do open doors and windows to ventilate the area.

**Don't turn electric switches on or off.**  
**Don't operate any electrical appliances/equipment**  
**Don't smoke.**

Liaise with property owner/representative and close emergency control valve to affected properties, if safe to do so. Do not operate electric doorbells. Knock on doors to alert occupants or gain access to property.

Check premises opposite and adjacent of the location for potential evacuation.

Identify and remove/control potential sources of ignition.

Do not enter a building if there are gas readings present or it is suspected that there is escaping gas within the building. Maximise the amount of ventilation within the building by opening doors, windows, cellar covers and vents after considering the effects of wind direction.

Do not enter an excavation or site containing gas plant until it has been assessed by Gas Network personnel.

Do not extinguish a burning gas escape. The fire should only be extinguished to safeguard life and property where it is the agreed best option. Where possible, damp down the area around the burning gas escape to control the effects of radiated heat. When the gas supply has been shut off, the burning gas should be allowed to self extinguish. Escaping gas should never be ignited deliberately, as this could result in an explosion.

**Do not use equipment that is not intrinsically safe in a gaseous atmosphere. This may include air movers, power cutters, mobile telephones etc. If in doubt, assume that any electrical equipment is not intrinsically safe.**

Gas escapes **from high pressure pipelines operating at 7bar and above** or regulator installations may be identified by significant noise, debris throw, gas jetting, freezing ground around the failure point, natural gas odour or the formation of a crater.

**Note: The gas in the National Transmission System is not odourised and therefore leaks from the National System may not be associated with the characteristic smell of leaking natural gas.**

In these circumstances, evacuation distances in excess of 750m should be considered to reflect the danger from thermal radiation if ignition occurs. This may be reduced when gas personnel arrive on site and carry out a risk assessment.

Do not operate external main or service isolation valves.

## **Safety advice for emergency services following gas personnel arriving on site**

Liaise with the lead Gas Network representative who will determine the required safety zone, evacuation criteria and other safety actions including the actions to stop the gas escaping.

## **Burning gas escape**

Fires on the gas network can be caused by:

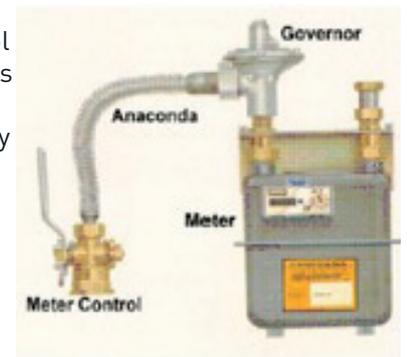
- Ignition of escaping gas
- Gas explosion
- Vandalism to exposed gas services/mains
- Operational failure during works

When there is a burning gas fire from a main, service or other apparatus it should not be extinguished until it can be determined whether the risk from the fire is greater than the risk from the gas escape once the fire has been put out e.g. the escaping gas may track into a building and create an explosive atmosphere.

## **Gas escape inside buildings**

Gas escapes can occur within a building, from the meter installation, installation pipework or appliances. Gas can also enter a building from an outside escape via ducts, cavities, or other building entry points. It should be noted that this can affect properties that do not use gas.

The emergency control valve is used to isolate all internal escapes. This is achieved by moving the emergency control valve so that it is at 90 degrees to the gas pipe. Gas meters and the associated emergency meter control valves are generally installed externally in meter boxes. However, within older properties, many meters are located within the building.



For Industrial/commercial premises (factories etc) any isolation should be made in consultation with the responsible person on site to ensure that there are no resulting process risks.

## **Gas escapes outside buildings caused by interference damage**

Gas escapes caused by third party interference damage during excavation works or by vehicle impact damage are a significant source of major gas escapes, fires, and occasionally explosions.

When reporting site circumstances to the Gas Network Operator [Free Phone 0800 111999], a detailed description of the size of gas plant and buildings/kiosks involved in the incident is essential to ensure the most appropriate response.

Other incidents also result from vandalism. A common occurrence being a fire that has been set alight in a wheelie bin located next to the gas meter box.