

SKETCH WITH ABANDONED LAYER ON

4in ST
SN-220001377438

15in DI
MR-220001377431

15in DI
MR-220001377432

125mm PE
SN-220001377434

15in DI
MR-220001377436

4in ST
SN-220001377440

220001270005

90mm PE

180mm PE
MR-220001377445

63mm PE
MR-220001377446

63mm PE
MR-220001377447

22000135658

700 COV

53mm PE 700 COV
MR-220001356593

16in ST
MR-220001377433

10in ST
MR-220001377448

6in DI UN
MR-220001377451

12in DI UN
MR-220001377454

994128963

994036010

0155671

Existing LP valve found here. See dr4.

7568

Playground

Covered tower

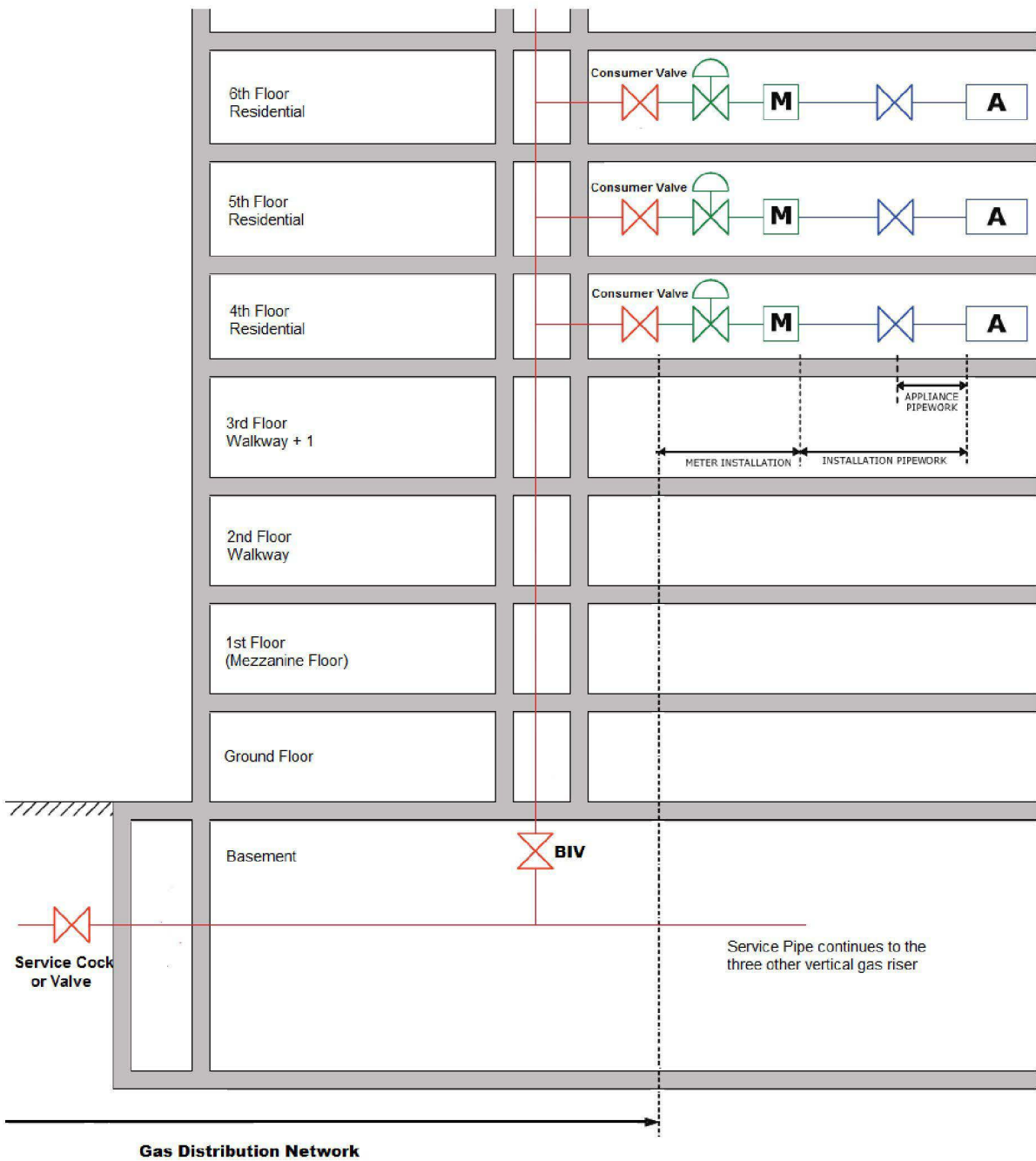
Supply

Exhibit JAH2



Exhibit JAH3

Schematic Layout of required gas service pipe and internal gas riser system installation at Grenfell Tower following construction in 1974 together with gas meter installation, customers installation pipework and appliances.












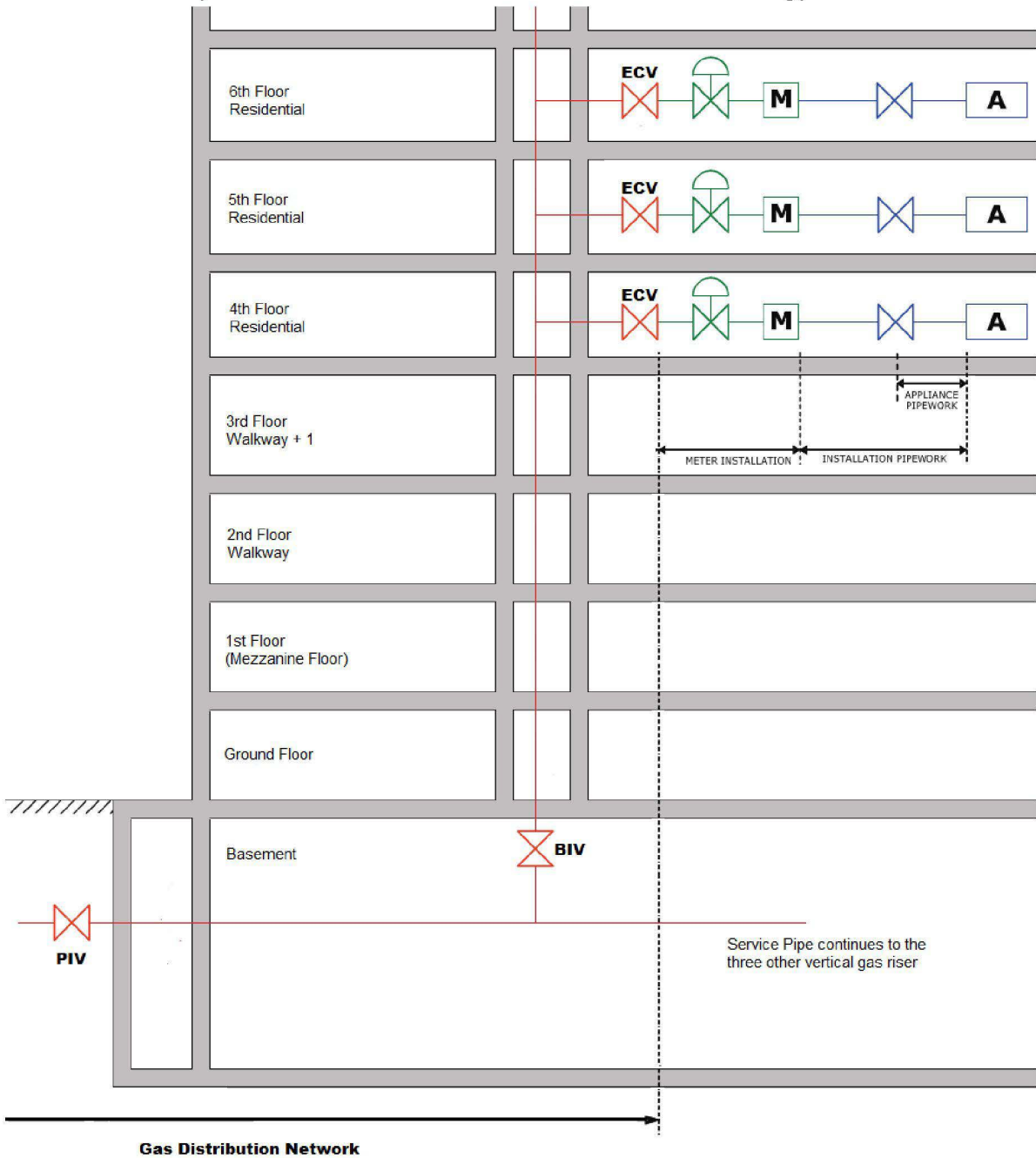
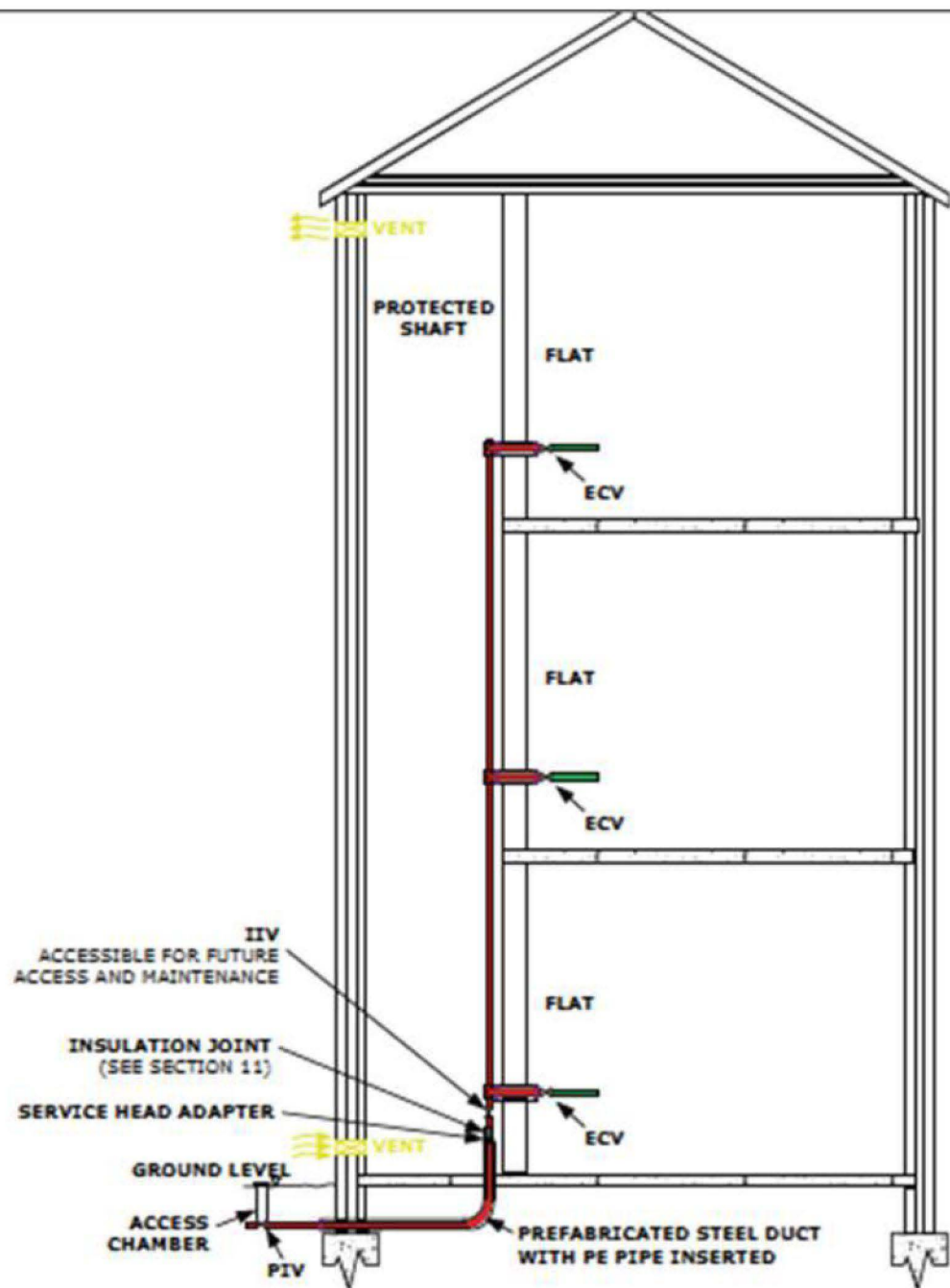
KEY		
Cadent's Ownership	Meter Asset Owner Ownership	Customer's Ownership
 Service Pipe	 Meter Governor/Regulator	 Installation Pipework
 PIV Service Cock or Valve	 Gas Meter	 Appliance isolation valve
 BIV Branch Isolation Valve		 Appliance
 Consumer Valve		

Exhibit JAH4

Same schematic layout as shown in exhibit JH2 but with current terminology for valves used



KEY		
Cadent's Ownership	Meter Asset Owner Ownership	Customer's Ownership
Service Pipe	Meter Governor/Regulator	Installation Pipework
PIV Pipeline Isolation Valve	Gas Meter	Appliance isolation valve
BIV Branch Isolation Valve		Appliance
ECV Emergency Control Valve		



Note: Reference needs to be made to clause 4.2.1.4.

FIGURE 18 - INTERNAL SCREWED OR WELDED NETWORK PIPELINE. PASSING THROUGH A PROTECTED SHAFT (ON AN OUTSIDE WALL). VENTILATED DIRECTLY TO OUTSIDE AIR

Exhibit JAH6

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:

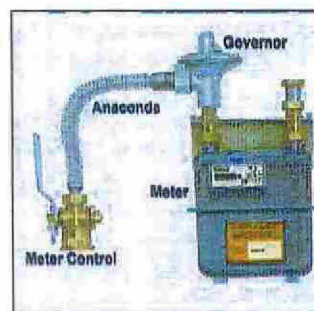
- Ignition of escaping gas
- Gas explosion
- Vandalism to exposed gas services/mains
- Operational failure during works

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 ESCAPES 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.

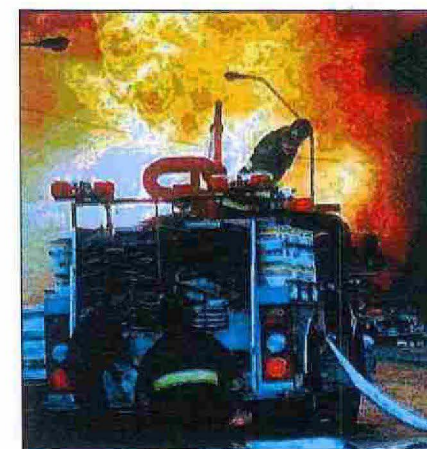
When reporting site circumstances to the Gas Network Operator [Free Phone [REDACTED]], a detailed description of the size of gas plant and buildings/kiosks involved in the incident is essential to ensure the most appropriate response.

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.



GAS TRANSPORTERS INCIDENT REVIEW PANEL

SAFETY ADVICE FOR EMERGENCY SERVICES ATTENDING GAS ESCAPES



NATIONAL GAS EMERGENCY FREEPHONE



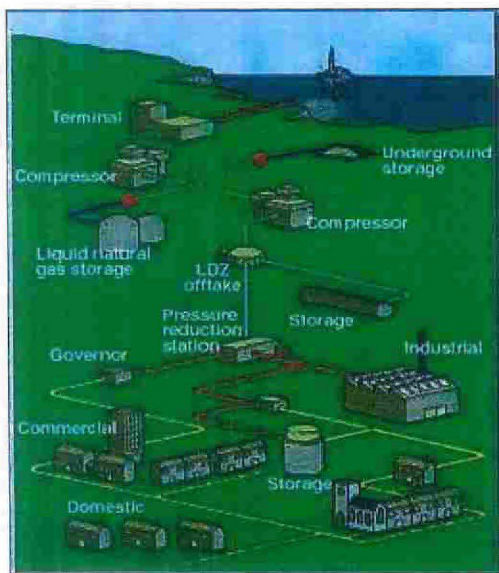
INTRODUCTION

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 3/4"-1 1/4" [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 XXXXXXXXXX]. 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.

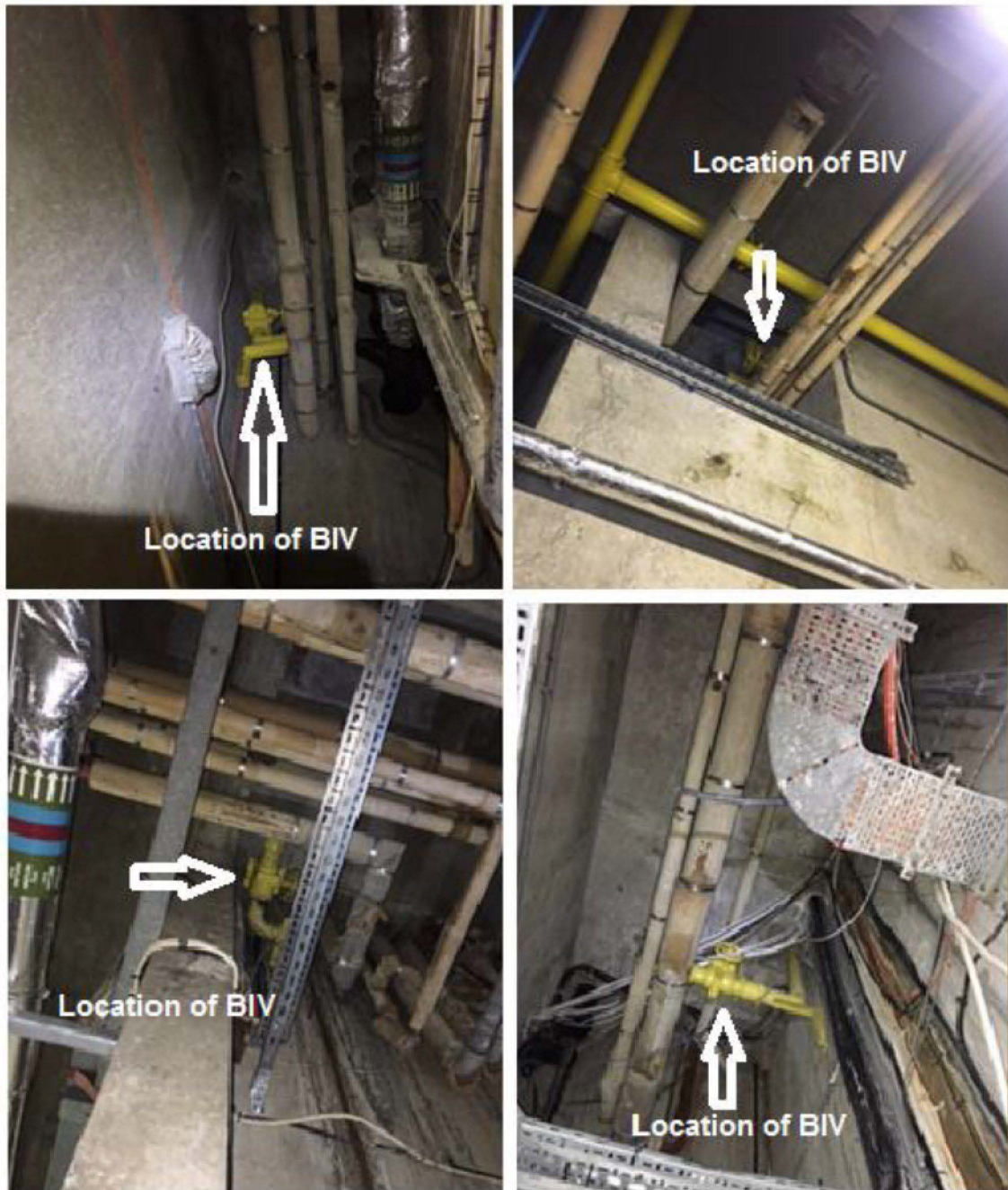
In these circumstances, evacuation distances in excess of 750m should be considered to reflect the danger from thermal radiation if ignition occurs. This may be reduced when gas personnel arrive on site and carry out a risk assessment.

Do not operate external main or service isolation valves.

Exhibit JAH7

1. The 4 x BIVs located at high level on the original 4" steel service pipe laid in 1974
2. The 3" IIV on the new 90mm Polyethylene (PE) gas service pipe
3. The ECV on the 10" steel gas service pipe

1. The 4 x BIVs located on the original 4" steel service pipe laid in 1974



2. The 3" IIV on the new 90mm Polyethylene (PE) gas service pipe

Figure K18 from Dr Lane's report Appendix K



3. ECV on the 10" steel gas service pipe

No known photograph of the 10" ECV available, however, it would be located to the left of this photograph where the text is written. This photograph shows the communal hot water and heating boiler supply showing one of the two regulators (silver fitting on left) installed supplying gas to the rotary gas meter (white fitting on right) installation. Gas flow would be from the left to the right.

ECV for 10" service pipe would be located approx. where this text is written.



Exhibit JAH9

Shurmer, Angharad

From: Milam1, Neale
Sent: 14 June 2017 08:15
To: Allday, Jason; Day, Tony J
Subject: Fwd: EXT || Grenfell tower
Attachments: Project.jpg

Jason/Tony, requested this from Peter, see below please.

Sent from my iPhone

Begin forwarded message:

From: "Connolly, Peter" <Peter.Connolly@cadentgas.com>
To: "Milam1, Neale" <Neale.Milam1@cadentgas.com>
Subject: FW: EXT || Grenfell tower

Morning Neale,

You might find the following helpful

Regards

Peter Connolly
Network Supervisor
London Repair East

Cadent Gas Ltd

Mobile: [REDACTED]
E-mail: peter.connolly@Cadentgas.com

From: Simon Boygle [<mailto:simon.boygle@k-spipecontractors.co.uk>]
Sent: 14 June 2017 08:06
To: Kelly, Patrick; Connolly, Peter
Subject: EXT || Grenfell tower

Hi Pat/Peter

Don't know if your looking to cut any supplies off or can get even close to the block but some information if it helps;

- there is a deep boiler room below the block.
- boiler room extends approx 3m out past building line so excavations have to be approx 4m away from building.
- I remember there were 2 existing incoming supplies & 1 new welded supply;
- 10" exist steel to communal boiler room rotary meter.
- 4" screwed steel to existing riser system.

-welded supply to recent replacement section.



10" steel supply
to boiler room
rotary meter

Kind regards
Simon Boygle
m [REDACTED]
e simon.boygle@k-spipecontractors.co.uk

K&S PIPECONTRACTORS LLP

Unit 1, Stock Road,
Southend on Sea,
Essex,
SS2 5QF

t [REDACTED]
e info@kspipe.co.uk
www.kspipe.co.uk

Sent from my iPhone

Exhibit JAH10

