

Hazard/threat category	Sub-category
Industrial accidents and environmental pollution	Fire or explosion at a natural gas pipeline
Hazard and threat description, plus scale	Risk reference number
Local to site causing up to 200 fatalities and up to 200 casualties. Explosions would cause primarily crush/cuts/bruise type injuries as well as burns. Fires would cause predominantly burn-type injuries	H7
Date of revision	Next review
December 2007	December 2008
Version	2
Author	Royal Berkshire Fire and Rescue Service

1. Overview of hazard or threat

Catastrophic fire and or explosion on a large natural gas pipeline resulting in a rapidly expanding fireball. This would result in other smaller fire starting and blast damage to surrounding buildings.

Difficulty in gaining access to pipeline and surrounding area until the gas supply has been shut down.

Water supplies for firefighting could be damaged.

Large numbers of casualties with burns.

2. Key historical evidence

There is no evidence of this having occurred in the UK.

3. Likelihood

Hazard	Outcome description	Likelihood
Fire or explosion at a natural gas pipeline	Local to site causing up to 200 fatalities and up to 200 casualties. Explosions would cause primarily crush/cuts/bruise type injuries as well as burns. Fires would cause predominantly burn-type injuries	Negligible (1)

4. Impact

Summary

Hazard	Outcome description	Impact			
		Health	Social	Env	Econ
Fire or explosion at a natural gas pipeline	Local to site causing up to 200 fatalities and up to 200 casualties. Explosions would cause primarily crush/cuts/bruise type injuries as well as burns. Fires would cause predominantly burn-type injuries	4	4	3	4

Details

Impacts
Primary
Damage to surrounding properties leading to members of the public unable to return to their homes or place of work
Large numbers of casualties requiring treatment for burns.
Recovery of bodies from the site and the surrounding area
Access to area around gas pipeline
Possible contamination of surface water or ground water
Poor air quality due to smoke which may contain toxic or noxious substances
Secondary
Long term effects on business not directly involved in the fire
Gas supplies to properties both private and commercial in the area could be disrupted
Drifting smoke may affect adjacent transport networks

5. Vulnerability and resilience

Most pipelines tend to be underground or in secure areas.

6. Mitigation and control measures

Plans in place under MAHP regulations to deal with on and off site incidents.

7. Overall assessment

Category	Sub-category		
Industrial accidents and environmental pollution	Fire or explosion at a natural gas pipeline		
Outcome description	Impact	Likelihood	Risk
Local to site causing up to 200 fatalities and up to 200 casualties. Explosions would cause primarily crush/cuts/bruise type injuries as well as burns. Fires would cause predominantly burn-type injuries	4	1	Medium

Controls in place

Pipeline Safety Regulations
COMAH regulations including on and off site plans
Site specific plans if known risk
Oxfordshire County Council Emergency plan
BFRS OC 11/30, Major Incidents; OC 11/44, Gas Pipelines; OC 14/2/1, Gas Indicator combustible
RBFRS Major Incident Plans
Milton Keynes Council Major Accident Hazard pipeline plan
Environment Agency Incident Management Plans
EA 24/7 Incident Response
EA MOU with Fire Brigades, Police, Local Authorities, Highways Agency, Health Protection Agency & Health Authorities
South Central Ambulance Service NHS Trust Major Incident Plans
Royal Berkshire Hospital NHS Trust Major Incident Plan
Heatherwood & Wexham Park Hospitals NHS Trust Major Incident Plan
Berkshire Healthcare Trust Major Incident Plan
Berkshire Primary Care Organisations Major Incident Plan and Operational Response Manuals
Buckinghamshire Hospitals NHS Trust Major Incident Plan
Buckinghamshire Primary Care Organisations Major Incident Plan
Buckinghamshire Mental Health Trust Major Incident Plan
Milton Keynes Hospital NHS Trust Major Incident Plan
Oxford Radcliffe Hospitals NHS Trust Major Incident Plan
Nuffield Orthopaedic Clinic Major Incident Plan
Oxfordshire Primary Care Organisations Major Incident Plan
Oxford Mental Health Trust Major Incident Plan
South Central Strategic Health Authority Major Incident Plan
Berkshire Integrated Emergency Planning Structure
Berkshire Unitary Authorities Emergency Plans X 6
Buckinghamshire CC Emergency Plan
Aylesbury Vale District Council Emergency Plan
Chiltern District Council Emergency Plan
South Bucks District Council Emergency Plan
Thames Valley Police Emergency Procedures Manual
ACPO Emergency Procedures Manual
Oxfordshire Fire & Rescue Service Major Incident Policy

Additional risk treatment required

Local/Regional joint emergency plans
Local/Regional joint exercises