



National
Operational
Guidance

Hazard

Rail-related incidents in tunnels



NFCC
National Fire
Chiefs Council

Developed and maintained by the NFCC



Contents

Hazard - Rail-related incidents in tunnels	3
<i>Control measure - Safe system of work: Rail tunnels</i>	3



Hazard - Rail-related incidents in tunnels

Hazard Knowledge

In addition to the hazards of working on or near railways, rail-related incidents that are located underground or in tunnels present additional or amplified hazards, including:

- Disorientation, due to:
 - Repetition of features
 - Lack of wayfinder indicators, such as signage or landmarks
- Reduced visibility
- Restricted communication
- Extended access, egress and evacuation distances
- Lack of railway staff at or near to the scene of the incident
- High temperatures
- If the incident involves rail passengers they may:
 - Become distressed, which may lead to attempts to self-evacuate
 - Suffer from heat illness



Control measure - Safe system of work: Rail tunnels

Control measure knowledge

For rail-related incidents located underground or in tunnels, safe systems of work, over and above those for working in the rail infrastructure, should take into account:

- Gaining an understanding of the environment, including:
 - The access, egress and evacuation strategy
 - Location of pressurised escape areas or intervention shafts
 - Location of and distance to water supplies
 - The structural stability of the tunnel
- The type of line – single or bidirectional
- If there is an electric rail power system including overhead line equipment (OLE) or conductor rail equipment (CRE)

- Whether the rail power system is involved

Fire and rescue services may need to:

- Request or provide emergency lighting
- Establish alternative communication strategies
- Request assistance for the transportation of emergency services equipment – this could include medical equipment as well as fire and rescue service equipment
- Consider the impact of exhaust fumes from petrol driven equipment, such as pumps, generators and fans

Strategic actions

Fire and rescue services should:

- Gather Site-Specific Risk Information (SSRI) about rail networks that are underground or in tunnels
- Provide personnel with equipment to assist with working underground or in tunnels

Tactical actions

Incident commanders should:

- Gain an understanding of the rail tunnel working environment and inform personnel about the hazards
- Request advice and assistance from the responsible person
- Maintain communication with the responsible person and fire control rooms to ensure the accuracy of information
- Request assistance for the evacuation of passengers from rail tunnels, if required
- Request or provide appropriate equipment for rail tunnels, such as emergency lighting and communication equipment