

Provision of fire extinguishers

At least:

- 2 AFFF extinguishers (9 litre)
- 1 CO2 fire extinguisher (2 kilogram)
- 1 fire blanket

must be provided at the location of any hot working, regardless of the availability of any local equipment.

Flammable gases

Potential fire risk exists from the presence of flammable gases in the ground, caused by:

- leaks from gas mains or petrol tanks
- the build up of methane gas in enclosed spaces.

Areas at risk are:

- below ground ticket halls and their accommodation areas, including upper machine chambers with sumps
- sumps and platform inverts.

Where hot working is to be undertaken in sumps, platform inverts or other enclosed spaces, a test must be made for the presence of flammable gases. The fire watchperson must check that the work area is clear of flammable gases both before allowing work to commence and during the course of the work.

The Project Manager must make sure that suitable gas detection equipment, calibrated and in-date is available for use.

Displaying hot works permits

The original, valid hot works permit must be displayed at the worksite.

The original hot works permit must be shown to station staff or others in authority upon request.

Suspending a hot works permit

Anyone can suspend hot working:

- in an emergency
- for any safety reason
- if the hot works permit is not valid.

In these circumstances:

- work must stop immediately
- the Site Person in Charge must make sure that the worksite is left in a clean and safe condition
- the relevant managers must be informed and determine the circumstances in which hot working can continue.

Requirements of other permits

The issue of a hot works permit does not remove the need for other specialised permits, if these apply to work at a particular site.

Fire watchperson cover

A fire watchperson must have completed and achieved the required standard in the fire watchperson's training course.



The fire watchperson must at all times while on duty carry their certificate of authorisation.

A fire watchperson, provided and authorised by the party undertaking the work, must be present during any hot working process, unless a hot works permit is not required.

While hot working is in progress, the fire watchperson must not undertake any other work that might be a distraction from the fire watchperson's duties.

At stations, the fire watchperson must:

- have their attendance (arrival and departure) recorded in the location log book as well as the station log book.



This information must be relayed by the station supervisor for inclusion in the log book of the adjacent station in the case of hot working undertaken in tube or subsurface tunnels.

- carry a hand-held radio to maintain contact with the relevant station control room.

At the lineside, on open sections, where staff use stations to gain access, the fire watchperson must:

- have their attendance (arrival and departure) recorded in the station log book and this information must be relayed by the station supervisor for inclusion in the log book of the adjacent station.
- use a hand-held radio to tell the Controller when on duty, that hot working is being carried out
- tell the Controller and Track Access Controller when the work party leaves the lineside, and when they leave the lineside after remaining on watch.

At the lineside on open sections, where staff use road access, the fire watchperson must:

- use a hand-held radio to tell the Controller that hot working is about to be carried out
- tell the Controller and Track Access Controller when the work party leaves the lineside, and when they leave the lineside after remaining on watch.



Where the reception on hand-held radios will not allow their use, another safe method of communication must be established and documented in the method statement for the work.

In all cases, the Site Person in Charge must record the presence of the fire watchperson in his personal log book.

At stations, the fire watchperson must carry out the following fire safety checks before allowing hot working to commence:

- automatic sprinkler and detection systems must continue to operate unless the Project Manager considers that the proposed work will affect the sensitive elements of the sprinkler or detection system
- the other side of any wall or partition on which work is being carried out must be inspected to make sure that materials there are not in danger of being ignited by direct or conducted heat (access will need to be arranged)
- where hot work is to be carried out on enclosed equipment, such as in containers or ducts, the equipment must first be cleaned to reduce the risk of any combustible material or flammable vapour igniting during the work
- fire extinguishers must be available at the hot worksite in well defined and identified positions
- those persons working in the vicinity of the hot work must:
 - be familiar with the use of the fire fighting equipment provided
 - be familiar with the means of escape
 - be aware of other persons working in the vicinity.
- any flammable materials must be moved at least 15 metres away, or be protected (depending on the practicability and the nature of the fire risk).

When the hot work process is finished, the fire watchperson must:

- remain on watch in the area for one hour after the completion of the work or until all fire safety systems that were isolated have been reset, whichever is the longer period
- make sure that all waste or litter is removed
- make sure that hot steel ends of welding rods and waste materials are disposed of safely
- inspect and certify the area as safe.

If there is any report of burning smells or of smoke in the vicinity of the hot work area during the period that the fire watchperson remains in attendance the fire watchperson must:

- inspect the area
- tell the station supervisor or, on open sections, the Controller
- accompany the fire brigade to the site, if necessary.

When hot working is undertaken in tube or subsurface tunnels and is completed less than one hour before the end of engineering hours, the fire watchperson must proceed to and remain on the relevant platform of the station, from which access to the tunnel was obtained, until one hour after completion of the hot work process. If a fire is then reported, the fire brigade will attend at both this station and the adjacent station, and the fire watchperson must give the fire officers details of the work that has been undertaken.

Applying for a hot works permit

Project Managers must apply for hot works permits according to the contractor's procedure for authorising, issuing and controlling hot works permits.



Hot works permits can be downloaded from the Operational Standards website.

Hot works permits

A hot works permit is valid for a maximum of one calendar month. Hot working extending beyond that period will require a new hot works permit.

The original copy of the hot works permit must be stamped in red in order to establish its validity. Any alteration to the permit will invalidate it.

A separate hot works permit will be required for each location.

Each valid hot works permit must be distributed as follows:

- Original (stamped in red) – displayed at the worksite or, if working on the track, carried by the fire watchperson
- Copy – landlord manager
- Copy – competent authority for issuing hot works permits.

Location

The location of the hot working process must:

- be a compact area that can be observed by the fire watchperson
- be clearly indicated on the hot works permit(s).

Hot working during engineering hours

Flame cutting, disc cutting, welding, grinding and other hot working processes can only be undertaken during engineering hours with:

- an authorised hot works permit
- a fire watchperson present.

Hot working during traffic hours

Flame cutting and other work with flames can only be undertaken during traffic hours:

- in an emergency
- with the agreement of the competent managers

Hot working



Best practice for staff undertaking 'hot work'

Operational Standards Issue 04

- with an authorised hot works permit(s)
- with a fire watchperson present.

Disc cutting, welding and grinding can only be undertaken during Traffic Hours:

- if the work is suitably enclosed
 - with an authorised hot works permit(s)
 - with a fire watchperson present
- and where any flashing or smoke does not:
- affect or distract train operators, passengers, or staff
 - activate any alarm system.

Hot working without a hot works permit

Only soldering and sweating may be undertaken without a hot works permit(s), provided that:

- the Project Manager:
 - provides a method statement for approval by the competent managers
 - tells the Fault Report Centre the details of the work and dates concerned
 - tells the station supervisor the details of the work and dates concerned
 - makes any necessary provision for temporary exemptions (during Traffic Hours) or isolations
 - tells the Fault Report Centre and the Station Supervisor when the work is complete
- the Fault Report Centre enters the information provided by the Project Manager in the Fault Report Centre log
- the Station Supervisor enters the information provided by the Project Manager in the station log
- Contractors ensure that all appropriate precautions against fire are taken



A fire watchperson does not need to be present, but the person carrying out the work must hold a valid fire safety certificate endorsed fire core.

Requests for temporary exemptions

A hot works permit must not be issued until approval has been given for isolations or temporary exemptions, as required.

When fire protection or detection systems are isolated in traffic hours and hot working has taken place, the appropriate landlord representative must remain on site and undertake an hourly fire inspection of the isolated area until the fire protection system is reinstated.

If it is necessary to isolate smoke detection in machine rooms, it is essential that the fire watchperson remains in attendance at all times.

If there is a break in work on site, arrangements must be made for the fire protection or detection

system to be reinstated during this period or for an inspection of the isolated area to be made at least hourly. Fire authority exemption notices may impose conditions that must be adhered to.

Keeping records

The competent authority authorising and issuing a hot works permits must keep a copy of each permit issued, and keep a record of the allocation of unique reference numbers for three months from the permit expiry date.

Requesting an isolation



If automatic fire detection or protection equipment needs to be isolated because of work being carried out on a station, a formal request must be made in advance to the Fault Report Centre by fax, using the "Request for isolation of fire protection equipment" found on the Operational Standards website, under Rule Book Forms.

When requesting an isolation, staff and contractors must consider whether the application will affect the interests of any other parties, and if so agree appropriate action before submitting the application for isolation.

For all areas on stations, the relevant Group Station Manager must be consulted and give permission before applications for isolations are made.

Requests for isolation must be made where practicable as soon as the requirement is known. The deadline is 15.00 hours for an isolation required at the close of traffic on the same day.

The Site Person in Charge at a site where a request for an isolation has been agreed, must:

- confirm with the Station Supervisor that the isolation has been made for the areas requested before starting work
- agree with the Station Supervisor a time for returning the equipment to normal operation after all work has finished
- tell the Station Supervisor details of the work being undertaken according to the station works plan.

Emergency isolations



In an emergency, the isolation of equipment must be arranged directly with the Fault Report Centre.

Relevant legislation



For further information about relevant legislation and applicable standards, contact your health and safety department.

The Regulatory Reform (Fire Safety) Order 2005

REMEMBER

Good housekeeping is essential to ensure that:

- fires are unlikely to occur;
- if they do occur, they are likely to be controlled or contained quickly, effectively and safely;
- if a fire does occur and grow, everyone in your premises is able to escape to a place of safety easily and quickly.