



## Hot Works Procedure

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# Hot Working Permit Process

## 1. Introduction

This process is necessary to ensure that fires or injury are prevented during and after any 'Hot Work', which includes welding and cutting, brazing, use of blow lamps, soldering equipment, bitumen boilers and any other equipment which produces heat, sparks or naked flames.

A permit-to-work system for hot work ensures that hot work does not start until a supervising person has granted formal permission. The 'supervising person' will be the person responsible for the work; this could be the Head Teacher, Site Manager, contracts foreman or the actual hot work operative.

The permit is valid for a limited period covering the estimated time-span of the hot work to be undertaken. The permit ensures that:

- The area is made as safe as possible before the work begins.
- Precautions are taken while the work is being undertaken
- The area is thoroughly checked afterwards on completion of the work.

The 'supervising person' is responsible prior to commencement of the hot works for carrying out an On Site Risk Assessment, for ensuring that contractors' Method Statements are produced, and for ensuring all parties involved are aware of their roles and responsibilities with regard to the process.

The period between the risk assessment and the hot works should be kept to a minimum. If circumstances on site change, or the period between the two is prolonged, a new risk assessment should be carried out.

## 2. Hot Work Process

Where the work to be carried out is in an area protected by Automatic Fire Detection (AFD), heat and smoke detectors within the area must be isolated first. The supervising person is to make an assessment as to the best method for arranging this from the following:

- Supervising person to arrange for the alarm maintenance contractor to isolate alarms and reinstate at the end of hot working. Ensure that AFD detectors are isolated in the area where work is to be carried out.
- Supervising person to isolate alarms and reinstate them themselves if familiar with system.
- Instruct contractors to cap smoke detectors with the appropriate caps. Careful consideration should be given to where the smoke may travel within entirety of the area affected by the hot works.
- In some instances the sensors may not be smoke detectors but in fact heat sensors, in which case no action need be taken. The 'supervising person' must check whether this is the case.

Once the smoke detection issue has been resolved the Supervising Person is responsible for ensuring the following: -

- Before any hot works, the area must be cleared of all loose combustible material. Exposed wooden flooring and fixed combustible items must be made safe or damped down.
- If considered necessary after the initial risk assessment, the area should be screened off to prevent flying sparks.
  - If works are to take place against a wall or partition, the other side must be checked to make sure that there are no combustible materials, which could be ignited by conducted heat, likewise check other floors above and below where necessary, as heat may also travel vertically.
- All gas cylinders must be secured in a vertical position and those in use fitted with a certified regulator and flashback arrestors.
- If bitumen boilers, lead heaters, or similar equipment need to be taken onto roofs, they must be placed on a protective heat-insulating base and supervised by a competent person.
  - The appropriate fire extinguisher for the work must be kept to hand during the work and the hot work operative made familiar with its usage.

- After the work has finished, the area must be constantly monitored for one hour to check that there is no smouldering. (Monitoring will be the responsibility of the person who has carried out, or supervised, the hot working and who must be familiar in the usage of portable fire extinguishers.)
- After the hour's monitoring has been completed, any isolated AFD detectors must be reconnected or any covered AFD detectors uncovered. The 'supervising person' should ensure that this has been arranged.

### **3. Action Required Note**

The person responsible for issuing the Hot Work Permit will also need to complete the Control of Asbestos Work, Permit to Work if applicable.

#### **The Hot Work Permit operates as follows (See Appendix A for Permit):**

1. The person responsible for issuing the Permit completes the necessary pre-work precaution & part 1. This would be the 'supervising person'.
2. When Part 1 is complete, the Permit is given to the hot work operative (contractor) who signs Part 2.
3. At end of the work, the area is checked for smouldering by the operative and the time is noted in Part 2 of the Permit.
4. After completion of work, the area must be monitored for at least an hour. Monitoring will be the responsibility of the person who has carried out, or supervised, the hot working and who must be familiar in the usage of portable fire extinguishers.
5. Part 3 is completed and signed after the hour is up and again the time noted.

A separate hot work permit is to be completed in full for every individual hot work period (shift/day) and is to be retained by the contractor for 'supervising person' inspection.

**Please note that the area is not to be left unattended at any time without a fire watch for example during lunch or tea breaks.**

### **Fire Prevention**

Prior to approving any hot work the 'supervising person' or his/her appointee shall inspect the work area and confirm that precautions as listed below have been taken to prevent fire.

Check off each item carefully

#### **Precautions**

- Sprinklers and other Fire Fighting Systems and Equipment in service where possible.
- Hot Work Equipment is in good condition.
- Gas containers/flammable liquid containers to be changed or refilled in the open.
- Automatic Fire Detection (AFD) within the area must be isolated first.

**Within 15 Metres of Work**

- Floors swept clean of combustibles and wetted down or covered with non combustible material where necessary.
- Combustible materials, hazardous or flammable liquids have been removed or are protected with non combustible curtains or sheets.
- Non combustible covers suspended beneath work to collect sparks.

**Work and Displays on Walls or Ceilings**

- Any combustible material has been protected against sparks or heat.
- Combustibles moved away from other side of walls and away from metal through which heat can be transferred.

**Work On Enclosed Equipment**

- (Tanks, containers, ducts, dust collectors etc.) Equipment cleaned of all combustibles and dust. Containers purged of flammable liquids and vapours.

**Fire Watch**

- To be provided during and 30 minutes after operation.
- Supplied with extinguishers and/or hose reel.
- Trained in use of fire fighting equipment and in sounding the fire alarm.
- Final Check Up to be made 60 minutes after completion of any operation.

Signed.....

Date ...../...../.....

**Hot Work Permit**

Date: ..... From: .....am/pm To: .....am/pm

**Precautions**

The following **MUST** be checked prior to the start of any hot work. Tick the boxes as the checks are completed or cross out items not appropriate to the work.

Hot work area		Work on walls ceilings or partitions	
	Loose combustible material cleared away to within 15m. Non-moveable combustibles covered/damped down		Other side of wall checked & combustibles moved / damped down
	AFD detectors isolated	<b>Welding, cutting or grinding work</b>	
			Work area screened to contain sparks
	Portable fire extinguishers at hand (contractor supplied)	<b>Bitumen boilers, lead heaters, etc</b>	
			Gas cylinders at least 3m from burner
	Gas cylinders secured in a vertical position on a trolley		Heat insulating base provided if on roof
	Gas cylinders fitted with regulator, flashback arrestor and hoses. secure & in good order		

**Part 1 (to be completed by person issuing permit before work starts)**

Address .....

Exact Location .....

Description of work .....

Location examined and necessary precautions taken, including isolation of AFD detectors:

Date ..... Time .....

Print name ..... Signature .....

Permit issued to .....

**Part 2 (to be completed by person to whom the permit is issued)**

Print name ..... Signature .....

Work Started ..... (Enter time) Finished & Cleared up ..... (Enter time).

**Part 3 (to be completed by person who has completed the Hot Works and has completed the fire watch for 1 hour after finish of work)**

All areas checked and safe at ..... (Enter time)

AFD detectors re-instated ..... (Enter time)

Print name ..... Signature ..... Date...../...../.....

**COMPANY NAME.....**