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The following Minimum Standard is applicable on all projects

Definition

Hot works is classified as any work activity that creates sufficient heat to ignite combustible materials/ substances.

This classification will include but is not limited to the following activities:

- Soldering and Welding
- Grinding out
- Using mechanical equipment to cut concrete or tiles
- Using hot bitumen products
- Use of Gas Torch or Blow Lamps
- Using mechanical equipment to cut steel trunking etc.

All the above activities should be based on risk assessment i.e. if external tasks are being undertaken then combustible materials may not be present.

This document provides a mandatory standard to all the above Unitas operating companies to ensure that all Hot Works are identified and suitable controls are put in place to mitigate risks that are associated with Hot Works.

Planning

Hot works may be undertaken on planned and responsive type works and consideration must be given to how the work activity is to be undertaken safely and planning of the task is required to prevent fires occurring.

Where hot works have been identified via a Point of Work Risk Assessment process then the requirement to reduce the risk of a fire must be implemented.

Hot work presents a major fire risk and therefore alternative methods should be adopted where reasonably practicable to eliminate the risk. For instance:

- Use of plastic pipework and push- fit fittings or compression fittings instead of soldering.
- Off-site fabrication such as soldering pipework / fittings outside the property, cooling it down and then installing.
- Mechanical / electrical pipe benders.

When there is no reasonable alternative and where possible, the hot work should be undertaken in a designated area away from the building under construction / repair and in an area free from combustible materials; this will isolate the works and remove the risk of fire.

- Preferably in an external area.

Where hot works need to be undertaken in an area where combustible materials are present then additional controls must be implemented to reduce the risk of fire.
For instance:

- Re-locating / re-running pipework etc. to another location away from combustible materials.
- Removal of all combustible materials from the work area to a safe distance.
- Point up / fill gaps and openings which could provide entry for flames or sparks into areas that are difficult to access and could contain combustible materials.
- Use of cooling agents such as water.
- Fire protective mats.
- Moving electric cables away from the work are to avoid damage from flames / hot work.
- Temporary covers such as floor protection, fire rated LPS1207 for internal use & LPS1215 for internal or external use.
- Fire extinguishers must be available in the work area while undertaking hot works**, this is a mandatory requirement**

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Extinguishers:

- **One 1kg Co2 Extinguisher.**
- **One 1lt Water Extinguisher.**
- **Larger extinguishers will be required for larger works dependant on the size of work.**

The primary purpose of fire extinguishers is to tackle small fires to prevent them becoming larger; putting out larger fires is the fire service's role and should not be tackled by site personnel.

Controls

All hot works are subject to stringent controls and for planned works the Fire Safety Management Sites Standard (SHEMS-STD-GR-021) must be followed and a Permit to Work (SHEMS-FOR-GR-019) must be used.

On Responsive Repair / Remote works where it is impractical to issue a permit then the following must be adopted:

- Competent Technician / Task Specific Risk Assessment, Safe System of Work & Point of Work assessment.
- Hot works identified by the technician / operative on site using the point of work assessment.
- Technician makes contact with management and informs them that hot works are required.
- Management assess the risks using the hot work permit (SHEMS-FOR-GR-019) as reference and discusses the options available for undertaking the work. This includes the methods noted above for eliminating hot works and must include; referring to any combustible materials or other potential risks in the work area such as electric cables that may be affected / damaged by the hot works.
- Management must also assess the risks from the specified controls i.e. use of water as a cooling agent, will this come into contact with any electrical installation?
- Consideration must be given for emergency evacuation especially in occupied premises.
- If management agrees that the hot works can proceed then they must specify what controls are to be adopted by the technician on site, these may include the controls listed above or any additional ones that may be required.
- Management must ensure that all resources are controlled to reduce the risk of fires occurring.
- Management open the hot work permit by logging permission on the spreadsheet (The permit is a verbal permit and no paper permit will be issued).
- Technician ensures all relevant PPE and equipment such as fire extinguisher is in place.
- Technician ensures all controls are implemented while adhering to the requirements of a hot work permit.
- Hot works undertaken.
- If during the work activity additional combustible or flammable materials are identified then the work must stop and contact with management is to be undertaken and awaits further instructions.
- After completion of the work several post work inspections of the area must be undertaken at a minimum of 15minute intervals until a minimum of one hour duration is reached (management specifies how many more may be required dependant on the risks) for timber framed buildings the cool down period is a minimum of two hours.
- Technician makes contact with management to inform them that the work is completed and that they can close out the permit on the spreadsheet.
- Permit closed out.

End of day checks are carried out using the spreadsheet to identify any logged hot works that have not been closed out, further investigations must be carried out by management with the technician to ensure suitable controls have been implemented.

Subcontractors

If subcontractors are employed to carry out hot works on behalf of Unitas then they must comply with this minimum standard or where practicable with the Unitas Fire Safety Management – Sites Standard (SHEMS-STD-GR-021) as a minimum.

Responsibilities

Senior / Service Managers

To ensure that all hot work activities are being undertaken in accordance with this mandatory standard and the agreed safe system of work.

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Operational Manager

- To ensure all areas of work are subject to a comprehensive risk assessment to determine the required safety arrangements and appropriate equipment for the task.
- To ensure full compliance with the mandatory standard and permit to work.

Supervisors, Team Leaders & Resource Controllers

- To ensure all areas of work will be subject to a comprehensive risk assessment and to determine required level of safety precautions needed to control the hot works.
- To ensure they are contactable to give prompt advice to all technicians / operatives and carry out regular site visits to monitor the activities on site.
- To ensure that resources are controlled and that the register (spreadsheet) is kept up to date for live and closed out hot work activities.

Technicians

- To ensure that all safety procedures are followed for all hot work activities.
- To ensure that all equipment issued is checked on a daily basis before use and that all equipment is maintained to the highest standards at all times.
- To ensure that all equipment is used as per the manufacturer's instructions.
- To ensure a Point of Work Risk Assessment is carried out prior to any hot work activity, to identify the appropriate controls required to reduce the risk of fire.
- To ensure that any concerns regarding the hot works are brought to the attention of their supervisor / manager immediately.

Further Guidance/Reference

Fire Safety Management – Sites Standard (SHEMS-STD-GR-021)
JCOP SECTION 16 requirements for hot works
JCOP section 11 requirements for portable fire extinguishers
HSG 168 Fire Safety in Construction Work
UKTFA guidance – 16 Steps to Fire Safety on Timber Framed Construction Sites