

Deafblind Scotland Policy on Hot Work

What do we mean by Hot Work?

Hot work includes any operation that uses open flames or the local application of heat and friction. Examples are Welding Soldering, Torch cutting, Grinding Hot riveting. Serious fires frequently can occur during maintenance and construction operations, where work is proceeding on either machinery, plant or fabric of Deafblind Scotland's Training Centre. Sources of heat most commonly involved in hot work processes are as follows:-

- Gas/electric welding and cutting apparatus
- Blowlamps/blowtorches
- Hot air guns or blowers
- Bitumen/tar boilers
- Angle grinders and grinding wheels and soldering

Hot work permit allows employers to maintain safety and control over potentially hazardous hot work operations. The hot work permit system reinforces to workers the safety requirements of their work situation. Most fires associated with hot work start after the job has been completed as a result of smoldering sparks.

Policy Statement

Deafblind Scotland will ensure a high satisfactory standard of care and supervision is in force, and effectively managed when hot work is required to be carried out by outside contractors or their sub-contractors. Prior to entering into a contractual agreement with contractors, advice should be obtained from Deafblind Scotland's current Insurers for guidance on the adequacy of the contractor's insurance. It is vital that the procedures are correctly followed working in or around Deafblind Scotland Training Centre whereby contractors are not familiar with structure of the internal/external building structure.

Deafblind Scotland will ensure a formalised written permit to work system is in force, Senior Management will ensure compliance with the procedures as outlined below:-

General precautions:-

- Hot work should only be authorised where a safer method of work is not available.
- Be carried out only by trained personnel.
- Where possible, items to be the subject of hot work should be removed to a safe area designated for that purpose.
- In sprinklered premises welding and cutting operations should not be carried out when the water supply to the sprinkler system is shut off.

- Where the premises are fitted with an automatic fire detection system, only the local detectors or zone where the work is being carried out should be isolated. All zone or detectors should be reinstated as soon as task has been completed.
- Trained Deafblind Scotland employee not directly involved in the work should provide a continuous fire watch during and after completion at least one hour following the period of work. This action will detect and extinguish any incipient burning in the work area and in all adjoining areas to which sparks and heat may spread.

Before hot work commences

- A hot work permit should be in place and be valid for the duration of the work, and for no longer than one shift. Each new permit should be signed by the person in charge to accept responsibility of its terms and conditions, and if at any point management changes the new supervisor should sign the permit. Once work is complete all three copies are brought back together and hand back to designated individual to sign off.
- Permits require to be secure and undamaged on-site and stored safely.
- Hot work permits should not be issued without considering the significance of any other permits to work in the vicinity
- Hot work permit should be issued for a specific task that is to be undertaken in a clearly identified area.
- Formal risk assessment and record of all hazards connected with the work being conducted to be completed before proposed hot work is carried out internally/externally at Deafblind Scotland's Training Centre.

Clearance and protection of work areas:-

- An area within 10m of the hot work process should be cleared of any combustible materials and flammable liquids. All elements of combustible construction and surface finishes should be protected. This applies to any openings, holes or gaps in walls, floors and ceilings through which sparks could pass. Distance may need to be further than 10m in some circumstances, especially where overhead work is to be undertaken.
- If combustible materials cannot be removed within a 10m radius, they should be completely protected by the use of non-combustible or purpose made fire retardant blankets, drapes or screens. Flammable liquids should always be removed from the area.
- Combustible floors in the designated areas should be covered with overlapping sheets of non-combustible material or wetted and liberally covered with sand. Particular care to ensure gaps in flooring area covered.
- Floors should be clean and good ventilation in place.
- Hot work should never be carried out in an area identified as a hazardous zone.

- Flammable solvents must not be used to clean surfaces immediately before work commences.
- Before work commences on one side of a wall an examination should be made of the area on the other side to ensure that any combustible materials are not in danger of ignition by direct or conducted heat.
- Where hot work is to be undertaken on composite building panels or similar constructions, type of insulating or other materials behind metal or other non-combustible surfaces should be assessed.
- At least 2 LPCB approved extinguishers each with a rating of 13A or a hydraulic hose reel should be provided at the place where the hot work will take place to be ready for immediate use in the event of an outbreak of fire.
- All contractors/sub-contractors involved with undertaking the hot work should be aware of Deafblind Scotland's Fire Evacuation policy and procedures.

When using individual items of equipment - Contractors

- Blow lamps and blow torches should be extinguished and allowed to cool before changing cylinders. Paraffin or petrol blow lamps should only be filled and lit in the open and should not be refilled when hot.
- Blow lamps or torches should be lit as short a time as possible before work commences and extinguished immediately after the work ceases.
- Lighting up should only be carried out in accordance with the manufacture's instructions. Blow lamps or torches should not be left unattended when alight.
- Electrically powered hot air blowers are a particular source of danger as no flame is apparent. When using those appliances the same safety measures should be observed.
- Bitumen and Tar Boilers – to prevent heat igniting the roof bitumen or tar boilers, lead heaters and similar equipment should only be taken onto roofs in exceptional circumstances where a non-combustible heat insulation base must be provided.
- Equipment must always be supervised by an experienced operator.
- Gas cylinders must be at least 3m from the burner. Gas hoses should be in a good condition and properly fitted. Cylinders not in use should be stored away from working area.
- Bitumen level and temperature should be monitored, and lid should be kept on the boiler.
- Burner should be turned off before transporting the boiler on a lorry or trailer.

Completion of Hot Work

When work is complete all hot waste materials required should be removed and disposed of safely. All equipment, including gas cylinders, should be removed to a secure area. Where bitumen/tar boilers were employed, only the gas cylinders need to be removed. Permit close out should be undertaken by an authorised individual.

Appendix 1 – Hot Work Permit, Hot Work checklist.