

FIRE SAFETY GUIDE TO HOT WORKS WITHIN THATCHED DWELLINGS



This document is designed to assist NFU Mutual customers in managing the fire risks associated with hot works completed in thatched dwellings



NFU Mutual
RISK MANAGEMENT SERVICES

INTRODUCTION

A known cause of fires in thatched properties, is via hot works. Such works often occur during large scale restorations or refurbishments where lead work is being completed or flat roofs adjoining the thatched section are being recovered or repaired but can as easily be employed for smaller, localised repairs such as paint removal using heat guns and as such. All hot works require extreme care to prevent fire inception.

The safest approach is to prevent any hot works from occurring within or in proximity to the building in question, however this may not be possible, or practical, and may prove necessary where there is no alternative.

Hot works are a concern across all building types however thatched properties provide additional challenges in the form of:

1. Combustible roofing material
2. Known or hidden wall and floor voids with absent fire stopping;
3. Waste matter accumulations in such voids and cavities
4. The increased presence of timber in the form of framing and flooring and;
5. Dry wall construction matter with applied combustible paint, lacquer, varnish or wax finishes.

The design of the building may provide un-compartmented areas which can allow fire to propagate and spread unchecked through the structure and will permit smoke to travel and cause additional damage to delicate and historic finishings. For more remotely located properties, Fire & Rescue Service attendance times and access to usable water supplies can allow a fire time to take hold.

Thatch fires are typically difficult to extinguish owing to the nature of the roof construction and the potential for sub surface flame spread, a phenomenon which can

prevent fire-fighting water reaching the fire. Attempts to extinguish a fire may also result in extensive water damage, assuming a local water supply is available, and traditional building materials being washed away. Whilst elements can be replicated, the original historic detail will be lost forever.

This safety guide is intended for owners and occupiers of thatched dwellings and their appointed contractors and is designed to promote best practice when undertaking work involving the application of heat. Whilst intended for work carried out by contractors/builders, the safety principles should be followed by homeowners/occupiers carrying out their own hot works.

HOT WORK

Hot works in thatched properties generally occur as part of smaller contract works including flat roof replacement or repairs, pipework and plumbing extensions or modernisation and can include lead forming, bitumen bonding, copper pipe brazing and soldering and for smaller works including redecorating, using hot air guns to remove paint layers. The list is not exhaustive and hot works should be considered to include any equipment producing heat or naked flames.

As a general rule, no hot work to be permitted in thatched properties and the increased costs for using alternative 'cold fix' methods to not be a deciding factor in the granting of a hot work permit. In addition, carrying out hot works within a designated, detached workshop located at least 7 metres from the thatched property to be encouraged wherever possible.

However, when there is no alternative, asking your contractor/builder to outline the precautions to be taken prior to, during and upon completion of hot work activity to reduce the potential for associated fire damage is strongly recommended. This will help ensure the contractor/builder is operating within safe

working parameters as well as providing you with some reassurance that the work is being carried out safely. Your contractor/builder will be used to working with such precautions via 'Hot Work Permits' when carrying out commercial work and should respect your interest in reducing fire risks at your home or residence.

GENERAL CONSIDERATIONS

The following general guidelines should be discussed with your contractor/builder when discussing the hot works:

1. Is hot work to only be undertaken by competent and trained personnel and where there is not a safer alternative method of work?
2. Has your contractor/builder provided a copy of their Public Liability insurance certificate and does it have an indemnity limit of at least £5 million?
3. Will the hot work equipment be only operated by a competent person i.e. experience and trained in the use of the equipment, and is it:
 - a. Properly maintained and serviced;
 - b. Attended at all times while alight or in operating mode; and
 - c. Extinguished immediately after use;
4. Can hot work for part assembly be transferred to a safer location e.g. contractor's own premises, specialist workshop or open yard and for commercial premises?
5. Can roofing sections be formed away from the building where possible and then cold fixed in situ?
6. Can push fit fixings should be considered for plumbing solutions to avoid soldering or brazing?
7. Can paint layer removal be completed by hand or using non heat generating tools only?
8. If the property is protected by a fire detection system will deactivation of heat or smoke detectors be strictly limited to the work area, and for the duration of the works only? (This will minimise the risk of false alarms occurring but ensure the detection is in full operation after the works have been completed. If the works are to be conducted in phases, the fire detection system should be fully operational during those interim periods).
9. Is the hot work being carried out at a time that will allow a fire watch of at least 60 minutes by the contractor/builder?
10. Will the home be occupied immediately after the hot works are completed to carry out random checks of the work area and ensure any signs of smouldering can be picked up and the Fire & Rescue Service called?

PRIOR TO HOT WORK COMMENCING

The following guidelines should be checked with your contractor/builder prior to works commencing:

1. Will a trained person not directly involved with the work provide a continuous fire watch during the period of hot work?
2. Will an area of at least 10m around the work be cleared of combustible materials and flammable liquids or gases? Where combustible materials cannot be removed, they together with any openings or gaps in walls, floors and ceilings within 10m, to be protected by non-combustible blankets, screens or drapes. Care should be taken to ensure wall and floor voids are clear of waste matter as this can often be a source of fire propagation.
3. Will all floors be swept clean and combustible floors in the area covered with overlapping sheets of non-combustible material or wetted and liberally covered with sand (but in consideration of any historic flooring materials present) and all floors are to be swept clean?
4. If work is to be undertaken on one side of a wall or partition, has the area on the other side be examined to ensure any combustible materials are not in danger of ignition by direct or conducted heat? (Particular care should be taken regarding any period surfaces that might have had flammable polishes or finishes applied).
5. If hot work is undertaken on plant such as boilers, hydraulic lift equipment etc. will it be purged of hazardous substances e.g. flammable liquids/vapours?
6. Will at least two suitable fire extinguishers to be made available for immediate use?

FOLLOWING COMPLETION OF THE WORK

Once the hot works have been undertaken, the following measures should be checked:

1. Has the area been cleared of any hot waste materials or spent materials generated by the process?
2. Has all equipment, including gas cylinders, been removed from the site or returned to a designated safe store?
3. Has the site of hot works, including any floors below/above and areas on the other side of walls or partitions as appropriate, been monitored for at least 60 minutes after completion of the work to detect and extinguish any smouldering materials or address any hotspots? (we strongly recommend this is followed by further checks being made at regular intervals, of no more than 20 minutes, up to 120 minutes after cessation of hot work by the owner or occupier).
4. Have any sections of the fire detection system that were isolated or covered during the hot works been fully reinstated?

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