

A Helping Hand

Where do we go from here?

Introduction

For over 35 years we have provided a single source of information for architects, builders, surveyors, Thatcher's and property owners. Whether it is a new build, extension or re-thatch project, we offer advice with regard to current building regulations and which fire barriers and systems are best suited or required for each individual project.

Having devoted years to the craft of thatching we have experienced most thatch problems or issues. It's therefore this experience, research and development that make Thatching Advisory Services invaluable.

In addition to our in-house experience, we also have a UK network of TAS Approved Thatcher's; these are invaluable to the way that we operate and can therefore enable us to offer the following:

- ✓ Access to a larger knowledge base for all involved
- ✓ Additional resource to assist with site visits and surveys
- ✓ Correctly identify the most suitable products & solutions for individual properties

Our Services Include:

- ✓ Technical information and advice to architects, contractors, surveyors, Thatcher's and property owners
- ✓ Supply of Fire Retardants and Fire Barrier Materials
- ✓ Supply, installation and maintenance of an Early Warning System for monitoring the temperature of the chimney at the point it meets the thatch
- ✓ Individually tailored Thatch Condition Surveys
- ✓ Comprehensive guide to thatching materials and roof construction
- ✓ Advice to owning a thatched property
- ✓ Avoiding the fire risks of thatch
- ✓ Good Practice & sound advice: Chimney's, Liners, Electrical installations, Wood burners, Hose pipes, Outside lighting, Bonfires etc.

Background

Although centuries old, thatching has seen many changes and improvements over the years and is currently enjoying a revival. A growing increase in the popularity of thatch has led to more new buildings and extensions to existing thatched properties

This oldest roofing method extends far beyond its beauty and provides unique thermal insulation, noise abatement and longevity of service. Currently over 60,000 properties in the UK have a thatched roof with more than 24,000 of these properties being listed

With the average figures of at least one thatched property per week suffering from a fire, more needs to be done to reduce the risks to the following:

- ✓ The occupants of these properties
- ✓ Irreplaceable possessions
- ✓ Our Heritage

Products used have changed or developed with the introduction of fire retardants and early warning temperature sensors for chimneys. These have reduced the fire risks to many thatched properties. Additionally, changes in roof construction & Building Control requirements have maximised the benefits of these fire safety advances.

The Issues

In most cases once a fire takes hold of a thatched building that does not have some kind of fire barrier installed, the result is total devastation and more often than not the building is left with four walls and a chimneystack.



The Issues - Contributing factors for Thatch Fires

- ✓ The use of wood burning stoves
- ✓ Use of unseasoned wood and incorrect materials for lighting the fire
- ✓ No chimney liner fitted
- ✓ Incorrect or poorly fitted liner installed
- ✓ Low chimneys which are often found in thatched properties
- ✓ Old or faulty electrical systems
- ✓ Use of halogen down lighters in the ceilings to include not having fire hoods fitted
- ✓ Outside flood lights installed close to thatch
- ✓ Dirty or Clogged Spark Arrestors
- ✓ Bonfires
- ✓ Limited Education – Not understanding or appreciating good practice

The Issues - Most Common causes of Thatch Fires

In addition to the 'most common contributing factors' it is widely accepted that there are two main causes of thatch fires.

Heat Transfer

- ✓ Heating solutions in the form of wood/coal burning stoves generate a far greater heat output than an open fire, therefore exposing the chimney to greater heat and a higher risk of heat transfer
- ✓ Heat transfer is further increased at the point that the thatch meets the chimney; this is due to the insulating properties of the thatching material
- ✓ Please note that the transfer process can be accelerated if the condition of the brick work or mortar has degraded over the years

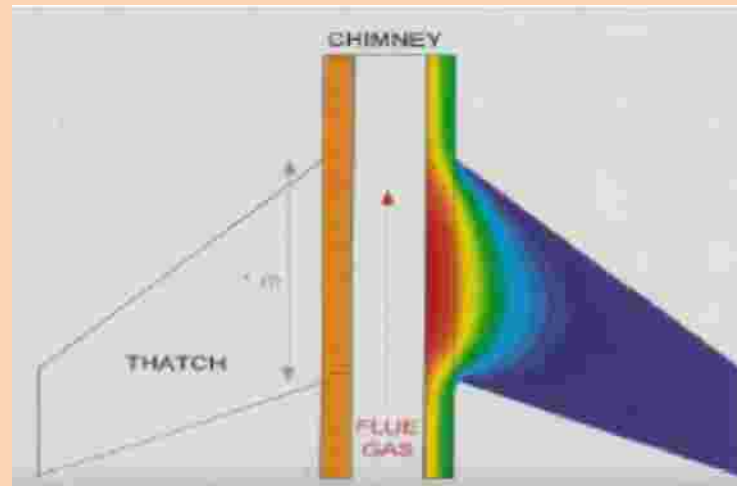


Image supplied by the National Society of Master Thatchers

The Issues - Most Common causes of Thatch Fires

Sparks & embers landing on the roof

- ✓ Embers exiting the chimney have been accredited to the cause of many thatch fires
- ✓ Thatch fires have been reported within less than 30 minutes of a fire being lit or re-fuelled
- ✓ The use of modern wood burning stoves and liners can increase the draught and therefore the risk of embers being exhausted from the chimney. The risk of a thatch fire is further increased when the chimney height has been reduced following many years of recoating works



The Issues - Other Related Problems

- ✓ Some misunderstanding in the market regarding products, solutions and good practice
- ✓ Misconceptions of the benefits of installing fire protection products or systems and therefore the impact that these can have in the event of a fire
- ✓ Due to the likes of the Internet, many products and services are purchased without people fully questioning suitability, provenance and having the appropriate testing

Solutions

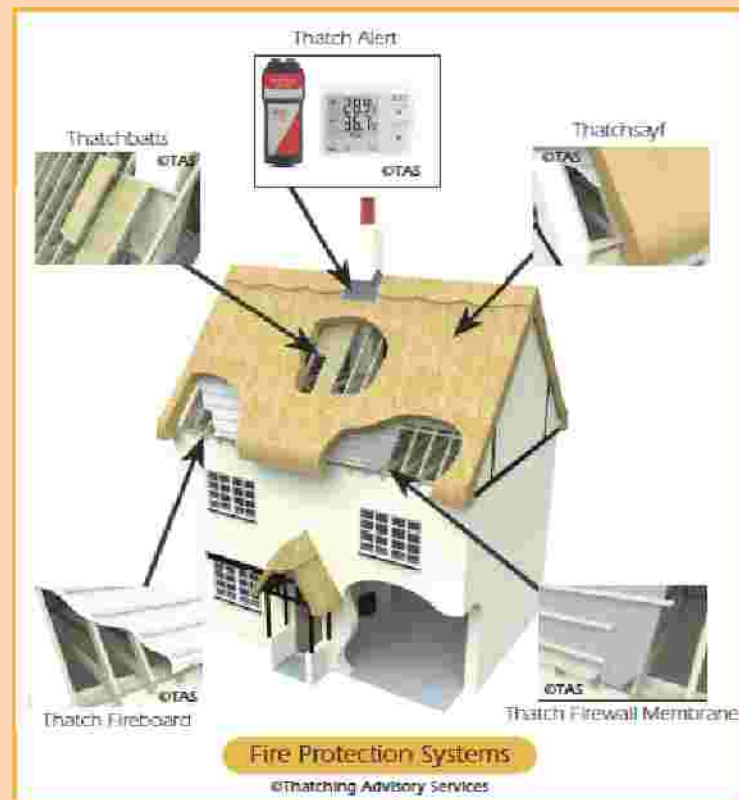
Many products are available in the market; however the key is to make sure that the correct products are selected for each individual application. This includes making sure that these products have the appropriate testing, for example:

- ✓ Any product used as a fire barrier or part of a system should be tested to BS476 Part 3. This test is specifically designed for spread of flame and penetration on pitched roofs
- ✓ If a rigid fire board is used as part of the fire barrier, these need to be vapour permeable and suppliers should have the tests to back this up
- ✓ Any products installed into the roof system need to be non-flammable and non-toxic in the event of a fire

Solutions

Over the past 35 years Thatching Advisory Services have developed a range of fire protection products to meet every requirement for a thatched property.

Each product is tested and therefore has the appropriate standards to meet Building Control requirements and all other known standards such as the 'Dorset Model'



Solutions - Dealing with the 'Most Common causes of Thatch Fires'

Heat Transfer

Chimney Temperature Monitoring Systems are designed as an 'Early Warning System' that works by monitoring the temperature of the chimney at the point that it meets the thatch.

- ✓ Our Thatch Alert System Continues to monitor the temperature after the alarm has been triggered and therefore allows the homeowner to carry on monitoring the temperature once they have taken preventative measures
- ✓ Most installations require the assistance of one of our TAS Approved Thatcher's to ensure that the probes are installed at the correct position on the chimney

Solutions - Dealing with the 'Most Common causes of Thatch Fires'

Sparks & embers landing on the roof

Thatchsayf is water-based solutions containing fire retardant and intumescent chemicals for the protection of thatched roofing. When applied correctly, Thatchsayf penetrates the stems of the thatch by up to 75mm, forming a thin protective film on the surface of the thatch stems.

On exposure to sparks from chimneys, bonfires or barbeques, Thatchsayf will foam (intumesce) and form a carbonised char, which binds the thatch stems together, cutting off the supply of oxygen to the fire, delaying the spread of flame and lowering the radiated heat output.

Solutions – Fire Barriers

The main two options available are either TAS100 Thatch Fire Board or Thatch Firewall Membrane

These are both designed to be installed directly on top of the roof rafters underneath the thatch. They then protect the structure of the property in the event of a fire; this includes limiting the amount of water entering the property during the fire fighting process.

However, many fire services now have access to CAFS (Compressed Air Foam Systems) as an alternative to using just water.

In the event of a fire, the thatch is seen as sacrificial.

Solutions – Fire Barriers

TAS100 Thatch Fire Board

TAS100 Thatch Fire Boards should be screwed or nailed directly on top of the roof joists, then an Intumescent Joint Sealer should be applied at each point the boards join.

All TAS100 Thatch Fire Boards are tested to BS476 Part 3 for spread of flame and penetration and meet the requirement of the 'Dorset Model'

TAS100 Thatch Fire Boards are more commonly used on New Builds or Extensions; this is normally due to Building Control requirements and the fact that the roof is straight enough to accept these systems.

- ✓ 90 minute rating
- ✓ Zero spread of flame
- ✓ Termite, mould and insect proof
- ✓ Vapour Permeable



Solutions – Fire Barriers

Thatch Firewall Membrane

Thatch Firewall Membrane is again installed directly on top of the roof joists with a minimum overlap of 75mm at each point the membrane joins.

Thatch Firewall Membrane is tested to BS476 Part 3 for spread of flame and penetration.

Although Thatch Firewall Membrane does meet the requirements of Building Control, it is more commonly used on existing roofs because it is flexible enough to cope with the variations in many of the roof structures.

- ✓ 60 minute rating
- ✓ Water Resistant
- ✓ Breathable
- ✓ Flexible



Solutions – Insulation Products

New Build & Extensions

Although thatch is a very good insulating product, a typical roof coating will not meet the current thermal insulation value requirement for Building Control. Therefore additional insulation is required if the space directly underneath is going to be a habitable space rather than a traditional loft space.

Existing Buildings

In most cases an existing building will not have to comply with current Building Regulations, however we have seen an increased number of existing buildings install additional insulation as part of either a full refurbishment or in some cases a re-thatch.

Solutions – Insulation Products

Insulation in thatch is normally installed between the roof rafters behind the selected fire barrier, the following benefits can be achieved:

- ✓ Additional Insulation , which will achieve U-Values in the region of 0.16 to 0.14
- ✓ Subject to the product used, the insulation will act as an additional fire barrier and will reduce the heat transfer around the structure of the roof joists

Our Thatchbatts are ideally suited as an insulation product within a thatched property. This is because they are a mineral product which is non-combustible and doesn't release any toxins. Since the 1980's, Thatchbatts have been widely favoured by architects who are working on thatched roof projects.

- ✓ Zero spread of flame
- ✓ Non-Combustible
- ✓ Semi-rigid
- ✓ High Density



Solutions – Comprehensive Service

As part of the solution we offer the following advice or services to a wide range of professionals and homeowners

Advice - Examples

- ✓ Most suitable Fire Protection Products for both New Build & Existing Properties
- ✓ Spark Arrestors – Most Fire Services recommend that these are not fitted and that if they are already fitted, they must be regularly cleaned
- ✓ Electrical installations, including the use of suitable lighting both inside and outside. Plus the installation of interlinked smoke detectors.
- ✓ Suitable Chimney Liners
- ✓ Use of Wood burning stoves
- ✓ Warning about bonfires and fireworks
- ✓ Website – this includes a copy of our comprehensive Thatch Guide, which gives a wide range of advice

Solutions – Comprehensive Service

UK Wide coverage via TAS Approved Thatcher's & Approved Contractors

- ✓ Enables us to offer homeowners local knowledge and trusted experience

Surveys

- ✓ Because every thatched property is individual, we survey every property before we commit to supplying either Thatch Alert or Thatchsayf
- ✓ We also are commissioned to complete Thatch Condition Surveys for Loss Adjusters and homeowners

Solutions – Comprehensive Service

Association with other bodies

- ✓ To enable us to provide a comprehensive service, we also have associations with electrical engineers and stove/liner engineers & suppliers
- ✓ Many other organisations such as insurance companies, fire services, The National Society of Master Thatchers etc. are also a very good source of information and play an important role in promoting good advice for homeowners.
- ✓ As an example most fire services have a 'Thatch Information Pack' which can either be downloaded from the internet or in some cases hard copies are available direct from your local Fire and Recue Service

Good working relationships with the leading thatch insurance

- ✓ Our products are recognised by many of the insurance companies with discounts ranging from 10% to 40% off insurance policies

Conclusion

- ✓ We pride ourselves on being the only organisation to offer a complete range of fire protection products and services as well as providing first-class, professional advice
- ✓ We strive to continue improving our range of products & services to help preserve our heritage
- ✓ We will seek to push the boundaries for improved product performance, through further development and testing
- ✓ To continue to support both professionals and homeowners with fire protection advice on how to best construct, maintain and protect thatch properties and families for future generations
- ✓ If you have any questions or queries, please do not hesitate to contact us, we are here to assist