THE COMPLETE THATCH GUIDE

A Guide for Architects, Contractors and Thatched Property owners

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"The UK's leading advisor in Thatch Fire Safety & Prevention"

Contact us: Tel: 08455 20 40 60 **or email:** info@tas-uk.co.uk

Thatching Advisory Services is the trading name of Thatching Advisory Services (UK) Ltd
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www.thatchingadvisoryservices.co.uk

General Maintenance

It is wise to take steps to guard against the problems that winter can cause. Insurance can protect you against many things but it is not a maintenance contract.

Check that roofs and chimneys are sound and that drain gratings are clear so that water can run away. Pipes and tanks should be insulated, but leave the space beneath your water tank free so that warm air can reach it. Central heating systems should be regularly checked by an expert. Electrical wiring should be tested every five years — many fires have been started by faulty electrical systems. The Electricity Board will often conduct a free visual check for you.

Always, if you are employing the services of an electrician, plumber, Thatcher or any building contractor make sure they have their own Public Liability Policy which should cover any damage caused by possible negligence — your own insurance policy will not cover you so it is important to ask.

If you have an open fire, make sure your chimney is swept regularly and at least twice a year. Having your chimney lined is a sensible precaution.

If you are leaving your home unoccupied for a few days or more, drain the hot and cold water system. If you have any doubts at all please telephone us.

Buying a Thatched Property

All too often prospective owners of thatched houses are persuaded by family and friends that owning a thatched property is expensive and requires constant attention. THIS IS NOT THE CASE. Thatching Advisory Services are able to offer a range of services that will indicate, before you exchange contracts, the immediate costs, future planning and of course the benefits of owning a property that is part of our National Heritage.

SURVEY OF THE THATCH ONLY - Carried out by thatch surveyors employed by Thatching Advisory Services which will confirm exactly in writing the condition of the thatch, what precautions can be taken to extend the life expectancy of the roof and indicate the current price of the works to be undertaken.

NO MATTER AT WHAT STAGE YOU ARE IN THE PURCHASE OF A THATCHED PROPERTY TAS IS ABLE TO OFFER YOU INDEPENDENT ADVICE.

Chimneys, Flues & Fires

There are 60,000 thatched properties in the UK, of which 50-80 suffer a serious fire each year, most of which are completely destroyed. The cost to the Fire Brigade is £1.3million per annum.

Thatch fire insurance losses totals £18million per annum, 90% of the homes struck by thatch fire have a combination of a wood burning stove either a flexible chimney liner or no liner at all.

If the fire brigade is called out due to a chimney fire and it is proven that the chimney has not been maintained, you can potentially face a bill of £2,000 for the call out.

If you are in any doubt with regard to the condition or suitability of your chimney, flue or fire, please contact a registered installation and maintenance engineer.

Five tips to help prevent chimney fires

Please take note, the Fire & Rescue Service recommends the following advice.
- Chimneys should be lined and swept properly by a professional
- The chimney should be swept if you haven't used it for some time
- Extinguish your fire before going to bed or leaving the house
- Never use flammable liquids, burn paper or rubbish or overload with fuel
- Always burn well seasoned or kiln dried wood

Chimneys

The chimney, including the pot, should terminate at least 1.8m above the height of the ridge. Due to the risk of condensation forming as hot gases cool, the chimney pots should be limited to a maximum height of 600mm.

Due to many of thatched buildings being listed a 'common sense' approach has to be taken into account when making this decision, this is because some of the restrictions by Local Authorities may not permit alterations of chimneys to such a large extent. In these cases please take the advice of a specialist engineer that has experience with Thatched properties. The most well known approval body for heating engineers is HETAS.

Advice from the Fire & Rescue Service

Without proper maintenance, any flue from a fire or stove can cause a dangerous build up of carbon monoxide gas. A carbon monoxide detector will help protect you from this risk. Make sure you are not at risk from carbon monoxide poisoning by having appliances installed and serviced by a competent engineer. Never block air bricks, vents or flues

Landlords, letting agents, and tenants

Landlords are legally responsible for
- Maintaining solid fuel heating systems, chimneys and appliances (Office of Fair Trading 2005)
- Providing literature for the relevant appliance

Tenants are responsible for
- Using a solid fuel heating system and using only appropriate fuels for the fire/appliance
- Informing the landlord/agent as and when defects arise with the fire & appliance

Materials

Types of Thatch

There are three commonly used thatching materials:

- Water Reed (Also Known As Norfolk Reed)
- Long Straw
- Combed Wheat Reed (Also Known As Devon Reed)
- Others include Flax, Heather, Broom, Sods, Marram Grass etc—for further information please contact T.A.S.

Water Reed (Phragmites Australis) is the most durable thatching material.

Long Straw is a winter wheat straw that has not been combed (its name refers to a style of thatching rather than a material achieved by any singular process although generally for the last 90 years long straw thatching has used the processed straw from the threshing drum). It has the shortest life expectancy of the three commonly used materials.

Combed Wheat Reed is winter wheat straw which has had the leaf removed and is laid in a similar way to water reed. With modem farming methods tall strong straw has become less readily available.

Life expectancies

Water reed, which is the most durable thatch, can last up to 50 years. Maintenance will include re-ridging every 10 to 15 years.

Combed wheat reed can have a life expectancy of 25 to 35 years. Long straw will last from 15 to 25 years. Both these materials will require re-ridging at 10 to 15 year intervals.

These life expectancy figures can drop noticeably the further west the thatched property is situated. This appears to be due to climatic conditions. The warm, high humidity, clean air conditions experienced in the West Country are ideal for the microbes that begin the decomposition process

Diagram 1: The pitch of the roof will relate directly to the pitch of the thatch and equally the thickness of the thatch will influence the pitch of the thatch. Thus, an l8" (457mm) coat of thatch will lie at a much slacker pitch than a l2" (300mm) coat and therefore a thicker coat will wear more quickly. The thinner the thatch, the steeper the pitch, however there must be adequate thickness of thatch over the fixings, thus a 4" (100mm) coat of thatch is steeper than a l2" (300mm) coat, but because the exposed stem length is longer (and therefore wears more quickly) and because there will be very little thatch over the fixings the thatch will not last as long as a l2" (300mm) coat. An optimum thickness for maximum longevity would be between 9" (228mm) and l5" (381mm) for water reed and 9" (228mm) and l2" (300mm) for combed wheat reed and long straw. Therefore, the point to remember is that there are an almost infinite number of specifications depending on pitch of roof and length of the thatching material.

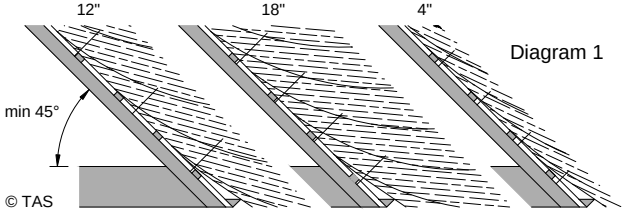


Diagram 1

General Information

Water Reed Specification for New Build Thatch

Thatching is generally recognised as a craft and as such it is almost impossible to give a single specification for a re-thatch. However in the field of new build thatching the majority of work is undertaken using water reed and therefore a specification is possible.

- The Water Reed should be laid to a thickness of approximately 12" (300mm)
- The ridge most commonly used is a block cut, patterned and saddled type ridge
- Supply and fix, ¾ inch (19mm), 22 gauge galvanised wire mesh to the ridge only
- Chimney flashings are usually lead although cement flashings are perfectly acceptable

Fixings (For All Types of Roof)

Hazel or steel runners can be applied and secured by steel thatching nails, fixing wires, twine or spars. The method will depend on the roof in question and the material used, however water reed on a new roof is usually fixed with thatching nails or stainless steel wires attached to rust-proof screws.

Roof Pitch

It is advisable to set the pitch at about 50 degrees. This is not due to the weight of the material which is in fact not over heavy, but rather to facilitate efficient drainage. Dormer roofs and eaves window-roofs should be at least at a 45 degree pitch, if possible.

Insulation of a Thatched Roof

Thatch is inherently a good thermal insulator with 'r' values of 11.1 and 14.3 mK/VV for reed and straw respectively. It is worth noting that generally thatch is considered a 'warm roof construction' and consequently does not require the ventilation of a tiled roof.

U Values

The U value of a roof refers to its thermal conductivity, i.e. how quickly heat is lost from it, and is measured in watts per m² per Kelvin. The U value of 12 inches of Water Reed on a pitch of 45º is 0.35 W/m²K. An R value is the inverse of U.

The current building regulations state that the U value required from a new roof should be 0.2 W/sq m K. Therefore there has to be some sort of insulation even under a thatched roof.

The calculations for U value are relatively complicated and therefore should be left to the architects. However it is definitely worth telling any interested parties that Thatchbatts and either Thatch Firewall or Thatch Fireboard underneath the thatch will give a U value in the region of 0.16.

Weight of Thatch

When calculating for a roof construction a weight of 7 lbsift2 (34 kg/rn2) should be assumed.

Roof Construction Detail

Smaller Span Roofs

For a 16'6" (5.03m) span roof with a clear span a simple form of truss is required as indicated in diagram 3. The trusses should be set at between six to eight feet apart. Rafters, ties, collars and diagonals should be 4" x 2" (100 x 50mm). The diagonal members should be notched so that the purlins will be held at right angles to the rafter.

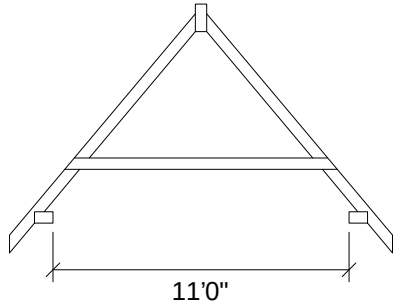


Diagram 2

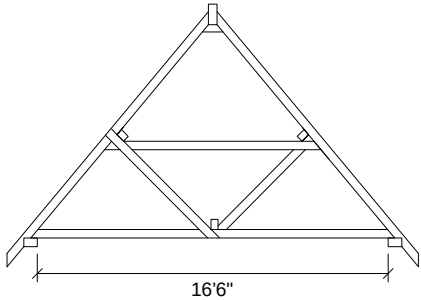


Diagram 3

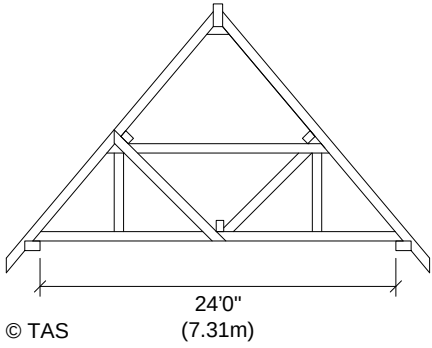


Diagram 4

The size of purlin is dictated by the distance between trusses and will vary from 5" x 2" (130 x 50mm) to 7" x 2" (180 x 50mm). Binders will vary from 5" x 2" (130 x 50mm) to 6" x 2" (150 x 50mm). All ceiling joists should be spiked to the binder to prevent sagging. Binders can be omitted if there is a convenient structural wall at or near the centre of the span. Up to an 11'0" (3.35m) span the construction can be of a simple collar type with the collar set in the bottom third of the roof. 4" x 2" (100 x 50mm) ceiling joists can act as collars if conveniently positioned.

All rafters must be bird-mouthed over the wall plates. 4" x 2" (100 x 50mm) rafters are normally spaced at 400mm centres, to ensure an adequate and secure fixing for the thatch. It is not recommended to exceed this distance.

Valley

A 7" x 1½" (180 x 38mm) layer board is placed over the rafters of the main roof. The jack-rafters are attached to this and the ridge can be set between the twin rafter members of the truss. See diagram 5.

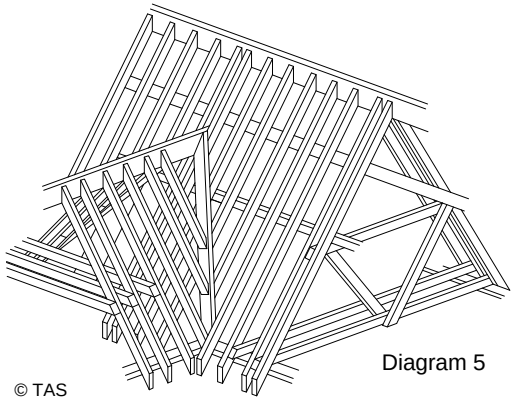


Diagram 5

Medium Span Roofs

The truss illustrated in diagram 4 is suitable for a 24'0" (7.3m) span. Ridge collars and diagonals and bottom ties should be 4" x 2" (100 x 50mm), hangers are 3" x 1" (76 x 25mm). With a span of this size the ceiling joists require support in three positions if the joists are to be kept at 4" x 2" (100 x 50mm). This truss provides for three binders which can be omitted whenever a convenient structural support is available.

Valley

With large and equal spans, a conventional 7" x 1¼" (180 x 32mm) valley rafter should be used. Jack-rafters should then coincide as far as possible. Where rafter spacing's of the two roofs are different, a layer board should be employed.

Ridge

Assuming that the rafters are 4"x 2" (100 x 50mm) at a pitch of 50º a ridge board of 9" x 1¼" (229 x 32mm) should be provided. The top batten should be 2" (50mm) from the ridge and the up stand of the ridge board should also be 2" (50mm). Thereafter, battens should be spaced at 9" (228mm) centers.

Detail at Eaves

For construction see diagrams 6, 7 & 8.

Close Boarded Raking Eave is constructed with a 15" (380mm) fascia held by 2" x 1½" (50 x 38mm) bearers and hangers. The hangers are spiked to the rafters, see diagram 6.

Vertical Fascia & Close Boarded Soffit. The fascia board should be 1¼" x 12" (32 x 300mm) and grooved to take ¾" (19mm) tongued and grooved boarded soffit. The soffit bearers should be 2" x 1½" (50 x 38mm) as per diagram 7 and are fixed to 2 x 1½" (50 x 38mm) plates which are plugged to the wall.

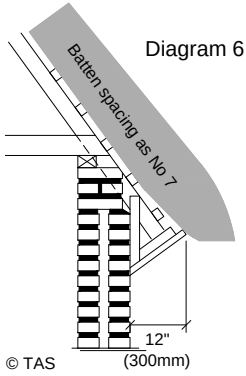


Diagram 6

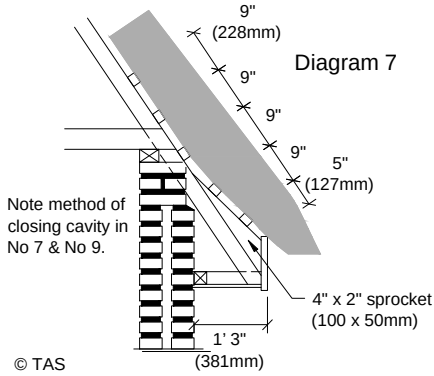


Diagram 7

Open Eaves Type. See diagram 8. This roof is finished with a 3" x 3" (76 x 76mm) tilting fillet. The overhang is in filled with eaves boards and battens and then rendered underneath to prevent vermin getting into the thatch. Unlike diagrams 6 & 7 the top of the cavity is in filled with expanded metal and mortar.

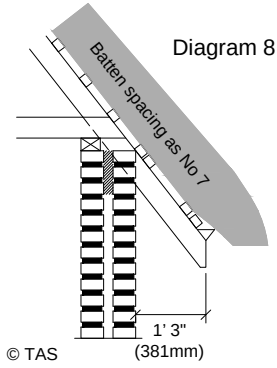


Diagram 8

Eaves Windows

These are often necessary due to the steep pitch of the roof and the deep over hang of the eaves. The windows can be held in a brick spandrel above the normal wall plate. The wall plate is continued through the spandrel to provide support for the untrimmed rafters. These are further secured by 3" x 1½" (76 x 38mm) spacers.

The top of the wall cavity is closed with expanded metal and cement and capped with a 3" x 2" (76 x 50mm) wall plate. The ceiling joists above the eaves window can be extended beyond the rafters to offer an extra securing point or the 3" x 2" (76 x 50mm) rafters forming the roof over the window opening. These rafters have been laid in a staggered formation to provide a curved seating for the thatch. The eaves treatment illustrated (diagram 9) joins onto a standard eaves type at the bottom of the spandrel.

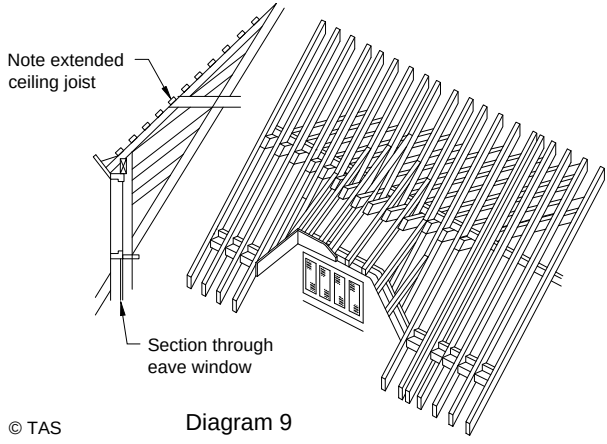


Diagram 9

Verges

See diagram 10 & 11. In both cases illustrated the barge-board should up stand the batten by 1½" (38mm). The top of the cavity may be closed by slates bedded in mortar with the batten passing over this.

N.B. Built-in purlins should not project beyond the wall into the verge. Also the last rafter is set approximately 1" from the inside edge of the brickwork.

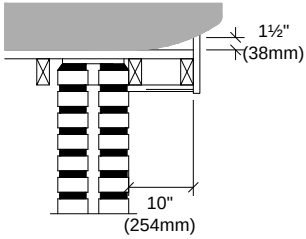


Diagram 10

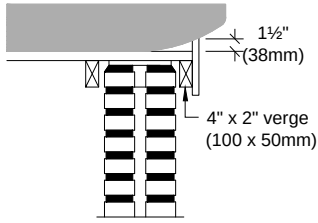


Diagram 11

Velux Windows

See diagrams 12, 13 & 14 Velux window is installed on top of the thatch by constructing a box, the height of which above the rafters is determined by the thickness of thatch (a new single thickness of combed wheat reed or water reed is usually 12" (300mm).

At the rear of the box, sloping lay boards overlain with lead can be placed to facilitate the run-off of water onto the side and front flashings which are on the surface of the thatch.

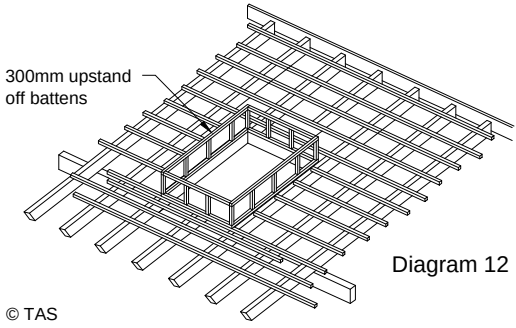
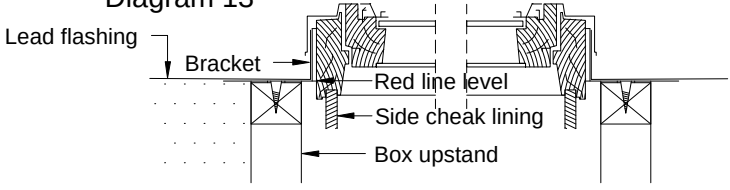


Diagram 12

Diagram 13



SECTION THROUGH SIDES

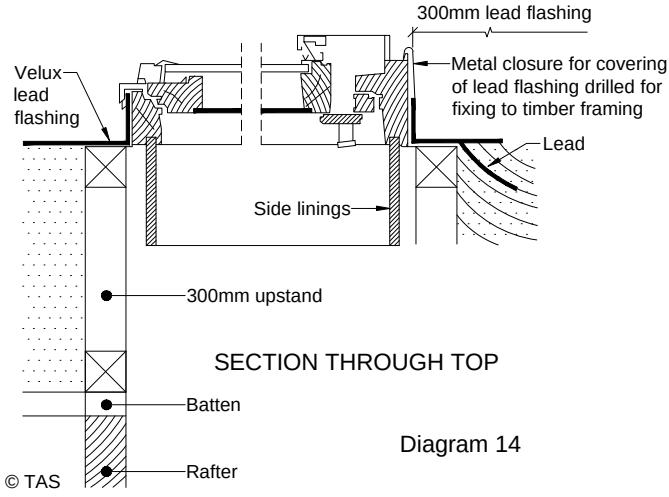


Diagram 14

Dormer Windows

See diagram 15. The construction of the dormer roof is similar to that of the eaves roof except in our examples 3" x 2" (76 x 50mm) ceiling joists have been incorporated to make a flat ceiling above the window aperture. At the foot of the dormer window the rafters are trimmed with an 8" x 2" (203 x 50mm) up stand. The bottom of the sill should be a minimum of 1' 6" (457mm) from the structural roof level. As with verge details a fascia is required with an up stand of 1½" (38mm).

It is important that the pitch should be at least 45º and on no account less than 40º.

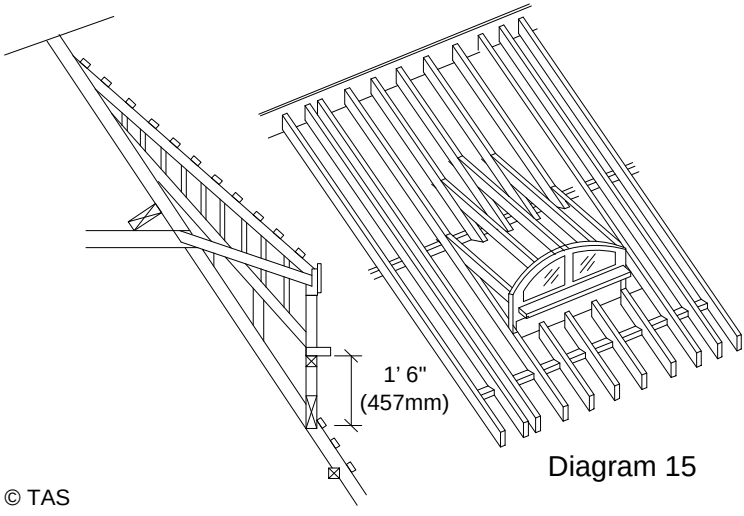


Diagram 15

Chimney Flashing

See diagram 16. The tilting fillet should be 2' 6" (762mm) from the chimney (as shown) and a minimum of 12" (300mm) above the bed of the gutter. This fillet should be 2" x 3" (50 x 76mm) and the gutter bed and up stand should be 1" tongued and grooved boarding. The substructure consists of 3" x 2" (76 x 50mm) bearers, struts and plates. The rafters below and above the chimney should be trimmed into either 4" x 2" (100 x 50mm) or 4" x 3" (100 x 76mm) trimmers dependant upon load exerted on these trimmers.

N.B. Care should be taken that the gutter discharges above the level of the thatch and that the pargetting to the lower portion of the chimney is not lower than the thatch.

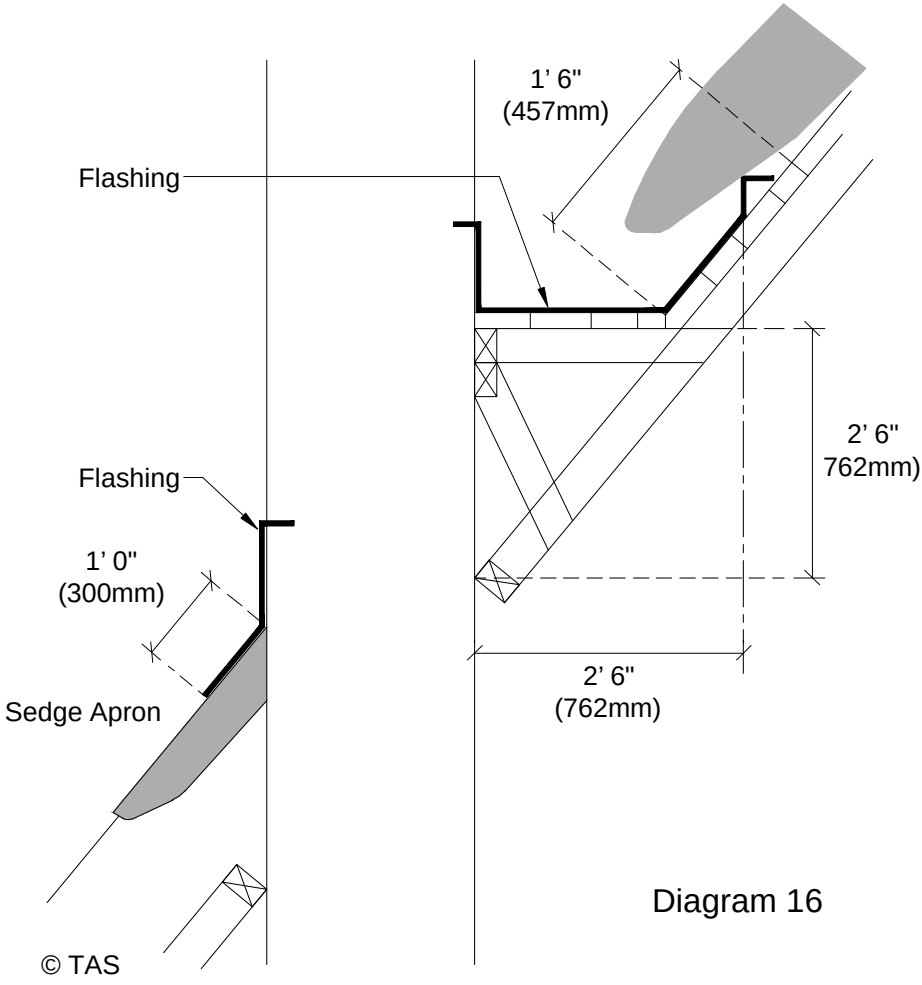


Diagram 16

Thatch New Building & Extensions -"The Dorset Model"

For some years now various Building Control divisions throughout the county of Dorset have grappled with the local Planning demands for new thatch properties within districts and the inappropriate distance from the boundary requirements of Regulation B4 and Table 17.

Generally speaking the authorities have varied the provisions considerably relaxing distance requirements and replacing them with conditions which give better protection for the occupancies.

The approaches were therefore, bound to be different from district to district and this was obviously causing confusion to designers and specifiers. With this problem in mind a technical committee was set up involving representation from all of the eight Dorset Building Control authorities. Meetings and research were extensively carried out in conjunction with the Dorset Fire & Rescue Service, the Dorset Master Thatcher's Association, the Building Research Establishment and the National Inspection Council for Electrical Installation Contracting. Other points of references included various insurance companies specialising in thatch, Rank Hovis MacDougal scientists and Thatching Advisory Services.

As a result a design guide suitable for all the authorities within Dorset was drawn up and for the lack of a better name, was called The Dorset Model" which satisfactorily met the criteria of all the aforementioned specialist advisors. The result of these requirements will give protection to the main structure of the building including the roof members should there be a thatch fire - the thatch being treated as sacrificial.

Companies specialising in thatch roof insurance welcome the model" and recognise that this approach will reduce premiums paid by their customers. Although obviously subject to future 'tweaking' and monitoring, the basis of the model is set out below.

Head of Building Control
West Dorset District Council

New Properties and Extensions

The following guidelines are to advise you of certain requirements if you are considering extending or constructing a thatched roof building to within 12m of your boundary.

Each proposal will be considered upon its merits, therefore early consultation with a member of the Building Control staff is recommended.

A uniform approach to thatched buildings is now being advocated across Dorset where compensatory requirements are considered acceptable to achieve compliance with the Building Regulations.

Requirements

a. Rafters are to be overdrawn with a minimum 30 minute fire barrier (integrity and insulation) this barrier should also be water resisting. 50 x 25mm battens are recommended on a micro-porous boarding to allow the thatch to breathe. (Dorset Fire and Rescue Service also recommend a 60 minute barrier under the thatch for property protection).
The use of a flexible material or cavity foam as fire resisting barrier is not considered acceptable for the purpose of the Dorset Model.

b. The chimney, including the pot, should terminate at least 1.8m above the height of the ridge. Due to the risk of condensation forming as hot gases cool, the chimney pots should be limited to a maximum height of 600mm.

c. A domestic mains and battery powered, interlinked smoke alarm system will be required with one smoke alarm fitted in the roof void. The system should generally be in accordance with that specified in Approved document B to B.S. 5839 Pt. 6: 2004

d. A terrace may not consist of more than three thatched dwellings together.

e. The use of intumescent mastic is required to help seal the fire barrier along all its junctions.

f. The written comments of the adjoining property owner will be requested by the Local Authority for consideration.

In addition to the measures that may be required by Building Control there are a number of recommendations that you should carefully consider at an early stage.

Recommendations

a. The provision of a loft hatch is recommended for fire fighting purposes. The minimum recommended size is 600mm x 900mm.

b. Advice should be sought from an approved electrical contractor regarding the most appropriate type of wiring system. Effects from rodent damage and straw debris need to be considered and the National Inspection Council for Electrical Installation Contracting have issued guidance to their members.

c. It is NOT recommended to install recessed lighting into the ceilings below the thatch. Light fittings within the roof space to be in a bulk head fitting. External floodlight should not be located under the eaves of the thatch.

d. Spark arrestors on the flues are NOT recommended because they can clog and restrict the flow of flue glues.

e. It is recommended that an external water tap supplied from the rising main, is fitted with a hose capable of reaching all parts of the roof.

f. Any metal plumbing in roof space should use compression joints to avoid the use of blow torches.

g. In order to achieve a 'U' value of 0.2w/m²K for thatched roofs, the following was taken from CIBSE Guide A3:
Reed = thermal conductivity 0.09 and a resistivity of 11.1
Straw = thermal conductivity 0.07 and a resistivity of 14.3
This gives a 'U' value of 0.2/m²K for 450mm of reed and 350mm of straw. On this basis ceilings may require additional insulation.

Statistics show that 70% of fires in thatched homes are caused by solid fuel burning appliances. The installation of a woodburner or a multi fuel appliance requires great caution due to the extreme temperatures generated over prolonged periods.

Fire Service personnel may need to consider how best to deal with thatch fires incorporating a fire barrier. The barrier must remain unbroken during fire fighting operations.

Further advice may be sought from the Dorset Master Thatcher's Association on how these matters may best be incorporated into their traditional craft.

The 'Dorset Model' has been jointly produced by the Local Authorities across Dorset in conjunction with Dorset Fire & Rescue Service, the National Society of Master Thatcher's, and after consultation with the National Inspection Council for Electrical Installation Contracting and the Building Research Establishment Ltd on the basis that evidence has shown that thatch can be made sacrificial in the event of fire.

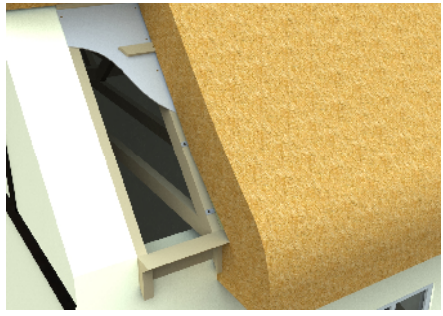
Fire Retardants & Barriers

Thatching Advisory Services has played a prominent role in promoting and applying fire prevention techniques which can be used in isolation or as part of a complete system.

Thatchsayf

THATCHSAYF is an environmentally safe and effective fire retardant coating for the fire protection of thatched roofs. On exposure to heat, the fire retardant forms a protective char that restricts oxygen flow to the surface and reduces the surface temperature of the coated base.

- Tested in accordance with CSIR, DIN, UL(modified) and ASTM E108 requirements and BS476 part 3 2004
- Environmentally acceptable
- Improves thatch compaction
- Allows the thatch to breathe to prevent rotting
- Retards bacterial and fungal growth
- Does not alter the natural appearance of thatch



Wording of typical specification
"Apply THATCHSAYF by high pressure spray to both sides of the roof in accordance with manufacturer's instructions.

Description
THATCHSAYF is a water-based solution of fire-retardant and intumescent chemicals in a polymer emulsion binder formulated for the protection of thatch roofing. This combination provides dual protection with the fire retardant chemicals penetrating the leaves of the thatch and the intumescent, as well as some of the fire retardant chemicals, forming a thin protective film on the surface of the thatch stems.

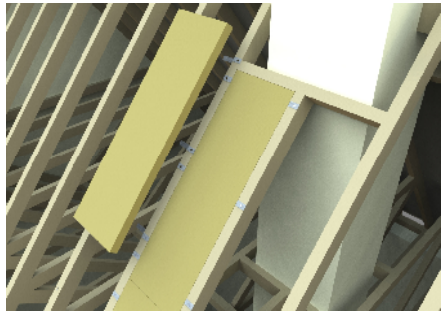
Aesthetics, Fungal growth, Leaching and Environmental Aspects
THATCHSAYF does not change the natural appearance of the thatch and improves compaction without hindering its ability to breathe. Thatchsayf also retards bacterial and fungal growth. In order to minimise water penetration it is crucial that roof slopes are 45º.

Application
THATCHSAYF is available in the UK and Ireland through Thatching Advisory Services who can recommend specially trained distributors to apply the product.

These distributors will then give you a certificate of application detailing the size of the roof and volume of solutions used.

Thatchbatts

Thatchbatts are non-combustible; high quality, resin bonded lightweight rock mineral slabs, designed to provide fire protection to the underside of thatched roofs on new buildings and/or extensions to existing buildings. They will also provide thermal and acoustic insulations as well as a one hour fire rating in conjunction with either Thatch Firewall or Thatch Fireboard.



Application
Thatchbatts are fitted between the rafters, supported from galvanised steel lop hat' brackets as illustrated. The fixing sequence is as follows:

- Secure the lop hat' brackets to the rafters with galvanised nails at 300mm centres, starting 150mm from the eaves. Ensure 150mm dimension is also main tamed at the ridge, if exceeded fit an additional bracket.
- Starting at the eaves, make a mitre cut in the first batt for wall plate/soffit and install the first layer of Thatchbatts, ensuring a good fit between the rafters. A mitre cut should also be made in the batt at the ridge. Part batts, e.g. 300-600mm length, should be supported on at least two brackets.
- Install the second layer of Thatchbatts. Horizontal joints must be staggered with the first layer.
- Secure the layer of Thatch Firewall over the Thatchbatts with a minimum 50mm lap on the horizontal joints.
- Secure battens over rafters for thatch as standard instructions.

Packaging
- 1200 x 400 x 50mm (400 centre rafters)
- Packs of 6 or 8 pieces are available per pack

Handling and Storage
Thatchbatts are very light and easy to cut any shape with a sharp knife. They are compression wrapped in polythene for short term protection. For long term protection they should be stored indoors or under waterproof covering and away from rodents.

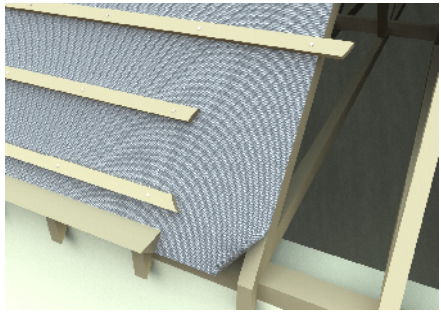
Thatch Firewall Membrane

Thatch Firewall is manufactured to meet the specifications as recommended by Building Control. Thatch Firewall is a flexible fibre glass woven fabric, with a fire retardant coating of specially formulated grey polyurethane with added aluminium pigment on both sides.

With the Thatch Firewall being fixed to the rafters underneath the thatch, it offers a one hour fire barrier (BS476 Part3 2004) classification EXT.S.CA. In the event of a thatch fire the thatch is considered sacrificial.

Benefits

- 1 hour fire barrier
- Easy Application
- Water Resistant
- Breathable
- Strong and Durable
- Flexible



Dimensions
Supplied in 50m X 1.27m Rolls, which covers approximately 61m² (660 sq.ft) including overlap (75mm).

Testing
Thatch Firewall is tested to BS476 Part3; this test was completed by the BRE, Watford. A Copy of the test certificate is available upon request.

Application
Thatch Firewall is laid horizontally across the rafters with a 75mm overlap on all joints. The Thatch Firewall can either be stapled or nailed to the rafters and then battens are fitted over the top with 300mm centres, with the first batten 125mm from the arris rail.

Systems
Thatch Firewall can be used as a stand alone fire barrier in accordance with BS476 Part3, however we also recommend that Thatch Firewall be used in conjunction with ThatchBatts to create a more comprehensive fire barrier and increase thermal insulation values.

Supply
Thatch Firewall is available exclusively through the Thatching Advisory Services, please contact us on 08455 20 40 60

PU28 Fire Membrane

PU28 Fire Membrane is manufactured to meet the specifications as recommended by Building Control

PU28 Fire Membrane is a medium weight fiber glass fabric with a specially formulated aluminum pigmented and fire retardant polymer on both sides. The material is halogen free and has an improved resistance to hydrolysis

Tested to provide a 75 minute fire barrier which is still breathable, waterproof and carries a class '0' rating

Benefits

- 75 Minute fire rating
- Easy Application
- Water Resistant
- Breathable
- Strong and Durable
- Flexible

Dimensions
Supplied in 40m X 1.27m Rolls, which covers approximately 50m² including, overlap (75mm).

Testing
PU28 Fire Membrane is tested to BS476 Part 6: 1989, Part 7 1997 – Spread of flame. The product has also been tested to BS476 Part 20 and 22

Application
PU28 Fire Membrane is laid horizontally across the rafters with a 75mm overlap on all joints. PU28 Fire Membrane can either be stapled or nailed to the rafters and then battens are fitted over the top with 300mm centre's, with the first batten 125mm from the arris rail. PU28 Fire Membrane can also be used for other applications such as partition walls, suspended ceilings and loft space firebreaks

Systems
PU28 Fire Membrane can be used as a stand alone fire barrier. However we also recommend that PU28 Fire Membrane be used in conjunction with ThatchBatts to create a more comprehensive fire barrier and increase thermal insulation values

Supply
PU28 Fire Membrane is available through the Thatching Advisory Services, please contact us on 08455 20 40 60

TAS 100 Thatch Fireboard

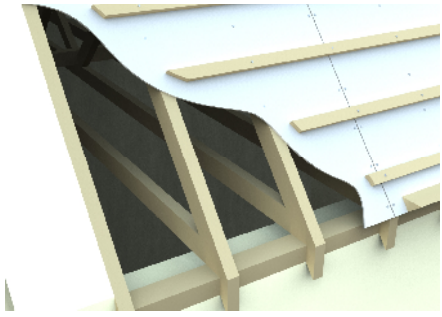
TAS 100 Thatch Fireboard is an environmentally friendly composite board offering a 90 minute fire barrier in accordance with BS476 Part3 classification EXT.S.AA.

TAS 100 Thatch Fireboard meets the requirements of 'The Dorset Model'

TAS 100 Thatch Fireboard out performs cement based boards and regular gypsum plasterboard, due to its superior environmental credentials and performance characteristics.

Benefits

- 90 minutes fire barrier
- Zero Spread of flame
- Easy to install
- Water Resistant
- Impact Resistant
- Sound insulating
- Termite, mould and insect proof
- Can be cut, drilled, nailed & screwed with no splitting
- Each board is supplied with a smooth & rough side



Dimensions
Standard board size is 1220x2440x8mm

Testing
TAS 100 Thatch Fireboard is tested to BS476 Part3 and achieved a Non-flammable classification of EXT.S.AA. This test was completed by the BRE, Watford. A Copy of the test certificate is available upon request.

Application
TAS 100 Thatch Fireboard is positioned on top of the rafters and fixed down with either nails or screws. We would then recommend that all joints are sealed with a durable elastic polyurethane sealant, battens are then fitted over the top with 300mm centres, with the first batten 125mm from the arris rail.

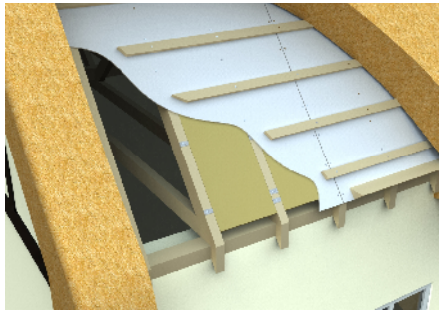
Systems
TAS 100 Thatch Fireboard can be used as a stand alone fire barrier in accordance with BS476 Part3, however we also recommend that Thatch Firewall be used in conjunction with ThatchBatts to create a more comprehensive fire barrier and increase thermal insulation values.

Supply
TAS 100 Thatch Fireboard is available exclusively through the Thatching Advisory Services, please contact us on 08455 20 40 60

Thatch Fire Protection Systems

Thatch Fire Board System

The Thatch Fire Board System is designed to meet the requirements of 'The Dorset Model' and those of building control for thermal insulation values. This system therefore complies with the 12m boundary rule for all new build projects or extensions to existing properties.



The system consists of:

- Thatchbatt 'top hat brackets'
- Thatchbatt Slabs
- Thatch Fire Board
- Fire Resistant Joint Sealer

System overview:

The Thatch Fire Boards will offer a 90 minute fire barrier in accordance with BS476 Part3 classification EXT.S.AA. The Fire Resistant Joint Sealer is used to give the roof integrity for both fire and water resistance.

The Thatchbatts are designed to sit on the 'top hat brackets' between the roof rafters to meet the required insulation levels. Thatchbatts are non-combustible, semi-rigid, high quality resin bonded mineral rock slabs. These are therefore ideally suited for use within the construction of a thatched roof because they offer zero spread of flame and good thermal transfer properties.

Although the Thatchbatts have been designed to be semi-rigid, the 'top hat brackets' ensure that top surface of the slabs are level with the top edge of the roof rafters. The brackets also maintain the position of the slabs within the roof structure.

Application:

1. Six 'top hat brackets' are required for each Thatchbatt Slab; these are nailed to the top of the roof rafters using galvanized nails. 50mm or 100mm brackets are available subject to the thickness of the Thatchbatt required.
2. Thatchbatts are then positioned between the rafters and will sit on the 'top hat brackets'. If 100mm is required then 2 x 50mm slabs are laid ensuring that all horizontal joints are staggered.
3. Thatch Fireboards are then fitted directly on top of the roof rafters with the smooth side facing upwards for improved water resistance. The boards are laid vertically to minimise the amount of unsupported joints.

   Thatch Fire Board may be screwed or nailed on to the roof joists using fasteners that are suitable for the timbers in place. Ensure that screws have enough length to provide a good grip to the roof rafters, with centres being between 150 and 200mm.

   When using self embedding screws, ensure that they do not go more than 0.5mm below the surface of the board. They must also be kept at least 12mm away from the edges, and 50mm away from the corners of the board. Furthermore, ensure that screws do not over-spin, thus losing grip of the timber.

4. Using a mastic gun, apply the Fire Resistant Joint Sealer to all joints in the board.
5. 25mm x 50mm battens are then fitted horizontally over the top of the Thatch Fire Boards at 300mm centres, with the first batten 125mm from the arris rail. Please note: if the Thatcher is going to use crooks, the size of the battens may need to be increased.

The components within the Thatch Fire Board System contribute to a part of the overall roof construction. Therefore please consult with your Architect with regard to the performance of the complete roof structure, to include requirements for other components such as vapour barriers etc.

Additional information for both Thatch Fire Board and Thatchbatts is available from the main menu of our website. Test certificates are also available upon request.

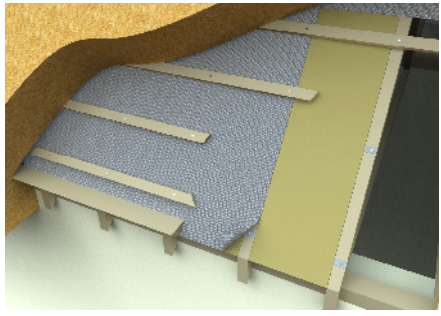
Thatch Fire Membrane System

The Thatch Fire Membrane System is designed to meet the specifications as recommended by Building Control for both spread of flame, penetration and thermal insulation values.

Please note that this system is not recommended as part of 'The Dorset Model' for new build projects and extensions where the property is 12m or less from the boundary. If your project meets these criteria, please look at our Thatch Fire Board System.

The system consists of:

- Thatchbatt 'top hat brackets'
- Thatchbatt Slabs
- Thatch Fire Wall Membrane



System overview:

The Thatch Fire Wall Membrane will offer a 60 minute fire barrier in accordance with BS476 Part3 classification EXT.S.AC. With the added benefit of being a flexible, water resistant and breathable product.

The Thatchbatts are designed to sit on the 'top hat brackets' between the roof rafters to meet the required insulation levels. Thatchbatts are non-combustible, semi-rigid, high quality resin bonded mineral rock slabs. These are therefore ideally suited for use within the construction of a thatched roof because they offer zero spread of flame and good thermal transfer properties.

Although the Thatchbatts have been designed to be semi-rigid, the 'top hat brackets' ensure that top surface of the slabs are level with the top edge of the roof rafters. The brackets also maintain the position of the slabs within the roof structure.

Due to the flexibility of this system it is favoured for existing properties that are not able to accommodate the rigid Thatch Fire Board System.

Application:

1. Six ‘top hat brackets’ are required for each Thatchbatt Slab; these are nailed to the top of the roof rafters using galvanized nails. 50mm or 100mm brackets are available subject to the thickness of the Thatchbatt required.
2. Thatchbatts are then positioned between the rafters and will sit on the ‘top hat brackets’. If 100mm is required then 2 x 50mm slabs are laid ensuring that all horizontal joints are staggered.
3. Thatch Fire Wall Membrane is then fitted directly on top of the roof rafters. The membrane is fitted horizontally with a minimum overlap of 75mm at each point the membrane joins.

   The membrane can either be stapled or nailed to the roof rafters to hold it in place on a temporary basis until the battens are fitted.
4. 25mm x 50mm battens are then fitted horizontally over the top of the Thatch Fire Wall Membrane at 300mm centres, with the first batten 125mm from the arris rail. Please note: if the Thatcher is going to use crooks, the size of the battens may need to be increased.

The components within the Thatch Fire Membrane System contribute to a part of the overall roof construction. Therefore please consult with your Architect with regard to the performance of the complete roof structure, to include requirements for other components such as vapour barriers etc.

Additional information for both Thatch Fire Wall Membrane and Thatchbatts is available from the main menu of our website. Test certificates are also available upon request.

QUESTIONS AND ANSWERS

1. Should I fit a spark arrestor?
No. The fitting of spark arrestors is not recommended because the mesh has a tendency to become blocked by soot and tar. In this condition they are likely to increase the risk of chimney fires.

2. How long does a thatched roof last?
The life of thatch will depend on a number of factors which include the pitch and design of the roof, type and quality of material used, geographical location, and degree of skill exercised by the thatcher. In ideal circumstances thatched roofs have been recorded to last in excess of 100 years but under normal conditions the following life expectancies can be used as a guide:

- Water Reed 30-50 years
- Combed Wheat Reed 20-30 years
- Longstraw 15-25 years

3. How long does a ridge last?
Depending upon the style of construction and type of material that is used, ridges can normally be expected to last for 10-15 years.

4. How do I identify what material is on my roof?
Not easy to define but the following generalisations may give a clue:

Water Reed
- Even dense coat showing butt ends of material only
- Likely to be angular in overall appearance with eaves dressed into place, ends of material at right angles to the stem
- Likely to have a 'block' ridge
- Likely to have wire netting on the ridge only

Wheat Reed
- Even dense coat showing butt ends of material only
- Likely to be softer and more rounded in appearance with eaves cut into shape leaving an angled quill like end to the straws
- Likely to be totally covered with wire netting

Longstraw
- Less dense and more 'shaggy' appearance to coat, may show a mix of butts and ears
- Soft contours to the roof, especially windows
- Should have a continuous line of hazel rod running on the surface at eaves and gables
- These are called 'liggers' they may appear as two lines with cross-sparring between them

NB: Be cautious, thatching materials are not easy to identify and there are many traps for the unwary.

5. Does my roof have a fire barrier?
If you can access your roof void safely, look between the rafters at the underside of the thatch. If you can see the thatch you do not have a fire barrier. If you can see a sheet or board material you may have a fire barrier. Try to establish whether this material is a bituminous or other type of sparking felt which does not constitute a fire barrier or it may be a fibre cement boarding or shiny flexible material which does provide a fire barrier.

6. What fire retardants are available?
Please review the Fire Retardant Section of this document

7. What does it cost to re-thatch a roof?
Approximately **£100-£125** + VAT per Square Meter of roof area including overhanging of eaves and gables.

8. How thick is thatch?
A single coat or thickness of thatch is normally between 300mm and 350mm. This thickness will reduce through the life of the roof as the result of natural erosion.

9. Why do some roofs have wire netting?
Wire netting is fitted to thatch to prevent or reduce damage from birds or other vermin. Ridges are netted in most cases, as are roofs of Longstraw and Combed Wheat Reed. It is common practice to leave Water Reed without netting because it is more resistant to vermin damage.

10. How does thatch stay on the roof?
Thatch is either fixed directly to the roof timbers with steel 'crooks' or screw fixings, or it is fixed to an underlying coat with hazel 'spars' which are twisted to form a staple which is driven through the new thatch into the old beneath.

11. How long does it take to thatch a roof?
Dependant upon the size of roof and number of thatcher's. A family sized four bedroom, detached house would probably take a team of three men about one month.

12. Does strong wind affect a thatch roof?
Under normal conditions a thatched roof, which is in good condition, is surprisingly resistant to high winds. The gale of the late 1980's proved this to be the case.

13. How do I choose a thatcher?
- Select a TAS approved thatcher.
- Select a member of the National Society of Master Thatchers. Select a member of one of the county associations.
- Ask for references or to see examples of work.

14. How do thatcher's price a job?
By means of accurate measurements which is cross referenced with appropriate specifications and market rates prevailing in the area.
NB: Measurements should always allow for the thickness at eaves, gables and ridge.

15. Is there an added fire risk to thatch?
According to statistics, the incidence of fire in thatched properties is no higher than any other type of roofing materials, but it is likely to cause greater damage. This may reflect the caution which is exercised by thatched property owners.

16. Does my insurance premium come down if I have a fire retardant or a fire barrier fitted?
Some insurers will offer a discount in these circumstances.

17. Can I install a velux window?
Velux windows are relatively easy to install in a new roof i.e. prior to thatching. They are less easy to retro-fit in an existing roof but it is usually possible.

18. What pitch should my roof be?
It is advisable to set the pitch at about 50º, dormer windows and eave windows should be at least at a 45º pitch, 45º is normally accepted as the minimum pitch at which thatch will perform effectively.

19. What is the Dorset Model?
The Dorset Model is a set of guidelines to advise you of certain requirements if you are considering extending or constructing a thatched roof building less than 12m from your boundary.

For any other questions you would like answered please feel free to call our office to speak to one of our Technical Team.

Technical Services

Further information, help and advice on these products and their application, is available from:
Thatching Advisory Services

Tel: 08455 20 40 60

Email: enquiries@thatchingadvisoryservices.co.uk

Website: www.thatchingadvisoryservices.co.uk