

Society for the
Protection of
Ancient Buildings
and
Council for Small
Industries in Rural
Areas

Technical pamphlet 10

The Care and Repair of Thatched Roofs

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Problems encountered in the care of and alterations to a thatched roof are legion. Good plain workmanship together with the perpetuation of regional characteristics in both style and the choice of materials are particularly important in an old building. The protection of archaeological features is of uppermost concern; ancient thatch, buried beneath subsequent layers, has sometimes remained undisturbed for centuries and may contain early features such as louvres, wattles and torching, as well as old carpentry details in the roof structure. Alterations and extensions planned, while suitable for other roofing materials, may not fulfil certain conditions essential for thatch; proposed features may be in positions that are found to be unthatchable. This pamphlet attempts to summarize the main areas of difficulty.



Fig. 1: A longstraw thatched roof with eyebrow windows

1 Introduction

Thatch was the most common form of roof covering everywhere in Britain until the end of the mediaeval period and it remained the practical solution for many roofs in rural areas until the mid 19th century.

Materials for thatching were those types of vegetation found readily at hand; wheat straw was the most widely used until the introduction of the combine harvester and the new varieties of shorter stemmed wheat in the 1950s. Long straw, combed wheat reed (Devon reed) and water reed (Norfolk reed), together with sedge as a ridging material, are the forms of thatch in most general use today. Heather remains in some areas; flax and rye are sometimes seen sandwiched as middle coats in old roofs. The wood chips of Sussex, which resemble coarse water reed in appearance, are now very rare.

The term 'traditional' is difficult to apply to thatching because, unlike other building components, where really old thatch survives it is concealed by subsequent coats of thatch and it is not clear when innovations came about. Guidance from early photographs and paintings may help to ensure that old profiles and styles are maintained. Thatch is most effective, both in style and longevity, when kept simple; the ornate designs so often seen today are thought to have been rare before the 19th century. Different considerations apply in rethatching an old building and one of a recent date. A house built prior to the 19th century requires good plain workmanship without embellishment.

There are distinct regional characteristics in methods of thatching and within a region a thatcher may have his own style. The treatment of ridges, eaves and gables varies in different parts of the country and in those areas where there is a strong thatching tradition a departure in style may look out of place. Roofs of the West Country are typically simple in line with a gentle pitch and soft curves; the butt-up ridge is common. In the eastern counties pitches are steeper and the thatch presents a



Fig. 2: Combed wheat reed thatch in Hampshire



Fig. 3: Water reed thatch. The thatched mansard roof with patterned ridge is usually found in East Anglia

more square and angular appearance with a tendency to be more decorative. The wrap-over ridge is typical in both the eastern counties and the steep-pitched roofs of the Midlands. In wheat straw areas, roofs of long straw and combed wheat with their soft, organic forms are particularly suitable for old cottages and farm buildings.

To ensure that the regional character is maintained use an experienced thatcher; one who chooses to work in the local tradition, who knows the local conditions and the wheat or water reed growers. If it is proposed that wheat reed be replaced by water

reed, this may require stripping back to the roof structure which may destroy early and interesting fabric: it will completely alter the appearance of the roof and consequently the character of the building. Some planning authorities require Listed Building Consent to change from wheat to water reed; also where there is a grant aid policy for rethatching the local authority may resist a change of material. The changeover to water reed in wheat reed or long straw regions means the extinction of a whole tradition.

See Section 5. Repairs: on 'Choosing a thatcher'.

2 Conservation

An original roof structure is generally the most historically significant part of an old building; the techniques used in its construction can provide an accurate means of dating. A thatched roof is of particular interest as the layers of thatch may have remained intact and undisturbed for many centuries due to its never having been completely stripped back to the timberwork. Smoke-blackened timbers, thatch, wattlework and smoke-louvres are rare survivals and should be conserved; these date from a time prior to the insertion of chimneys where smoke from the house fire found its way through the roof. (However slight blackening may, in some cases, be due to a leaking chimney).

Few old written records on the craft of thatching survive. It is therefore crucial to perpetuate the knowledge by saving what remains of early work. Means of securing thatch to the roof structure varied and many fixings are of historical interest such as lengths of honeysuckle, and blackberry rods; straw, grass and bark ropes, also hooks and pins (fig 4). Heather, rye, flax, furze and other materials may be found buried below layers of later thatch; limed thatch or clay beaten together with short straw can be of an early date. Changes in support techniques using wattles, brushwood, mats, riven battens or torching can be vital in dating and deciding the original layout of a building.

If any unusual features are found S.P.A.B. or CoSIRA would be pleased to know about them. These rare survivals pose difficult conservation problems and advice should be sought on their means of protection.

WHERE WHEAT STRAW IS TO BE REPLACED WITH WATER REEDS THIS IS LIKELY TO INVOLVE STRIPPING BACK TO ROOF TIMBERS AND IN AN OLD ROOF ANY HISTORICAL EVIDENCE PROVIDED BY THE THATCH WILL THEN BE DESTROYED. Smoke blackened thatch is covered by statutory protection in regard to listed buildings

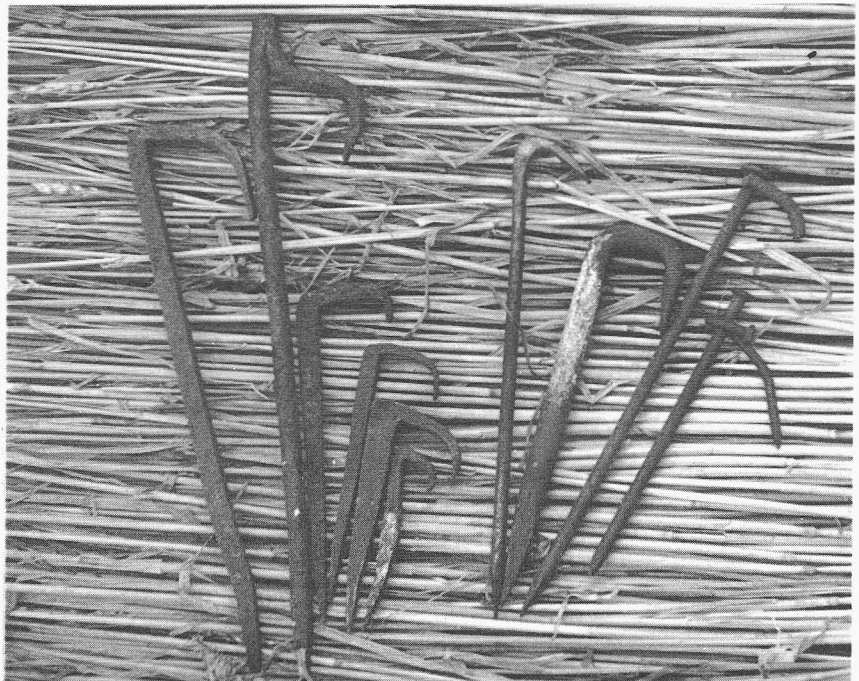


Fig. 4: Thatching hooks (crooks)

Some old roofs built for thatch have timbers that may be too widely spaced, are unsquared on section and insufficiently strong to take tiles or slates; this factor is worth considering when contemplating the economics of replacing thatch with another material.

3 Characteristics of Materials

Long straw. Long straw thatch is easily recognizable. It has long lengths of straw visible on the surface and gives the general appearance of having been 'poured on' in contrast to the closely cropped look of combed wheat reed and water reed thatch. Long straw also has exterior hazel rodding at eaves and gables, a feature seldom seen on the reed types. It is more easily attacked by birds but netting in good order should overcome this completely. The roof pitch is generally steeper for long straw and combed wheat reed than for water reed. Long straw requires more preparation on the ground before applying.

Combed wheat reed. This is referred to as 'reed' in thatching terms because its appearance and the way it is laid on the roof is similar to that of water reed. They both have the same closely packed and quill-like finish

with the butt-ends of the stems forming the face of the thatch. It is not easy to differentiate between a fine water reed and combed wheat reed thatch. One possible way is to note the eaves and gables. In a combed wheat roof these features are finished by cutting and each butt-end will be cut flush with the eaves line.

Water reed (*phragmites communis*). A true water reed roof has the eaves dressed into position with the use of a leggett and not cut with a knife as with combed wheat reed. The roof is often capped with sedge which is rare in wheat thatch. Sedge when new is a mid-light brown whereas a new straw ridge is yellow; but once weathered it is difficult to distinguish between the two.

Sedge (*cladium mariscus*). This marsh grass is pliable and therefore suitable as a ridging material while *phragmites communis*, with its stiff and brittle nature, is unusable for this purpose.

Comparative costs are difficult to evaluate; the situation of the building, whether it is to be rethatched or it requires to be stripped back to bare timbers are all taken into account. Contact the local Master Thatchers' Association for advice.

"The Thatcher's Craft", a CoSIRA publication, describes in detail the ways in which different thatching materials are applied to a roof.

4 The Life of Thatch

The life of thatch will depend on many factors; these include pitch of the roof, roof design, type and quality of material used, geography, topography, and not least, the skill of the thatcher.

It is a fact that roofs in the East last longer than those of the West and South West, the reasons being climate and roof pitch. Topography is important: a difficult site for thatch, more common in the West, but applicable to any county, is the small valley surrounded by trees with a water source such as a pond or stream. Selection of thatching material is important in such an area; longer coarser wheat or water reeds (depending upon the region) are desirable and they should be fixed in a manner that allows the roof to breathe.

Trees should always be kept well back from thatch and never allowed to overhang or brush against the roof.

Thatch performs well in windy situations even where water is present and where rainfall is heavy.

Disturbing the thatch may shorten its life; avoid climbing on the roof or laying a ladder against the material.

5 Repairs

When rain falls on thatch it remains on the surface; water movement is from butt-end to butt-end. Any ingress of moisture is normally through capillary attraction but this seldom exceeds 2" (50mm). Where there is evidence of greater penetration this should be reported and investigated by a thatcher.

It is often not clear whether a re-thatch is necessary, or a repair is worthwhile. Repair can be the appropriate action and will continue the life of an old thatched roof.

Each roof should be assessed on its

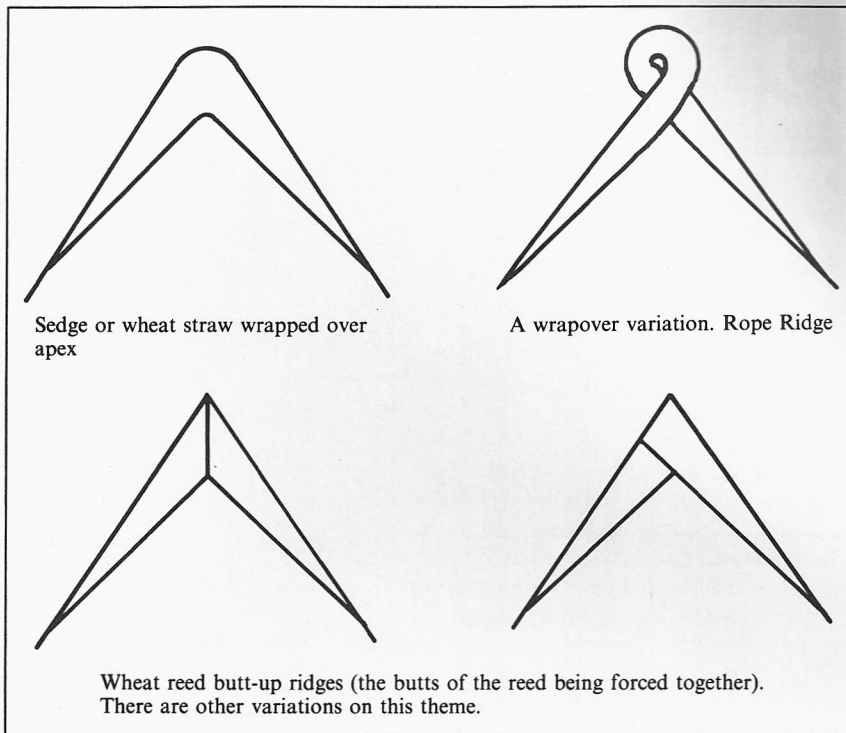


Fig. 5: Ridge cappings

merits, and advice sought from the local Master Thatchers' Association, or a fully experienced thatcher of good reputation. If it is considered that a repair is possible, this should be balanced against the possible remaining life of the roof in the form of a simple calculation: $\frac{\text{cost}}{\text{lifespan}}$

It is not an easy matter to assess the remaining life of an old thatch, as the rate of deterioration varies widely. A knowledge of the history is most useful and should be sought by anyone buying a new property.

The thickness of the thatch decreases over the years as the surface is gradu-

ally eroded. A thatched roof can be thought to be nearing replacement when the fixings are close to the surface. A roof is as good as the amount of correctly laid thatch covering the fixings. Good thatch should not require regular maintenance but it is important to report any faults to your thatcher as soon as possible.

Ridges. There are two basic types of ridge cappings; (a) the wrap-over (b) the butt-up (Fig. 5). There are many variations on these two themes, they include a knotted variation of the wrap-over, and a knuckled variation of the butt-up. In the latter instead of the butts of the material being forced together, the straw is bent double to



Fig. 6: The ridge peak is only found on a butt-up ridge; this is common in south west England

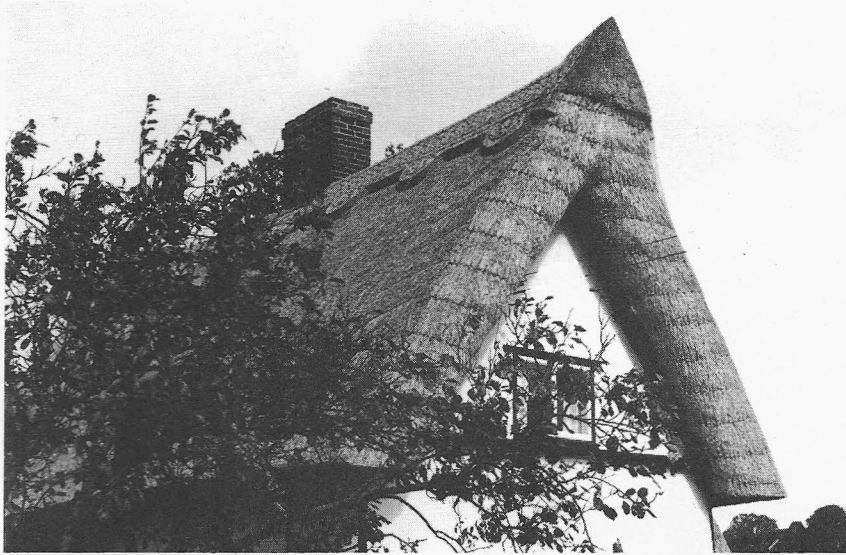


Fig. 7: Traditional East Anglian long straw thatch. Rolled gable and pinnacled to wrap-over ridge. The rolled gable is common in Suffolk, Northamptonshire and Sussex with a variation in Essex

form a knuckle before being pressed together. These types tend to follow area styles, with the wrap-over being found mostly in the East, South East and Midlands; and the butt-up in the South West (Fig. 6). The simplest ridge patterns are most suited to old cottages.

Re-ridging will be required several times during the lifespan of a thatch. The life of a ridge will vary depending upon the type, pitch, location and other factors. An approximate guideline would be 10 to 15 years; although a West Country ridge may be less durable due to the climate and pitch. An untidy ridge may still be sound; seek advice as to whether repairs are really necessary as work may disturb a main roof which is still in reasonable condition.

Overcoating. In most instances rethatching will not involve complete removal of all the old thatch. It is a more common practice to fit wheat reed and long straw over an existing coat of thatch. This is a perfectly satisfactory means, and indeed a traditional way, of rethatching. The existing thatch is stripped back to a sound base; all loose areas and decayed material should be retightened and replaced as necessary.

An excessive build up of old thatch, particularly on steeper pitches, can result in the weight causing the thatch to slip. However where it is felt that a roof pitch could be improved, particularly in the West Country, old thatch can be left on and new thatch built up above.

Ceilings. Sometimes ceiling plaster is fixed directly to the underside of the thatch and removal of the thatch may disturb the plaster.

Chimneys. It is important that thatch around chimneys should be stripped back to the timbers to check that mortar is sound at the base of the stack. Mortar will often be sound at the top of the stack but decayed below the level of the thatch and this has been the cause of some fires. The chimney should be inspected to ensure that no bricks or stones are loose.

In the case of a stack introduced into a previously open mediaeval roof this may well be where extremely interesting remains of the louvre (for smoke escape) exists. The louvre and the way in which the accompanying layers of thatch fitted or formed the louvre could be the most important relic in the building.

Vegetation. Thatch can become covered with lichen and similar type growths; this is particularly so on roof areas with poor air circulation. These coverings are generally not harmful although a few species do have a detrimental effect on the thatch.

Removing vegetation is a skilled task as it is easy to damage the thatch in the process. Both the tools and the methods used vary according to the thatching materials; expert advice should be sought. A traditional method of control is to have the lichen removed at the time of re-

ridging and at the same time have a copper strip fitted each side of the ridge beneath a ligger; this normally has a 50% success rate. Overhanging and close surrounding trees should be cut back to improve ventilation. (Fungicides are available but it should be remembered that anything put on to a thatch which is doing its job will end up on the ground — with all that that implies.)

Wheat will sometimes sprout on the roof where some grain has remained after threshing. In most instances this will not take hold and will soon die off. In the unlikely event of the shoot taking root refer the problem back to the thatcher responsible for the work.

Choosing a thatcher. The thatching craft has always been an essential part of the building industry; thatchers today undergo a four year training period and adequate trainees are available. It is always worth obtaining estimates from more than one thatcher although the lowest estimate may not necessarily be the most economical in the long run. Ask the estimating thatcher to provide names of people they have worked for and addresses of properties they have thatched. A specification for the proposed work should also be obtained from the local Master Thatchers' Association.

Choose a thatcher who works in the local tradition. (See also Introduction.) Contact the local Master Thatchers' Association for names of thatchers. See back page of this pamphlet for address.

6 Roof construction

When alterations to an old roof are contemplated a careful examination of the roof structure is necessary to ensure that original timbers will not be disturbed. If there is doubt about the quality of the roof contact the county council Conservation Officer, S.P.A.B or the Vernacular Architecture Group. Where it is necessary to add new timbers these can usually be fixed at the side or above the old.

Consultation with a thatcher on proposed additional features is essential. Thatchers quite often arrive on a site

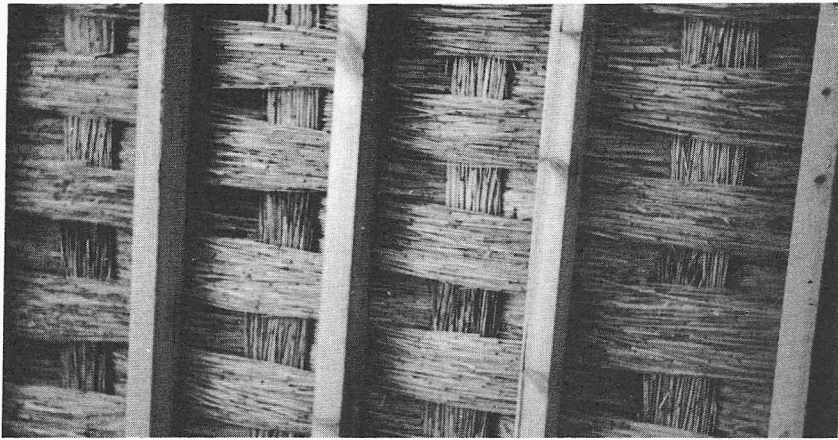


Fig. 8: Fleeking; a woven mat of water reed on the underside of thatch

to start thatching, only to find that the structure provided, while being suitable for other materials, does not include certain elements of construction that are essential for thatch; also features have been planned that are found not to be thatchable. This invariably means that carpenters have to be recalled, extra expenditure is incurred and valuable time is lost.

A common problem is where new windows are planned in positions that cannot be thatched. Space must be allowed for the thickness and length of material to enable the thatcher to turn his thatch to an abutment and for large aprons that extend up to the fixing of the thatch at sway level. Windows, chimneys and vent pipes should be placed well clear of gables and valleys. It is also worth noting that thatched extensions, such as porches, will often be subject to undue weathering from rainwater run-off from the main roof.

Rafters to new roofs should have a minimum thickness of 2" (50mm) to hold thatch hooks.

The minimum recommended pitch for a new roof for thatch is 45 deg. A steeper pitch will provide better weathering resistance but pitches around 60 deg. can make work for the thatcher more difficult. (Pitches of valleys and tops of dormers will often be less than 45 deg.) Lower pitches are, however, encountered on old roofs especially in the South West; these may be part of the traditional building style and it is right that they should be kept.

1½" × 1" (38mm × 25mm) battens to support the thatch are fixed horizontally across the rafters. For water reed the battens are placed at 10" (255mm) centres; for long straw at 6" (150mm) centres; for combed wheat reed at 6"-9" (150mm-230mm) centres: these distances can be widened in some circumstances and the

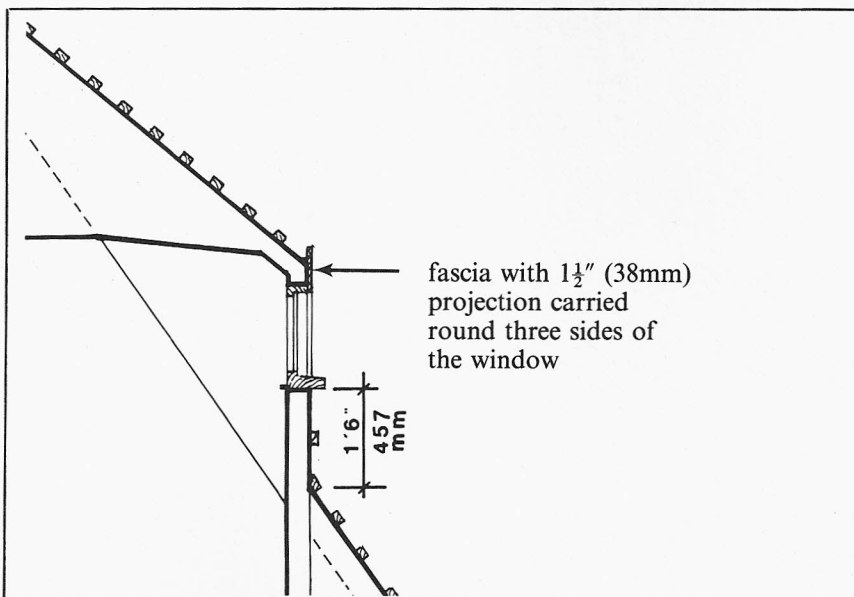


Fig. 9: Section through dormer window

thatcher should be consulted. The top batten is placed 2" (50mm) from the ridge and an extra batten 5" (125mm) from the edge of the eaves to allow for fixing a double course of thatch in this position.

Some early water reed roofs were not fully battened and where the underside of the roof was exposed it was common practice to fix a plaited or woven mat of reed above the rafters; this process known as 'fleeking' is seldom done today but it can be repaired; reed matting is still obtainable (Fig. 8). In the South West a woven wattle hurdle was placed between rafters and battens.

See section 8 on structural aid to fire fighting for information on an access hatch to roof space.

Eaves and verges. The structural treatment of eaves in an old building is of interest; there are also regional variations and these should be retained. Ancient wallplates of stone or hardwood are important elements in the architecture of many buildings and need to be preserved.

To provide the necessary upward tilt to the exposed ends of the thatching materials at eaves, verge and subsequent courses; the fascia (to a new roof) is given a 1½" (38mm) upstand above the battens. For an open eaves, without fascia board — the usual ancient detail — 3" × 3" (75mm × 75mm) tilting fillets are fixed to the rafters.

Gutters. Thatched roofs seldom have eaves gutters. Problems associated with fixing gutters and downpipes off the wall discourage their use; they can also look unsightly. Gutters clog with fragments of thatch and need attention; deep timber gutters are a solution but they do tend to leak.

Ridge. The top batten is fixed 2" (50mm) from the ridge. The upstand of the ridge board projects 2" (50mm) above the apex of the rafters.

Windows. When inserting a new window it is essential to consider proportions of existing windows in the building as well as local types. Traditional thatched dormers housed windows of varying widths but with heights that rarely exceeded 2'6" (.760m). This gave a less disruptive appearance than the taller modern window. The standard window of to-

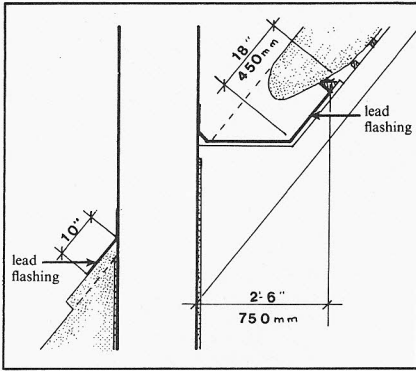


Fig. 10: Chimney flashings

day can also present difficulties for the thatcher.

The eaves or eyebrow window is preferred to the dormer window. A gable-dormer drains less efficiently, it is more expensive to install and maintenance is higher.

For an eyebrow window the wall, or boarding, is carried up above the normal wallplate level on either side of the window and the new wallplate and eaves details are continued across the head of the window. In an old building, boarded cheeks would cause less disturbance to the structure than raising the height of the wall.

The minimum recommended roof pitch for an eyebrow or dormer window is 45. deg but it may be possible in certain circumstances to reduce this. Location is an important factor and this should be discussed with the thatcher.

A dormer window requires a minimum of 1'6" (450mm) between the top of the dormer rafters and the ridge board to the main roof. The sill should be raised to a minimum of 1'6" (450mm) above the structural roof level to allow for the thickness of the thatch and the lead flashing under the sill (Fig. 9). The fascia will normally continue around the three sides of the dormer window with a projection or tilt of 1½" (38mm).

Chimneys. Good access must be provided to the roof space for inspection of the stack to ensure that no bricks or stones are loose. (See section 8 on structural aid to fire fighting and section 5 on repairs). In new buildings flues and the heights of chimneys should conform to the Building Regulations particularly in regard to the proximity of combustible or conducting materials.

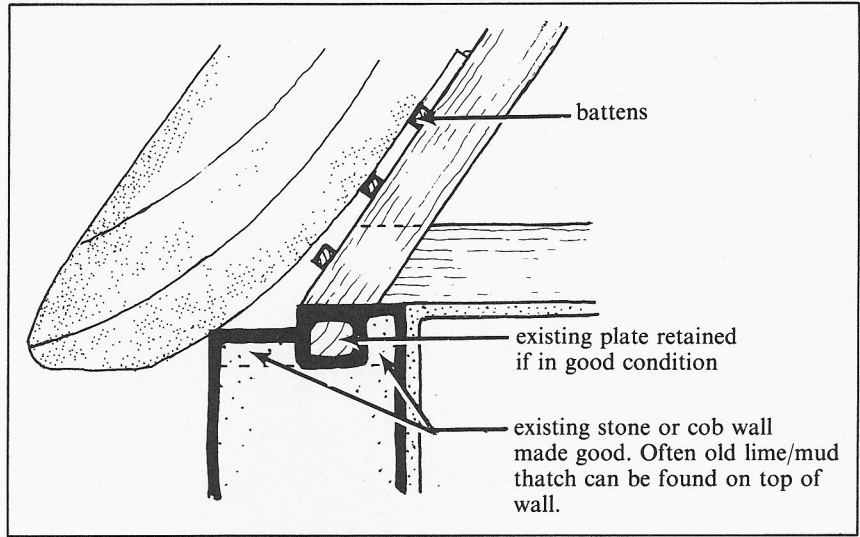


Fig. 11: Suggested treatment where existing rafters and plates are retained

A new stack is best placed at the ridge in order to avoid a back gutter. Where a chimney passes through a pitched roof the distance from the tilting fillet to the face of the chimney should be 2'6" (750mm) and the tilting fillet should be at least 12" (300mm) above the bed of the gutter (Fig. 10). Care should be taken to ensure that the gutter discharges above the level of the thatch and that the rough rendering, or parging, on the exterior of the stack extends to the uppermost surface of the thatch. An alternative but less common method sometimes used behind a

large stack is to use a ridge or saddle piece.

Where there is a chimney with a slab capping there is a tendency for the capping to deflect currents of air down towards the thatch. Spark arresters, in the form of grilles fitted to the openings below the cap, are advisable. For names of manufacturers contact the Master Thatchers' Association.

Lead is the most secure form of flashing for a chimney, but it is not always possible to fit it into random

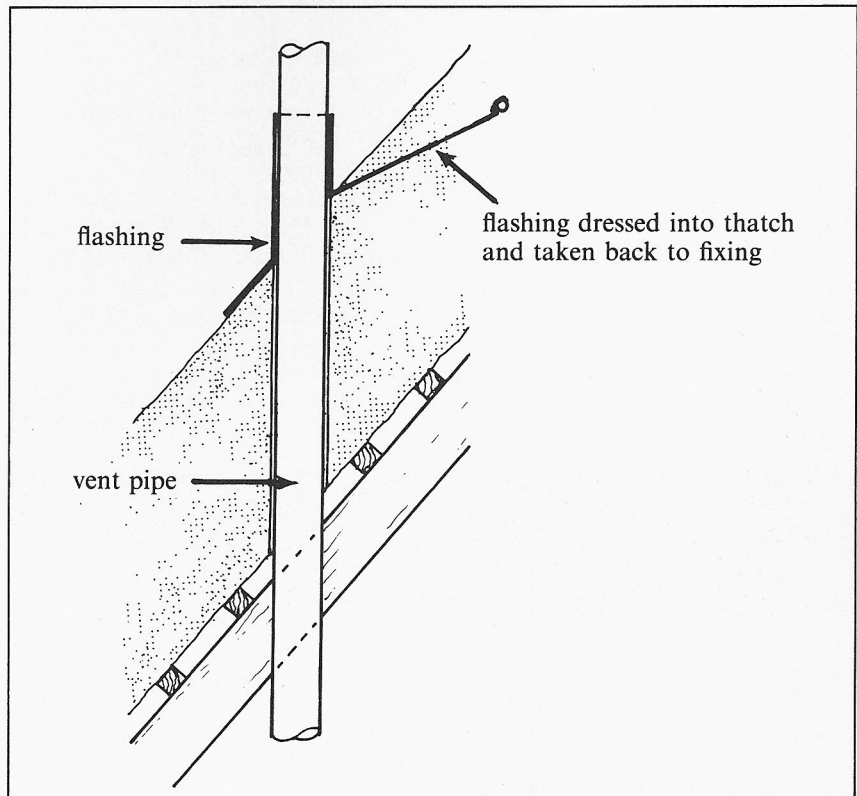


Fig. 12: Vent pipe flashing

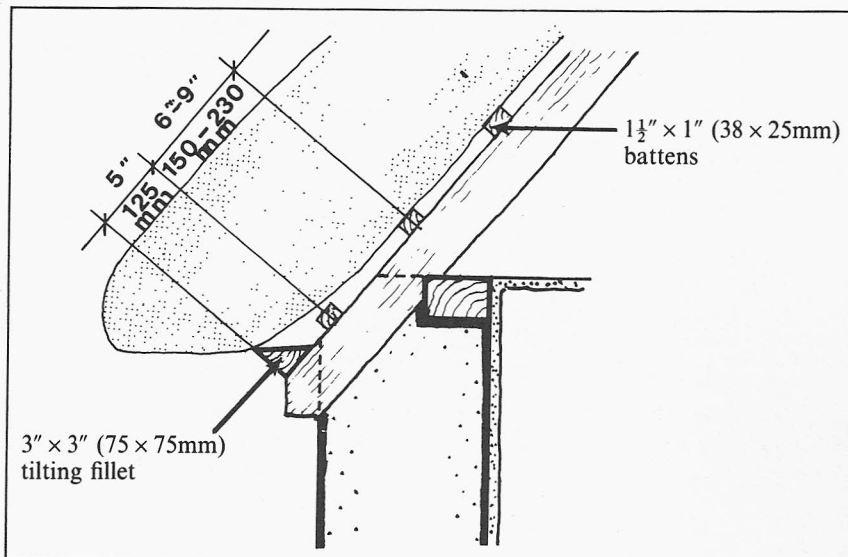


Fig. 13: Section through eaves showing exposed rafters and tilting fillet

stonework; also when dealing with a sparred coat (as in most cases of thatching) the relative position of thatch to chimney may change from one new coat to another, or even from ridge to ridge. Therefore, the alternative to lead is a cement/lime/sand mortar fillet which is often supported with nails fixed into the chimney. These should be renewed with each ridge. An old practice was to use projecting string courses or inserted slate in the stack to shed rainwater but the projections are rarely in the correct positions especially after several coats of thatch have been applied.

Felt underlay. (See also Section 8, Fire Precautions, under 'Draughts'). Felt underlay is NOT advisable for a long straw or combed wheat roof; these types of thatch are applied wet and felt can prevent the straw from drying out. Water reed is applied dry and there may be a case for using felt but the felt must be hung loosely and ample ventilation at the eaves would be required which is not recommended for thatched buildings. Polythene sheeting has been found not to be suitable for use under thatch.

7 Netting

The purpose of netting is to keep birds off, not thatching on; although it does have this use in certain temporary repair situations. Long straw usually needs to be netted as it is more prone to bird damage. For

combed wheat and water reed seek advice; a thatcher will avoid its use where possible. It is better to let the thatch breathe and dry out; new thatch is visually more pleasing in its natural state. In parts of the South-West netting is not needed; sometimes only a ridge and/or gable will require protection.

The disadvantages of netting are that debris, such as leaves, can become trapped and impede the flow of water which may encourage the growth of moss and lichen. It can also be a drawback in the case of fire by causing delay in stripping the thatch.

20 gauge $\frac{3}{4}$ " (19mm) mesh is laid with selvedge edges flush (not overlapping) for easy removal. Metal hooks, designed for the purpose, with the two edges twisted together, are fixed at 9" (230mm) intervals. The netting is laid vertically from ridge to eaves and joined at the apex where it meets at the centre of the ridge. (See also section 8 on Fire Precautions under 'Removal of Wire Netting'.)

Some thatchers are now using plastic nets; (garden netting is not suitable).

8 Fire Precautions

Speed and adequate supplies of water are the vital factors in the event of fire. It is also essential that firemen have easy access to the roof space. Consultation with the local Fire Prevention Officer on matters relating to

the safety of the building is advisable. A loft needs to be regularly cleared of old thatch, straw dust and other debris; combustible materials stored in a roof space are a hazard.

Electrical work. Electrical equipment should be of a high standard and needs to be checked at regular intervals; straw dust on junction boxes without lids can be particularly dangerous. Where supply cables for electricity are above ceiling joists and under rafters in the loft they should comply with the following British Standard titles:—

Mineral-insulated cables. BS 6207: Part 1:1969 incorporating amendment Nos 1-3

Steel conduit and fittings for electrical wiring BS31:1940 incorporating amendment slip Nos 1-5

Steel conduit and fittings with metric threads of ISO form for electrical installations BS 4568:Part 1:1970 incorporating amendment slip No. 1

PVC-insulated cables (non armoured) for electrical power and lighting BS 6004:1984

Electric light fittings in the roof space should be enclosed in a bulkhead or well-glass fitting. Ensure that lights are not left on.

Television aerial. This is best fitted to a free-standing pole at least 20' (6m) away from the roof. Where this is not possible it can be fixed to a gable-end chimney with the lead taken down the wall avoiding any contact with the thatch. Maintenance of aerials can cause damage to thatch and there is also the risk of an aerial acting as a lightning conductor.

Draughts. To inhibit the likelihood of fire, a draught-free roof space is es-

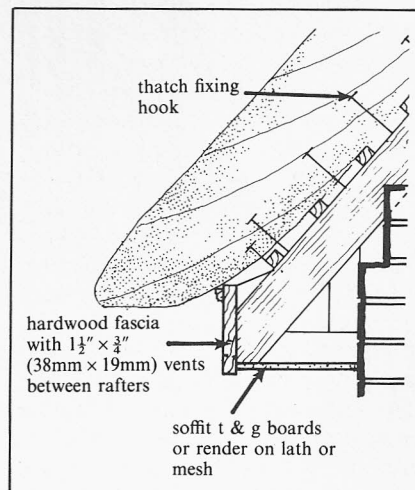


Fig. 14: Closed eaves

batten is then fixed, with the batten edge directly over the centre, and extending the entire length of every rafter except where tilting is to be used; in this case the batten is stopped 4" (100mm) short above the rafter feet. Cross-battens are then fixed overall at normal spacing.

Many old buildings built prior to the 18th century are likely to have rafters of coppice poles or lengths of riven oak; these may be irregular, undressed and often twisted, with plaster between each set of rafters. Where timbers are decayed they can be retained to support the old ceiling and

new rafters may be laid alongside the old. Using relatively stiff insulating board levelling up can be achieved with firring fixed to the joists (Fig. 17).

Fire retarding boards are only fixed on old roofs where it is necessary to strip thatch back to the timbers.

9 Measurement of Thatch

Old Roofs

Area

In the preparation of a reliable estimate careful attention is necessary to ensure that measurements are taken at the correct points, bearing in mind the considerable variation in the amount of stripping necessary to reach the desired sound foundation.

- 1 If the existing thatch is badly worn, and is measured as it stands, an under-estimate of the roof area will result.
- 2 If the roof carries a very thick thatch, hanging low at the eaves, and is measured as it stands an over-estimation will result.

In both cases, therefore, the measurement has to be adjusted

Generally, the procedure is to measure the distance over the roof from eaves to eaves, including the thickness of the thatch at both eaves. The horizontal measurement of length is taken at eaves level, including the finished thicknesses of both barges. These dimensions multiplied together produce the superficial area of the roof. To this must be added the superficial area of dormer and eyebrow windows, hips and valleys.

Although the above method may appear to apply only to roofs with regular rectangular surfaces, it can be demonstrated that the method also produced a correct result when applied to hipped and half-hipped roofs.

SPECIFICATIONS

Quantities per Square Metre (m²)

Water Reed

	Thickness of Coat	No. of Bundles	Crooked or Tarred Twine	Sways
New Work	300 mm 250 mm at barges	9-11	400 mm centres rafters; 4-6 crooks or 100 g of tarred twine	Three 2 m
	300-350 mm in eaves according to pitch			

RIDGE: Per lineal metre: 100-120 spars, 11 liggers. The pattern course should be of sedge; a roll of reed should be fixed on the apex of the ridge and covered with a sedge turnover, 150 mm thick.

Both sides of the ridge are finished with rods in herring bone or diamond cross sparring and cut to the required pattern.

Combed Wheat Reed

	Thickness of Coat	No. of nitches 13 kg per nitch	Tarred Twine	Sways or Binders	Spars	Crooks
New Work	300-450 mm	2.25	70 g	3	3-5	5-7
Undercoat or Waistcoat*	200-250 mm	1.5	70 g	3		
Re-coating	200-250 mm	1.5	18 g		22-28	

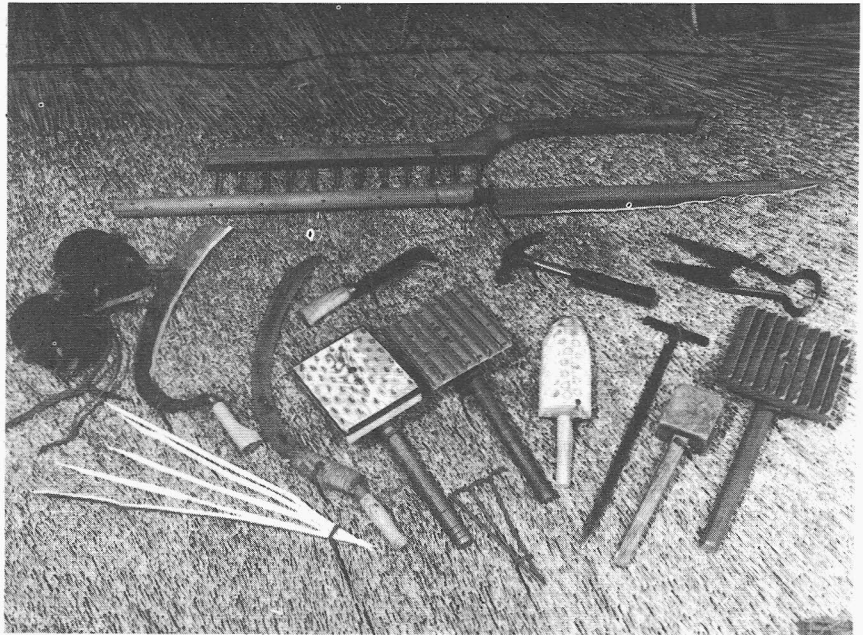
*An undercoat or waistcoat is used in some areas as a base, to which a top or finishing coat of thatch is sparred (fixed).

Threshed Long Wheat Straw

	Thickness of Coat	Amount	Tarred Twine or Crooks	Sways or Binders	Spars
New Work	400 mm	28 kg	70 g	5-7	3
Re-coating*	250-300 mm	21 kg			22-28

*The roof, including all eaves and gables, should be stripped of superfluous and decayed thatch down to a sound foundation of original coat.

Fig. 18: Thatching tools. Leggetts for dressing combed wheat and water reed are shown centre and right



10 Glossary of thatching terms

Water Reed

Grown on British and Continental marshes and riverside marshland; sometimes contains a small amount of mace reed and boulder.

Combed Wheat Reed

Wheat straw passed through a Reed Comber.

Long Wheat Straw

Threshed wheat straw, wetted and prepared by hand.

Sedge

Used for the ridge capping on water reed thatch.

Rye Straw

Threshed and used for ridging.

Bunch

Bundle of water reed approximately 600 mm in circumference. Can also be in 1 m size.

Nitch

A bundle of combed wheat reed weighing approximately 13 kg.

Bed

A prepared heap of long straw, sedge or rye from which a yealm is drawn.

Yealm

A prepared drawn layer of the above, 350–450 mm wide and 100 mm thick.

Spars

Sometimes referred to as broaches. Split hazel or willow rods $\frac{3}{4}$ m in length, pointed at each end and twisted in the centre to form a staple. Used for securing new coat of thatch to existing coat, also to secure liggers on ridges.

Liggers or Rods

Split hazel or willow, 1–1 $\frac{1}{2}$ m in length used on outside surface of ridges and in the case of long straw to eaves and gables also.

Sways, Ledgers or Binders

Split or round rods, 1–3 m in length used to secure thatch to roof by placing horizontally across each course of thatch. They are fixed by stitching with tarred cord or by crooks driven into each rafter at intervals. They are covered by each succeeding course.

Course

A horizontal layer of reed or straw thatch.

Stulch

A strip of thatch approximately $\frac{3}{4}$ m wide running from eaves to ridge, laid as work proceeds.

Roll or Dolly

Bundle of reed or straw 100–200 mm in diameter and of any suitable length, used for building up ridge prior to capping.

Gable

Alternatively known as 'flue', 'verge', or 'barge', the finished edge of thatch overhanging the gable.

Patterned Ridge

Patterns cut into sedge or straw ridge.

Fleeking

A woven mat of water reed used in lieu of battens. Giving an attractive finished appearance to the underside of thatch in buildings with open rafters, such as barns and pavilions.

Flashing

Sheet lead fitting over thatch and into brickwork at junction with chimney.

Pinnacle or Peak Ridges

A raised end in ridge, surmounting gable or top point of hip.

Types

- Plain: ridge finished off flush with surface.
- Decorated: cross sparring or herring-bone pattern.
- Straight Cut: block ridge 80–100 mm thick cut in straight line below bottom ligger.
- Ornamental: bottom edge or ridge cut to any desired pattern.

Crooks or Hooks

Made from 6–10 mm iron rod varying from 200–300 mm in length, pointed at one end, with a turned head at the other. Used in securing thatch to roof by driving into rafters in conjunction with a sway.

Tarred Twine or Cord

Strong cord, treated with Stockholm tar, and used for stitching thatch to rafters or battens.

Master Thatchers Association Local Secretaries (in county order)

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Technical pamphlets published by the SPAB

1. *Outward Leaning Walls* by John E M Macgregor OBE, FSA, FRIBA
2. *Strengthening Timber Floors* by John E M Macgregor OBE, FSA, FRIBA
3. *Chimneys in Old Buildings* by Gilbert Williams FRIBA
4. *Cleaning Stone and Brick* by John Ashurst DArch, RIBA
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6. *Fire Safety in Historic Buildings* by Alan Parnell FRIBA, FSIAD, FIFE, Dip TP and David Ashford ACII
7. *Fire Safety in Historic Buildings — Part II —* (To be published)
8. *Treatment of Damp in Old Buildings* by Andrew Thomas AA Dipl, RIBA
9. *Electrical Installations in Old Buildings* by Alistair Hunt RIBA
10. *The Care and Repair of Thatched Roofs* by Peter Brockett, Thatching Officer, CoSIRA and Adela Wright ARIBA.

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