



NATIONAL SOCIETY OF MASTER THATCHERS LIMITED

REPAIR AND MAINTENANCE POLICY FOR LISTED BUILDINGS WITH THATCH

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NSMT REPAIR AND MAINTENANCE POLICY FOR LISTED BUILDINGS WITH THATCH 2014

The National Planning Policy Framework (NPPF) gives guidance about 'Conserving and enhancing the historic environment'. Heritage assets are an irreplaceable resource and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations.

Historic England's advice for listed buildings with thatch is brief – *“existing thatch should be replaced with like for like material unless a strong case can be made for change.”* Their guidance documents clarify this by saying - A flexible policy towards the choice of thatching materials and styles in no way compromises “traditionalists”, who do not wish to embrace change. However, policies should also allow those who wish to make professional judgements for change to do so without fear of reprisal. The UK is fortunate to have such a rich thatch heritage. It is thatchers who take the responsibility for the durability and quality of their workmanship. With thatch an approach to heritage of constructive conservation is the key to its long-term survival. Indeed, government policy defines conservation as the intelligent management of change. To this end thatch and thatching must be allowed to evolve using the very best current materials and methods necessary for its continued survival. In conservation terms, respect for the past is necessary, consideration for a viable future is essential.

Members of the National Society of Master Thatchers (NSMT) endeavour to work in conjunction with local authorities to realistically balance conservation principles, historical accuracy and the demands of modern usage of old buildings, which includes a duty of care to provide a high level of craftsmanship and a sympathetic and flexible approach relevant to every property in their care.

It remains a thatching fact, that there are no nationally agreed industry minimum standards. It is really important for the survival and appeal of thatch that this situation prevails. However, there is, set out in the 'Repair and Care of Thatched Roofs' from SPAB which gives a simple guide which is often followed.

All NSMT thatchers make decisions regarding the care and maintenance of a listed building using their professional skills. Their evaluation of existing thatch will consider the current condition of the property and past performance of the thatch.

Availability of acceptable quality raw materials will be judged and documented against specifications required through the NSMT materials quality programme. An assessment of the condition of a property might recommend a change in materials, material preparation techniques or replacement of other roof elements. This consideration would be in the best long-term survival strategy for a property and necessary approval would be sought.

NSMT members accept that in many cases concerning listed buildings, care is taken to protect the original fabric of the building in addition to the thatch for the very reason that it is of historic interest. However, a thatched roof had no characteristic of permanence when it was first installed and was installed with the view to its frequent renewal. Thus, the renewal of the thatch is (and was always intended to be) part of the continuing history of the building. Where ever possible it is only the surface layer that is renewed. The appearance of the thatch will change over time, in the same way that the surrounding area will develop, mature and change.

CHOICE OF MATERIALS

The life expectancy of thatched roofs varies considerably; there are many factors which contribute to this. The investigation of alternative thatching materials should be considered and where these can be shown to positively impact on the preservation of thatched buildings their use should be actively encouraged.

English Heritage guidance notes (2000) recognise *Triticale* as an acceptable thatching straw, it has been used extensively for over thirty years. A coat of Triticale will take a natural place in the future historian's view of thatched properties. Some conservation officers resist its use and this stance is not supported by any legislation. In the UK much of straw thatch is now *Triticale*. In considering planning applications for change of materials in listed buildings it is vital that conservation officers understand the seriousness of the situation and are flexible and realistic in their requirements.

There is insufficient home-produced water reed to meet demand; there is very limited response from conservation bodies to increase production. At least 75% of water reed used in the UK is imported. Research is being carried out to understand the issues of reduced longevity in some imported reed. It is recommended that any imported reed is checked and recorded using the NSMT procedures and documentation. Where the use of water reed is on an existing property or where an application for change has been agreed with a local authority conservation officer there is no reason to reject the use of water reed on the grounds of it being imported.

Thatchers have their own preferences on the selection of materials; this will vary depending on their personal choice, materials availability, and geographical location. Research evidence is showing that on average the life expectancy of any thatched roof is less than it was 20 - 30 years ago. The overall cost of maintaining a thatched roof is high and for this reason the NSMT recommends considering a change of thatching style and/or materials where the past history of a roof's life falls below the average. Thatchers may recommend a change of material or thatching style where it can be shown existing materials have limited durability or are in short supply.

Material	Minimum life expectancy
Long straw	15 years
Combed wheat reed	20 years
Water reed	30 years

Table 1. Proposed minimum acceptable time between life expectancy and economic viability for thatching materials. Consideration should be given for change on roofs where the thatch is not meeting these target projections.

THATCHING STYLE

As resources, climate and economic conditions change, what was last placed on a roof may not be the most appropriate material or style for the next generation. Historically, thatchers have always done what was "right" for the time and conditions and it is inappropriate to try to stop the clock or to run it backwards. There are few thatchers who specialise in only one material or a single thatching technique. Survey results (2016) of NSMT members (from the 55% of members who replied) showed that 92% are thatching in combed wheat reed, 56% use long straw and 93% water reed.

The NSMT has no desire to see any style of thatching lost. However, there is a risk that a fixation on one style and period in history will compromise the survival and viability of the current historic thatched housing stock. Whatever the thatching material and style any change is ephemeral and does not irreversibly alter the fabric of the building. For historical accuracy and the future sustainability of thatch, it

is important to understand what lies behind the statements on which policies are based and to ensure that current requirements for thatch are based on modern reality. In a listed building with multi-layers of thatch, where practicable only the top coat will be removed, and the surface cleaned down to a firm foundation, on which to secure a new protective layer.

Property listing was introduced in 1945 with many listings for thatched buildings dating from the early 1970s. Listing was seen as a mechanism for recording and protecting interesting old buildings; the fact that a dwelling was thatched was the only information recorded. NPPF rules apply to what is on the roof at the time of rethatching. Contrary to some local authority claims the NPPF rules do not allow for a change back to material and style of the past.

REPAIRS TO ROOF TIMBERS

Most thatched buildings are listed for their 'architectural or historic interest'. In many cases the decision whether to list them is also influenced by their contribution to the character of the area in which they are located. Putting aside (as far as possible) the issue of what material a roof should be thatched with, there is another major issue for thatchers relating to the repair of the roof framework itself. Unlike many other listed buildings, the use of thatch is commonly the result of a need for economy at the time the building was first constructed. The same need for economy often means that the roof structure is itself of poor quality; and it is all too common to come across a thatched roof whose basic structure can no longer support the load of a new coat of thatch (or the weight of the thatcher who has to climb up onto it to do the work). It is quite common for thatched roofs to be found in this condition, and this creates a dilemma for all concerned if the building is listed.

It is not acceptable for thatchers to strip off a roof before assessing the condition of the structure supporting it; and in most cases the approach to repairs will have to follow the principle of minimising the 'loss of historic fabric'. It may also be necessary to carry out some form of archaeological assessment of the roof in order to determine what features are of greatest importance, and possibly recording of features that will be unavoidably lost. Alterations of this magnitude require planning permission and listed building consent. Retention of existing timber work alongside modern repairs can be carried out sensitively. For any re-thatching or re-timbering work, it may be a condition of listed building consent that records and documentation are provided. Photographic evidence may suffice or it may be a requirement that pre-existing thatch is bagged and annotated. This step is only of value if the historic significance of any retained material is explained.

RIDGES

All thatched roofs are capped with a ridge at the apex, which protects the fixings of the top course of the thatch below. By spanning the thatch on either side, the ridge provides a weather-tight topping designed to shed rainwater and to give a decorative finish to the roof. The appearance of the final finish will depend on whether the ridge is block cut or flush or in some local areas butt - up ridges may be found. Combed cereal straw and Long straw coat work have ridges which are constructed in a similar way; block cut or flush appearing on either.

Historically ridges are an individual thatcher's signature; block cut ridges are special to the UK and should be considered in this context. The choice of ridge type and style should be an owner's preference and a thatcher's recommendation on practicality and longevity. On average a ridge would expect to last from 8 – 12 years; in this respect, the long-term impact of the ridge on the appearance of a property is ephemeral. Many modern thatchers will use both types of ridge during the life of the coat work; this is to protect the property and to reduce cost so that the ridge and coat work weather to a similar life expectancy and replacement. Local authority conservation officers tend to have a preference for ridge type, and generally

the “like for like” policy will apply. A strong case will need to be made for change to a different ridge type from an existing one; listed building consent is required to make changes.

MANAGING THE RISK FROM FIRE IN LISTED THATCHED BUILDINGS.

Preventing the destruction of thatched buildings by fire particularly those that are listed and of historic importance is the greatest conservation task facing the industry now. In risk analysis terms, the permanent heritage loss caused by serious thatch fires is more devastating and long lasting than a change of ridge type, or a change of style or thatching materials. Current trends taken from data collected over a period of 17 years show that at least one thatched property each week is lost or seriously damaged by fire. The majority of these fires are chimney related; the mechanisms of heat transfer from chimney to flue are well documented and understood along with emission of burning brands resulting from the use of inappropriate fuels.

Wood burning stoves with inappropriate liners and deep thatch surrounding a central active chimney are now the most common source of ignition leading to a major fire in thatch. The NSMT constantly monitors the incidents of fires in thatched properties. Developments in fire protection for thatch are regularly evaluated and findings are made available to members who should be able to advise owners and conservation officers in the best strategy for fire understanding and managing the risk in listed buildings with thatch. Angold, Sadd and Sanders (1998) Fire in thatch reports research in to the propagation, spread and prevention of thatch fires. The NSMT regularly reviews any updates or validated research which compliments this original work.

THATCH, U VALUES, PART L AND RDSAP“U” Values and Energy Performance

In 2007 the introduction of the new energy performance measurements for all properties requires a calculation of the insulation performance of the roof. Building insulation is measured by the “U” value of the walls, floors and roof. The measure represents how much heat passes out of a building. The lower the value the more heat is kept in by the part of the structure being measured. The “U” value is actually a measure of the overall ability of a roof to prevent heat loss and is measured in watts per square metre per degree Celsius.

For major repairs and refurbishment, it is a legal requirement to notify LABC (Local authority building control), complete the necessary forms and agree the work with the LABC officer, before any work is undertaken. LABC vary in their regulations from region to region regarding thatched roofs. However, it is important that LABC are contacted and are aware of any major repair or replacement work being carried out on thatch.

THATCHERS - *best practice*

Thatchers, backed by the NSMT, should be recognised as local experts competent to provide advice to local planning departments.

- ◆ Local authority planning departments must be prepared to take responsibility for any decisions that they impose.
- ◆ With the client, discuss availability and choice of materials timescales for commencement and completion of the project.
- ◆ Investigation of the internal condition of a roof before any thatch is removed.
- ◆ Consultation with the local Fire & Rescue Services to ensure any proposed layered roof timberwork does not compromise health and safety in the event of a thatch fire.
- ◆ An assessment of the history and possible archaeological significance of the roof.

- ◆ When roof timbers require replacement consider the retention of parts of the old structure of the old roof: possibly only the frames and purlins, but also rafters in many cases, particularly those that support historic ceilings.
- ◆ Consider what thatch requires removal and any pre-thatching remedial work including chimney condition.
- ◆ Consultation with Building Control regarding compliance with "U" values and insulation requirements prior to starting any work.
- ◆ With the client, meet with the local conservation officer, be prepared to assist with any planning documents, ensure these have been submitted and agreed before any work is started.
- ◆ If consultation with conservation officers is unsatisfactory consideration should be given for going to appeal.
- ◆ With the client, carry out and document risk assessments for health and safety and fire prevention using templates. Make sure these are agreed and signed by all parties.
- ◆ Include any recommendations for fire prevention measures in the written estimate. Where appropriate indicate to the client, in writing, the advisability of seeking specialist advice on choice of appliances and chimney linings for active flues.
- ◆ Prepare and submit an estimate of the work agreed including a clear description of choice of materials and summary of each stage of the process. Terms and stage payments should be agreed and signed off at this stage.
- ◆ Thatchers own records in line with the NSMT material quality testing of all raw materials and a comparative quality assessment should be submitted to the owner as part of the property records and should also be filed as a demonstration of due diligence in case of subsequent complaints.
- ◆ Thatchers should consider signing a disclaimer for any proposed/imposed work that in their opinion is not in the best long-term sustainability of the property.

Appendix 1.

Areas of Agreement and Disagreement with Historic England - interpretation of guidance policy.

The various official and powerful heritage bodies within the United Kingdom, such as Historic England and SPAB should deserve and earn our respect and support. However, their entrenched academic approach to conservation (as experienced in recent planning appeals) can lead to highly-skilled thatchers with long years of relevant experience within the heritage sector being tasked with adopting materials and approaches that are against good craft practice and which if accepted would compromise the long term protection of historic buildings with thatched roofs.

One rightly concedes that artisans cannot be permitted a *carte-blanche* approach on an historic structure, but this should work in reverse too, when insisting on differing materials simply because, from an academic standpoint, a philosophy says it should be so. This academic approach actually compromises the continuity of original materials, purpose and the historical integrity of a building and the development of a craft.

Areas of Agreement

- 1.1 The sustainable management of the historic environment depends on sound principles, clear policies and guidance based on those principles, and the quality of decisions that stem from their consistent application. (EH 2008) appendix 2.
- 1.2 Periodic renewal, such as re-covering roofs, differs from maintenance in that it occurs on a longer cycle, is usually more drastic in nature and often has a greater visual impact. It involves the temporary loss of certain heritage values. By contrast, the consequence of not undertaking periodic renewal is normally more extensive loss of both fabric and heritage values. (EH 2008) appendix 2.
- 1.3 Sufficient work should be undertaken to achieve a lasting repair, the extent of the repair should normally be limited to what is reasonably necessary to make failing elements sound and capable of continuing to fulfil their intended functions.
- 1.4 The use of materials and/or techniques with a lifespan that is predictable from past performance is important. Recognise that not all historic building materials or techniques were durable; once failure occurs, stabilising the structure depends on addressing the underlying causes of the problem, making documented changes and not perpetuating inherent faults.
- 1.5 There are no definitive rules for thatching and a skilled craftsman will choose the method most suitable for any particular set of conditions and requirements. (EH 2000) appendix 2.
- 1.6 Combed wheat reed, - by this term winter grown cereal straw is meant: it may be wheat, rye or a hybrid (*Triticale*). Long straw, - in the choice of straw the same considerations apply as to the straw used for combed wheat reed. The straw is not combed.

1. Areas of Disagreement

- 2.1 The NSMT agrees in principle with the guidance given by Historic England as shown in appendix 2. However in recent times the NSMT finds itself in disagreement with interpretation of the rules by some EH personnel and their advisors from COTTG.
- 2.2 In line with EH statement for materials suitable for combed wheat reed *Triticale* has been used successfully for ~ 30 years. The NSMT strongly disagrees with EH when the use of *Triticale* is trying to be restricted.
- 2.3 Availability of thatching materials should be based on quality assessment not what is in suppliers' barns.
- 2.4 Imported water reed is an acceptable material and prejudice against its use should be stopped.
- 2.5 The NSMT disagrees with EH when the imposition of policy takes priority over the sensible protection of a property through change of materials or thatching style
- 2.6 Thatching is a craft the interpretation of thatching style and method of preparation of materials is very much based on a thatchers preference, geographic location and training. This is particularly important for the survival of long straw thatching.
- 2.7 There are methods of preparing straw for long straw thatching other than drum threshing. New methods which reduce the high labour costs should be acceptable.
- 2.8 No credible research data has been provided to show how many roofs were originally thatched in long straw. The like for like policy should also be applied against councils who are trying to change roofs thatched in other styles to long straw. The claim of tradition is not proven.
- 2.9 It is essential that decisions are based on proper research. Too often, EH are making sweeping statements without robust research to support them.
- 2.10 It is not acceptable for any data and measurements put forward by the NSMT for these to be dismissed out of hand, without an alternative being given to support the arguments, which is what is happening at present.
- 2.11 Moisture measurements used as a measure of quality and thatch longevity are extensively made using moisture probes originally designed for measuring moisture in straw bales. While it is true these are not designed for use in thatch they have been accepted on a global basis. Probes are regularly checked against conventional methods of moisture measurements and against each other and have been shown to be an accurate indication of the moisture levels within a roof or in bundles.
- 2.12 It is disingenuous for COTTG to be used as representative of the industry, they are a small pressure unrecognised group, with EH employees acting as judge and jury.
- 2.13 The Burgoynes' thatch fire paper is an hypothesis which at the present time has not been evaluated through robust research. Its adoption by other bodies is clouding the message to owners of thatch and putting properties at risk.

It is important to recognise that our historic buildings are not the sole preserve of heritage bodies to dictate to alone, but decision making should also take account of the traditional building crafts that actually erected, articulated and decorated them; and for centuries successfully carried out repairs. At this point in time these same artisans are expected to take responsibility when a roof fails, no matter who made the decision and whether they agree with a decision regarding its maintenance and repair.

Appendix 2.

Published Historic England Policies and Guidance in relation to thatch in listed buildings.

1. Extracts relevant to thatching from CONSERVATION PRINCIPLES POLICIES AND GUIDANCE FOR THE SUSTAINABLE MANAGEMENT OF THE HISTORIC ENVIRONMENT (April 2008).
2. Extracts from Thatch and thatching: a guidance note. English Heritage (June 2000)

1. CONSERVATION PRINCIPLES POLICIES AND GUIDANCE FOR THE SUSTAINABLE MANAGEMENT OF THE HISTORIC ENVIRONMENT (April 2008) Foreword & page 52, paragraphs 114 – 119

FOREWORD

The sustainable management of the historic environment depends on sound principles, clear policies and guidance based on those principles, and the quality of decisions that stem from their consistent application. We need a clear, over-arching philosophical framework of what conservation means at the beginning of the 21st century; and to distil current good practice in casework, given the impending reform of legislation and the need for more integrated practice. These Principles, Policies and Guidance for the sustainable management of the historic environment have been developed through extensive debate and consultation, both within Historic England and with colleagues in the historic environment sector and beyond. Our main purpose in producing the Principles, Policies and Guidance is to strengthen the credibility and consistency of decisions taken and advice given by Historic England staff, improving our accountability by setting out the framework within which we will make judgements on casework. Our success will also be measured by the extent to which this document is taken up more widely in the sector. Over time, and in conjunction with legislative reform and improving capacity in the sector, we hope that the document will help to create a progressive framework for managing change in the historic environment that is clear in purpose and sustainable in its application – constructive conservation.

Lord Bruce-Lockhart Chairman English Heritage April 2008

PERIODIC RENEWAL

- 114 Periodic renewal of elements of a significant place, intended or inherent in the design, is normally desirable unless any harm caused to heritage values would not be recovered over time.
- 115 Periodic renewal, such as re-covering roofs, differs from maintenance in that it occurs on a longer cycle, is usually more drastic in nature and often has a greater visual impact. It involves the temporary loss of certain heritage values, such as the aesthetic value of the patina of age on an old roof covering, or the value of a dying tree as a habitat for invertebrates; but these values are likely to return within the next cycle, provided the replacement is physically and visually compatible (normally 'like for like', to the extent that this is sustainable). By contrast, the consequence of not undertaking periodic renewal is normally more extensive loss of both fabric and heritage values.
- 116 The justification required for periodic renewal will normally be that the fabric concerned is becoming incapable of fulfilling its intended functions through more limited intervention; and additionally, in the case of landscapes, that succession planting cannot achieve the objective in a less drastic way. Harm to values that will normally be recovered during the next cycle can, in most cases, be discounted, but potential permanent harm cannot be ignored in making the decision.

REPAIR

- 117 Repair necessary to sustain the heritage values of a significant place is normally desirable if:
- there is sufficient information comprehensively to understand the impacts of the proposals on the significance of the place; and
 - the long term consequences of the proposals can, from experience, be demonstrated to be benign, or the proposals are designed not to prejudice alternative solutions in the future; and
 - the proposals are designed to avoid or minimise harm, if actions necessary to sustain particular heritage values tend to conflict.
- 118 It is important to look beyond the immediate need for action, to understand the reasons for the need for repair and plan for the long-term consequences of inevitable change and decay. While sufficient work should be undertaken to achieve a lasting repair, the extent of the repair should normally be limited to what is reasonably necessary to make failing elements sound and capable of continuing to fulfil their intended functions.
- 119 The use of materials or techniques with a lifespan that is predictable from past performance, and which are close matches for those being repaired or replaced, tends to carry a low risk of future harm or premature failure. By contrast, the longer term effects of using materials or techniques that are innovative and relatively untested are much less certain. Not all historic building materials or techniques were durable – iron cramps in masonry, or un-galvanised steel windows, for example, are both subject to corrosion. Some structural failures are the inevitable, if slowly developing, consequences of the original method of construction. Once failure occurs, stabilising the structure depends on addressing the underlying causes of the problem, not perpetuating inherent faults.

2. Thatch and thatching: a guidance note. English Heritage (June 2000)

These Guidance notes 2000 acknowledge that *“there are no definitive rules for thatching and a skilled craftsman will choose the method most suitable for any particular set of conditions and requirements. No two roofs are the same and from time to time the thatcher will need to be flexible in his approach to the job, perhaps occasionally combining one method with another to achieve the best results”*

“.....the diversity of thatching materials and styles is not an historical accident”

Appendices 2. General guidance on design methods. (page 16)

Combed wheat reed

“By this term winter grown cereal straw is meant: it may be wheat, rye or a hybrid.”

Long straw

“In the choice of straw the same considerations apply as to the straw used for combed wheat reed,....but the straw is not combed and has passed through the drum of a threshing machine.”