APPENDIX 1

THATCH AND THATCHING IN SOUTH CAMBRIDGESHIRE

Initial Draft - December 2005

Purpose

The purpose of this document is to clarify the Council's position on the preservation and enhancement of local thatch and thatching techniques in South Cambridgeshire and to present guidance to assist with the implementation of the adopted planning policy.

Reference should also be made to the adopted "South Cambridgeshire Local Plan 2004" and the, "South Cambridgeshire Design Guide – 24th Nov. 2005".

A. Background

1. It is generally acknowledged that thatch is a distinctive feature of the English landscape, particularly in the south and the east, and should be conserved as part of our built heritage. The materials and the methods by which they are applied reflect both the broad geographic and economic character of their areas over time. The survival of regional diversity in thatching is, therefore, a central aim of conservation policy in those areas where the character can be firmly identified.

2. South Cambridgeshire has historically been a predominantly arable area and consequently wheat straw has been the most widely available thatching material, although some water reed has always been used on the fen-edge.

3. In more recent times there has been an increase in the use of reed over long straw, due to the perceived greater longevity and availability of reed and the promotion of this material by the Rural Industries Bureau in the first decades after the Second World War. The Bureau encouraged the use of water reed in order to stop the wide scale removal of thatched roofs following the introduction of the combine harvester, which rendered straw unusable for thatching.

4. In the 1970s combed wheat reed was introduced from the West Country and has been replacing the traditional longstraw thatch. Combed wheat reed is basically wheat straw but it is prepared and applied to the roof in a different manner, resulting in a crisper finish, similar to that of reed and consequently a change in the character and appearance of traditional longstraw thatch.

B. Policy Context of Thatch and Thatching in South Cambridgeshire

5. It is intended that following appropriate consultation, a version of, *"Thatch and Thatching in South Cambridgeshire"* will be presented for adoption as Council Policy to inform the implementation of the saved South Cambridgeshire Local Plan (2004). The Council would, therefore, refer to the adopted document as planning guidance when considering listed building applications, and Planning Inspectors will also be expected to make reference to it when considering appeals on thatched buildings within the district.

6. The aim is to ultimately develop the guidance document into a Supplementary Planning Document (SPD), to support the Core Strategy and Development Control Policies of the South Cambridgeshire Local Development Framework, which is due for adoption in November 2006. This will be following further consultation as necessary.

7. This initial draft guidance document, "Thatch and Thatching in South Cambridgeshire", specifically relates to the following policy set out in the South Cambridgeshire Local Plan adopted on 9 February 2004 :

Policy EN23: *The District Council will use its planning powers and grant schemes to preserve the character of the roofs of Listed Buildings, which are made of traditional materials. In particular it will resist applications for consent which:*

(1) imply the loss of traditional longstraw roofs and their ridge, barge and dormer details.

C. Proposed planning guidance principles

8. ***Change in Thatching Materials, Methods or Detailing***

The following will apply to the consideration of proposals to alter a thatched property.

(i) As with all listed building consent applications, applicants must be able to justify their proposals, to demonstrate why works, which would affect the character of the listed building, are desirable or necessary in terms of the preservation of the historic building.

(ii) A full survey of the roof from an independent thatching consultant will normally be required as part of the application, to explain and justify any proposed alterations. Short-term economic arguments will not be considered as sufficient justification.

(iii) The Council will resist listed building applications for an alteration in thatching material or thatching detailing which is not traditional to the specific location or landscape character of the property.

(iv) The Council will resist listed building applications which result in a change to the external appearance of the historic building by introducing a different material, method of thatching or detailing.

(v) Listed Building Consent will not normally be granted for the removal of original base layers and material of archaeological or historic importance. These will include medieval smoke-blackened thatch or timbers surviving from the time prior to the erection of a chimney stack, or the remains of the original louver.

9. Listed Building Consent is normally required for a change in roof materials, as this will affect the character and appearance of the historic building. The District Council will not normally support listed building applications which compromise the special, historic interest of the building.

10. A change in thatching material or the method of application could significantly alter the character and appearance of a historic building and may destroy evidence of the original material. Consequently, replacement of original thatching material (in particular longstraw) with another material will not normally be granted listed building consent

For the avoidance of doubt, Listed Building Consent is required, but would not normally be supported for the following potential changes in thatching material :

(a) Longstraw to water reed

(b) Longstraw to combed wheat reed or wheat straw prepared and laid in a different manner to traditional longstraw

(c) Combed Wheat Reed to Longstraw or Water Reed

11. The above guidance is supported by the following planning appeals :

(a) - South Cambs example - to be added

(b) - Somerset example - to be added

12. **Reinstatement of Thatch**

The following will apply to the consideration of proposals to re-instate thatched material.

(i) Listed Building Consent will always be required for a re-instatement of thatching material, in order to ensure that material appropriate to the individual building and the landscape character area is utilised.

(ii) The District Council will use its planning powers; grant schemes and advisory role to secure the reinstatement of original thatching material on historic buildings, where there is photographic or physical evidence for the particular material originally used on the building (either longstraw or water reed).

(iii) The Council will discourage the use of materials and methods of thatching which are not traditional to the district.

(iv) The Council will encourage the retention of a "reed fleeking", which is a woven mat visible between the rafters of early roofs, where it exists, to form the base coat for the new thatch.

(v) The Council will discourage the use of felt underlay or polythene sheeting when re-instating thatch as it will inhibit drying out and may cause decay from condensation.

(vi) The use of anti-fire devices should be visually appropriate to the building and should be discussed and approved in writing with the Historic Buildings Officer, prior to commencement of works.

13. In the period between First and Second World Wars and immediately after the Second World War, there was a shortage of skilled thatchers and a lack of suitable straw. This resulted in the covering of large numbers of thatched roofs with corrugated iron and in some cases corrugated asbestos, shingles or tiles. Some buildings still retain their "temporary" roof covering due to the cost of replacement.

14. Reinstating thatch will require listed building consent and the applicant will be expected to provide physical or photographic evidence of the type of thatch and the detailing of the ridge and dormers. Where there is no photographic or physical evidence the local thatching style may provide an indication. The presence of a reed fleeking will not necessarily indicate that the roof was once thatched in water reed but where a fleeking exists it should be retained as part of the historic character of the roof. Existing thatch ties (twisted tarred or untarred cord) should be retained as evidence of a historic method of longstraw thatching.

15. Reinstating thatch may require strengthening of the roof. Thatch is one of the lightest roofing materials and rafters are often no more than thin poles. When reinstating thatch existing historic roof structures should be retained and new timbers placed alongside the original. New timbers should be of a similar size and section to the existing. Listed Building Consent may be required if the repairs are extensive and will alter the character of the roof.

15. Re-thatching roofs that have lost their thatch will be subject to the requirements of the Building Regulations, which recognise that thatched roofs (and also roofs covered in wood shingles) provide a potential risk

of fire spread between properties. Buildings with these roofs are therefore required to be isolated from one another and from their boundaries. In most cases they are required to be at least 12 metres away from the property boundaries.

16. The repair or replacement of an existing thatched roof would not normally be required to comply with the Building regulations usual requirements for isolation. However, the installation of thatch on a corrugated iron/asbestos covered roof, which had previously been thatched, would be expected to meet the requirements for a new thatch roof in terms of isolation from boundaries. Where a property is closer than 12 metres from a boundary an application for a relaxation of the requirements may be made, possibly using the so-called *Dorset Model – A guide to Fire safety on Thatched Buildings* (Appendix 1).

17. **Traditional Repair**

The following guidance will apply to the consideration of proposals to undertake repairs to a thatched property.

(i) The Council will encourage that a detailed survey of the roof is undertaken by an independent thatching consultant, to identify appropriate techniques, the extent of any surviving historic material and an explain and justify any proposed repairs prior to commencing work on the roof.

(ii) In order to ensure that locally characteristic features are not lost the Council will encourage the employment of experienced thatchers who work in accordance with local tradition.

(iii) Complete stripping is rarely needed on a longstraw thatch roof ; therefore the Council will aim to ensure that only defective thatch is removed to a sound base. The Council will therefore encourage the tradition of small-localised repair and resist total re-thatching where repairs may be more appropriate.

(iv) Localised repairs should match the topcoat in method and material where possible.

(v) Where a “reed fleeking” exists (the woven mat visible between the rafters of early roofs) it should be retained to form the base coat for the new thatch.

(vi) Detailed justification will be required for timber repair or strengthening of a historic roof structure is necessary, retaining original timbers in situ where appropriate. New timbers should be of a similar size and section to the existing. Listed Building Consent will be required if extensive repairs will alter the form or character of the roof.

18. Water reed thatching today normally involves the entire replacement of the existing thatch and a water reed roof is almost never repaired (other than re-ridging), although a form of re-dressing was carried out in the past.

19. Localised repair by patching is a tradition in longstraw thatches and can substantially extend the life of the main coat. Until as recently as the 1950's, thatchers spent more of their time in repair than re-coating. Ridges will need to be replaced on all thatches after approximately 15 years; other areas prone to decay are valleys, chimney abutments and dormers.

20. The actions of birds and rodents, or casual damage can also provide opportunities for decay. In such cases the same material and method can be adapted to rethatch a limited area.

21. Replacement ridges should be carried out in the same material as the existing. Where the existing ridge is blockcut, encouragement will be given for a traditional flush ridge.

22. The stripping of eaves and barges during re-coating of a longstraw thatch is not considered to be necessary and will result in the loss of archaeological evidence. The underlayers of thatch may be of considerable age due to the practice of stripping only the decayed material from the surface, prior to repair but this will not be visible at the eaves and barges if they are stripped out and consistently replaced.

23. Re-coating may occasionally involve repair/strengthening of the roof structure. Where this is the case existing historic roof structure should be retained and new timbers placed alongside the original. New timbers should be of a similar size and section to the existing. Listed Building Consent may be required if the repairs are extensive and will alter the character of the roof.

24. A build up of moss under the netting can be gently removed if desired; however there is no agreement as to whether the moss does more damage by retaining moisture than it does by forming an extra coat on the thatch. Performance is not always linked to appearance and a roof can present a varied appearance without being inferior to a much neater new thatch.

25. Advice on repairs should always be sought from an independent professional. Complete re-thatching may be more profitable for the thatcher, and it many be recommended in a material not previously used for reasons in which the thatcher is financially interested. However there will be many occasions where a relatively small repair is better for the building, and if there are problems with supply of materials these are likely to be less for repair than a re-coating. Despite its organic nature, thatch in its potential for small-scale repair should be seen as a material

that can be conserved; it does not fall outside the realm of conservation or escape the need to justify renewal.

26**. New Buildings**

(i) In accordance with the adopted *South Cambridgeshire Design Guide,* the Council may encourage new thatched buildings in villages where there is a thatching tradition and where locally appropriate details and materials are proposed.

(ii) Proposed thatched properties will be required to comply with Building Regulations and meet Fire Regulations in terms of isolation from one another and from their boundaries.

(iii) New thatched buildings will always be constructed in accordance with The Dorset Model – A guide to Fire Safety for thatched Dwellings. (Appendix 1) .

D. Types of Thatch

Longstraw

27. Longstraw is ordinary threshed wheat straw and as the name suggests the length is crucial. It is generally thought essential for this not to fall below 75cm. It is also recognised that the strength and texture of the straw will be greatly improved if the crop is cut whilst the stalk is still partially green and threshing is done carefully.

28. Longstraw thatch is distinguished readily from other thatching techniques, by the amount of preparation it receives and the method of application to the roof. The straw is laid on the ground in layers (bed) without regard to the alignment of the stems and wetted in order to make it more flexible and to enable it to be compressed when applied to the roof. The well-soaked straw is then drawn from the bed by hand and formed into yealms (loose bundles of straw) which can be applied to the roof. (Photo).

29. Longstraw when applied directly to an existing roof is fixed on top of the existing under-layer and not to the rafters as other forms of thatching material. Under-layers of thatch can, therefore, be of considerable age and several examples of mediaeval smoke-blackened thatch are known in the District.

30. Yealms are laid on the roof in vertical courses and held in place with hazel spars and finished with external fixing at the eaves, gables and

ridge. (Photo). The loose composition of the yealms means that it is not necessary to dress the material in place and, therefore, it has a softer, more rounded and "poured on" appearance than combed wheat reed. The appearance is neatened by raking out and by cutting the eaves and barges with a long eaves-knife. (Photo).

31. With proper maintenance the top coats or 'wearing courses' of a longstraw thatch roof (possibly overlaying a medieval base layer) would be expected to last from 25 – 30 years.

32. Appendix 2 contains a specification for Longstraw which will normally applied by the Council as a condition of grant aid or Listed Building Consent.

Water reed

33. Water reed (*Phragmites communis*), is recognised by its brown feathery seed head growing on a single stem with broad spear like leaves and its length varies from 1 – 2.5 m (3 – 8 feet). Originally from the marshes and fens and often known as Norfolk Reed, demand has outstripped supply and, it is estimated, that three-quarters of the water reed used in Britain today is purchased from Europe. "Mixed" reed is occasionally used, being reed mixed with shoof grass and other plants, which grow in company with it. Harvesting takes place in the winter and the reed is formed into bundles or bunches ready to be delivered to the site.

34. Preparation on site is very simple and involves butting each bundle to align the stems and grading the bundles according to length and quality. The bundles are applied to the roof in horizontal courses from the eaves to the ridge and are normally fixed directly to the timber structure of the roof with metal sways (rods) and iron hooks hammered into the rafters. It is not usual to retain underlying layers of thatch (so there is unlikely to be any underlying historic thatch retained. (Photo).

35. The reed is pushed up into position with a leggett so that the butt ends face downwards and present an even surface, which results in a uniform, crisp, sharp appearance entirely of the butt ends of the reeds, with the exception of the ridge. (Photo). The reed coat is rarely as thick as in the straw styles and faithfully follows the lines of the roof structure, emphasising features such as dormer windows. There are no visible fixings on the eaves or verges, the reed being secured by its own concealed fixings and by its own tension against the roof structure, which is made to splay out at this point.

36. A newly re-thatched in Water reed would be expected to last for between 80 and 100 years, before requiring complete stripping.

37. Appendix 3 contains a specification for Water Reed which will which will normally applied by the Council as a condition of grant aid or Listed Building Consent.

Combed wheat reed

38. Combed wheat reed, Devon reed, virtually undamaged straw are all names which are given to a “hybrid” which is not a traditional method of thatching in South Cambridgeshire. This form of thatch, which is traditional on the shallower roofs of the West Country, uses wheat straw, the same raw material as longstraw but it is produced by passing the straw through a reed comber, which removes the grain without crushing the stems and binds the straw into bundles with the stems all lying in the same direction.

38. The existing thatch is not normally stripped beyond the decayed upper layer and the bundles are applied to the roof in a similar technique to water reed, with the butts of the straw downwards. The bundles are loosened on the roof and the straw is dressed into place with a leggett as water reed is. The final appearance is achieved by clipping rather than driving the material up. When weathered a combed wheat reed thatch may resemble the precision and crisp nature of a water reed thatch, although the build-up of layers gives a more rounded appearance and the clipping of the eaves and verges emphasises the softer appearance. (Photo).

39. Given appropriate maintenance a combed wheat reed thatch will last between 25 – 40 years.

E. Traditional Thatched Roof Details

Ridges

40. Ridge details vary according to the region and often give are very local in origin. Historically In South Cambridgeshire ridges on longstraw were flush with the main coat and of the same material and finished with a decorative pattern of liggers. (Photo). Decorated blockcut ridges were introduced in the 1950s and although of straw they lack the simplicity of a flush ridge. (Photo). Detailing at the end of the ridge varies depending on whether the roof is hipped or gabled and on the individual thatcher. (Photos).

41. Reed is not pliable and ridges are formed from either straw or sedge (*Cladium mariscus*) and are generally “block cut”, sometimes with decorative patterns, although traditionally a straight cut ridge was usual until the 1950’s. (Photos). Fixings are visible in the form of hazel liggers or sways.

42. Ridges on Combed Wheat Reed are formed from straw and are traditionally flush with the main coat.

Dormers

43. Due to the pliability of longstraw and the greater thickness of thatch that is often found on longstraw roofs, features such as dormers can be swept over. Although this is not always the case, this type of dormer is characteristic of South Cambridgeshire and is generally referred to as an "eyebrow". (Photo). Some longstraw roofs have gabled dormers and these are normally thatched in longstraw with a straw ridge to match the main roof. (Photo).

44. Dormers in water reed roofs have a more angular appearance, as reed is not pliable and cannot be swept over features such as dormers. (Photo).

45. Tiles and slates were often used on gabled dormers on both longstraw and water reed roofs and photographic evidence suggests that some of the tiled dormers date from at least the 19th century. Where historic tile or slate dormers exist they should be retained and not replaced with thatch. (Photos).

Barges

46. In South Cambridgeshire it is traditional to cut the barges on a longstraw thatch flush with the gable using a long eaves-knife.(Photos). Wrap around barges, which are seen in longstraw thatch in other localities, are not a traditional feature of East Anglia and consequently would not normally be encouraged in South Cambridgeshire.

Abutments

47. The usual detail employed at abutments with chimneys or parapet gables is the mortar fillet. (Photo). Lime mortar is more flexible and less prone to cracking than cement and is recommended. Lead flashing is not a traditional detail and as it is often visually intrusive would not normally be encouraged in South Cambridgeshire.

Netting

48. Thatch, particularly new thatch, is attractive to vermin and birds as a source of food and also as a nest or nesting material. To prevent damage, wire netting is normally provided, lightly fixed in order to provide speedy removal in the event of fire. This is usually considered necessary in the case of longstraw but not in the case of water reed. Netting is laid from ridge to eaves and the edges of the sheets are not overlapped. The sheets are joined at the ridge and fixed with clenched nails, wire hooks or spars at eaves and barges.

APPENDIX 1 –
"The Dorset Model". A guide to Fire Safety in Thatched Dwellings.

The Dorset Model was developed on the basis that evidence has shown that thatch can be made sacrificial in the event of fire, and requires the following provisions to be included within the design:

- Rafters are to be overdrawn with a material providing 30 minutes fire resistance, which should also be water resisting. 50 x 25mm counter battens are recommended on a microporous boarding to allow the thatch to breathe;

- Any 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 pot should be limited to a height of 600mm;

- A domestic mains and battery powered, interlinked smoke alarm system is to be installed, with one smoke alarm fitted within the roof void;

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

In considering an application for such a relaxation the building control authority will have to consult with adjacent neighbours and the Fire Authority, and this may add to time taken to determine the application. In addition, the Dorset Model also includes the following recommendations:

- A loft hatch 600 x 900mm (minimum) is recommended for fire fighting purposes;

- Effects from rodent damage and straw debris need to be taken into account when considering the wiring installation;

- It is NOT recommended to cut in recessed lighting into the ceiling below the thatch and any light fitting within the roof void should be in bulkhead type fittings. External lighting (especially floodlights) should not be located immediately below the thatch;

- Spark arrestors on flues are NOT recommended because they can clog and restrict the flow of flue gases;

- It is recommended that the proposal includes an external water tap, supplied from the rising main and fitted with a hose capable of reaching all parts of the roof;

- Any metal plumbing in the roof void should use compression joints so as to avoid the use of blowtorches.

APPENDIX 1

Drawing No. App1 : The Dorset Model.

APPENDIX 2 - LONGSTRAW THATCH SPECIFICATION

1. Prior to rethatching a full survey of the roof shall be carried out by an independent thatching consultant.

2. All old wire shall be removed. All decayed thatch shall be removed to a sound base, but there should be a presumption in favour of preserving old thatch where this is practicable.

3. The roof shall be thatched in good quality longstraw, normally a hollow stemmed, winter grown wheat cut to an average length of 30 inches (750mm). It shall be as little bruised and broken as possible, preferably with cavings and all other rubbish removed, should not be discoloured and should be strong and supple and able to resist or even defy efforts to break it by twisting a handful continuously.

4. Straw shall be wetted and yealmed on site, unless agreed with the Council's Conservation Officer and shall be laid to a depth of not less than 10 inches (250 mm). The material shall be tightly thatched and of an even density and securely fastened with hazelwood spars of adequate length to secure the new coat to the old. The use of dry bundles of combed straw (combed wheat reed, virtually undamaged thatching straw, flail threshed combed long thatching straw, Devon Reed) dressed into place with a leggart (Leggett) driven against the butt ends is not acceptable – see notes A and C below.

5. Unless otherwise agreed the ridge shall be a flush ridge set in pitch with the main roof and detailed to the satisfaction of the Council. Normally decorative, block-cut ridges and ornamental features will not be eligible for grant. The shaving of the ridge detail should also be kept to a minimum to avoid the appearance of a block cut ridge.

6. Gables shall be cut so that there is an adequate overhang to protect the gable and all verges, eaves and the ridge shall be securely fastened with liggers and spars in a traditional pattern.

7. The thatch shall be securely finished at the chimney abutments and sealed with a lime mortar fillet.

8. The roof shall be covered with 20-gauge 19mm (maximum) galvanised wire netting. Netting shall conform closely to the roof shape and be fixed in such a way that it can be easily removed in the event of fire.

NOTES

A Any change of thatch material or method of application on a listed building requires listed building consent, which has to be obtained from the Council. Consent is required to change from longstraw to combed

wheat reed, for example or from water reed to longstraw etc. No consent is required to rethatch in a like manner.

B Any roof timbers which may need replacing should be done on a like for like basis, using timbers of similar size, type and section. The Council's Conservation Officer should be consulted, as listed building consent may be required.

C Since it has now been established that a contractor can be held responsible for unauthorised alterations to a listed building (even if acting under direct instruction), it is advisable to ensure that listed building consent has been obtained for any changes in thatching style or materials before work commences.

Photo :

Drawing : Ridge Detail

APPENDIX 3 - WATER REED SPECIFICATION

1. Prior to rethatching a full survey of the roof shall be carried out by an independent thatching consultant.

2. All old wire and thatch shall be removed. The roof shall be thatched in good quality water reed (Phragmites communis), cut to a length

3. The minimum length over the batten or substrate from the surface of the thatch will not be less than 12inches (300 mm) and the depth of the material over the fixings shall be a minimum of 5 inches (125 mm). The reed shall be secured by adequate fixings (normally steel hooks, 8mm steel rod and twine) to ensure that there is no slippage and every course should be fixed to every rafter.

4. The water reed shall have a compact finish and even density and the surface of the reed will conform to the pitch of the rafter, which will not normally be less than 45 degrees.

5. Eaves and barges will be applied in the angular Suffolk style and not “rounded off”.

6. Unless otherwise agreed the ridge shall be a straight, undecorated, block-cut ridge of longstraw or marsh sedge, detailed to the satisfaction of the Council and of a minimum thickness of 3 inches (75 mm).

7. The thatch shall be securely finished at the chimney abutments and sealed with a lime mortar fillet.

8. The ridge, or where appropriate the whole roof shall be covered with 20/22 gauge 19mm (maximum) galvanised wire netting. If wire netting is fixed to the whole roof, it shall conform closely to the roof shape and be fixed in such a way that it can be easily removed in the event of fire.

NOTES

Any change of thatch material or method of application on a listed building requires listed building consent, which has to be obtained from the Council. Consent is required to change from longstraw to combed wheat reed, for example or from water reed to longstraw etc. No consent is required to rethatch in a like manner.

Any roof timbers, which may need replacing, should be done on a like for like basis, using timbers of similar size, type and section. The Council’s Conservation Officer should be consulted, as listed building consent may be required.

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Photo :

Drawing