

Roofs on Listed Buildings

and in Conservation Areas



ROOFS ON LISTED BUILDINGS

INTRODUCTION

Roofs are one of the most important elements of any building. They are also a very important visual element.

This leaflet is intended as a guide to those considering the repair or replacement of roofs on listed buildings and buildings within Conservation Areas.

considered this would materially effect the appearance of the building; unless the property is a single dwelling in which case replacement of the roof covering would not normally require consent.

Planning permission is required to alter an unlisted building (including single dwellings) where an Article 4 Direction is in force.

IN BRIEF

Listed Building Consent is required to alter the design, material and colour of any roofs on a Listed Building.

Listed Building Consent is not required to repair any roofs in a Listed Building where the original design structure, materials and colour are to be maintained.

Planning permission will be required to alter roof structures and materials where it is

Listed Building Consent and planning permission will not normally be granted for the use of non-traditional roofing materials, including imitation materials, on Listed Buildings or most unlisted buildings in Conservation Areas.

Please read this leaflet for detailed information. If in doubt, please consult the Planning Department of Warwick District Council for further advice, clearly stating the address and present use of the property in question.



TRADITIONAL ROOFS

A pitched roof to disperse rainwater rapidly from the roof of a building has been employed by builders for many centuries.

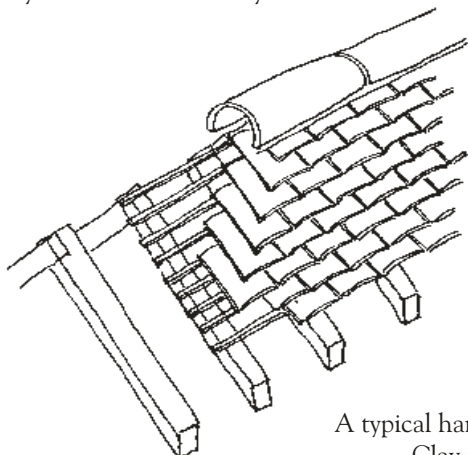
The degree of a pitch, nature of the roof construction and type of covering have varied widely due to the availability of materials, geographical location, building type and architectural style. These influences combine to give the building its individual character which should be respected when any restoration work or alterations are progressed.

Modern roof coverings and changes to roof shapes can seriously detract from the character and the integrity of a traditional building.

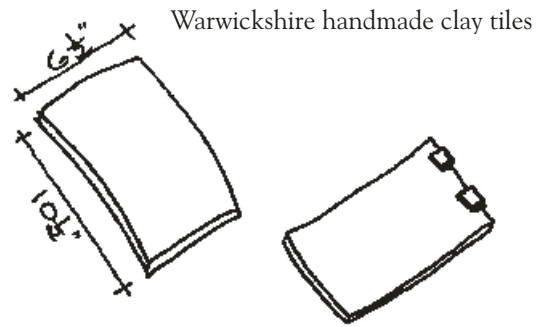
ROOF COVERINGS

Plain Tiles

The use of clay plain tiles has developed alongside brick making and the tile size of $10\frac{1}{2}$ inches by $6\frac{1}{2}$ inches by $\frac{1}{2}$ inch was standardised in 1477. Plain tiles in Warwickshire were normally hung by means of a nib moulded into the tile, from light timber battens. They were laid in regular courses and in order to protect the joints between tiles, each tile is lapped over two others, leaving only about four inches exposed. The tiles were usually laid at a pitch of more than 45 degrees. Hand made clay tiles have a camber on each tile which tends to give traditional roofs covered with hand made tiles a distinctive character which machine made tiles do not give. Various hand made components were also available including hip and ridge tiles, bonnet tiles for use on hips and valleys enabling quite intricate roofs to be covered entirely in hand made clay tiles.

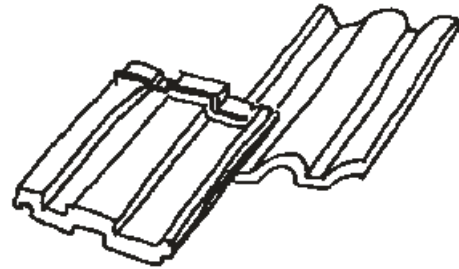


A typical handmade Clay tile roof



Warwickshire handmade clay tiles

Modern concrete interlocking tiles which are unsuitable for re-roofing traditional buildings



Tile slips were also produced to bed into the end of ridge tiles and to bed over mortar fillets at abutments. Hand made clay tiles were produced for general use until the middle of the nineteenth century. After this date machine made tiles, often called Rosemaries, were produced for the mass market.

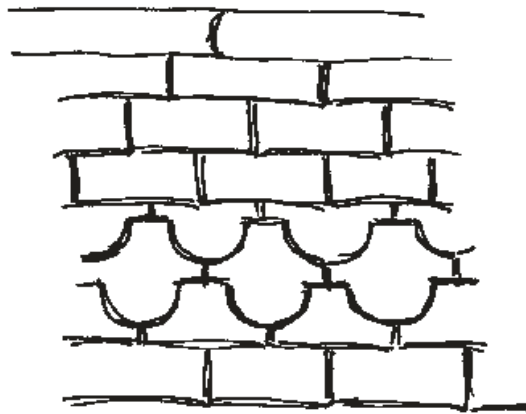
Wherever a building traditionally had a handmade clay tile roof, these tiles should be used in restoration and replacement work. The character and appearance of a traditional building can be greatly enhanced by the reinstatement of handmade tiles.

A specification for clay tile roofing using handmade tiles is included in the appendix. This should be strictly adhered to in order to maintain the integrity of the building.

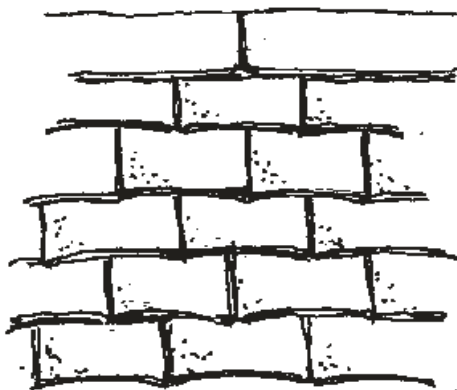
Where possible, secondhand clay tiles should be used for restoration and repair work. These must be carefully selected to ensure that they are sound and of a consistent colouring. It is also important that quantities of secondhand tiles are obtained from sources which do not deplete other sensitive parts of the environment.

New handmade clay tiles are available, and may be appropriate for use in certain instances where their use does not affect the appearance of other traditional roofs. Consent from the Council would be required for the use of all new tiles in traditional locations.

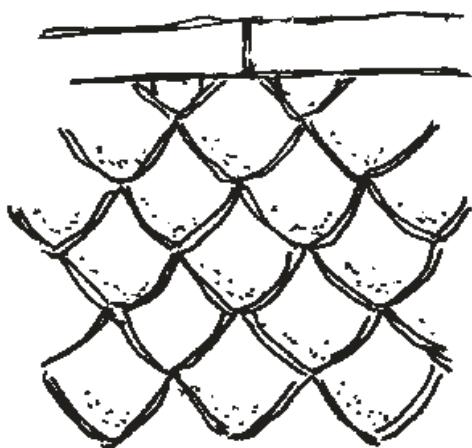
Machine made tiles should only be used if restoring or replacing a roof in mid/late nineteenth century and twentieth century buildings which were originally roofed with such tiles. Whenever decorative tiles, such as fishscale or coloured tiles, were used or tiles laid in alternate bands of colour, these should be reinstated in the restoration and re-roofing works.



Clay tiles with decorative banding



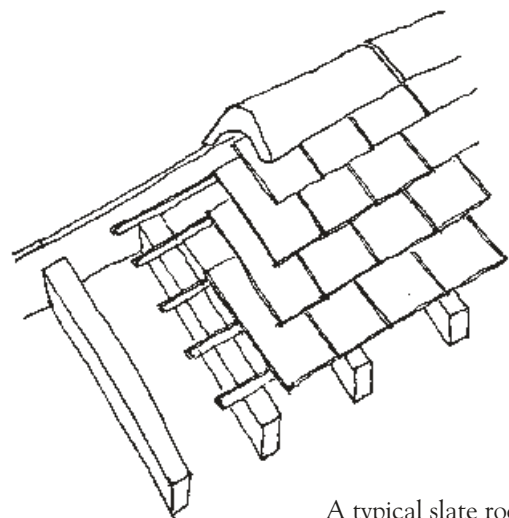
A clay tile roof



A Fishscale Clay tiled roof

Slate

Until the mid/late eighteenth century, slate would not have been available for roofing in Warwickshire. With the advent of canals (and later the railways), slate, particularly Welsh slate, came into widespread use. Welsh slate is usually used in thin slabs of uniform thickness and uniform size; courses are regular, and a roof slated with this material appears thin, smooth, and precise. Slates are nailed to light timber battens, coursed in such a way that the vertical joints are protected and each slate is lapped over two others.



A typical slate roof

Less common forms of slating in Mid-Warwickshire include the use of Stone slate and Leicestershire and Lake District slate which are laid to diminishing courses. A number of buildings on the lower part of the Parade in Leamington Spa retain roofs, probably of Leicestershire slate, laid to diminishing courses.

Where slates are laid to diminishing courses they should always be restored in the same manner and using identical materials.

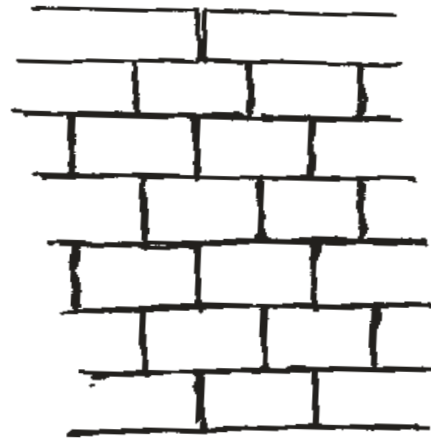
Slate was popular as it enabled roofs to be constructed at a much lower pitch than plain tiles. Welsh slate had widespread usage in the nineteenth century in Leamington and also, to a lesser extent, as a replacement of plain tile for the front slopes of some buildings in Warwick. This later use of slate represents a historical development and should in most instances be retained.

A specification for slate roofing is included in the appendix. This should be strictly adhered to in order to maintain the integrity of the building. Sound secondhand British slates may be used for replacement roofs, as well as new Welsh slate, although all secondhand slates must be carefully selected to ensure an even colour throughout the roof.

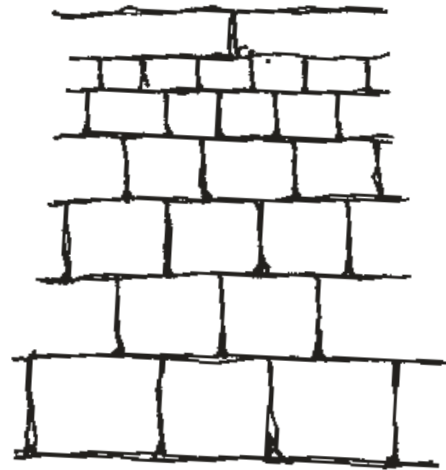
Spanish and other imported slates are not acceptable on listed buildings as they are darker than British slates and generally contain more impurities. All forms of artificial slate and reconstituted slate are unacceptable on listed buildings and buildings within conservation areas, including new buildings.

Certain types of good quality slate from foreign sources may be acceptable on non listed buildings in conservation areas subject to the appearance and quality of the slate enhancing the character of the area and meeting with the Planning Officers approval.

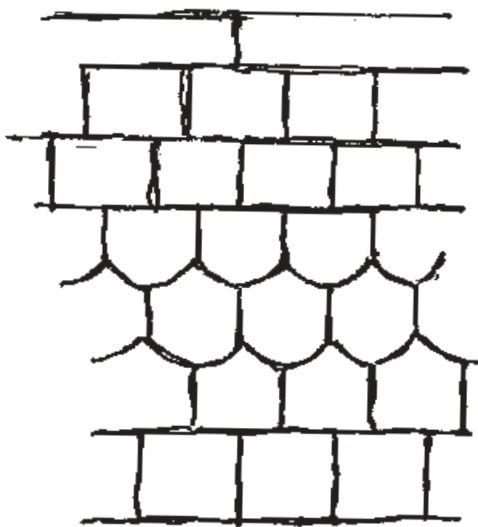
All forms of patterned slates such as fishscales and diamonds should be reinstated or new slates cut to match the original patterns. Extensive patching on slate roofs and the use of ill matched slates and the necessity to clip slate replacements can disfigure roofs. Re-roofing in accordance with the recommendations of this document will be more effective.



A plain slate roof



A slate roof laid to diminishing courses

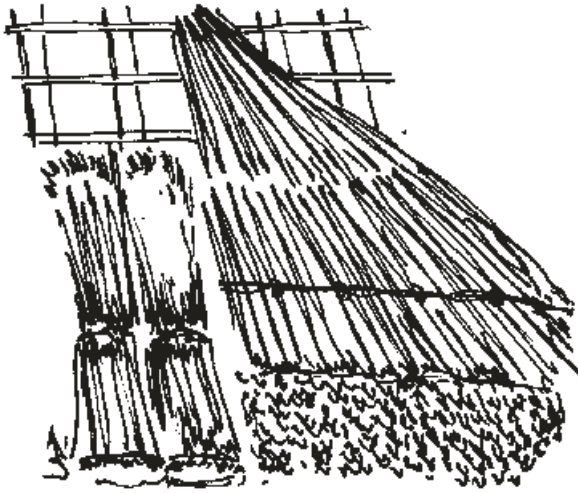


Slates with decorative fishscale banding

Thatch

Thatch was a widespread roofing material throughout England. Many thatched roofs have now been lost to Welsh Slate, corrugated sheet and even concrete tile replacements. Long Straw and Norfolk reed are the main forms of thatching material.

Materials which are traditional to particular areas should always be used for replacement or repair work. Many thatch roofs can be repaired by renewing the ridge, patching and rewiring the roof.



Detail of a thatched roof

The advice of a member of the Association of Master Thatchers should always be sought when considering repairs or replacement of thatched roofs as this is specialised work not carried out by ordinary roofing contractors.

In certain instances where it is clear that the roof has been replaced by a more recent roofing material, consent would be given to return to thatch. It is, however, most unlikely that consent would be given to replace an existing thatched roof with any other material.

It is also not necessarily appropriate for extensions to thatched properties to have a roof to match the main house, as the integrity of the main historic core may be lost by extending the thatch over later additions. Selection of alternative materials to use alongside thatch however needs careful consideration.



A thatched house with later addition having a clay tiled roof

OTHER TRADITIONAL ROOFING MATERIALS FOR PITCHED ROOFS

Pantiles were originally imported from Holland and were manufactured in England towards the end of the seventeenth century. The size of the pantile (13½ inches by 9 inches by ½ inch) was standardised during the reign of George I.

Their use in Mid Warwickshire is limited. Pantiles are single lap tiles in that they lap over only one tile below but the vertical joint is protected by a sideways lap.

Pantiles are laid on widely spaced battens corresponding with the top and bottom of each tile. Similar but less common are Roman tiles, forms of which were produced in the nineteenth century. Clay ridge tiles were often produced for use with pantiles and Roman tiles.

Wherever pantile and Roman tile roofs exist they should be restored using sound, matching, secondhand materials

Oak or Cedar shingles are less common, although examples do exist in Warwickshire. Shingles are formed by splitting timber and are not generally regular widths although they are normally laid to regular courses.

Shingles were sometimes used on large country estates where the timber was readily available.

Shingle roofs should be maintained as such unless a case can be made for returning to an earlier roof covering such as thatch.

LEAD AND METAL SHEET ROOFS

Lead and other sheet materials such as copper and zinc were used for very shallow pitched roofs which are usually hidden from view behind a parapet. Traditionally, this type of roof was only employed on churches and larger domestic buildings such as country houses where a steeply pitched roof would have been inappropriate. Cost was also a factor in restricting lead roofs to these types of buildings.

Areas of leadwork may also be found used in conjunction with pitched roofs particularly with buildings from the Georgian period onwards. Lead flats were sometimes incorporated into buildings with a deep plan-form requiring a double pitched roof or particularly as in Leamington Spa in a parapet gutter at the front of the building.

Lead roofs should always be replaced with lead. In certain instances, lead may need to be introduced into situations where bitumen felt has been used in the past

All lead work should be detailed strictly in accordance with the recommendations of the Lead Development Association's publications.

Lead is also an important material for using on roofs for flashing purposes to keep out water at roof abutments and intersections.

In some instances traditional roofs can be made more waterproof by the introduction of lead flashings which is an acceptable introduction with traditional material. Lead roof gutters and flashings should never be replaced by substitute materials on traditional buildings.

Copper and zinc, to a lesser extent, have been used on traditional buildings for shallow pitched roofs and replacements should be detailed in strict accordance with the relevant code of practice.

Copper and zinc have been used particularly in Leamington Spa as a covering for narrow verandah roofs. Alternative sheet metals and felts are unacceptable as replacement in these instances.

MODERN ROOF COVERINGS

Plain tiles, pantiles and Roman tiles have been superseded on the mass market by various forms of concrete plain and interlocking tiles.

These have a different texture and weight to the traditional forms of tile and have no place as replacements on traditional buildings or on extensions to traditional buildings.

These types of tiles are only appropriate when chosen carefully for use on new buildings. In certain instances, Welsh slate roofs have been

replaced by concrete interlocking tiles which have proved too heavy for the original roof structure and have caused various structural problems.

Slate roofs have also been replaced by artificial and reconstituted slates. Whilst these may have a place on modern buildings outside the Conservation Areas, the texture and appearance is inappropriate in traditional surroundings. Artificial roof coverings are inappropriate within Conservation Areas.

The appearance and integrity of many fine buildings has been spoiled by the thoughtless replacement of traditional roofing materials by inappropriate mass produced materials. In many of these instances it would have been possible to salvage much of the original material for refixing back onto the roof.

ROOF SHAPES

The external slope of a roof is a direct result of the internal support structure that is used. Thus the structure is an important part of the integrity of any roof on a traditional building. Many forms of traditional roof structures and shapes exist and specialist advice may need to be sought if a structure is in need of repair.

It is important to consider that the roof structure is part of historic fabric just as the externally visible parts of the building are, and thus any repair must be carried out in a sympathetic way.

Wherever possible original timbers should be retained and strengthened by setting new timbers alongside. Complete replacement of a traditional roof structure should only be contemplated after taking appropriate advice and enquiring whether such a change would require Listed Building Consent or Conservation Area Consent to demolish.

Alterations to the slope of a traditional roof should always be avoided - the removal, rather than restoration of gable features, finials and other items at roof level is generally unacceptable, as it detracts from the integrity of the building. Wherever possible these features should be reinstated, especially if they are missing.

DORMER WINDOWS AND THE INTRODUCTION OF DORMER WINDOWS IN TRADITIONAL ROOFS

Various forms of dormer windows have been used over the centuries to light rooms within the roofs of buildings. Wherever possible these should be retained in their original form.

The removal of gables and pediments and the use of felted roofs is not acceptable. All windows within dormers should be considered in accordance with the recommendations in the District Council's guidance leaflet "Windows in Listed Buildings & Conservation Areas".

Where new dormer windows are proposed to be inserted into an existing roof which already had dormer windows, it should not be assumed that further dormers can always be added to the traditional roof and advice should always be sought in each instance.

Where it is agreed that traditional dormers can be successfully integrated into the existing roof, it is usually appropriate to match the style and detailing of the existing dormers.

Where it is intended to introduce new dormer windows into a roof which has never had dormer windows previously, great care is needed to ensure that they can be properly integrated into the design of the property as a whole. Wherever possible the principles of traditional dormer windows should be used and in all cases where planning permission or listed building consent has been granted, large scale working details will be required by the District Council to ensure the window has been appropriately detailed.

Where additional accommodation is being sought by the introduction of dormer windows, the impact on the external appearance of the building must first be assessed in order to determine the scope for achieving the required additional accommodation.

It is not appropriate to accommodate large-box dormer windows into properties in order to provide additional living accommodation at attic level, since such features are invariably out of scale with the original roof of the property.

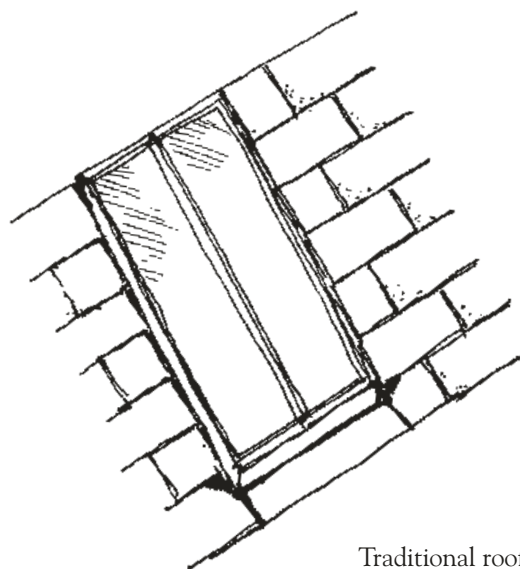
In certain instances it may be possible to carefully integrate the accommodation within the existing roof and to look at alternative staircase locations to avoid the need for large box dormers which would not receive planning permission.

In certain instances it may not be appropriate to introduce any form of dormer window at all.

For example houses with shallow roof pitches could not by tradition, have had any form of dormer as there would be little usable space to provide accommodation and the alteration of the roof pitch to increase usable space is also unacceptable in the historic environment.

Buildings within Conservation Areas require planning permission for the introduction of dormer windows and further additions or alterations to the roof and in the case of Listed Buildings, Listed Building Consent is always required for such works.

ROOF WINDOWS



Traditional rooflights set flush with the roof shape

Roof windows that followed the line of the roof became popular in the nineteenth century as a means of lighting stairwells and small attic rooms and were usually discretely located on the roof slope. In recent years, with the mass production of proprietary rooflights, these have been in popular demand for creating more usable space within a roof.

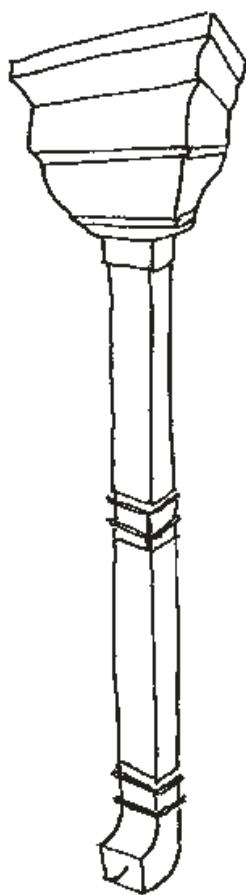
They do not however, add to the quality or appearance of the building. Large areas of glass, within a traditional roof, can seriously detract from the overall appearance of the building. As in the past, the discrete placing of roof windows is the only acceptable solution, either behind parapets or on less visible rear slopes.

Rooflights, to a traditional design, are now available and should always be used on Listed Buildings and buildings in Conservation Areas as these avoid the considerable upstand which most modern roof windows have.

RAINWATER GOODS

Rainwater goods are an essential element of any roofing system, with the exception of thatch. Gutters and downpipes were traditionally made of lead, although sometimes wooden gutters were lined with lead. Lead hopper heads at the top of downpipes and discharge chutes were often made into decorative features in buildings of the seventeenth to nineteenth centuries.

Any remaining examples of lead rainwater goods should always be preserved.



Cast iron rainwater goods became more prevalent, in the nineteenth century, with hopper heads still forming, in many instances, a decorative feature. Gutters were also given a more interesting appearance by the use of ogee shape. **Cast iron should always be used for rainwater goods on traditional buildings.** Cast aluminium may be used in certain instances where the historic integrity is less critical. **Pressed aluminium and uPVC are, however, unacceptable.** These materials have a completely different appearance and weathering qualities to those of cast iron or lead.

Rationalisation of rainwater goods and other pipework on the elevations of a building can greatly enhance its appearance. Wherever possible, front to back discharge systems from parapet gutters, as exist in many Regency buildings in Leamington Spa, should be retained. These can be improved by using a pipe system with access plates to avoid flooding in the roof.

The proper maintenance of a rainwater system on any building is essential to the long term preservation of the building.

OTHER ROOF FEATURES

The addition of aerials, telecommunications appliances and solar panels will always require Listed Building Consent, where a building is listed and in most cases Planning Permission.

The location of such features can have a detrimental effect on the appearance of the listed building and non listed buildings within the conservation area and the advice of the Planning Department should always be sought before considering such installations.

CHIMNEYS

Chimneys are an important feature of most traditional roofs. They often reflect the plan form of the building and have been designed as part of the overall building concept. With the installation of central heating, many chimney stacks are now redundant and, as a consequence, many traditional stacks have been removed or reduced in height.



Chimney stacks on Listed Buildings and buildings within Conservation Areas should always be maintained at their original height. Where they have been reduced in height in the past, consideration should be given to reconstructing them back to their original form with appropriate string courses and pots.

Chimney pots are an integral item of many stacks that have often been removed or replaced by modern equivalents.

Wherever possible uniform pots should be maintained. Uniformity of stacks and pots is particularly important in terraces and groups of identical villas.

A substantial restoration of chimney stacks and pots has been carried out Lansdowne Crescent in Leamington Spa which highlights the benefits of uniformity in these situations.

IS PERMISSION NEEDED TO REPAIR OR REPLACE ROOFS, CHIMNEY STACKS AND RAINWATER GOODS?

Listed Buildings

Listed Building Consent will be required to change the type of roofing material, including a change of colour on any Listed Building.

Listed Building Consent will also be required to change rainwater goods to non-traditional materials, alter chimney stacks and to inset roof windows and dormer windows in Listed Buildings.

Non Listed Buildings in Conservation Areas

Planning permission will be required to change the roof covering on non listed buildings and alter rainwater goods, where it is considered this would make a material change to the appearance of the building or where the buildings are covered by an Article 4 Direction, which protects certain elements of a building.

Normally Planning Permission will also be required for the provision of roof lights and dormer windows on buildings in Conservation Areas and for alterations to chimney stacks.

Single Dwellings in Conservation Areas

In the case of a single dwelling within the Conservation Area, it is advisable to discuss any proposed change with the Conservation Section of the District Council's Planning Department, before carrying out the works. In certain instances, Conservation Area Consent may be required for demolition of any part of a building within the Conservation Area. In certain instances where permitted development rights exist, planning permission or conservation area consent may not be required.

Consent would not normally be granted for the use of modern roofing materials on listed buildings or buildings within the conservation area. Artificial and reconstituted slates and certain sources of natural slate are unacceptable throughout conservation areas on both traditional and new buildings. Consent would not normally be granted for the use of upvc rainwater systems, the reduction of chimney stacks or the removal of pots.

If in doubt, the advice of the conservation section of the planning department should always be sought.

The principals set out in this guidance leaflet are fully supported by Planning Policy Guidance Note 15 (September 1994).

SPECIFICATION CLAUSES FOR HANDMADE CLAY TILE ROOFS

Work in association with clay tiled roofs could include:-

- Stripping off existing clay tiled roof, removing from site any machine made, perished or damaged tiles, setting aside good tiles for reuse.
- Cleaning off all old tiling battens as required, driving home all old, projecting nails; cleaning down exposed rafters and members where applicable.
- The condition of all newly exposed roof members (trusses, rafters etc.), should be investigated. Any defective members should be replaced with new tanalised timber sections to suit.
- Laying new tanalised tiling battens and roofing felt as required, all to existing roof slopes and in accordance with the current British Standard Codes of Practice.
- All timbers should be treated with a recognised preservative, for which a guarantee should be provided.
- Adequate ventilation should be provided to all roof spaces to comply with current Building Regulation requirements.
- Relaying roof using those tiles previously salvaged, making up any deficiency with good quality, second hand clay tiles to match the existing. Clay tiles are to be bedded (not nailed) every third course using a 1:1:6 (1 cement, 1 Lime, 6 sand) mix. Cut tiles, bedded at every course are to be used at verges and abutments.
- Relaying ridge and valley tiles, making up where necessary, with second hand, hand made tiles to match the existing, and bedded using a 1:1:6 (1 cement, 1 lime, 6 sand) mix.
- It should be borne in mind by grant applicants that many instances the full scope of remedial measures required to roof timbers can be assessed once the existing roof covering has been removed.
- If the main roof trusses or members are found to be seriously defective, then there may well be a need for structural advice; extra costs may be incurred.
- Proposal to use new clay tiles should first be discussed with the Planning Department as it is likely that Listed Building Consent or Planning Permission will be required.

SPECIFICATION CLAUSES FOR NATURAL SLATE ROOFS

Work in association with natural slate roofs could include:-

- Stripping off existing slate roof, removing from site any machine made, asbestos, perished or damaged tiles, setting aside good slate for reuse.
- Cleaning off all old roof battens as required, driving home all old, projecting nails, cleaning down exposed rafters and members where applicable.
- The condition of all new exposed roof members (trusses, rafters etc.), should be investigated. Any defective members should be replaced with new tanalised timber sections to suit.
- Laying new tanalised tiling battens and roofing felt as required, all to existing roof slopes and in accordance with the current British Standards Codes of Practice.
- All timbers should be treated with a recognised preservative, for which a guarantee should be provided.
- Adequate ventilation should be provided to all roof spaces to comply with current Building Regulation requirements.
- Relaying roof slates using those tiles previously salvaged, making up any deficiency with sound second hand slates to match the existing, all fixed with copper nails to current British Standards for slating. Where new slates are required they should be good quality British slates sized to match any existing on the property or adjacent properties and should comply with current British Standard Codes of Practice in all aspects.
- Rebedding salvaged and sound second hand ridge tiles / slates to match existing using a 1:1:6 (1 cement, 1 lime, 6 sand) mix
- It should be borne in mind by grant applicants that in some instances the full scope of remedial measures required to roof timbers can only be assessed once the existing roof covering has been removed. If the main roof trusses or members are found to be seriously defective, then there may well be a need for the advice of a structural engineer, extra costs may be incurred.

USEFUL ADDRESSES

The Architectural Salvage Index

C/O Hutton & Rostron
Netley House
Gomshall, Surrey GU5 9QA

British Brick Society

C/O Brick Development Association
Woodside House
Winkfield
Windsor, Berkshire SL4 2DX

British Standards Institution

2 Park Street
London
W1A 2BS

Copper Development Association

Orchard House
Mutton Lane
Potters Bar
Hertfordshire EN6 3AP

English Heritage

Fortress House
23 Saville Row
London W1X 2HP

English Heritage - Regional Office

112 Colmore Row
Birmingham B3 3AG

Federation of Master Builders

Gordon Fisher House
14-15 Great James Street
London WC1N 3DP

The Guild of Architectural Ironmongers

8 Stepney Street
London E1 3JU

Lead Sheet Association

St John Road
Tunbridge Wells
Kent TN4 9AX

National Society of Master Thatchers

"High View"
Little Street
Yardley Hastings
Northamptonshire NNY 1EZ

Natural Slate Quarries Association

C/O Mr R. Toms.
26 Store Street
London WC1E 7BT

FOR FURTHER INFORMATION CONTACT

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