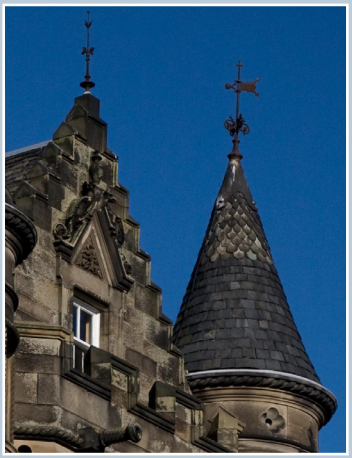
Managing Change in the Historic Environment

HISTORIC SCOTLAND ALBA AOSMHOR

Roofs



October 2010

Key Issues

1. **The roof and associated features of a historic building, or group of historic buildings, form important elements in defining their character. Listed building consent is required for any works affecting the character of a listed building and planning permission may be required in a conservation area.**

2. **The significance of a historic roof is derived from a number of factors including its age, functional performance, shape and pitch, profile, and the qualities of its supporting structure, covering materials and associated features.**

3. **In planning works to a roof it is important to understand its contribution to the building's character and to protect the special interest of the building through the re-use of existing historic materials and close matching of new materials.**

4. **Improvements in the energy conservation of historic roofs can be achieved through insulation and ventilation, without damage to the appearance of the roof.**

5. **Planning authorities give advice on the requirement for listed building consent, conservation area consent and other permissions.**

1. INTRODUCTION

1.1 This is one of a series of guidance notes on managing change in the historic environment for use by planning authorities and other interested parties. The series explains how to apply the policies contained in the *Scottish Historic Environment Policy* (2009) (SHEP, PDF 312K) and *The Scottish Planning Policy* (2010) (SPP, PDF 299K).

1.2 This note sets out the principles that apply to altering the roofs of historic buildings. It should inform planning policies and the determination of applications relating to the historic environment, and replaces the equivalent guidance in *The Memorandum of Guidance on Listed Buildings & Conservation Areas* (1998).

1.3 Monuments scheduled under the Ancient Monuments & Archaeological Areas Act 1979 require scheduled monument consent for any works. Where a structure is both scheduled and listed, the scheduling controls have precedence. Separate advice is available from Historic Scotland's website: Scheduled Monuments: Guidance for Owners, Occupiers & Land Managers (PDF 718K).

The rich variety of domes, towers, steeples, gables and chimneys contributes to the character of Glasgow City Centre. © N. Haynes.

2. WHY ARE HISTORIC ROOFS IMPORTANT?

2.1 The wide variety of historic roofs reflect variations in local climate and the availability of materials and skills at a particular period in time. The design, use of materials, construction and detailing of roofs make a substantial contribution to the character of any historic building or area. In practical terms, roofs are clearly critical to protecting the structural components and interiors of historic buildings from the weather. Collectively, roofscapes and skylines are often key features of historic cities, towns and villages.

3. IDENTIFYING THE INTEREST OF A HISTORIC ROOF

3.1 The interest of a historic roof is derived from a number of factors including its shape or form, structure, covering materials, and associated features. The roof can play an important part in the architectural design of a historic building, and craftsmanship can also contribute to its interest. Traditional roofs were usually constructed by local tradesmen using local materials and techniques. This local distinctiveness is frequently a key element of the interest of the building.

3.2 Even within a single building, parts of a roof can have different levels of interest: some parts might be designed as architectural features whilst other parts are hidden in roof valleys or behind parapets.

Regular courses, but random widths of local slate fixed using a double-lap method under stone ridge pieces. Dumfries & Galloway.

The Seatown at Cullen, Moray, showing a wide range of slated and pantiled roofs. The Scots slate here is darker and smaller than the more regular blue Welsh slate. Pantiles were commonly used in Eastern Scotland where cheaper and well-ventilated roofs were needed, but slate was preferred on most houses.

Blackhouse at Arnol, Lewis. Thatching weighted down with stones on ropes.

Form

3.3 Historic roofs take an enormous number of forms from simple, practical coverings to flamboyant architectural statements.

3.4 Each roof has its own distinctive characteristics of height, shape, pitch and profile. Traditional roof forms were usually influenced by the types and weights of local covering materials and local climatic conditions. Scottish roofs tend to be steep, with slopes of around 40°. Steeper pitches drain water quickly and are less prone to let wind-driven rain or snow into the roof space.

3.5 The most common traditional form is a pitched roof with a single ridge running between two gables. M-shaped gables with two ridges and a valley between allowed increased building depth. From the mid 19th century many roofs were designed for picturesque or stylistic effect in many shapes and sizes with overhanging eaves, gabled dormers, turrets or other features. Technological advances and stylistic considerations allowed the construction of large-scale flat roofs from the early 20th century.

Structure

3.6 Although not widely visible, structural elements underneath the roof covering contribute to the character and authenticity of a historic roof. Sometimes early structural elements survive where the roof covering itself has been replaced.

3.7 Structural elements before the 19th century were usually made of timber (with the exception of stone vaults), but the types of timber, jointing, finishing and arrangement of beams varied depending on the period and nature of the building. New structural use of wrought-iron, cast-iron and mild steel allowed increasingly large spans and forms of roof from the later 19th century.

Covering materials: general

3.8 The colour and texture of different roof covering materials make a substantial contribution to the character of a building. Many traditional roofing materials can also develop attractive long-term weathering patterns.

Thatch

3.9 From the earliest times covering materials were usually gathered from as close to the site of the building as possible. Turf, heather, straw, reed and other types of thatch were common domestic roofing materials until the end of the 19th century. They are becoming increasingly rare.

Stone and slate

3.10 From the mid 17th century to the early 20th century, the use of slates or stone slates or tiles expanded from high-status buildings, such as churches and lairds' houses, to become the principal roofing materials for most building types in Scotland. Local slates predominated until the advent of industrial-scale

West Highland slate production and improved transport methods in the 19th century. Diverse traditions of slate-laying, influenced by the various materials and local conditions, are evident throughout the country. The use of varied sizes of slate on sarking boards allowed for many different shapes of roof and decorative patterns of laying.

Pantiles

3.11 Clay pantiles laid on battens were in widespread use from the 17th century, particularly in East Central Scotland. Pantiled roofs are often 'bellcast' (a slight flattening of the roof near the eaves) to prevent lifting by the wind, or they have 3 to 5 courses of slate to protect the wallhead from driving rain or snow.

Metals, felts and glass

3.12 Lead was another early roofing material, particularly where flat or shallow areas of roof were required. Industrial production methods in the 19th century were developed for coverings such as copper, corrugated iron, felts, tiles and glass. Many roofing innovations took place in the 20th century, but particular impact was made by the use of reinforced concrete and bituminous sheeting.

Associated features

3.13 Associated roof features such as chimneys, dormers, cupolas, rainwater goods, and decorative ceramic, metal and timberwork can also be of significant value to the overall variety and interest of the roofscape.

4. GENERAL PRINCIPLES FOR REPAIRS AND ALTERATIONS

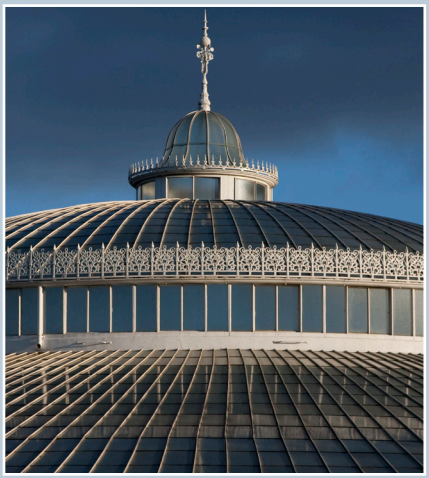
Character and interest of the building

4.1 Alterations and repairs to roofs and their associated features should protect the character of the historic building. The contribution of the roof to that character should therefore be understood before considering how to alter the building.

4.2 A brief written analysis of the character of the building and the area of change will always be helpful in assessing proposals. The proposed alterations should take account of this analysis in specifying appropriate designs, materials and working methods.

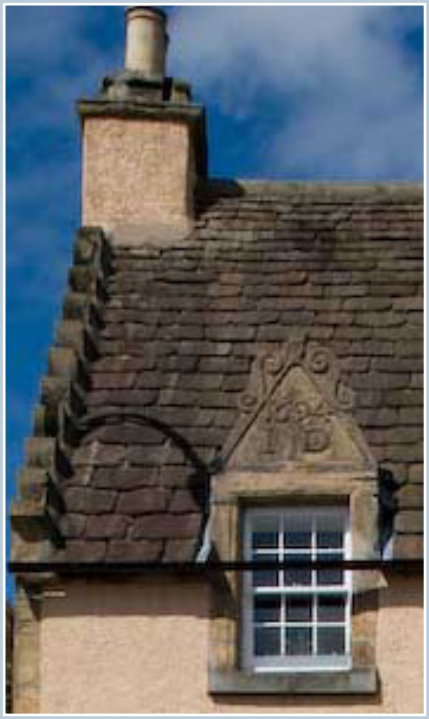
4.3 Some areas of a roof will generally be more sensitive to change than others: alterations to subsidiary elevations and roof valleys are likely to have less visual impact on the character of a building. The interest of the underlying roof structure should also be considered.

Clay pantiles and a 'catslide' dormer on a 17th-century house, Falkland, Fife. The roof sweeps up a little towards the eaves. © N. Haynes.



Glazed roof at the Botanic Gardens, Glasgow City. © N. Haynes.

Hand-hewn roofing timbers pegged together in a late 18th- to early 19th-century cottage. Pitlochry, Perth & Kinross.



Graded stone slates, laid in diminishing courses from the bottom to the top of the roof. Associated features incude crowstepped gables, a corniced chimney and a decorative dormerhead dated 1694. Elgin, Moray. © N. Haynes.

A traditional iron rooflight set into a West Highland slate roof. The small size, low profile and 'portrait' format are typical characteristics. © N. Haynes.

Repairs

4.4 Wherever possible the repair of historic roofs should be carried out in traditional materials to match the existing. Replication of the type, dimensions, pattern and coursing of materials is important to maintaining the character of the roof. The use of slate, lead and other traditional materials not only protects the character and appearance of a building, but with regular maintenance they can also be extremely durable. Associated features, such as rainwater goods and chimneys, should also be repaired or renewed using appropriate traditional materials.

Alterations

4.5 New work should normally match the original as closely as possible. The alteration of a roof can create additional space to allow the building as a whole to remain in use and develop with the needs of the occupants. In considering how to alter a roof it is important to understand the impact of the works on the roof itself and the appearance of the building or street as a whole. The potential for cumulative effects of similar developments should also be considered.

Slate

4.6 It is recognised that Scottish slate is not currently in production and that second-hand supplies are limited. Where possible, existing slates should be re-dressed and reused. If it is necessary to specify new natural slate, regard should be given to finding the best modern equivalent in terms of colour, thickness, weight and texture of slate. Artificial slate or concrete tiles are not normally acceptable because they rarely match the durability and weathering qualities of natural slate.

4.7 If new slate is needed to make up a shortfall, it should be laid in the same way in terms of graded lengths and random widths, and older slates should be consolidated in more conspicuous parts of the roof.

Dormers and rooflights

4.8 Early historic dormers should be retained. The addition of new features to principal or prominent roof slopes should generally be avoided. New dormers and rooflights should be appropriately designed and located with care.

Ventilation

4.9 Ventilation of roofspaces is essential to avoid a build-up of damp. This can normally be achieved by means of discreet ventilators under the eaves or through redundant chimney flues. Where ventilation is required directly through the roof covering, the ventilators should be minimal in number, carefully selected to fit flush with the surrounding roof covering, and located to minimise their impact. Breathable materials are available for use beneath the final roof covering.

Fixtures and renewable energy developments

4.10 New roof fixtures, such as satellite technology, should be located where they will not detract from the appearance of the building. In general, where new fixtures are proposed to be located on a roof, they should be carefully sited to avoid being visible from ground level or breaking the profile of the roof or chimneys. Separate guidance on small-scale renewable energy developments and external fixtures is available in Historic Scotland's *Managing Change in the Historic Environment: Micro-Renewables* guidance note.

Badly designed box dormers detract from the classical proportions and elegant detailing of this late 18th-century house.

Reinstatement

4.11 Where a roof has previously been altered, consideration should be given to the reinstatement of traditional materials and original form, particularly where roofs have been badly altered, for example by the addition of concrete tiles that are too heavy for the supporting structure.

Roof extensions

4.12 Removal of a historic roof and replacement with an additional storey, or storeys, should only be considered where the existing roof is not of significance to the character of the building, and the new work will form a similarly subsidiary feature. Roof extensions involving the removal of a serviceable historic interior to provide structural support should not be proposed. A roof extension may not fit comfortably where long views are important to the profile of a building. Where streets are narrow, the buildings are tall, and the new work is recessed from the wallhead, the visual impact of a roof extension is likely to be less.

Sample panel prepared to ensure appropriate grading and random widths in the laying of new slate, with a fire-damaged Perthshire slate from Morgan Academy, Dundee.

Chimneys

4.13 Historic chimneys can make an important contribution to the character of a roof and should be retained. Where repair is required, this should respect the original form and materials. If the structural stability of the chimney is unsound, like for like reconstruction should be encouraged.

5. ENERGY EFFICIENCY

5.1 Proper repair and maintenance of historic roofs and associated features using appropriate and compatible materials and construction techniques is generally the most sustainable course of action. Historic Scotland publishes several practical guides and technical advice on maintaining various types of historic roof, details are given at the end of this leaflet.

5.2 Energy efficiency can normally be improved significantly without damage to historic character by insulation of the roofspace. However, it is important to retain adequate ventilation to prevent the build-up of moisture in this area.

Aerials, vents, rooflights, satellite dishes and air conditioning units located in roof valleys to minimise impact.

Solar panels being fixed to a roof at Lauriston Place, Edinburgh. Separate guidance on small-scale renewable energy developments is available in Historic Scotland's 'Managing Change in the Historic Environment: Micro-Renewables' guidance note.

6. CONSENTS

6.1 Listed building consent is required for any work to a listed building that affects its character. The local authority determines the need for consent.

6.2 Planning permission may be required for works to unlisted buildings in Conservation Areas. Where consent is required, an application is made to the local authority. This should include accurate scale drawings showing both the existing situation and the proposed works in context. It is normally helpful to provide detailed technical information and photographs. A brief description of the interest of the roof and an explanation of the impact of the alterations are always useful in assessing change.

FURTHER INFORMATION AND ADVICE

Details of all individual scheduled monuments, listed buildings, designated gardens and designed landscapes, and designated wrecks can be obtained from Historic Scotland (see contact details below) or at: www.pastmap.org.uk. Details of listed buildings can also be obtained from the relevant local authority for the area.

Advice on the requirement for listed building consent, conservation area consent, building warrants, and other permissions/consents should be sought from local authorities.

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Cover images

Shetland Croft House Museum (circa 1870), Southvoe, Dunrossness, Shetland. © N. Haynes.

Cullen Seatown, Moray (from 1822).

Later 19th-century baronial villa, City of Edinburgh. © N. Haynes.

Other selected Historic Scotland publications and links

Maintaining your Home – A Short Guide for Homeowners (2007)

Inform Guide: Energy Efficiency in Traditional Homes (2008)

Inform Guide: Repairing Scottish Slate Roofs (2007)

Inform Guide: Pantiles, Maintaining a Pantiled Roof (2007)

Inform Guide: Roofing Leadwork (2008)

Inform Guide: Bituminous Sheet Flat Roofs: Their Repair & Maintenance (2008)

Inform Guide: Care & Maintenance of Corrugated Iron (2008)

Inform Guide: Domestic Chimneys & Flues (2008)

Inform Guide: The Maintenance of Cast-iron Rainwater Goods (2007)

Inform Guide: Finials & Terminals (2008)

Inform Guide: Ventilation in Traditional Houses (2008)

For the full range of Inform Guides, Practitioner Guides, Technical Advice Notes and Research Reports please see the Publications section of the Historic Scotland website.