Roofs

CHAPTER 9
9.1 Introduction

9.1.1 In many buildings, the roof is a major element that gives the building its distinctive profile. The aspects of a roof, which may contribute to the special interest of a protected structure or a structure within an ACA, include the profile and structure of the roof, the cladding materials used and other details associated with the roof. Specialist advice may be needed in order to identify the special characteristics of a roof.

To help assess the potential contribution of a roof or its components to the special character of the structure, several questions may be considered:

a) Is the roof structure, or any of its component parts, original to the building?
b) If not original, is the roof structure nevertheless of architectural merit or of other interest?
c) If not of interest in itself, does it contribute to or detract from the perception or appreciation of other, more important, parts of the structure?
d) Is there the possibility of an earlier structure existing below later alterations?
e) What are the existing cladding materials? Do these contribute to the character of the building?
f) Are the details such as dormer windows, chimney stacks etc. original to the building? Are they part of a later remodelling? Do they contribute to the interest of the building?
g) Where it is proposed to upgrade the thermal insulation of an existing timber roof, what effect would this have on the appearance of the roof? How is it proposed to ventilate the roof? Where are proposed vents to be located? Would their size, shape or location adversely affect the appearance of the building?

9.2 Profile and Structure

IDENTIFYING SPECIAL FEATURES FOR PROTECTION

9.2.1 When identifying the special characteristics of the profile of a roof it should be considered whether or not the roof retains its original profile and structure. If the present profile is not likely to be the original, then it should be decided whether the present roof profile is of any architectural or other interest or is a later alteration which detracts from the appearance of more important elements of the building.

9.2.2 The structural elements of the roof should be examined. The roof structure should, wherever possible, be viewed from within the roof space and evidence of any part of an earlier structure noted. Structural elements are of importance when they are original to the building, are evidence of earlier alterations or are examples of unusual or innovative design. Wrought and cast-iron roof structures, particularly those with applied decoration, are also of importance. Early mass or reinforced-concrete roofs are of interest as examples of civil engineering design.

CONSIDERATION OF PROPOSALS TO ALTER A ROOF STRUCTURE

9.2.3 Unevenness and undulations of a roof surface are often part of the character of an old building. Where they exist, it should be established whether or not they affect the watertightness or structural integrity of the building, if it is proposed to replace the roof.

9.2.4 The unnecessary removal of a roof, or part of a roof, in order to replace it in replica, should not generally be permitted. Where this is proposed, the applicant should be required to demonstrate the necessity for the proposed works.

9.2.5 Roofs of structural interest should generally not be altered. Any original, or early, roof structure or structural members should be retained. In cases where the construction of a new roof is unavoidable, the planning authority could make it a condition that the earlier roof construction is retained below the new roof.
9.2.6 Proposals to alter the shape of the roof of a protected structure or of a structure within an ACA will have a potential impact on the character of the structure and its surroundings. It should not be permitted without careful consideration of the circumstances.

9.2.7 Roofs of protected structures should retain their original form and profile and not be radically altered, for example, to provide extra accommodation in the form of a mansard roof. The insertions of lift-motor rooms, plant rooms and dormers can also materially alter the character and profile of a historic roof and should be carefully scrutinised. Similar alterations to other structures in an ACA should only be permitted after careful consideration of any effect that the alteration could have on the character of the ACA or on the setting of adjacent protected structures.

9.2.8 Where the original shape of the roof has been previously unsympathetically altered, the opportunity could be taken to reinstate the earlier form of the roof, thus restoring the integrity of the structure. However, any such restoration should be based upon firm evidence of the original state. Where a new roof is proposed, the design of the replacement should be sympathetic to the character and special interest of the building and not detract from the overall appearance.

9.2.9 Where a roof or its components have been removed, poorly repaired or altered inappropriately, the reversal of unsatisfactory later work could be undertaken. However, any such restoration work should be based upon firm evidence of the original state of the roof or element using old photographs, drawings, or other reliable information. Where it is proposed to re-roof a ruinous structure, the applicant should use expert advice to identify fabric or other evidence of the previous roof construction. Care should be taken that this evidence is not lost in the restoration works and is either recorded in detail or preferably retained in situ. A new roof should be appropriate to the character of the protected structure but this need not necessarily preclude the use of modern materials providing these do not damage the fabric or appearance of the building.
### 9.3 Cladding Materials

9.3.1 The type and nature of the cladding materials used on a roof have a significant impact on the appearance and special interest of a building. There are a number of types of roof cladding commonly found on historic buildings. The most common ones are described below.

9.3.2 The retention of traditional roofing materials and the development of new sources of these materials should be encouraged. The dismantling of other buildings for salvage materials, such as slate, should however be discouraged as this promotes the destruction of old buildings.

9.3.3 Any proposals that involve the removal, partial removal or alteration of the roof cladding materials of a protected structure will require careful scrutiny. The insertion of large areas of glazing or numbers of openable rooflights into prominent slopes of roofs is generally not appropriate. The covering of historic roofs with waterproof membranes such as bitumen or tar should not be permitted, except to those roofs originally covered with such materials.

### Slates

#### IDENTIFYING SPECIAL FEATURES FOR PROTECTION

Slate is the most common covering material found on older roofs in Ireland. From the beginning of the eighteenth century until the mid-twentieth century, it was used on most buildings of consequence. Eighteenth-century slates that survive in situ are increasingly rare. Where they exist, these slated roofs contribute to the character of the building and are usually worthy of protection.

In the nineteenth century, the design of slate roofs became more elaborate with patterns formed in different colour variegated slates or courses of clipped or scalloped-edged slates. Such elaborate uses of slate are found on many churches and houses. Where such patterning is found, it should be identified, assessed and retained.

Slate roofs that have been laid in diminishing graduated courses should also be identified, as should the existence of unusual or large-sized slates.
CONSIDERATION OF PROPOSALS AFFECTING SLATES

9.3.7 In principle, sound slates should be carefully retained in situ. The stripping of traditional slate roofs should be discouraged because of the resulting loss of historic material such as the slates themselves, associated timberwork and parging (a lime mortar coating applied to the underside of slates). An applicant should be required to justify proposals by providing evidence of widespread failure of fixings or the poor condition of slates, battens or structural elements before stripping the roof. Where the work is permitted it should be carried out by experienced craftsmen, in order to maximise the preservation of the original material. Breakages can be minimised by good work practices such as the avoidance of double handling and by keeping slates in proximity to the work. As many as possible of the removed slates should be re-used on the more prominent slopes of the roof, with matching new materials on other, concealed slopes. The roof should be photographed prior to commencement of works to allow for its correct reinstatement. Where the existing slates are laid in patterns or in diminishing courses, such features should be retained. Any repairs should be carried out with care.

9.3.8 New cladding materials used in repair works should be compatible with the existing ones in terms of colour, size, texture, thickness and durability. The use of concrete tiles and fibre-cement tiles (sometimes referred to as ‘artificial slate’) should not be permitted in conjunction with, or as a replacement for, natural slate as the weathering characteristics, durability and appearance of these materials are very different from those of natural slate.

Thatch

IDENTIFYING SPECIAL FEATURES FOR PROTECTION

9.3.9 There are two distinct forms of historic thatched roof: the vernacular thatched roof, now most often found on traditional cottages, and the architect-designed, cottage-orné thatched roof. The vernacular thatched roof was common throughout the country until the early twentieth century, but is now becoming increasingly rare. While many thatched roofs have been replaced in other materials, others have been simply covered over with corrugated iron sheeting above the thatch. Where there is a possibility that a building was thatched, care should be taken to identify, record and protect evidence of the original roof-covering.
9.3.10 Thatch was a pervasive feature of the Irish landscape, as it provided a plentiful locally available roofing material. The traditional thatched roof has become symbolic of the vernacular heritage and is considered to be the indigenous roofing material.

9.3.11 Although the predominant material used was straw, there are regional variations in thatching style and materials used. Wheat straw, a farming by-product of food production, was used wherever it was produced. Rye is to be found on the Aran Islands, Co. Galway. Flax was used in Ulster. Heather, oats, potato hulm and marram grass are also to be found. Reed is used in particular locations where there were supplies from nearby riverbanks and lake margins.

9.3.12 In the vernacular tradition, thatched roofs are detailed functionally to withstand the elements and to make efficient use of scarce resources. The roof structure is often of unwrought wood. In coastal or other exposed locations, the roof structure was not a simple ‘A’ frame (which would necessitate a sharp ridge and excess concentration of wind pressures), but was truncated and made of four members to create a rounded profile. In these areas too, netting from ridges to eaves was employed as a restraint, as well as ropework tied back to pegs at the top of the wall and ridge scallops. In midland, eastern and southern areas, hipped- or half-hipped roofs replaced the gables to avoid excessive wind pressure. The roof structure often supported sods of earth, into which the thatch was fixed. When re-thatching, it was expedient only to replace the upper layers, and lower layers can thus represent an important record of agricultural life in an area and retain features such as old varieties of straw and older fixing techniques. Scallop-thatching used wooden rods to fix the straw, and thrust thatching required the knotted straw bundle being forced tightly into the layer below.

9.3.13 The cottage-orné style of thatching differs greatly from the vernacular tradition, having a separate language of detailing featuring verandas, elaborate cresting to the ridge and patterned eaves fixings together with a sculptural treatment of chimney stacks and windows to attic rooms.

CONSIDERATION OF PROPOSALS AFFECTING THATCH

9.3.14 Thatch presents special conservation issues, for two reasons. As a material it has a relatively short life, requiring to be renewed on a ten to thirty-year cycle. Secondly, thatch tends to be found on modest buildings whose accommodation may be inadequate for modern expectations. Hence there
ROOFS are economic barriers to the conservation of this roofing material. Planning authorities should bear this in mind, and give consideration to any assistance that it may be possible to offer.

9.3.15 Re-thatching should, according to best practice, follow regional characteristics of materials, form and detail. Permission should not normally be granted for replacement of thatch with other materials, or of one type of thatch material with another. Complete stripping of thatch is rarely required and defective thatch should only be removed to a sound base. It is acceptable for a roof to have a variegated appearance following repair. Where anti-fire devices are introduced for thatch, they should be visually acceptable.

9.3.16 Proposals to reinstate thatch, on a roof that is known to have been thatched, should be carefully assessed. Surviving evidence from the building itself and information provided by old photographs and other records should be used to ensure accurate reinstatement of features.

9.3.17 Re-thatching a simple traditional vernacular roof using elaborate ridge or eaves details from the cottage-orné style is not appropriate. When re-thatching a cottage-orné roof, however, it is important that the original detailing is respected. Where a thatched roof has been covered, for example with corrugated metal sheeting, the opportunity to re-expose the traditional material could be taken.
9.3.18 Lead and copper were traditionally used on buildings of quality for flat roofs, roof-walks, gutter-linings or cladding for domes and cupolas. Both materials, together with zinc, were also used extensively for flashings. Dates or inscriptions can be found carved into lead. Where these exist they are often important features which should be preserved and, if possible, incorporated into the new roof-covering.

9.3.19 Corrugated-iron and profiled steel, zinc or aluminium sheeting is also to be found on a variety of buildings and it should be noted where they are likely to be the original cladding material.

CONSIDERATION OF PROPOSALS AFFECTING METAL SHEETING

9.3.20 Lead and copper roofs should, where possible, be repaired rather than replaced. A correctly detailed and well-executed lead or copper roof can last for several hundred years without problems. There are examples, however, where the design of the original roof may have had inherent faults. These were most often caused by the use of overlarge sheets of the material or incorrect fixings that can lead to cracking of the sheets. Where there is an inherent design fault, the roof covering will require replacement to an improved design. Cracks should not be repaired with solder or with sealant, as these repairs will often cause further problems at a later stage. In addition, repairing metal sheeting with solder creates a fire hazard as most metal sheeting is supported by timber below.

Stone ‘slates’

9.3.21 So-called stone ‘slates’ are in fact thin slabs of limestone or sandstone dressed simply to rectangular shapes and used in a manner similar to slates. Stone ‘slates’ were usually laid in diminishing courses. There are very few remaining examples of stone ‘slates’ in Ireland and any examples should be preserved in situ with a minimum amount of disturbance.

Clay tiles

9.3.22 Clay tiles were rarely used traditionally in Ireland after the middle of the eighteenth century and are now usually only seen in buildings of the late nineteenth or twentieth century. They can be found as flat tiles, pantiles or profiled interlocking tiles. Clay tiles should be retained on buildings or additions where they are the original roof-covering. Examples of clay roof tiles predating the twentieth century are
valuable historical and architectural survivals and should be retained in situ. Clay and terracotta are however found extensively in ridge tiles.

Glazed tiles

9.3.23 A distinctive feature on some roofs of the mid-twentieth century is glazed tiling. Glazed tiles should be retained on buildings or additions of that period where they are the original roof-covering.

Concrete tiles

9.3.24 Concrete tiles were used on roofs of the late twentieth century and should be retained on buildings or additions of that period where they are the original roof covering.

Shingles and shakes

9.3.25 Shingles are thin, sawn or cleft pieces of timber used as roof, and sometimes wall, cladding. Shakes are shingles which are split on at least one face. Shingles and shakes were rarely used as a roof-covering in Ireland after the end of the seventeenth century and where examples are found they should be identified and are generally worthy of protection. In addition to their use as roof cladding, shingles and shakes are sometimes found as cladding to roof lanterns and similar features and as cladding to walls. Shingles and shakes were usually made of cedar, but chestnut and oak are among the timbers also used.

9.3.26 Where shingles and shakes are found, they should be retained. Where replacement shingles or shakes are required, these should match the original ones on a like-for-like basis, while allowing it to be clear on close inspection which is the original material.

Asphalt, bitumen and other membranes

9.3.27 Where this is the original type of covering it should be retained, but, if necessary, replaced with a like material, as membranes can be difficult to repair effectively.

9.4 Roof Details

9.4.1 The architectural detailing of roofs is often of importance not only to the individual building, but can also contribute to the character of a town or surrounding countryside.
9.4.2 Architectural details are important features of the roofscape and their removal should rarely be permitted where they are in good condition or are capable of repair. The removal of details of interest will have implications for the special interest of the structure, as they contribute to the quality and character of a roof. Where the structure forms part of a unified terrace, the alteration or removal of roof details from one structure will affect the character of the entire group and this should be borne in mind when considering a proposal for planning permission.

9.4.3 Where inappropriate earlier changes have been made, the reinstatement of missing features in replica may be appropriate, where there is sufficient evidence for their original form, or otherwise with an appropriate new design. Evidence for the original design might be found in adjacent buildings, for example, where the building is part of a terrace.
9.4.4 Ridges were traditionally finished with clay, terracotta, lead or stone capping. In the latter part of the nineteenth century the treatment of the ridge became more elaborate with terracotta ridge-combs, finials or iron cresting being used. Original or early weathervanes are of particular interest and contribute to the character of the structure.

CONSIDERATION OF PROPOSALS AFFECTING RIDGES, ETC.

9.4.5 Modern ridge tiles should not be permitted as a substitute for clay, terracotta, stone, lead or zinc. Where possible the original or early ridge details should be retained and repaired. Where replacement is considered appropriate they should be replaced to match. Original or early weathervanes should be retained and repaired as necessary.

Associated masonry detail

9.4.6 The masonry details associated with a roof may include crowsteps, kneelers, scrolled springers, bell-cotes, gargoyles, decorative water-spouts, eaves cornices, blocking courses, parapets, balustrades and other ornaments.

CONSIDERATION OF PROPOSALS AFFECTING MASONRY ROOF DETAILS

9.4.7 Masonry details are important features of roofs and their removal should rarely be permitted where they are in good condition or are capable of repair. The repair and conservation of these details should be in accordance with the guidance notes given for stonework in Chapter 8 above.

Domes, cupolas, lanterns, decorative roof-ventilators, spires and steeples

9.4.8 These roof features are not only important architectural features of the structure itself; the silhouette of such features contributes to the character of the surrounding landscape or townscape.

CONSIDERATION OF PROPOSALS AFFECTING DOMES ETC.

9.4.9 The removal of domes, cupolas, lanterns, ventilators, spires or steeples, or their replacement with simpler forms, should generally not be permitted.
Chimneys, shafts and pots

IDENTIFYING SPECIAL FEATURES FOR PROTECTION

9.4.10 Chimney stacks and pots are important elements of the roofline of a building. They can be indicators of the date of a building and of its internal planning. In Victorian buildings in particular, chimneys are usually an integral part of the architectural design.

CONSIDERATION OF PROPOSALS AFFECTING CHIMNEYS

9.4.11 Chimney stacks or pots, finials, or cresting should usually be repaired and retained. Only if they are decayed to the extent of being dangerous, should their rebuilding or replacement be permitted. Even when they are perceived to have no further use, chimneys should be retained together with their pots where their appearance is important to the appreciation of the building as a whole. While their main purpose is to remove smoke from open fires, chimneys also function in providing permanent ventilation to the building and, particularly in older buildings, they serve, or may have come to serve, a structural function. They also contribute visually to the architectural composition and massing of a building. Redundant flues should be capped but never fully sealed.

Eaves, verges and parapets

IDENTIFYING SPECIAL FEATURES FOR PROTECTION

9.4.12 The architectural treatment of the edges of a roof often gives a distinctive character to the entire structure. The eaves may be flush, or almost flush, with the wall below or there may be a projecting stone or brick course at the head of the wall to support the eaves gutter. Alternatively, the eaves may overhang the wall supported on projecting, exposed rafter ends, or on boxed-in rafter ends. Projecting eaves may be supported on plain or decorative timber or metal brackets.

9.4.13 There may be a parapet wall that rises above eaves level with a concealed gutter behind. Parapets can be balustraded or plain.

9.4.14 The verges of the roof may be flush with the wall and the gaps between the slates or tiles filled with mortar. The wall may rise above the plane of the roof and form a gable parapet. Alternatively, the verge may overhang the wall in which case the edges may be trimmed with bargeboards. Bargeboards can be relatively plain timbers or elaborately carved or pierced.
CONSIDERATION OF PROPOSALS AFFECTING EAVES ETC.

9.4.15 Alterations to the treatment of the eaves and verges of a roof, which materially alter the character of the roof and the entire structure, should not be permitted. Exposed rafter ends should not be enclosed with the addition of fascia boards and soffits, as this alters the appearance of a roof, and possibly the entire façade. Overhanging eaves and verges are a distinctive architectural feature of many buildings and should not be truncated.

9.4.16 The covering of previously uncovered parapets and blocking courses with lead or an other weather-proofing material should generally not be permitted where it would tend to distort the proportions of the building. The upper surfaces of cornices should only be covered by a lead flashing if the porosity of the stone or the absence of saddle joints makes this unavoidable. In such instances the depth of the drip at the edge of the cornice should be kept to a minimum to avoid the presence on the façade of a dark line where none was intended and similarly with any upstand at the back of the cornice. The planning authority should approve details in advance of works commencing.

9.4.17 Where decorative bargeboards, consoles, valances or brackets are in good condition or capable of repair, they should be retained and repaired. The addition of fascia boarding to provide fixing for gutter brackets should not be permitted as this will alter the appearance of the building.

Dormer windows, access hatches, skylights and rooflights

IDENTIFYING SPECIAL FEATURES FOR PROTECTION

9.4.18 Original or early dormer windows, external access hatches, skylights and rooflights are features of importance on a roof. Dormer windows used during the late eighteenth and early nineteenth centuries tended to be confined to secondary elevations. Surviving early eighteenth-century dormers are very rare and should be considered for protection. Cast-iron framed rooflights should be identified and retained wherever possible.

9.4.19 Dormer windows, skylights or rooflights may retain old glass, whether coloured or painted, or early plain glass such as crown glass. Bargeboards, finials, ridge tiles, ridge combs and other details associated with individual dormer windows should also be identified and protected as part of the character and special interest of the building.
CHAPTER 9
ROOFS

CONSIDERATION OF PROPOSALS AFFECTING DORMERS ETC.

9.4.20 Proposals to remove or alter original or early dormer windows, access hatches, skylights and rooflights from a protected structure will affect the character of the structure and should be carefully scrutinised. Alterations to these features will affect the overall appearance of the structure and, in some cases, the appearance of an entire terrace of buildings.

9.4.21 Original dormer windows should be retained and repaired rather than replaced. The enlargement of existing dormers and the linking of dormers should not be permitted where this would adversely affect the external appearance of the building. Old or interesting glass, whether coloured, painted or plain, should be conserved when repairing skylights, rooflights and dormer windows.

9.4.22 Where it is proposed to install new dormers or rooflights, the extent of potential damage to historic roof structures should be considered. If the building is part of a terrace, the proposed addition may upset the balance of the whole architectural composition. New rooflights and dormers on minor or concealed slopes may be considered acceptable in some cases. Low-profile ‘conservation-type’ rooflights with a central glazing bar should be used in preference to standard modern types. Where a large increase in natural lighting is required in the roof space below, it is usually preferable to permit the use of patent glazing in place of the existing roof cladding rather than the use of excessive numbers of rooflights which would disrupt the visual appearance of the roof.

9.4.23 Where it is proposed to reinstate a lost dormer or to replace a later unsympathetic alteration, this may be permitted, provided sufficiently accurate evidence exists either from an adjacent dormer or from old photographs or drawings. However, if such an alteration would result in an obtrusive patching of the roof-covering, it may not be appropriate to permit it.

Rainwater goods

IDENTIFYING SPECIAL FEATURES FOR PROTECTION

9.4.24 Rainwater goods which contribute to the special character of a structure can include plain or decorated lead or cast-iron hopper heads, profiled or half-round gutters, square section or round downpipes and decorative fixings and brackets. The fixing methods of the gutters should be identified. Traditional gutters are either supported on iron straps or brackets which project from the eaves, or they may rest on a projecting stone or brick course at the head of the wall.

Original lead rainwater goods (bottom) are rare survivors and often incorporate dates or impressed or embossed marks. This example is embossed with a fleur de lis and a Tudor rose. In the Victorian period the design of rainwater goods came to be an intrinsic part of the design of the structure (left). The style of the fixings – some with decorative clasps – may also be integral to this design.

While well-designed new dormers may be acceptable where they do not conflict with the architectural character of a structure, the profusion of many different-sized dormers on a terrace usually detracts from the character of the area as well as that of the individual structures (top). New rooflights may also have an adverse effect, particularly when installed on a principal elevation or where several are grouped or spread out over the roof (bottom)
9.4.25 A roof may retain evidence of interesting early water-collecting systems on or within the structure such as tanks, cisterns, pipework, internal guttering and the like. Such features should be identified and, even where subsequent alterations have rendered them redundant, efforts should be made to retain them in place.

CONSIDERATION OF PROPOSALS AFFECTING RAINWATER GOODS

9.4.26 The character of the structure will be altered by the removal of early rainwater goods. In many buildings, particularly Victorian buildings, the design of rainwater goods was an integral part of the overall design. In other structures the existence of early and original details adds to the special interest of the building. Many buildings, often cottages and farm buildings, were designed without rainwater goods and proposals to install gutters and downpipes on such structures will require careful consideration.

9.4.27 Original or early lead, iron or more modern pressed steel rainwater goods and their associated features should be retained. The use of extruded aluminium or plastic rainwater goods and associated fittings on a protected structure is rarely appropriate and should not be permitted.

9.4.28 Where the repainting of rainwater goods is proposed, the colour used should be sympathetic and appropriate to the character of the building. In cases where a profiled cast-iron gutter is mounted above the moulded brickwork of an eaves cornice to form the corona, the gutter should be painted to blend in with the brickwork thus visually completing the cornice. Lead gutters, hopper heads and downpipes should not be painted.

9.5 Insulation of Roofs

9.5.1 The insulation of a traditional roof can have far-reaching effects on the way in which the roof performs. The performance of a traditional roof was designed to rely on the ventilation of the roof space by the movement of air through gaps between the slates and tiles or through thatch. Insulation of a traditional roof to enhance energy efficiency will generally bring about the need for additional ventilation, requiring alterations to the eaves and ridge or the addition of vents in order to prevent the timbers within the roof space from being damaged through excessive moisture build-up and condensation. The location and type of vents and any proposed alterations to eaves and ridges should be carefully considered. Insulation of the roof space should only be undertaken where it can be achieved without damage to the fabric and appearance of the roof. The effect on cladding materials, such as slates, thatch or lead sheeting, should be assessed whether during the course of the works or from subsequent erosion due to condensation.