



## HERITAGE TECHNICAL NOTES

### ROOFING

#### Scope

The City of Adelaide is dedicated to the protection, preservation and promotion of Adelaide's built heritage.

This Technical Note aims to provide guidance to owners, managers, architects, builders and contractors in relation to roof works to Local Heritage Places. Advice on roofs for State Heritage Places should be sought from Heritage South Australia of the Department for Environment and Water, unless an application for funding via the City of Adelaide Heritage Incentive Scheme is intended.

Due to their visual impact, roofs are important to a heritage place aesthetically. Roofing should reflect the age, style and materials of the building. Inappropriate roofing detracts from both the heritage and economic value of the heritage place. Nineteenth and twentieth century buildings up to about the 1940s were usually gabled or hipped. Many larger Victorian homes had a double hipped roof, commonly referred to as an 'M' roof with a central box gutter.

Re-roofing of heritage places requires Development Approval. The works may also be eligible for funding assistance through Council's Heritage Incentives Scheme.

#### Background

Roofing has developed according to fashion and technological innovation, such as the relatively brief popularity of Marseilles tiles, originally imported from France at the turn of the 20th century.

As well as its aesthetic contribution, a sound roof is crucial to the preservation of a heritage place. Maintaining a roof and undertaking regular inspections of the roof sheeting, gutters and downpipes is essential. If a building is not weather-tight, other parts of the building such as plaster ceilings, walls or floors will quickly deteriorate, negating the value of any work done to the interior.

Re-roofing a heritage place requires lodgement of a Development Application with the following information:

- site plan – a sketch showing the location of the building
- roof plan – a sketch (or aerial photo) showing the extent of the roof to be replaced
- roof materials and finish
- details of chimney flashings
- profiles of hip, ridge or barge cappings
- location, materials and size of downpipes
- gutter size and profile
- method of stormwater storage/disposal
- replacement of any lost features such as vents, acroteria, bargeboards or finials.

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## Roofing Elements

### Roof

Heritage places in the City of Adelaide were most commonly roofed in galvanised corrugated sheeting, although slate was also used in the nineteenth century and terracotta tiles from the 1890s.

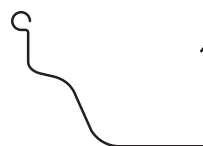
Galvanised roof sheets were originally only manufactured in short sheets, approximately 1.8 metres long, eventuating in a distinct rusted edge pattern where the sheets overlapped. Original roof sheeting remains on some Victorian dwellings in the City of Adelaide. Short sheets are still available for owners wishing to replicate the appearance of the original roof. It is also possible to repair original roof sheeting, even if rusted. Provided there are no holes, rust can be cleaned off and sheets re-fixed. Repair of original roofs is encouraged as roofs seldom look the same once replaced.

Corrugated steel roof sheets are protected by a zinc coating process, known as galvanising. Natural galvanised roof sheeting is the preferred material for re-roofing heritage places. Galvanised roof sheets (often referred to as 'heritage galvanised') have a distinct mottled appearance which also dulls off rapidly. Today galvanised roof sheets are available in two thicknesses of galvanised coating: Z450 and Z600. The Z600 coating is more durable and closer to the traditional zinc coating thickness.

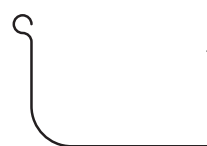
'Zincalume' is a contemporary steel finish with a zinc-aluminium alloy coating. It produces a bright smooth appearance which is not appropriate for heritage places. 'Colorbond' is a factory applied paint finish over 'Zincalume' and is generally not appropriate for heritage buildings.

### Gutters and Downpipes

When replacing gutters, the gutter profile should be appropriate for the era of building. Ogee profile gutters, 125 – 135mm wide, were commonly used in Adelaide during the nineteenth and early twentieth centuries. Verandah gutters were usually 100mm. A timber scotia (curved piece of timber) was usually fixed to the timber fascia to align and support the gutter. It is preferable that the scotia is repaired or reinstated when undertaking roofing repairs to a heritage place. Quadrant (also known as 'D' profile) gutters were commonly used on buildings from the 1920s. After WW2 additional gutter profiles such as Squareline, and materials such as PVC were introduced.



Ogee gutter



D gutter

Generally, downpipes should be 75mm diameter and in rolled galvanised steel rather than PVC. Verandah downpipes should be 50mm diameter and cranked around the corner of the building to connect into the main roof downpipe. This method avoids the downpipe clashing with verandah posts.

### Flashings and cappings

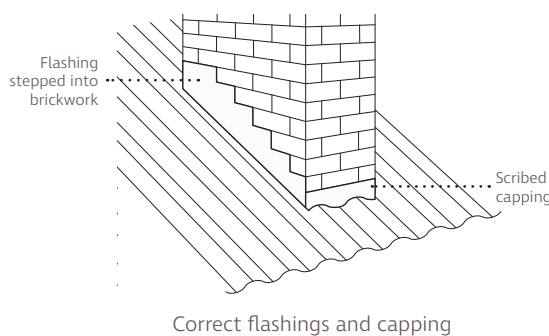
Flashings seal roof penetrations, such as chimneys or vents. Cappings seal roof junctions where different roof components meet. Early chimney flashings may have been lead or galvanised steel and should be replaced like for like where there is evidence of the original material. Chimney flashings should be stepped into the brickwork unless existing evidence suggests otherwise.

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Barge cappings (where the side of a gabled roof meets the wall), were originally in timber. Galvanised steel barge cappings with a rolled edge were later introduced to protect the timber. Roof ridge and hip cappings should have a roll top profile and be scribed to the corrugated roof sheeting profile.



### Other Roof Elements

Re-roofing also provides an opportunity to reinstate features such as roof vents, gablets (small triangular gables in the roof), roof cappings, rainwater heads and acroteria (decorative features at the corner of the gutter), if part of the original construction. These are important components contributing to the appearance of the heritage place. Where still intact they should be repaired and reinstated or if missing, replicated.



## Principles

The principles used to assess heritage conservation are based on the Burra Charter (the Australia ICOMOS Charter on the Conservation of Places of Heritage Significance), an Australia-wide professional guide which is widely accepted in the conservation industry.

Retention of original material is important in maintaining the heritage value of a heritage place. It is always preferable to repair rather than replace an original roof. If the existing roof is a replacement and is inappropriate to the style of the building, it should be replaced in a suitable material and style. If the building has been previously re-roofed, investigate what type of roof the building would originally have had. Original roof materials such as timber shingles, slate or original galvanised iron may remain under the current roof or archival photographs may be available to assist the investigations. Surrounding buildings of similar age, may also provide evidence or can be used for obtaining dimensions and design detail.

Where retention of an original roof is not possible, the new roof should:

- be based on evidence of the original roof (photographic, physical evidence, reference to nearby buildings of similar age, style and materials)
- not compromise the heritage value of the building or streetscape
- maintain the original roof pitch and form
- use materials appropriate to the heritage place.

Other related publications:

- The Australian ICOMOS Charter (Burra Charter) for the Conservation of Places of Cultural Significance
- Heritage SA – Early Roofing and Roof Materials in South Australia (available online)

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Left: Later aluminium tiled roof inappropriate for the era of building and historic character of the streetscape.  
Right: Roof replaced with galvanised corrugated sheeting.



Galvanised corrugated iron roof



Slate roof



Stepped chimney flashing and scribed capping

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