

# THE ART OF REPAIR

## CONSERVATION PRINCIPLES IN PRACTICE

ROBIN KENT

**Repair is at the very heart of conservation but the line between ‘propping a perilous wall or mending a leaky roof’<sup>1</sup> and reconstruction or restoration is often far from clear.<sup>2</sup> Even authoritative guidance documents on conservation principles such as *BS 7913* (the draft British Standard dealing with the conservation of heritage assets) and *The Burra Charter* vary in their definitions of repair.<sup>3</sup> What is certain is that overzealous or ill-informed repair can lead to damage which reduces the value of heritage assets. Equally, however, neglecting ‘stitch in time’ repairs can lead to accelerated deterioration and loss.**

Repair is an art which requires knowledge and skill, and must be guided by conservation principles.

### UNDERSTANDING

Since all buildings deteriorate over time, repair is not optional. If heritage assets are not repaired they will eventually be lost. In some cultures such as Japanese renewal is seen as an integral part of heritage conservation, helping to keep craft traditions alive by periodic rebuilding which closely reproduces the appearance of the past in new materials. By contrast in Western culture the preservation of authentic original materials and the information these contain about the past can, ironically, result in loss of the original appearance and design intention.

The balance between such extremes is found in assessment of the cultural significance of the building, the foundation of all conservation work. Theoretically if the materials themselves are the most significant aspect, then they should be painstakingly preserved; if the design



*The repair of the Grace Darling Memorial, Bamburgh (1844, Grade II\*) required completely dismantling (below) and rebuilding it. (All photos: Robin Kent)*

or appearance is significant, then repairs may need to reflect this as well. Every historic building is unique and we may find that different cultural groups have different perceptions of value and these may change over time. It is therefore essential for the approach to repairs to be based on an up-to-date, holistic understanding of embodied values.



Repairs also need to be based on the correct diagnosis of defects. This requires an understanding of the building, its design and materials, and their decay patterns and rates of decay over time. It is all too easy to assume the worst and take a disproportionate response to erosion, distortion or cracking that may have been evident for many years, inherent in the design or part of the special historic character of the building. Often, monitoring defects over a period of a year or two will put things in perspective. The need for detailed professional survey and recording of historic buildings to guide repairs is clear.

### MINIMUM INTERVENTION

Assuming that repairs are really necessary for the long-term survival of the building, the key to preserving historic character and significance is ‘conservative repair’, or keeping repairs to the minimum necessary to ensure structural integrity, arrest or delay deterioration, and ensure continued function.<sup>4</sup> This even applies if the ‘function’ is merely as ‘a ruin in the landscape’. Minimum intervention will ensure that repairs do not cause unnecessary damage. Historic buildings are a finite resource and the principle of minimum intervention also makes economic and environmental sense.

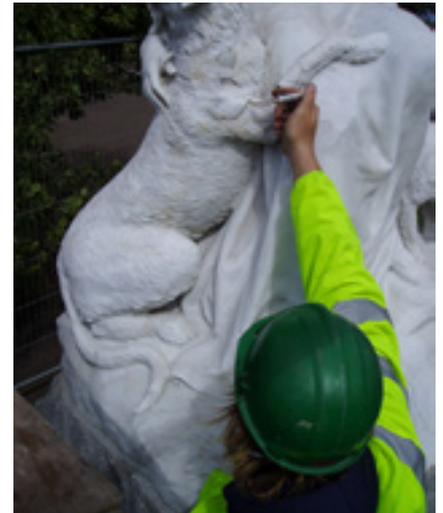
Many historic elements were designed to be repaired in a minimal or piecemeal fashion. Timber windows, timber frames, masonry and brickwork can all usually be repaired by piecing-in matching materials. At the same time, there are elements such as roof coverings that will eventually require comprehensive replacement to ensure that they remain safe or weatherproof.

### TRADITIONAL MATERIALS AND TECHNIQUES

Materials used for repairs will never be exactly the same as historic materials but should be as close as possible and compatible so that they do not introduce damaging chemicals or stresses or disfigure the appearance of the building. To ensure that repairs do not cause unnecessary damage, materials used in repair work should be fitted to the surviving historic materials, not vice-versa.



*Statue of Lady Jerningham, Berwick-upon-Tweed (1908, Grade II): the marble statue was treated with an irreversible sealant and was featured on the BBC television series ‘Tomorrow’s World’ in 1975*



*A conservator from Nicolas Boyes Stone Conservation works on the statue. Extensive conservation work had to be carried out in 2007 to prevent serious cracking and spalling attributable to the ‘innovative’ treatment.*



*Many of the balustrade panels at Brizlee Tower, Northumberland (1781, Grade I) were beyond recovery due to rusting of the original iron pins and cramps and had to be completely re-carved in matching sandstone. Stainless steel and bronze cramps and pins were substituted in the repair work.*



*Rebuilding the balustrade at Brizlee Tower included adding stainless steel posts to support and reinforce the balustrade to make it safe.*

Occasionally, repair work may require the use of modern materials or detailing to correct past design defects which are causing active deterioration. However, this approach is only appropriate in cases where it allows more of the historic fabric to be retained and if the repair can be achieved unobtrusively. Modern ‘miracle’ materials or treatments have too often been found in retrospect to be damaging to historic fabric and repairs to historic buildings are not the place for experimentation. Perhaps the most widespread example of the use of damaging modern materials in repair work is the repointing of hundreds of our most important

historic monuments with cementitious mortars, which irreparably damaged the masonry by introducing salts and inhibiting drying out.

The wisdom of using tried and tested traditional materials and craft-based techniques that can last for hundreds of years is now more commonly accepted for repairs, but other old buildings should not be cannibalised to provide ‘authentic’ materials such as roofing slates. Part of the aim of using traditional materials and techniques should be to help support suppliers and craftspeople in business so that they remain available for repairs to other historic buildings, to benefit the wider heritage.



Masonry is designed to be repaired piecemeal: here, failed stones are cut out at Bowden Pant (1861, Category C(S)) by a mason from McIntyre Masonry. The completed repairs, above right, will blend in harmoniously over time.

## REVERSIBILITY

The possibility that research may discover alternative design features or better repair techniques means that, wherever possible, there should be the potential to remove or reverse repairs at some future point without damaging historic material. In practice this may be hard to achieve, especially with structural repairs that require built-in reinforcement or rebuilding, but also in the case of some finishes and decorations which may need to be more durable than their predecessor to cope with more exposed conditions or less frequent maintenance.

## AUTHENTICITY

Most people agree that repairs should not aim to deceive but equally they do not always need to ‘bear a contemporary stamp’,<sup>5</sup> which will inevitably strike a discordant note in years to come. Rather, they should be recessive and harmonious,<sup>6</sup> so that the emphasis remains firmly on the significance of the heritage asset instead of the repairs themselves, however exciting and innovative they may be. Repairs only need to be identifiable ‘on close inspection’,<sup>7</sup> the more so if they are recorded and discreetly dated.

Repairs may be easy to spot when newly carried out but artificially aging or distressing materials to reproduce ‘the patina of age’ and help them blend in with existing materials is usually unwise. It can eventually lead to disfiguring variations in

appearance. Instead, repairs should be left to weather-in naturally.

Generally, previous repairs and alterations should be preserved as a record of the history of the building but schemes of repair can often provide the opportunity to remove damaging past repairs such as cement renders or disfiguring later accretions ‘of little interest’.<sup>8</sup>

## ADVICE

The most important factor in carrying out repairs is to get the right advice. There are currently three schemes of conservation accreditation for architects operating in the UK and one for surveyors, which aim to provide those who care for historic buildings with more confidence that they are appointing the right professional adviser to lead their project. Professionally prepared quinquennial (five-yearly) condition reports can provide a firm basis for prioritising, planning and budgeting for repairs.

Conservation professionals will also be able to recommend which other specialists may be needed and help to ensure that appropriately qualified and experienced craftspeople carry out the repairs. Perhaps the most important conservation principle in practice is that the art of repairing historic buildings is seldom the responsibility of a single inspired individual but instead requires cooperation, communication and contributions from several ‘artists’.

## Recommended Reading

C Brereton, *The Repair of Historic Buildings: Advice on Principles and Methods*, English Heritage, London, 1991

*Draft British Standard 7913:2013: Guide to the Conservation of Heritage Assets*, BSI, London, 2013

English Heritage, *Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment*, English Heritage, London, 2008

J Knight (ed), *The Repair of Historic Buildings in Scotland: Advice on Principles and Methods*, Historic Scotland, Edinburgh, 1995

**Robin Kent DiplArch(Oxf) MA RIBA RIAS AABC IHBC is a conservation accredited chartered architect with wide experience of practical conservation work both in government and private practice (see page xx).**

*This article represents the personal views of the author; it is not official guidance or a statement of the law, and should not be relied on as such. No responsibility is accepted for errors or omissions. Each historic building is unique and will require individual consideration.*

## Notes

- <sup>1</sup> SPAB *Manifesto* (1877)
- <sup>2</sup> See, for example, the assertion of French archaeologist Adolphe-Napoléon Didron that: ‘it is better to consolidate than repair, it is better to repair than restore’ (*Bulletin Archéologique*, I, p47, 1839)
- <sup>3</sup> Compare BS 7913 (2013 draft), s.2.22, with The Burra Charter, s.1.5
- <sup>4</sup> The Madrid Congress (1904), article 1
- <sup>5</sup> The Venice Charter (1964), article 9
- <sup>6</sup> The Venice Charter (1964), article 12
- <sup>7</sup> The Burra Charter (1981), article 19, referring to reconstruction, viewed as a type of repair
- <sup>8</sup> The Venice Charter (1964), article 11