



War memorials are often made from limestone, sandstone, granite or marble. Even though these have different properties, there are good conservation practices which can apply to them all.

Even the best cleaning methods cannot make stone look like new so expectations should be realistic. Good cleaning methods will try to do as little damage to the stone as possible - any work will impact upon the stone and thus minimum intrusion will save the maximum amount of historic fabric for future generations. Cleaning should always be undertaken by professional specialists as areas of the war memorial such as lettering and decoration can be fragile.

This helpsheet is designed to offer some basic advice about the cleaning of limestone. If you require further guidance, please contact the Trust's Conservation Team.

Why do problems occur?

The two main issues affecting war memorials are pollution and biological growths. Often memorials are situated near roads and over time carbon and sulphur deposits from vehicle exhausts settle on the stone surfaces in crusts. Rainwater falling onto the deposits means the dirt is carried further into the pores of the stone and trapped. Biological growths such as algae and lichen thrive on damp stone. Sometimes these can add to the attractiveness of the memorial but too much can cause stone damage and obscure inscriptions.

Removing pollution and dirt

It is important to use gentle cleaning methods on stone so as not to damage its surface. Damage to the surface allows rainwater to penetrate and speeds up the weathering process. The following methods are recommended for limestone where dirt and deposits are usually water soluble.

- Washing with water and soft bristle brushes;
- Washing with a steam cleaning system;
- Using a low pressure water spray.

It is best to undertake cleaning during the summer months as during winter water can get trapped in cracks then freeze which can cause splits in the stone.

The Trust **does not** advise general use of:

- High pressure water jets;
- Abrasive methods such as rubbing blocks, carborundum discs, sand blasting, metallic brushes;
- Chemicals, bleaches or detergents.

In some circumstances, light abrasive or gentle chemical methods can be used but only if all other options have failed. Contact the Trust's Conservation Team for further advice on these.

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Removing biological growths

Algae and lichen can be removed with a wooden spatula and soft bristle brush. If this is not sufficient, steam cleaning will remove the more stubborn areas. Regular application of a biocide will keep the growths away.

Please note that some forms of plant species, including some biological growths are protected. Please see War Memorial Trust's helpsheet 'Lichens' for further information.

Removing staining

Bronze and copper elements on memorials can often leach green or turquoise deposits into the stonework. Iron elements will leach red or brown deposits. These can be removed by a method called poulticing. Chemicals or other substances (e.g. clay) are placed on the surface stone through a cloth in a number of sessions to draw out the staining. You should note that colour cannot always be removed and it will often reappear. This should be seen as part of the historic nature of the war memorial.

Conservation professionals will be able to advise you on the most suitable method. Please see War Memorials Trust's 'Conservation contacts' helpsheet for further information.

Removing graffiti

Graffiti should be removed as soon as possible before particles of paint have penetrated too deeply into the pores of the stone. The most commonly used methods are poulticing, steam cleaning and laser cleaning.

There are anti-graffiti coatings available which are transparent substances painted onto the stone surface. However, some of them change the colour of the stone and have yet to be proved effective in the long term. It is therefore recommended they are not used but other security measures are improved.

Further information includes:

- **Graffiti on historic buildings and monuments: methods of removal and prevention (1999)**
Published by English Heritage, product code XH20101, and available free (PO Box 569, Swindon, Wiltshire SN2 2YP, T: 0870 333 1181, E: customers@english-heritage.org.uk).
- **The treatment of graffiti on historic surfaces**
Published by Historic Scotland, available for £17 (Longmore House, Salisbury Place, Edinburgh EH9 1SH, T: 0131 668 8638, E: hs.conservation.bureau@scotland.gsi.gov.uk, W: www.historic-scotland.gov.uk/publications).

Other considerations

Public opinion differs greatly about how war memorials should look. Some believe they should look as new as possible, others they should look weathered and aged to reflect their history. War Memorials Trust believes a balance is appropriate and that custodians should ensure inscriptions can be read and that war memorials are cleaned sufficiently to avoid damage to the structure but not undertake cosmetic cleaning. The Trust suggests custodians provide people with information about their approach to cleaning; this could be as part of a simple maintenance plan. The Conservation Team is happy to advise if you are unsure if cleaning is required.