



Threads of Conservation

Social fabric • Fabric and place • Conserving fabric

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David Young OAM is a heritage consultant specialising in building materials conservation. With a background in geology he has been involved in the diagnosis and repair of historic buildings and sites for over thirty-five years, with a particular focus on those of stone. He also undertakes a range of teaching and training activities and has run short courses on building conservation in Australia, New Zealand and South Africa. He was convenor of the Australia ICOMOS working group that undertook major revisions to the Burra Charter in 1995–1999.

David is the author of the technical guide, *Salt Attack and Rising Damp: a guide to salt damp in historic and older buildings*, and the forthcoming *Mortars: materials, mixes and methods — a guide to repointing mortar joints in older buildings* which will be published by all State heritage agencies.

Desalination by captive-head washing: results of simple trials

Paper Abstract

Captive-head washing is a system designed for cleaning dirt and grime from building façades in which the dirty wash water is captured by a wet vacuum cleaner, thus minimising clean-up and waste disposal issues. The system's potential for reducing salt loads has been recognised for some years and anecdotal evidence suggests that it works well enough to justify its on-going use, yet there is little published data which supports this.

To begin to rectify this situation, trials were conducted at the 2014 Longford Academy on an interior wall of the 1820s brick blacksmith's shop at the Woolmers Estate. The 350 mm thick brickwork suffers from penetrating dampness carrying salts through the wall to the interior surface where the low-fired bricks are severely decayed by salt attack. Samples of the wash water from two cycles of captive-head washing were collected and analysed for soluble salts (total dissolved solids) by electrical conductivity.

The results show that a significant quantity of salt was removed from the wall. The second cycle removed about one third the amount of salt of the first cycle, which raises the question of whether additional cycles may be beneficial. Further trials should seek to replicate these results on different substrates, test the effect of multiple cycles, and compare different nozzle flow rates in order to optimise the technique.