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Soft wall capping: Testing its usefulness in conserving ruined monument walls

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In ruined monuments, where roofs have failed and unfinished wall tops are exposed to the elements, considerable problems of accelerated stone decay can occur. Water can penetrate into stonework from all directions, and the walls also become more vulnerable to diurnal temperature fluctuations without the presence of roofs. In England many such ruins are classed as Ancient Monuments and are under the care of English Heritage. Conservation methods used in the past have mainly involved 'hard capping' which is the use of stone and mortar to provide resistant caps on the top of ruined walls, or 'do nothing' which has, in effect, let natural processes of decay take their course. Sometimes, however, the strategy of benign neglect has resulted in the colonisation of wall tops and sides by a range of vegetation types which can, in some circumstances, protect the stonework from decay. English Heritage has recently commissioned research to investigate whether purposefully applied vegetation (called 'soft wall capping') can have a similar protective effect. The research aims to test whether simple soil and turf capping can be a successful, cost-effective, ecologically-friendly and low-maintenance conservation technique. We report here on an integrated series of laboratory and field experiments which form part of this research. Field trials of soft wall capping have been initiated at a range of sites in Yorkshire, Lincolnshire, London and Gloucestershire in order to observe the performance of soft wall capping on a range of stone types under different climatic and architectural situations. Laboratory experiments on scaled down versions of soft wall caps have been undertaken to provide more detailed information on their thermal blanketing ability and role in altering water movements. Initial results show that soft wall capping is a cost-effective solution in many cases, which prevents freezing of stonework on the tops of vulnerable ruined walls.