



Biogeomorphology in action: Soft capping of ruins as a form of heritage conservation

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Organisms make many contributions to geomorphic processes with knock-on impacts on ecosystem functions. These biogeomorphic interactions may be harnessed to aid environmental management in natural and built environments. An example of such 'applied biogeomorphology' is provided by the technique of soft capping (plants and soil placed on ruined wall heads) as a preventive conservation method to slow the deterioration of ruined buildings and sites. A ten year study run in collaboration with English Heritage provides a detailed, integrated assessment of the value of soft capping based on experiments on test walls and field trials on genuine historic ruins. The study demonstrates that soft capping is a very valuable technique for heritage conservation. The results illustrate that it provides an effective thermal blanket, protecting walls from damaging temperature fluctuations. The results also provide evidence that soft capping has often complex, but usually benign, influences on moisture regimes within ruined walls largely preventing moisture from seeping into the walls. Field experiments demonstrate the efficiency of soft capping in preventing water runoff down the wall face. The research also indicates the complexity involved in soft capping as the soil and vegetation systems behaviour varies in space and develops over time.