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A holistic approach to the assessment of stone decay: Bonamargy Friary, Northern Ireland.

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Mapping and condition assessment have proved to be useful tools in understanding stone decay and identification of remedial action. In this study a holistic strategy is taken to the study of façade decay at Bonamargy Friary, on the north Antrim coast, Northern Ireland. After lithology and decay forms are mapped, inter-relationships between decay form, stone type and environment are identified and quantified. This is accomplished through the analysis of spatial association of decay forms (Turkington & Smith 2004) and is used to inform our understanding of decay processes and environmental and lithological controls on those processes. This approach is combined with the UAS staging system developed by Warke et al. (2003) that is based upon a "whole-building" approach to the assessment of stone condition, the spread of decay, and a staged approach to conservation intervention. Bonamargy Friary has been used to test the application and combination of these approaches to mapping and decay assessment on medieval sandstone monuments. The case study demonstrates how the combination of these approaches can be used to improve our understanding of the factors that control stone decay whilst providing a clearer understanding of the cumulative impact of combined decay mechanisms.