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## The ' Greening' of Natural Stone Buildings: Quartz Sandstone Performance as a Secondary Indicator of Climate Change in the British Isles?

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### ABSTRACT

A number of recent studies have explored the impact of climate change on natural building stones. Because of its sensitivity to change, sandstone can be seen as having a predictable, recognisable and sustained response to changes in system inputs that control performance – most crucially for the UK and Ireland, how it responds to an increased moisture input. There has been a widespread biological “ greening” of sandstone buildings in response to these periods of wetness during autumn, winter and spring months. Furthermore, there is a wealth of literature detailing the response of sandstone in a variety of environments where sand-stone response is representative of the environment in which it has been placed. This letter suggests that the response of sandstone to trends towards wetter winter conditions is predictable to the extent that it may have potential to be a secondary indicator of climatic change – that is, a system that alters in response to fluctuations in environmental conditions in a sustained way. It is hoped that the letter may stimulate discussion as to what other possible indicators of climatic change remain unacknowledged.

### KEYWORDS

Climate Change, Sandstone, Weathering, Greening

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