



## ASSESSING THE IMPACT OF CLIMATE CHANGE ON CONSERVATION HEATING IN NATIONAL TRUST HISTORIC HOUSES

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**ABSTRACT:** The National Trust uses humidistatically controlled conservation heating as its main method for controlling the indoor environment for care of collections in over 100 historic houses in England, Wales and Northern Ireland. The Trust is very interested therefore, to understand if this climate control strategy will remain effective in a changing climate.

Regional climate model data generated by the Climate for Culture research team have enabled us to investigate this question for several of our case study sites with a local geographical resolution of 10 x 10 km grid squares. Simulated temperature, absolute humidity and relative humidity data were used to investigate how target temperatures required for conservation heating may change in the future and the implications this has for thermal comfort inside our buildings and for energy consumption of our conservation heating systems.

This paper will present these findings for several of National Trust case study houses, demonstrating local geographical variation within the UK, and the possible effects of climate change on our current environmental control strategy.