

## CLUES Conference: Energy in the Locality



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**The Barbican Centre: An investigation of the effectiveness of applying post-occupancy evaluation methods at a case study residential site, to design retrofit solutions for iconic and listed buildings**

A post-occupancy evaluation (POE) of 2056 residential dwellings was carried out at the Grade II Listed Barbican Centre in London. The purpose of the study was to characterise occupant satisfaction, energy use and behaviour in Barbican dwellings, to investigate options for refurbishment strategies to reduce energy consumption without compromising the heritage value of the buildings, which are architecturally significant and retain many original features such as the centrally-controlled electric district heating system.

This presentation will consider the effectiveness of the adopted methodology, which draws on methods from POE and building performance evaluation (BPE), by discussing the relationship between the key findings of the study and the methods used.

The research comprised a residents survey and an evaluation of metered heating energy consumption data. A questionnaire was developed based on the domestic BUS methodology, with additional questions that sought to quantify domestic energy behaviours. On the basis of this work, which found that 89% of residents were using windows as a substitute for heating control during winter, a series of recommendations were made to the estate's management, which are currently being piloted. However, the critical question, which identified this problem was only added after consultation with the residents' sustainability group.

The work concludes that although the chosen methods were successful in identifying a workable solution to some of the residents' concerns, a 'one size fits all' approach will not always be effective when working with hard-to-treat buildings, and that there is an opportunity for a more targeted methodology to be developed.