

## International Conference on Sustainability in Energy and Buildings

### Invited Sessions

**Title of Session:** The Sustainable refurbishment of heritage buildings

**Name of Chair:** Dr Carolyn Hayles and Amber Wismayer

**Description:**

Recognition of the interconnectedness of buildings, people, and community (including cultural identity), is essential for the creation of a sustainable built environment. A number of factors have led to a focus on sustainable design and construction within the built environment. These include: a greater awareness of and sensitivity towards the World's limited natural resources (reducing environmental impacts); as well as a growing demand for healthier, more energy-efficient, and more environmentally responsible homes, schools, hospitals, work places, and leisure facilities (providing physiologically and psychologically healthier indoor environments).

Estimates suggest that 70% of existing buildings will still be in use in 2050. As the construction of new buildings is carbon intensive, the embodied energy of existing buildings cannot be overlooked.

Retrofitting, refurbishing and reusing existing building stock provides a solution that allows heritage building of cultural significant to continue to benefit society. Moreover, there is considerable scope for reducing the energy consumption of existing buildings by retrofitting and refurbishing them in a sustainable and energy efficient manner.

In this invited session, we welcome research papers that consider the sustainability of built cultural heritage and in particular the sustainable and energy efficient eco-refurbishment of heritage buildings. Papers that explore sensitive approaches to refurbishing heritage buildings, which include retaining or reinstating passive design features, and those that take into account human behaviour, human health and welfare, and environmental responsibilities, are particularly welcomed.

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