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Kin completed her PhD on the conservation of sandstone heritage buildings at UTS, Sydney in 2008. She then worked as a conservator in the Macau Art Museum for 6 years and currently as the principal conservator at the Cultural Heritage Department of the Macau Cultural Bureau, responsible for the enforcement of the Heritage Protection Law, the conservation and restoration of the World Heritage listed Macau Historical Centre, and conservation standards in historical architecture. Kin is currently working on the investigation and re-introduction of traditional building materials and techniques in conservation in Macau.

Sustaining traditional practice and utilising local materials in heritage conservation

Paper Abstract

Macau was originally a small fishing town composed of narrow stone alleys, patios and traditional architecture. Since the Portuguese settlement over 400 years ago, Macau has been an important bridging platform for the exchange of cultures, sharing values and building knowledge between the east and the west.

Macau Historical Centre was inscribed by the World Heritage Committee in 2005, as "being a living example of a settlement that represents the exchange of values between Chinese and Portuguese in various fields of culture, sciences, technology, art and architecture over several centuries" (WHC 2005). The heritage centre not only displays significant examples of architectures from both communities, but also represents residents from different walks of lives sharing a community in harmony.

Many of the city's original landmarks were built using local materials and traditional techniques that are no longer practicing nowadays. These include the rammed earth city walls as well as the rich coloured lime washed buildings and plaster stucco. This paper discusses the examination of rammed earth samples from various heritage walls in Macau. Sections of these walls were selected to be restored using traditional methods and locally available raw materials. Experienced rammed earth skilled workmen from local community were invited to join the project and custom-made tools were specially prepared according to various researched requirements.

Part of the research focused on traditional rice straw hydrated lime as used extensively by local builders and decorators in the past. Housing plaster, decorative stucco and cornices, as well as colourful lime washed facades are still seen today. In this project attempts were made to slake rice straw lime using local techniques and available natural materials. Lime plaster and lime washes were prepared and applied in accordance with methods recalled by old residents in several conservation projects on traditional houses. The research findings and experience of reviving traditional practices will be shared in this paper.