International Course on Stone Conservation SC13

SESSION: Lime mortars – properties and uses

INSTRUCTOR: David Odgers

TIME: Thursday, 2nd May/ 11:30-13:00 (1.5 hours)

SESSION OUTLINE

ABSTRACT

Mortars based on lime binders have played a fundamental part in the built heritage in all parts of the world. This session will provide an understanding of the technical and practical implications of their use and how they continue to be an important tool in the conservation of stone buildings, monuments and archaeological sites.

OBJECTIVES

To achieve a sound technical and practical understanding of the way in which lime is made and used and why it is a fundamental material for the built heritage. Participants will be able to recognise the different types of lime and understand when their use might be appropriate. They will have knowledge of the use and properties of lime as a binder in mortars as well as its other applications.

CONTENT OUTLINE

- The properties of:
    - different lime binders,
    - types of aggregate,
    - aggregate distribution,
    - additives,
    - setting mechanism,
    - application and aftercare.
- How these properties can be manipulated depending on the use of the mortar.

READINGS

📖 = Essential reading material
💻 = Available online

📖 Ashurst, John. 2002. *Mortars, plasters and renders in conservation*. 2nd ed. London: Ecclesiastical Architects' and Surveyors' Association. 2-42.

Ashurst, John, and Nicola Ashurst. 1988. *Practical building conservation: Volume 3: Mortars, plasters and renders*. Vol. 3, English heritage technical handbook. New York: Halsted Press

English Heritage, 2011, *Practical Building Conservation – Mortars, Plaster and Renders.* Surrey: Ashgate Publishing

Teutonico, Jeanne-Marie, Iain McCaig, and John Ashurst. 1994. The Smeaton Project: Factors Affecting the Properties of Lime-Based Mortars. *APT Bulletin* 25 (3-4): 32-49.

Scottish Lime Centre, and Historic Scotland. 2003. *Preparation and Use of Lime Mortars*. Rev. ed. Historic Scotland Technical Advice Notes 1. Edinburgh: Historic Scotland.