

Project **STONECORE** deals with the development and application of nano-materials for the conservation of natural and artificial stone.

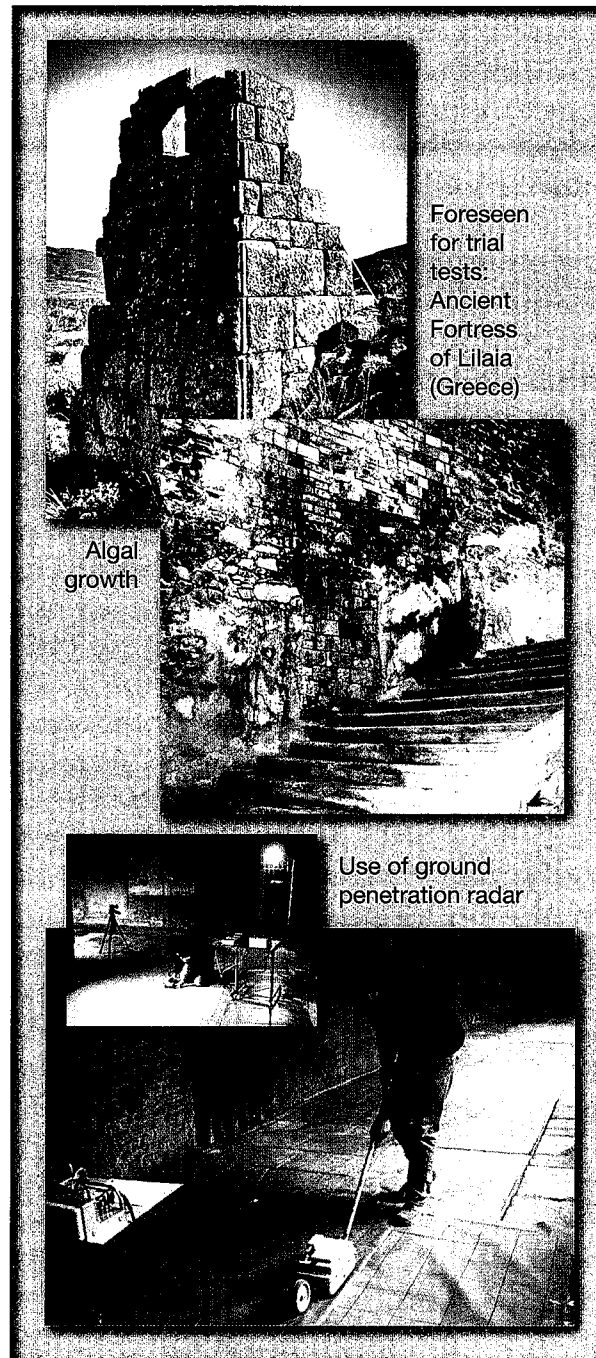
Materials will be developed that are compatible with components originally used during the construction of buildings and monuments.

A second main objective of project **STONECORE** is the advancement of non-destructive assessment methods for stone.

These will be used to assess the performance of the novel materials.

In detail, project **STONECORE** combines the following principle subjects:

- ◆ Development of methods for the synthesis of nano-materials that are compatible with natural and artificial stone
- ◆ Development and evaluation of technologies suitable for the application of nano-materials for strengthening stone and mortar and the removal of microbiological growth
- ◆ Development of new, non-destructive assessment methods for stone based on ultrasonic as well as geophysical measurements
- ◆ Treatment of different stones with the materials developed and the characterisation of any effects obtained



Six SMEs, four universities, one public research organisation and one governmental organisation from seven countries have joined together in order to find a new approach for the refurbishment of natural and artificial stone. The idea of the project is to combine applied research, performed by the participating SMEs, with fundamental investigative work at the universities. The following applications are in the centre of interest:

- ◆ Consolidation of limestone, marble and related materials due to the formation of calcium carbonate from calcium hydroxide sols
 - ◆ Consolidation of different types of mortar, plaster and sandstone by newly developed nano-sols
 - ◆ Destruction of mildew and algal growth by colloidal suspensions combined with consolidation of the treated area due to mineralisation
 - ◆ Solidification and conservation of stucco
 - ◆ Stabilisation of wall paintings
- Project **STONECORE** aims also to develop innovative, non-destructive or low invasive, minor destructive