



Preventive conservation and diffusion of buried archaeology in civil engineering work sites: the ArchaeoTrack Project

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Preventive archaeology is fundamental before any civil engineering work. The ArchaeoTrack research project deals with new advanced methods, based on the use of non-destructive techniques, to minimize interferences between the site works and any potential archaeological remain still to discover.

In fact, major issues arise from the use of the traditional archaeological survey methodologies (e.g. excavation of inspection trenches), as they are very expensive and time-consuming. In addition, the management of the archaeological data that come from the excavation still remain an open issue. Indeed, once studied and brought to light, the archaeological sites are seldom presented to the public because of the high maintenance costs required to restore them and to make them accessible. To overcome these issues, the project sets the following objectives: I) identification of the most suitable GPR system for archaeological prospections, II) development of dedicated survey protocols for stand-alone use of GPR and integrated use with other non-destructive/minor-destructive survey methods III) virtual reconstruction of the surveyed buried structures in a 3D environment and IV) data storage and visualisation on a free digital platform, to make them available to communities.

As an initial step of the project, detailed Ground Penetrating Radar (GPR) surveys are being conducted in the Complex of Maxentius, an archaeological site located on the 3rd mile of the Ancient Appian Way. Various areas of interest have been identified within this site. By first, the research has been focused on the area where thermal baths from 2nd century AD are believed to be located. A partial plan view of the hidden structure was already known thanks to the inspection carried out during the twentieth century.

The outcome from the tests allowed to integrate the knowledge about the structure, to obtain new information about the area and, further on, together with the bibliographical and archival research, develop a three dimensional model of their original appearance.