

Leica Geosystems **TruStory**

Leica Builder for Archaeology Projects



York Archaeological Trust (YAT) is an educational charity dedicated to exploring the past and explaining it through many different mediums. Founded in 1972, the organisation employs over 100 people. YAT supports local history and archaeology groups in carrying out their own research through Jon Kenny the Community Archaeologist.

YAT work on local projects through the expertise of the community archaeologist and a dedicated set of surveying and geophysical equipment that can be used by local community groups. One such project has been carried out by the North Duffield History and Conservation Society (NDHCS), who have surveyed the village green.

The NDHCS is carrying out an archaeological landscape survey in the fields surrounding the village and is interested in the development of the village green. How has the green developed the topography that we see today? What lies beneath the green? To understand these questions the NDHCS have carried out a geophysical survey to better understand the underlying archaeology as well as to create a topographic survey. A Geoscan Research RM15 resistivity instrument was used to look for anomalies in the electrical resistance of the subsoil, looking for pits, ditches, walls and the like. In the past, community groups have used hand tapes and a dumpy level to carry out this kind of work. But now, thanks to the Heritage Lottery Fund supported by Greater York



■ **Company**
York Archaeological Trust

■ **Challenge**
To make a topographical survey and record of geophysical data of the village green for archaeological investigation

■ **Date**
August 2010

■ **Location**
North Duffield, York



■ **Project Summary**

Instruments

- Leica Builder R300M
- Geophysical instruments

Software

- Leica Construction Data Manager Office Software
- Cadd n4ce Survey Software

Objective

- To provide an accurately measured base map for other surveys
- Developing a better understanding of the development of the historic landscape
- To allow local people to participate in researching their own local heritage
- To carry out a very visible project on the village green enhancing interest amongst locals
- To build confidence and skills amongst members of the local history society in operating easy to use instruments



■ Benefits

- Easy to use total station
- Easily adapted to the traditional survey with tapes
- Ability to store positions of geophysical measurements points on-board the Leica Builder
- Ability to survey inaccessible points without a prism

The reflectorless capability of the Leica Builder was particularly useful to measure the detail of the island in the middle of the small village pond.

Community Archaeology Project a Leica Builder Total Station is available allowing to record the positions of the geophysical measurements to create base maps.

Following discussions with local Authorised Leica Geosystems Distribution Partner, York Survey Supply Centre, a Leica Builder 309 was purchased because of its ease of use and robust nature. The instrument is not only used by the Community Archaeologist, but is also available for loan to groups such as NDHCS. The survey of the village green was the first proper use of the Leica Builder and York Survey Supply gave on site training and assistance so YAT would maximise the use of the many functions on the instrument. Overall, the Leica Builder proved very easy to set up and start observations. The data was stored on-board the instrument and the reflectorless capability to

pick up the detail on the central island in the middle of the small village pond was particularly useful. The DXF export function was also ideal in order to transfer the data to the software back in the office.

Throughout his career the Community Archaeologist, Dr Jon Kenny commented "I have used a number of Leica Geosystems instruments and they have always proved easy to use in variable conditions and physical landscapes. The Leica Builder also proved very easy to use and required very little training and survey expertise. Although primarily aimed at the construction market, the Leica Builder is equally adept at recording all data on archaeological sites, including building facades using the reflectorless capability".

For detailed information please visit www.yorkarchaeology.co.uk

