

Case Study

Customer:
Perth and Kinross Heritage Trust

Project:
Recording of 1000BC log boat position

Solution:
Trimble SPS GPS with SCS 900 software



Positioning History

The discovery of a 3000 year old logboat on the south bank of the Tay Estuary has provided an unusual challenge for Perth and Kinross Heritage Trust.

The discovery of a 3000 year old logboat on the south bank of the Tay Estuary has provided an interesting measurement challenge for Perth and Kinross Heritage Trust.

In 2001, partially buried by inter-tidal sands and gravels, the prow of the Carpow logboat was spotted and reported by Scott McGuckin, a metal detectorist from Dundee. Carved from a single tree trunk, the boat was found to be around 9.25m long and 1m broad and remarkably well preserved. Given the

significance of the vessel and the evidence of damage by tides and the weather, it was decided that the boat should be lifted from the estuary.

Prior to the lifting date set at August 2006, the boat's exact dimensions and position had to be recorded along with location data taken from the surrounding estuary mudflats. Heritage Officer Sarah Winlow explains, "We needed to accurately record points from the prow to the stern but working conditions on the intertidal site were very difficult and made a conventional archaeological survey incredibly hard. Half of the boat was buried below the mudflats and so the excavation was persistently waterlogged. The time and space available for recording the boat were very constricted as the excavation team and two water pumps were working constantly. Therefore the traditional methods of using a bulky dumpy level for height measurements and using offset measurements from a known baseline for positional data were not feasible. Following a phone call to KOREC, their representative suggested that Trimble SPS GPS with SCS 900 software would offer the perfect solution!"

The Trimble GPS allowed Perth and Kinross Heritage Trust to quickly and easily collect data with cm accuracy. The system also

allowed for height information to be recorded which will be used to calculate the angle that the boat was lying at. These calculations will be an integral part of the final excavation report.

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Sarah Winlow
Heritage Officer

Location data will be added to the Historic Environment Record (HER), a database, linked to GIS, of all archaeological and historical sites, buildings and find spots in the Perth and Kinross area. The accuracy of this data is vital for subsequent study and for reference to other topographical and geographical data.

Sarah concluded, "The speed and accuracy at which the data could be recovered with the Trimble GPS was fantastic – it is spot on! Following our survey, the boat was successfully excavated and then floated

downstream to the village of Newburgh where it was transported by lorry to the National Museums of Scotland for conservation."

All information kindly supplied by Sarah Winlow, Heritage Officer, Perth and Kinross Heritage Trust

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