PERRANPORTH BEACH BATHYMETRY SURVEY

Location: Perranporth, Cornwall, UK
Project Dates: May 2014
Clients: Southampton University

Scope of Work:
- Combined supratidal and subtidal survey
- Single-beam bathymetric survey
- RTK-GPS topographic survey.

PROJECT DESCRIPTION

A bathymetry and topography dataset was collected by Dr Tim Scott (surveyor) and Dr Ellie Woodward (skipper) using a small inflatable rescue boat (IRB). The survey was conducted over a high-tide period during the early morning on the 17/05/2014. Depth soundings were sampled at 6 Hz using a Valeport MIDAS Surveyor with a 210 kHz transducer travelling at 5 kts. Positional data were collected using a Trimble 5800 RTK-GPS. Bathymetric data were collected in cross-shore profiles extending approximately 600 m offshore of Mean Low Water Spring. Alongshore line spacing was 25 m over the nearshore bar morphology and 50 m offshore of the outer bar. Bathymetric data was merged with topographic intertidal data collected on the previous spring tide on the 15/05/2014, creating a significant overlap between the two datasets for quality control purposes. Topographic data were collected using an ATV-mounted RTK-GPS in alongshore lines of approximately 10 m spacing.

Above: An aerial view of Perranporth beach reveals the presence of 3D subtidal bathymetric features.

Right: Bathymetric and topographic data were merged to create a continuous digital elevation model for the entire beach face.