

SURVEY



Project	:	Blakeney Channel Survey
Client	:	Blakeney Channel Coastal Community Team
Date	:	October 2017

Keywords : Unmanned Aerial Vehicle (UAV) Survey • Aerial Photogrammetry • Topographic Survey • Tidal Modelling • Digital Elevation Model • Historical Data Analysis • Navigation

Description : Blakeney Channel is an important navigation channel that connects Blakeney Harbour to Blakeney Town and its iconic quayside on the north Norfolk Coast. The area is dynamic and has shown some significant morphological changes over recent decades, including; shifting sandbars, meandering of channel centres and both eroding and accreting saltmarsh.

As part of the ongoing monitoring of the Channel and to facilitate the long-term management of safe navigation channels within Blakeney Harbour, the Blakeney Channel Coastal Community Team (BCCCT) commissioned Exo Environmental to conduct an aerial and topographic survey, to compliment and allow direct comparison with historical data sets, to identify changes to the Channel's morphology over recent decades.

To achieve this, a photogrammetric survey was undertaken using an aerial drone with a pre-programmed flight path and referenced to a series of ground control points placed over a range of altitudes across the study site. To support the aerial survey, topographic GNSS equipment was used as a quality check and to obtain data from areas submerged at all states of the tide. The combined dataset was used to create an XYZ grid with <1cm accuracy and a resolution of approximately 2cm per pixel. The resolution of the resultant 3D model is far superior to historic aerial and satellite imagery and comparable to that of LIDAR data accessible from the Environment Agency.

