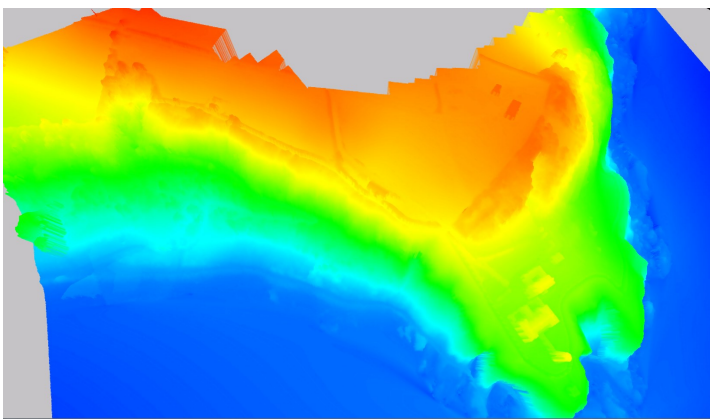


Aquila



CASE STUDY: UAV SURVEY:

BLACKHEAD LIGHTHOUSE, CARRICKFERGUS NORTHERN IRELAND



Abstract: Aquila UAS Ltd undertook the contour, DTM and orthophoto creation of the cliff face at Blackhead Lighthouse near Carrickfergus, Northern Ireland. The client required high resolution imagery in order to carry out a pre works survey of the condition of the cliff face prior to a rope access survey. The brief was to capture NADIR and OBLIQUE images and combine these both into the final 3D model. DTM and contour production were also required to assist with the planning of rope access survey.

Client: The client is a Geological Consultant commissioned by Carrickfergus Borough Council.

Methodology: Aquila UAS Ltd used state of the art UAV's to capture the imagery. A Sirius Pro was flown at an elevation of 80m agl for the NADIR imagery and a S800 EVO hexacopter was used for the oblique imagery. Images were processed (alignment, optimisation, dense point cloud and DEM) to produce a final orthophoto and DTM from which the contour drawings were produced. GCP's (Ground Control Points) were used to optimise the creation of the orthophoto and DEM with a final resolution of 2.5cm being achieved. Orthophotos were delivered in a GeoTiff format. The final product was exported to a 3D renderer from which detailed analysis could be carried out. An animated flyover of the area was produced and can be viewed here [BLACKHEAD LIGHTHOUSE](#)

