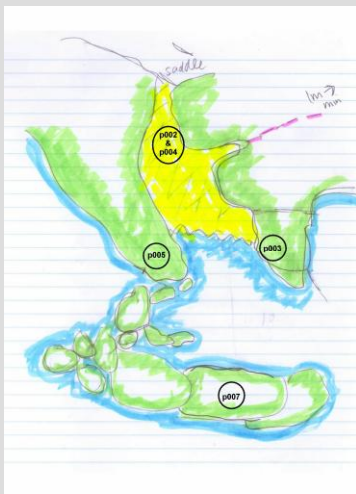


Laser scanning and development of a 3D model

Laser scanning was used to develop a 3D digital model for the film industry. The location required a number of camera setups including a reef of rocks accessible only at low tide. Nearly 3 million points were captured in the scanning by Global Surveys.



Looking from the sea towards the rocky shoreline

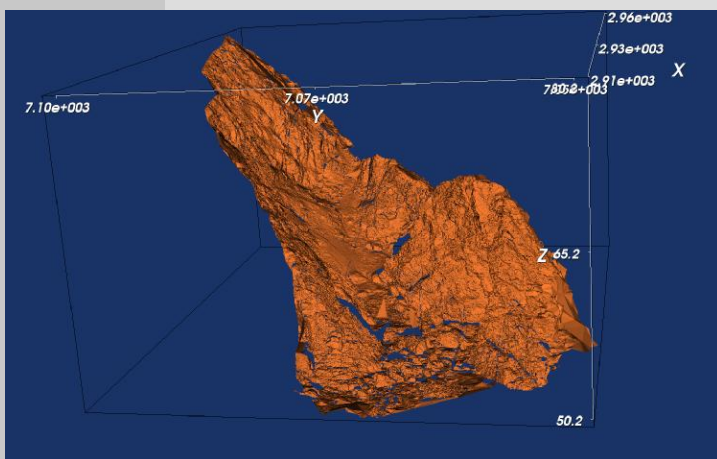


Sketch of location and camera setups



The rocks where the camera was mounted (as viewed from the shore)

Some editing of the model was undertaken using the Cyclone software. The triangulation algorithm within Cyclone did not adequately create a TIN/mesh that represented a true 3D model with overhangs, a limitation of most GIS applications, so the laser scanned points were exported as ASCII XYZ. Surfaces were then created using a program developed by the Centre of Computer Graphics and Data Visualisation at the University of West Bohemia based on a CRUST (3D Delauney triangulation) algorithm.



Python scripts were developed by IRBA to subset the points into manageable sizes. The CRUST processing of each dataset produced TRI files which were then converted to an OBJ format (as required by the client). These files were then viewed using VTK open source software.