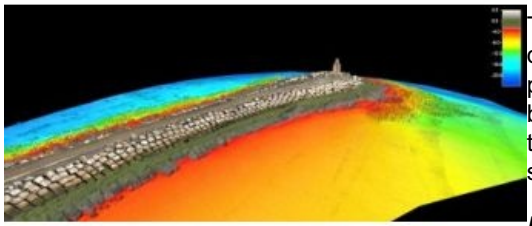
Benefits of UAS Breakwater Monitoring



The North Sea Canal in The Netherlands connects the Port of Amsterdam with the sea. The two breakwaters at the mouth of the harbour in IJmuiden are usually monitored on displacement of basalt block by airborne Lidar and on subsidence by annual levelling of permanent points. Could a camera-equipped UAS survey conducted simultaneously with a bathymetric survey provide information of equivalent accuracy? A recent study has shown that it could: time series of 3D models of the breakwaters are useful for erosion and subsidence monitoring.

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Monitoring of the breakwaters at IJmuiden, The Netherlands, is currently carried out using airborne Lidar together with spirit level / total station measurements. Airborne Lidar is excellent but very expensive when projects are small, such as a breakwater survey. A UAS survey is a proper, and much more affordable, alternative.