

Evaluating process and effect: coastal erosion at the Knowe of Swandro, Rousay, Orkney



The Archaeology

The multi-period site at the Knowe of Swandro on the west coast of the island of Rousay, Orkney is being destroyed by the sea. Excavation has revealed that the site is a multi-period settlement mound dating from the Iron Age through to the Pictish period and probably to the Viking period and the Westness Viking houses, which we have now shown overlie part of the site. To the north, a large monumental structure which survived under the beach and which forms the foundation of the Knowe revealed casement walling indicative of a Neolithic chambered cairn. The sea has attacked the *in situ* archaeology under the boulder beach, forming a series of truncated erosion terraces creating quite literally steps in time.

In 2018, a large area of the upper beach and an adjacent landward area over the suspected chambered cairn were excavated. This revealed a higher degree of complexity than was visible from the truncated survival on the beach. The monumental structure indicated by the concentric casement walling was reused in the Iron Age with the construction of a large round house; this in turn seems to have a long history, with a significant re-modification in the Late Iron Age or Pictish period. The standing dry stone walling and the structural collapse indicate a significant depth of stratigraphy. It is hoped to investigate this further in the next two seasons.

Key to the project has been the adoption of three-dimensional (3D) recording, using both photogrammetric recording and laser scanning in order to provide an accurate spatial documentation of the archaeology. Laser scan data provides an opportunity to view different aspects of the site from orthographic plans and angled view points, to vertical slices providing elevations and sections. These 3D methods have proved to be a cost effective means of recording such sites especially in the intertidal zone where excavation and recording are limited by the tidal cycle.



Participation; places available for 2019

The excavation (directed by Dr Julie Bond and Dr Steve Dockrill) incorporates a Field School training programme and provides an opportunity to gain excavation experience on a complex archaeological sequence in the heart of one of the world's most significant archaeological landscapes. For details of the project please visit www.swandro.co.uk.

The training can be taken in one of two, 4-week blocks; the first commences on the 24th June and the second block commences on the 15th July. There are also opportunities for interested individuals to excavate for the full period of the excavation (24th June to the 10th of August). The excavation for USA students can be administrated for academic credits via Hunter College (CUNY); contact Dr Maher (ramaher@gmail.com). Or if interested in participating contact Dr Stephen Dockrill, School of Archaeological and Forensic Sciences, University of Bradford for information and costs (s.j.dockrill@bradford.ac.uk).