



Tam Ward December 2014

In seeking fieldwork project areas and site types to investigate, the Society looked naturally to the coast lines of the North Clyde Estuary. However it soon became apparent that working on mudflats and beaches would offer little in terms of what we could safely do and achieve, and also that most of the few known sites have already been investigated or surveyed by others.

Coastal military installations dating throughout the 20th century still remain an option although much of those have also been covered by others.

So it was we turned to sea cliffs and caves and here, apart from one project on an Ardmore cave but which was rather inconclusive in terms of result, the subject was untouched. When 'our' coastal area was surveyed by viewing maps and then by reconnaissance, it came as a surprise that so little had been attempted since it is just the type of landscape (or seascape) where people of all periods in the past made landfall for the first time in western Scotland, and most especially the Hunter Gatherers of the Mesolithic time. Caves and rock shelters were ready made homes for these pioneer people.

Some very interesting archaeological results have been forthcoming from Portkil Cave No1 and will be reported soon on this web site; however this short note is more concerned with understanding how the sea cliffs and caves formed. It is important to know this as it affects predictions on what may be forthcoming archaeologically on the sites.

Geologically the coastline has a lot to commend it for visitors and the sea cliffs and caves are impressive to view between Dumbarton and Cove. Sitting back from the present shoreline on raised beaches which have formed since the last Ice Age ended around 11, 000 years ago.



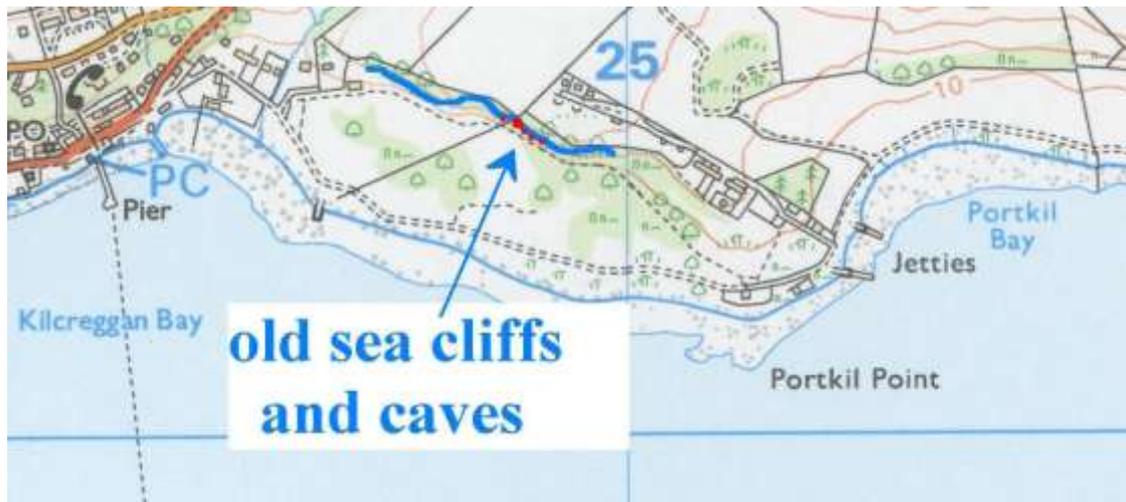
Dumbarton and Cardross

Ardmore



Rosneath Peninsula. Caravan Park – Portkil – Cove

The geology is split by the Highland Boundary Fault Line roughly in line with the road from Rosneath Bay to Kilcreggan with red sandstone conglomerates stretching east to Dumbarton and grey coloured schist west of Kilcreggan garage.



Portkil cliffs and caves with raised beach between them and the present shoreline.

While understanding *what* the archaeological deposits are is fairly easy, understanding *how* they got there is another matter! The Geological features of sea cliffs and caves however are open to interpretation as to exactly *when* they formed.

Perceived wisdom will say that the Portkil caves were created by sea wave action *after* the last Ice Age when sea levels were at their highest. However this theory carries some problems and it was for that reason that I asked one of Biggar Archaeology Groups (BAG) volunteers to write a paper for us, explaining the business of changing levels of land and sea in Scotland. Ian Paterson is a retired geologist formerly working with the British Geological Survey based in Edinburgh and has been a valued member of BAG for his geological expertise, especially regarding prehistoric lithics found by the Group.

Current theories on geology and archaeology are continually being turned on their heads through new discoveries and hypothesis, it is hoped that his paper; *Sea level changes and raised beaches* will promote some discussion on the matter of geology on the Clyde coast and, as a consequence the archaeology of it.

As for the Society's interest in the cliffs and caves it is hoped that further exploratory work can be done at various locations (see maps above) along the coast, and maybe we will be able to provide a new focus on the subject of archaeology and geology of the North Clyde coastline.