Aberffraw to Porth Cwyfan

Fully illustrated PDF

Welsh version

Enjoy fascinating geology and magnificent scenery on this beautiful walk on the west coast of Anglesey. Dr John Conway (GeoMôn - Anglesey's geopark & Royal Agricultural College)

Length: 4km each way

Time: 2-3 hours Difficulty: easy

Start/Parking: The old Packhorse Bridge, Aberffraw [SH 355 689].

Starting point: The old Packhorse Bridge, Aberffraw [1][SH 355 689] This geotrail follows the coastal footpath all the way along the rocky shore to Porth Cwyfan. As you walk down the western bank look across the river to Tywyn Aberffraw [2][SH 35680 68429], a vast area of sand blown ashore during massive storms in 1331, fronted by Traeth Mawr, a beautiful sandy beach backed by the dunes.

On the headland, Tywyn Du [3][SH 35256 67949], flints and other remains have been found dating back over 8000 years to the Mesolithic period — in those days it would have overlooked a low coastal plain. its topography offering a chance to drive game against what is now the cliff line and into an ambush — this is seen even more clearly just along the coast at Porth Trecastell All that is visible now is a very low circular feature from the Bronze Age.

Across the head of the first sandy cove, Porth Lleidiog [4][SH 35090 67916] vegetation is colonising a shelf at the top of the beach, this is a small 'raised beach' — a feature created by the land rising slowly out of the seas after being depressed by the ice sheets though due to global warming means it is threatened by rising sea levels. At the far side of this cove, glacial deposits can be seen sitting directly on the ice eroded rock surface [5][SH 34979 67854] — if you back and you will see large boulders lying on the shore these are 'erratics' left exposed as the sea erodes the finer material from the glacial deposits. From here into Porth Cwyfan, if you look generally at the rock platform [ignoring the erosion cutting into it] a smooth, gently curving surface can be determined, and in places, especially close to eroding soft deposits, it may have a smooth, even polished surface. This represents the ice-eroded rock surface that has been dissected by wave action into a jagged irregular surface. Follow the coastal path, admiring this smooth glacially eroded rock surface, and the excavation of deep inlets by the sea along faults and fractures in the rock. As you pass the headland with an offshore reef (Carreg-ytrai) look carefully into the next little bay [6][SH 33906 67475] before the headland with a rusty windlass and note the transition from the Gwna green schists you have been crossing to slightly more metamorphosed silvery grey mica schists.

Porth Cwyfan

Rounding the headland brings us into a large rocky cove unique in having a small church on an island in the middle of the bay. The glacial deposits that once filled the bay can still be seen as a low cliff at the head of the beach. Just beyond the track that comes down onto the beach. you can see deep. narrow V-shaped features [7][SH 33981 68192] usually very pale in colour lined by an orange or rusty coloured rim; these are ice-wedge casts, features formed towards the end of the ice age when this area was permafrost. The soil here is a brown earth. a very fertile if somewhat stony soil, with gradual changes in appearance of soil properties down the profile. The topsoil is frequently almost free of stones, the result of earthworms casting fine soil onto the surface and allowing the stones to be concentrated at the base of this layer. Further round. this glacial deposit thins as you approach the stream entering the bay [8][SH 33947 68254]. There is a layer of rusty. black or reddish coloured material, often very hard and forming a protruding ledge near the base of the soil. this is an iron pan caused by "gleying" - a process whereby the very wet conditions cause an absence of oxygen which in turn affects the chemistry of iron (and manganese) creating nodules or leading to cemented layers. A little

further on the top of this layer looks like a conglomeration of small spherical pebbles. these are actually concretions or nodules of manganese.

The origins of the church [9][SH 33585 68274] are lost in the mists of time. reputedly founded in 605 by St Cwyfan (Kevin). but the current structure was built in the 11th century at twice its present size. The church originally stood on a promontory of boulder clay but subsequent erosion not only left if isolated on an island, but undermined the northern half of the church. What we see today is the result of 19th century remedial works, including the stone wall that surrounds the island. The bay beyond the causeway is known as Porth China, apparently a reference to mining boulder ['china'] clay, not suitable for china but it may have been used for bricks or pottery.

You can retrace your steps along the coastline, or take the track up to Llangwyfanisaf then turn right and follow the footpath back to Aberffraw, or follow the road.

Figures

Pictures: J. Conway, unless stated otherwise. **See PDF**

Route map

View across the Afon Ffraw towards Tywyn Aberffraw, the vast expanse of sand dunes.

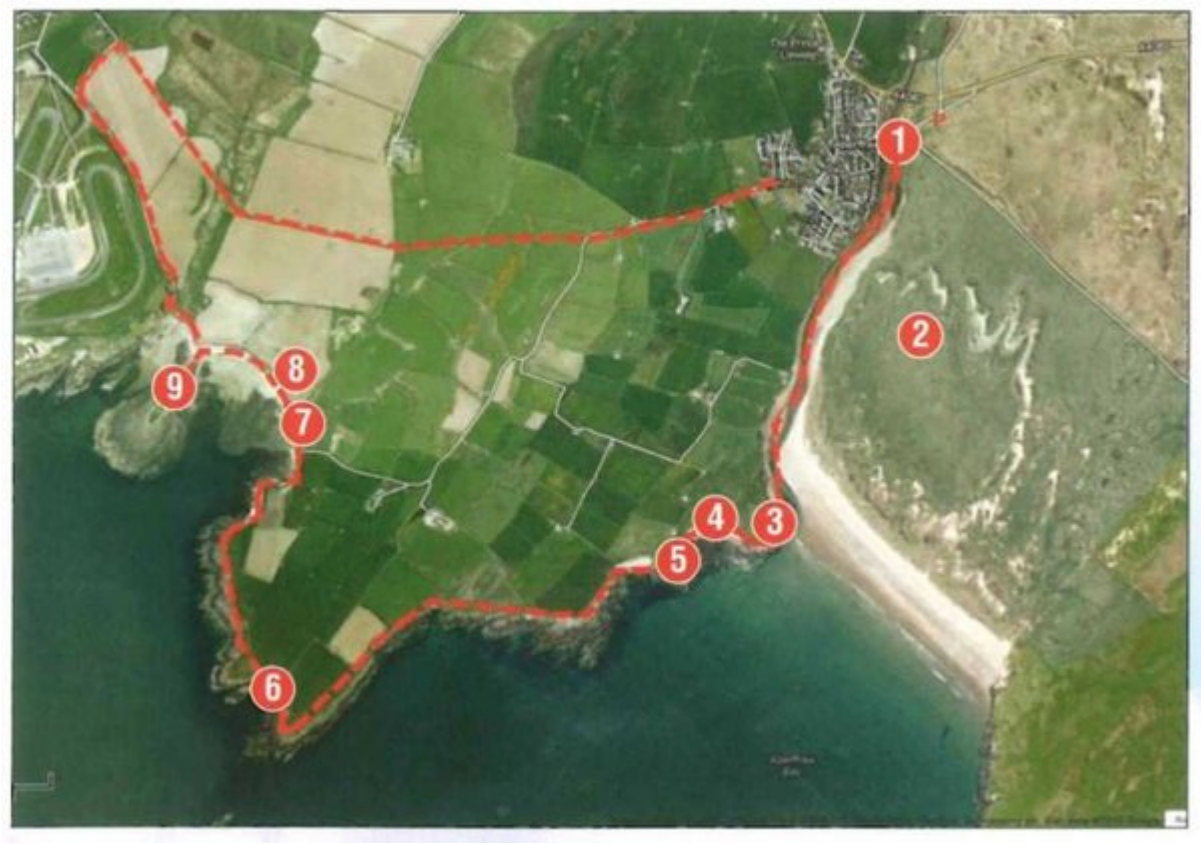
View across Ice carved rocks to Porth Cwyfan.

Bronze Age remains on site of earlier Mesolithic dwelling; looking across Traeth Mawr.

Erractics (boulders carried by the ice) left stranded on the shore.

Soil formation within the glacial sediments in Porth Cuyfan.

Stunning views from the Aberfraw coastline across to Pen Llyn.



Aberffraw to Porth Cwyfan route map.

Stunning views from the Aberfraw coastline across to Pen Llyn.