INVESTIGATION OF TWO POSSIBLE ROMAN ROADS COMING INTO PORTH MAWR (WHITESANDS) ST DAVID'S



CARRIED OUT END OF MARCH AND EARLY APRIL 2021

Martin Davies

A 'VIA JULIA'

SM 743 266



Whilst tracing the course of the so-called 'Via julia', a line was spotted heading W towards the cliff-top at Whitesands. The large field in particular showed a very strong 5m wide line on Google Earth 2005. See below



The official view is that a Roman road being visible in this location is impossible, due to a large depth of windblown sand spread over this area by freak storm events in the Middle Ages. Searches were sent to Dwr Cymru, and it can be confirmed that this line does not co-incide with any sewers or water mains. The most likely explanation for the crop marks, particularly judging by the width, was therefore a road, and it seemed likely, due to their visibility, a road had been built on sand and subsequently covered by sand.

Unfortunately, permission could not be obtained for investigation on the large field, but Robin Elliot of Porthllisky farm very kindly gave permission to probe the smaller square field (below) for evidence of a road.



Intially, this was done by repeatedly pushing a rod down into the sand and feeling for resistance. This was a bit hit and miss, because there were loose stones below the surface, but eventually, a test hole was dug in the most promising location. This revealed a hard surface with stones 270mm below the surface. A 'control experiment' was then carried out well off the line of the road to confirm that a similar surface was not encountered everywhere in the field. This revealed two different coloured layers of sand with a sharp dividing line between. The top layer of dark sand was 190mm down from the surface. Below this a more orange-yellowy sand continued down for an unknown depth. There was no hard surface and a road along the line was thus more likely.

A construction hole was then dug through the initial hole in the road line, which revealed a 360mm thickness of stone and yellowy sand, perhaps 50-50 in proportion. Below this, clean sand of the same colour continued on down for an unknown depth.



An attempt was now made to establish the width of the road by prodding the soil with the steel rod. This was not successful, possibly because the rod was striking stones below the surface.



ROAD SURFACE

CONCLUSIONS

The road test hole proved that a stone layer consistent with a road existed along the line of the crop mark. I suspect that it was patchy in terms of survival. It was built on the orange-yellow sand.

The 190mm deep very sharp colour divide between the two sands in the off-road hole might have suggested one of three things:

1) the darker top colour had to do with manure and organic matter being introduced into the surface sand and defined the depth of ploughing and harrowing. (though Newport has dark grey sand)

2) The top sand was wind-blown and the sand below was from events prior to the construction of the road, either wind-blown or brought by other means.3) the top sand was brought by a tsunami, which some believe caused the Bristol Channel inunda-

3) the top sand was brought by a tsunami, which some believe caused the Bristol Channel inundation of 1607.

The field had surface stones scattered about in a wide area, some quite large, and it did not seem possible that they all came from a road. In fact, it was the same in the field immediately to the south, which entirely ruled out the road as a source. The question was: how did they get there? The odd stone might be introduced from the farm-yard via manure, but there were too many. Were hurricane winds likely to have hurled these stones over the cliff from the beach? It didn't seem so. What totally rules this out is the statement of the previous owner of Croeswdig that there were boulders underground in the sand.

The above seems to point to the possibility that the bulk of the deep sand encountered in this area was introduced glacially, and the wind-blown element is only the top surface. A further argument for this is lack of supply: how could Whitesands beach have produced such a huge volume of sand to cover the whole area maybe several metres deep? It doesn't add up even if it was the result of several separate events. The volume would be staggering, before you consider how boulders or even stones could blow in the wind. But if surface field stones could not blow in the wind, how were they there? The obvious answer is that the ground surface before the Medieval storms was littered with glacially-introduced stones; and the plough manages to reach these at 190mm down and bring them up to the surface.

There is the question of this bit of road having been possibly below the surface of the surrounding land at the time of the first wind-blown sand event, and this suggests that it was partially robbed in Roman, Dark Age or Medieval times This may have been to repair an existing road, perhaps the nearby Roman one from St David's to Whitesands, this stretch to an obsolete cliff-top fort having become redundant. Frustratingly, it looks as if the continuation of this line through the big field is in better repair, perhaps because it was further away. But permission was not forthcoming to explore it.

ACKNOWLEDGEMENTS

John Dyer, for his physical and intellectual help in flushing out the elusive remains of this road and taking some of the photos.

Robin Elliot from Porthllisky, who gave permission for us to explore the field.

Apologies to Robert Davies, Treginnis, who turned up as we were leaving and revealed that he had grazing rights on the land, which we didn't know about. When I explained what we were doing, he surprised us by asking whether it was Via Julia or Flemish Way, then coming out with an array of local knowledge about the roads, at machine-gun pace, which was impossible to assimilate, but seemed imperative to follow up.

B POSSIBLE TERMINATION OF THE FLEMISH WAY ON THE WHITESANDS GOLF COURSE

SM 736 270



This line was spotted 5 years ago and was thought potentially to be the termination of Flemish Way at Porth Mawr (Whitesands). East of the golf course, it crosses the present road, goes straight through Ffynnon Faiddog and then splits into a fork as it heads east, with one branch headed towards Fishguard and another towards the Preselis. The investigation of the possible road was carried out on the rough of the golf course at the westernmost arrow in the aerial view above.

AIMS

There were two aims:

- 1) to make minor trial holes to see if a road could be found.
- 2) To conduct a 'control experiment' as had been done at Croeswdig nearby and establish what the natural layers were near the surface.

I was given to understand by archaeologists and a geomorphologist that there were several metres of windblown sand in this area and so no Roman remains were likely to be visible. On the previous trial hole on Croeswdig land (SM 743 266) in connection with 'Via Julia', there were two different colours of sand: grey sand down to about 8" from the surface, and orange-yellow sand from there down, though apparently containing boulders. This cast doubt on the latter being windblown and raised the possibility that only the top grey sand was wind-blown. This would mean that any Roman remains were well within reach.

Once we reached the location at 51 deg 53' 47", 5 deg 17' 34", it became immediately apparent that this was indeed a road or track running through the golf course and the photo below shows it

looking east from the trial hole site, which was off the fairway on the rough. Phil the groundsman assured us that he never went along it on his mower.



The initial road hole went down through 280mm of sand to a hard layer of gritty clay. We expected on digging further to reach a road construction of stones, but this did not happen. Instead, the initial layer very soon (perhaps in 25mm) gave way to clay-shale, and ultimately shale until we reached a depth of 730mm and went no further. We then made a test hole, the 'control experiment', off the line of the road, and found a similar hard surface with shale below, 170mm down.

Further probing and test holes in the quarry area, about 180 metres SW of the road hole, and off the golf course, revealed in the low ground between dunes exactly the same hard layer 8-10" down from the surface. The dunes themselves reached a considerable height, and were of the same grey sand; but almost certainly, a hard plane with a gritty surface and deep shale below it was passing below everything. In other words, yes there was wind-blown sand, but it was only deep where the dunes were. In between them, and on the golf course, it was shallow. In the photo below, the hard



plane can be seen appearing at the surface. Also prevalent off the golf course were boulders apparently sitting on the hard layer and embedded in the grey sand.



The road was therefore something of a mystery, because it was quite obviously a road or track, but there was no construction layer, only the natural hard surface. Could it be that it was considered unnecessary to build a road because everywhere was a natural road? The only way to gain any more insight was to do a wider test hole below the shallow surface ruts. This revealed quite a surprise. The uncovered surface was imprinted with precise cart ruts to a narrow gauge of 52".



On the north side was a built-up stony surface which trowelled as a road, came very close to the ground surface and was maybe 6" above the hard natural grit plane which ran through the site. It seems that the rest of the section had been worn down to the hard natural layer by the hooves of a draught animal. The initial deep test hole has been shown here for clarity, but it was actually made a couple of feet west of the wider hole in the same line. It seems to show all natural material, and if we had dug deeper, I believe we would have hit rock. Had we not widened the hole width, we would not have found evidence of a road construction.

The golf club has a more recent history as kindly provided to me by the secretary, Steve Jarvis:

Before the 2nd World War of 1939-1945 the St. Davids City Golf Club provided a very pleasant and popular 9 hole links which was very well supported by the local population, both male and female. During the early part of the war, however, the local landlord -Mr. Evan Evans, was required to hand over the course so that sand could be provided for the building of the Armaments Depot at Trecwn, near Fishguard. As a result the entire surface was destroyed and when the war was over the course was in complete ruin with the surface covered in weeds and brambles and with huge boulders left over after the sandy surface had been removed.

He also adds that the older members say there was a road built across the course to facilitate removal of sand in 1939. It seems unlikely that this was the road for the following reasons:

- 1) It would have entered the site in an un-central location at the end of the course, off the road down to the beach with poor manoeuvrability onto a small side road. The easier entry onto the site would be up at the road junction E of the course where the car park is now.
- 2) Adopting this route, it would seem that no road was actually needed due to the natural hard surface. In fact, the current track into the quarry is just that.
- 3) If this was the WW2 in-road, why would there be cart ruts? Surely a lorry would have been used. and the uncovered profile would have been different.

There is one possibility that has to be considered, that despite the ready-made hard natural ground, and unlikely as it seems, the army in WW2 added a built-up road along this line. But after they had left, and during the war years, a local farmer or builder repeatedly entered the site along this road with a horse and cart to help himself to sand that had not been taken. It is a matter of judgment whether these trips in a relatively short period would have been enough to wear through 6" of road. The 1947 RAF aerials might reveal where this road actually was, depending upon how quickly the golf course was restored after the war.



RUTTED ROAD SURFACE BEING UNCOVERED

Looking south

It is not totally clear to what extent the actual fairways were altered during WW2. One wonders why the unused dune area SW of the golf course was not used instead of destroying a golf course. It is possible that there was a lot of banked sand between the fairways which was re-moulded dunes, and was much easier to remove in straight lines. By 'the entire surface was destroyed', could the older members have meant that it was heavily damaged with wheel tracks, rather than all the shallow fairway sand being removed? The latter would have been counter-productive to totally remove, because grit and shale would have come up with it, making it useless for mortar unless it was subsequently put through a vibrating mesh.

CONCLUSIONS

ROAD LINE ACROSS THE GOLF COURSE

The strongest argument for this being an ancient road, for me, is that it lines up with the line on the fields E of Ffynnon Faiddog. The wheel ruts, being under the sand, appear to have existed before the wind-blown sand events, and I am not persuaded, though I keep an open mind, by the WW2 scenario. If this is a built-up metalled ancient road, as I believe it is, its last use would appear to have been by a single property overlooking the beach with one cart who used it for a long time until the extreme storm events. The surface ruts may indicate its continued use afterwards, but for this to be the case, the road would have to have had boundaries, because otherwise it would have been lost in a sea of sand.

INVESTIGATION OF GROUND LAYERS

The shallow sand in the low points of the dune area and the hard shale 8"-10" below it show that the area is actually not covered in several metres of wind-blown sand, as I was given to believe. The deep sand is only in the high dunes, and in the low spaces between them, the Roman level is very close to the surface. There are plenty of places where ditches or pits, or even banks that have been robbed above ground level, might still be accessible and traceable by geo-physical survey.

Further inland, where the 'Via Julia' test hole A was made on Croeswdig land, the same dark grey sand existed to a similar depth, but on top of yellow-orange sand, not shale. If the yellow-orange sand was wind-blown, why would we not have found it in the golf course area too? Only grey sand was found on top of gravel-topped shale. Could the yellow-orange sand be glacial? The map below shows Irish Sea Ice impinging on St David's head, and other maps show it more advanced, extending south as far as Penzance.



ACKNOWLEDGMENTS

John Dyer for his help and company and orienteering us around the golf course in misty weather.

Steve Jarvis, secretary of the golf club, for his interest and giving permission to investigate. Apologies to him and Phil for digging a little more than was originally intended, but it paid dividends and all was made good.

Phil the groundsman for guiding us to the correct location, for his interest and invaluable help, even very kindly checking to see if my van lights were left on. I hope he finds out that we did eventually find a road.