

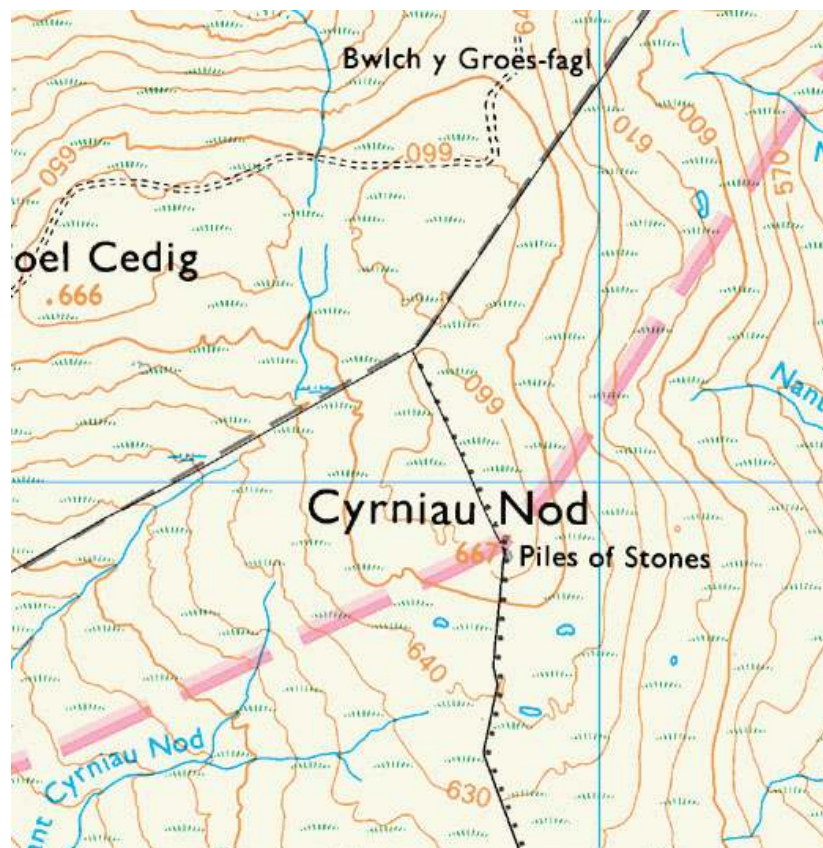
Survey of Cynriau Nod

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1) Introduction

Cynriau Nod (Hill 2105, Section 30E, OS 1:50000 Map 125, OS 1:25000 Maps 239/255, current Grid Ref SH988279) is listed as a Sim, Hewitt, Nuttall, HuMP and a Marilyn. The OS 1:25k map, shown below, gives a spot height of 667m adjacent to a cairn. In 2013 John Barnard surveyed with an Abney level the area adjacent to the cairn and found that ground 13m North of the cairn was approximately 0.1m higher than the cairn's base. However, there was also ground about 200m to the North that appeared to be as high but because of the dense heather and grass, it was not possible to confirm this with the Abney level. In addition, about 800m to the North West is a 666m spot height on Foel Cedig. It is possible that Foel Cedig could be higher than Cynriau Nod.



The purpose of this survey was to locate accurately the summit position of Cynriau Nod.

2) Equipment used and Conditions for Survey

The ground survey to locate the position of the summit was carried out using a Leica NA730 Professional Automatic level (X30 telescopic system)/tripod system and a “1m” E-staff extendable to 5m.

Conditions for the survey, which took place between 15.30hr and 16.15hr, were good. Visibility through the optics was clear but slightly hampered by a little heat haze and shimmer. It was warm, about 20 degrees Celsius, and with no wind.

3) The Survey

3.1) Character of Hill

Cyrniau Nod lies in the Western Berwyn to the South East of the Penllyn Forest which also lies South East of Llyn Tegid (Bala Lake). The Western Berwyn is a series of heather covered rounded hills where solitude can easily be found. These hills have generated the label “boring Berwyns” but they do have a certain wild attractiveness about them. However if ridges, pointed summits and crags are your desire then these hills are not for you! Although there are paths to most of the main hills now, going can be very tough and tedious. Fortunately a wide track runs from the highest point of Cwm Hirnant, where there is limited parking, to almost the summit of Y Groes Fagl (SH 988 289) thereby greatly improving the access to this group of hills. Small areas on these hills are covered with grass and are used for grazing sheep. Otherwise apart from an occasional grouse and a few meadow pipits there is not much nature to be seen unless you are lucky.

Cyrniau Nod lies at the end of a “ridge” that runs about 600m South from the main track. This ridge is covered with a mixture of grass and heather and has numerous minor undulations. A fence runs from the track all the way to the “pile of stones” marked on the map and the path by it makes access a lot easier. The summit is marked with a fairly large cairn with a pole sticking out of it but even visually it is clear that this is not at the highest point.

3.2) Summit Survey

The summit survey commenced near the cairn and the Leica level was set up at a convenient position a few metres from it. Staff readings were taken at the base of the cairn and systematically in area 10 to 20m north of the cairn until the highest point there had been found. Readings were only taken to the nearest 1cm because of the unevenness of the terrain due to tussock grass and heather.

The staff readings were:-

Staff reading at cairn = 0.72m

Staff reading at highest point ca. 13m north of cairn = 0.55m

Therefore the point 13m North of the cairn is 0.17m higher than the base of the cairn and this result is in agreement with the Abney Survey mentioned in the Introduction.

The following ten-figure grid references were taken:-

Summit:-

Garmin Montana 600	SH 98852 27924	Height = 668m
Garmin Etrex 20	SH 98851 27922	Height = 669m

A 360 degree visual scan through the level showed that ground about 200m North of the cairn could also be a contender for the highest point. The level was moved to a high point about 70m further North and set up so that it was horizontal with the point 13m North of the cairn. Ideally we would have liked to set up the level to a higher position so that staff readings could be taken from all points but the tripod was not high enough to do this. However, it was possible to estimate that the level was set within +/-0.1m in height of this point. Systematic staff readings were then taken in the area about 130m to the North of the level and the highest point found. The staff reading for this was 0.62m and therefore this point is clearly lower.

The following ten-figure grid references were taken:-

Highest point about 200m North of cairn:-

Garmin Montana 600	SH 98791 28099	Height = 674m
Garmin Etrex 20	SH 98789 28097	Height = 672m

4) Discussion of Results

The summit of Cynriau Nod was easily identified as a point about 13m North of the cairn. Even though the ground in this area was a little uneven due to the nature of the vegetation, the difference in height between this point and the base of the cairn was large enough to make the conclusion definitive. This was also in accord with the previous Abney level survey. The ground 200m to the North was 0.6m lower and therefore not a contender for the hill's summit.

With the automatic level and staff it was not possible to determine if Foel Cedig is higher or lower than Cynriau Nod. This measurement would have to be carried out by GNSS.

5) Summary and Conclusions

The **summit** of **Cynriau Nod** is at grid reference * **SH 98852 27923** and has no feature. It is approximately 13m North of the cairn.

- NB average hand-held Garmin GNSS grids are quoted in the summary.

John Barnard, Graham Jackson and Myrddyn Phillips 17 June 2014.

Appendix

Photograph looking south showing the summit area of Cynriau Nod. The highest point is the red marker on the left of the photograph which is 13m distant from the cairn.

