

# Survey of Moel Eithinen

**04 September 2020**

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## 1) Introduction

Moel Eithinen (Hill Number 14405, Section 30C, OS 1:50000 Map 116, OS 1:25000 Map 265, Grid Ref. SJ167592) is listed as a Tump (a hill with drop greater or equal to 30m) in the Database of British and Irish Hills (DoBIH). A number of people who have visited this hill; have observed that a point about 30m to the south of the currently accepted summit position may be as high. However, John Barnard visited this hill on the 24 August 2020 and using an Abney Level was not able to confirm which of the two points were higher. Therefore, the purpose of this survey was to locate the highest point of this hill with a detailed survey using more accurate equipment.

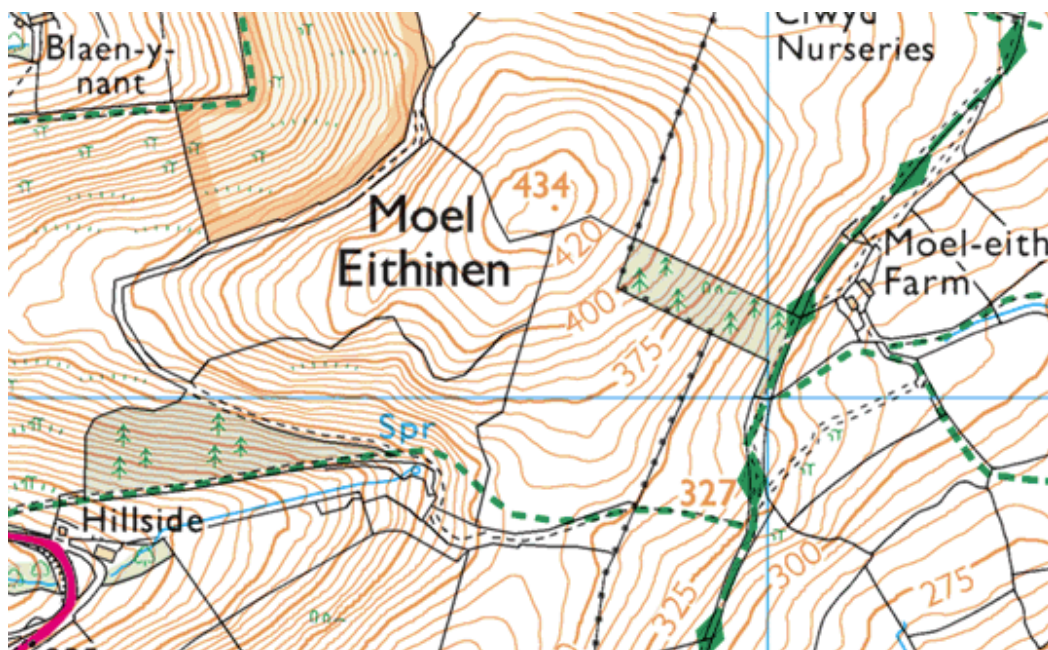
## 2) Equipment used and Conditions for Survey

A Leica NA730 Professional Automatic level (X30 telescopic system)/tripod system and a “1m” E-staff extendable to 5m were used to determine the relative heights of the candidate summit positions.

Conditions for the survey, which took place between 13.30hr and 14.30hr GMT, were good. The weather was mild, 15 degrees Celsius, but with a strong breeze. The sky was cloudy but visibility was excellent.

## 3) Character of Hill

Moel Eithinen is a summit in the Clwydian range of hills and it lies about 1km north of the highest point on the main A494 between the towns of Ruthin and Mold. The flanks of the hill are grass covered on all sides and are predominantly used for grazing livestock – sheep at the time of visit. Sections of the flanks of this hill are divided into fields protected by wire fencing topped with single strands of electric fence. An extract of the Ordnance Survey 1:25000 scale map (Crown Copyright Ordnance Survey) is presented below.



Access to Moel Eithinen is easily gained from the south by following the Offa's Dyke path to a point about 300m SE of the summit. A path is marked on the map running west from this point but no track is evident. The grassy southern flank can be ascended to within a few metres of the summit via gates in the fences. The two candidate summits lie either side of an electrified fence without an access gate between them. A photograph of these two points is shown in the Appendix.

If coming from the north, there are field gates at the col between this hill and Foel Fenlli, and therefore the 434m spot height can be reached without the need to climb over an electric fence.

#### 4) The Survey

For the purposes of this survey we define the two candidate summits approximately 30m apart as North Top and South Top. The North Top is currently accepted as the higher point.

The Leica NA730 level was set up on a tripod a few metres from the North Top. Staff readings were then taken systematically around the South Top until the highest point was found. This was marked with a flag. The same procedure was carried out around the North Top.

The staff readings were: -

Highest Point of North Top = 0.620m

Highest Point of South Top = 0.650m

Therefore, these readings confirm that the North Top is the hill's summit and is 0.03m higher than the South Top.

We would estimate that we could locate the position of each top to a height uncertainty of +/-5mm and are therefore confident that the current summit position is correct.

Grid references for the North and South Tops were measured to be: -

North Top and Hill's Summit

Garmin Montana 600	SJ 16731 59251	Height = 434m
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Garmin Etrex 20	SJ 16731 59252	Height = 437m
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Garmin Oregon 450	SJ 16729 59249	Height = 390m
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South Top

Garmin Montana 600	SJ 16726 59220	Height = 435m
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Garmin Etrex 20	SJ 16724 59220	Height = 437m
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Garmin Oregon 450	SJ 16723 59218	Height = 441m
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#### 5) Summary and Conclusions

The **summit** of **Moel Eithinen** is at grid reference \* SJ 16730 59251 and is on unfeatured grassy ground and corresponds to the 434m spot height marked on OS Maps.

The point about 30m to the south at grid reference \*SJ 16724 59219 is 0.03m LOWER.

- NB: Grid references for Garmin receivers are quoted in the summary.

John Barnard and Graham Jackson, 04 September 2020

**Appendix**  
**Summit Photograph**



Candidate Summits of Moel Eithinen looking South to North. Foel Fenlli in background.