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“St Agnes Beacon”

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The Society publishes a wide range of books and booklets on historic OS map series and its journal, *Sheetlines*, is recognised internationally for its specialist articles on Ordnance Survey-related topics.

St Agnes Beacon

Ann Preston-Jones

David L Walker's paper on the initial Ordnance triangulation of 1795-1811¹ referred to the significant part played by the trig point at St Agnes Beacon. Here, Ann Preston-Jones delves more deeply into the history of this popular and familiar Cornish landmark.²

The starting point for this investigation was a proposal by the St Agnes Improvements Committee to convert the trig point on top of St Agnes Beacon to a topograph or location-finding device. At first, I was under the mistaken impression that making a topograph might involve completely demolishing the trig pillar – that familiar landmark against which anybody who has ever walked up the Beacon leans, to admire the stupendous view. That also led me to wonder what, if any, disturbance might be caused to the very prominent mound upon which the trig point is located, and then I began to wonder precisely what that mound might be. Is it, as the Ordnance Survey maps indicate, a Bronze Age *tumulus* or barrow, perhaps modified for the purposes of lighting a beacon fire on top, or might it rather be the remains of the tower which once stood on top of the Beacon?



*Figure 1: St Agnes Beacon seen on the horizon from Godrevy, some nine miles to the SW.
(Photograph : Andrew Darling)*

¹ *Sheetlines* 117, 9.

² Ann Preston-Jones is Heritage at Risk project officer with Historic England. This is a revised and updated version of a paper first published in the *Journal of the St Agnes Museum Trust*, No 13, 1997

St Agnes Beacon stands 628 feet (192 metres) above sea level, and has fine views in all directions. For this reason it was chosen by the Ordnance Survey as one of their earliest trigonometrical stations. The earliest triangulation or trigonometrical station on St Agnes Beacon appears *not* to have been in the location of the present trig point, but in a position on slightly lower ground to the south. This is indicated in a description of the station made in 1912,³ and in a plan of 1846 which similarly appears to show the station to the south of the summit (*figure 2*).

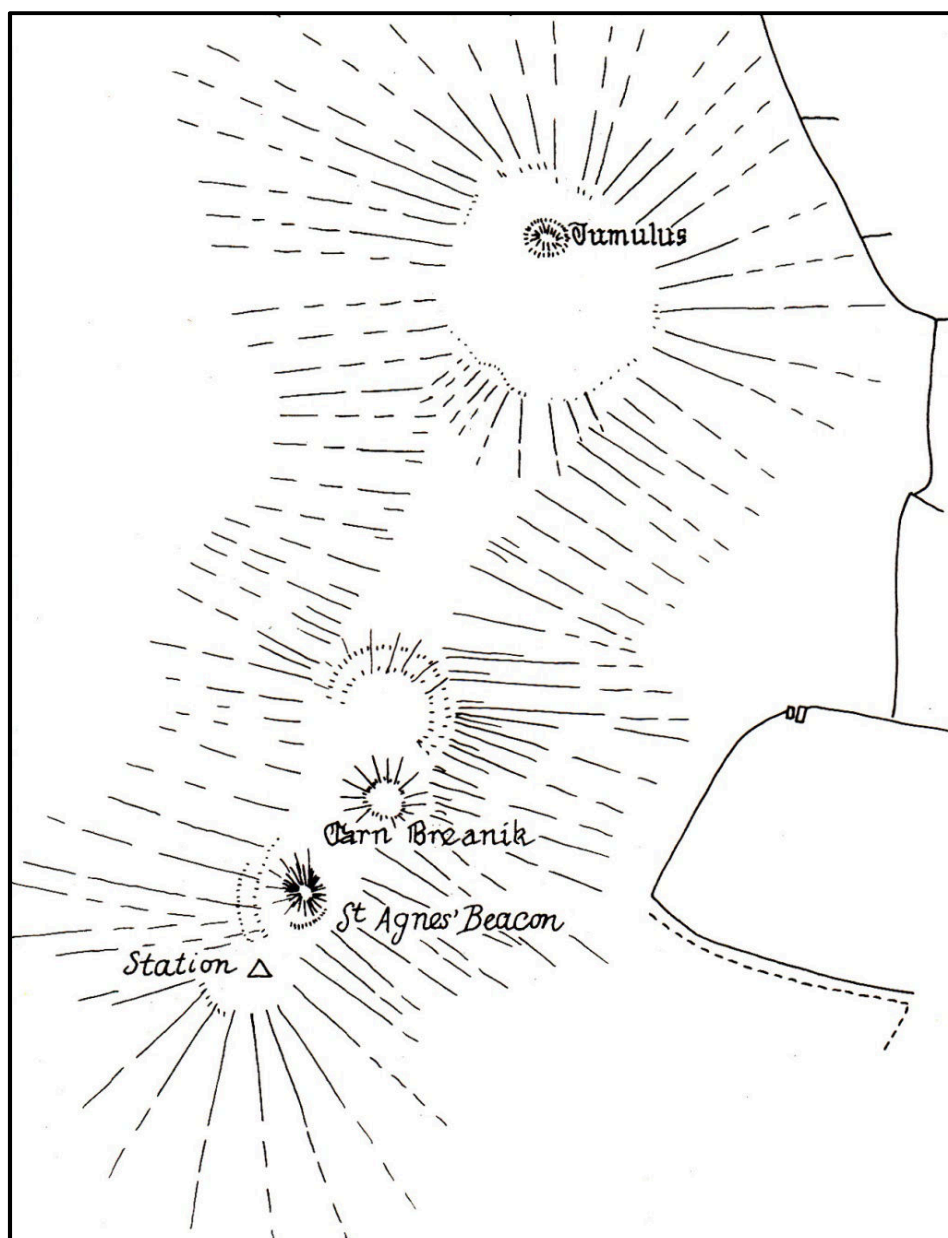


Figure 2: re-drawn from a map of the Assessionable Manor of Tywarnhaile, 1847 (map at Kresen Kernow QSPDD/33).

³ OS records: the description of the Trigonometrical Station on St Agnes Beacon 1912, and records quoted below were kindly supplied by the Ordnance Survey when the original research for this paper was undertaken.

It is suggested below that this location was chosen because there was some other structure there in 1796, preventing use of the more logical, higher, point. However, from the lower position, which lay roughly half-way between the summit and the rocky outcrop to the south, there were nevertheless excellent views in all the directions that could be required by the surveyors – that is, over the land to other trigonometrical stations on other prominent hilltops. Only the view to the north was hindered by the hill behind; but only the sea lies in this direction.

The major triangles measured from St Agnes Beacon were: St Agnes Beacon-Trevose Head - Hensbarrow; St Agnes Beacon – Hensbarrow – Dodman (Gorran); St Agnes Beacon – Dodman – Carmenellis (Wendron); and St Agnes Beacon – Carmenellis – Trendrine Hill (Zennor). Once the distances between the major landmarks had been established, there existed an accurate framework on which to build the more detailed mapping. ‘Interior triangles’ were surveyed, from St Agnes Beacon to landmarks including Castle an Dinas, Probus ‘steeple’, Veryan Beacon, St Teath Windmill, Stithians Down, Carn Brea, Camborne and Gwinear Steeples. Heights of selected stations were calculated by using the Great Theodolite to measure angles of elevation and depression. St Agnes Beacon was calculated to be 599 feet above sea level; the difference from the modern value may be partly due to the fact that the earliest survey point was below the position of the present trig point, rather than to any inaccuracy in calculation.

In the second half of the nineteenth century, a triangulation point was also established on the summit of the Beacon, where the trig pillar / topograph now stands. From a description of the trigonometrical station on St Agnes Beacon made in 1912,⁴ this new station appears to have been established in 1876 and must relate to the 1:2500 survey of the country taking place at the time. This is the position marked on the first edition 25-inch map of 1880 (*Figure 5*). The same document records that the original triangulation station was marked with ‘a pile of stones 5 feet high and 25 feet in circumference’ and a ‘hole drilled in [a] brass bolt and set in [a] 2' concrete cube and covered with [an] iron protection box’, set at a depth of 2 ft 0 ins.⁵ There is now no sign of this feature, unless a scatter of stones visible in the path due south of the topograph represents its remains.

In October 1936, the Ordnance Survey wrote to Mr Coulter Hancock, who by then was the owner of the hill: “I am desired by the Director General to state that during the course of restoration and re-observation of the basic triangulation of Great Britain, it will be necessary to erect a small concrete pillar on the site known as St Agnes Beacon, which I understand is owned by you.” Coulter Hancock, perhaps at first a little suspicious, replied on 7 December that “I am prepared to grant permission for the erection of the pillar ... in exchange for an undertaking that the Department will remove it at any time by my request or at the request of my successors in title.”

⁴ OS records

This response prompted a reply from Major Martin Hotine, Head of the Trigonometrical and Levelling Division: "I am desired by the Director General to furnish you with the required undertaking that the pillar will be removed at six months' notice, if so desired ... he is prepared to rely on your continued goodwill and co-operation to allow the pillar to remain standing unless in fact its removal should in the future prove to be absolutely necessary."

On 17 December 1936, Coulter Hancock finally gave his consent and soon after, a Triangulation Reconnaissance Report found that the new station was to be set over the 1876 survey point, "on a large flat-topped mound on the highest part of the hill, and known as St Agnes Beacon." It also noted that in St Agnes was the nearest Post and Telegraph Station, that the nearest cement was obtainable from Perranporth and the nearest water from Cannon Ball Farm.

The pillar was eventually erected in March 1937. The report on the construction of the survey station stated: "It was placed on the highest part of the hill, on the original survey site, although no mark was found. A base 3' by 3' was dug, and at a depth of 2' 3" a firm foundation was found, being mostly rock – a brass bolt with hole drilled in the centre was inserted in a 1' concrete cube at this depth. The pillar was then constructed in the usual way." The pillar builder was one LJ Dawson, and the total cost, including materials, labour and transport, £6 16s 9d. After leaving a suitable period for the new pillar to settle down, the trig point was occupied by the surveyors. The theodolite used, the five or five-and-a-half inch Geodetic Tavistock, weighed thirty two pounds and was considerably smaller than the Great Theodolite used in the first survey. Observations were made at night to electric lamps maintained on other stations by solitary light-keepers whose contact with the observing party was via morse code light signals or if necessary telegrams. Thereafter, the survey station has been used (or 'occupied') twelve times by the Ordnance Survey, at approximately three to four yearly intervals.⁶ In 1953, when it was to be occupied for astronomical observations, the OS wrote to Coulter Hancock: "While observations will be taken at night, the equipment, which is very valuable, must be protected during the day. I would be grateful, therefore, if you would give permission for our surveyors to erect two medium size tents and a small wireless pole near the pillar. The work is to be carried out during the coming summer and will take about one week to complete."

Routine inspection and maintenance was also carried out. In March 1958, Station Inspector H Court found that, although the general condition of the pillar was good, it was cracked on three sides from the top of the sighting tubes to the top of the flush bracket, probably as a result of frost. The centre pipe was filled with stones, soil etc, damage attributed to vandalism. Having cleaned out the centre pipe, the inspector chiselled out the crack on three sides and filled in with cement. He also sealed three sighting holes, greased and fitted new Allen screws and split pin and greased and replaced the spider cap. As a finishing touch, the pillar was given a new coat of Snowcem and the large depression around the

⁶ as at 1997.

base filled with stones, soil, and turf.

In 1993 the pillar was officially ‘adopted’ by the Camborne School of Mines who use this and other trig points in Cornwall for teaching surveying.

Summer-house on St Agnes Beacon

For a short time at the end of the eighteenth and beginning of the nineteenth centuries, there was a tower on top of the Beacon. At the time, it must have been a striking and dominating feature of the landscape, yet little is known of it nowadays. This may be because, although reasonably well-documented in antiquarian literature, there are no published drawings and no obvious surviving remains, and it had crumbled into near oblivion by the time the first detailed maps of the parish were produced in the 1840s.

The tower is not mentioned by Thomas Tonkin in his account of the parish made between 1710 and 1720, and since he gives a full account of features on the Beacon at that date, it is probably safe to assume that it had not at that time been built. Likewise, a map of 1778 (Kresen Kernow EN/1381) shows three cairns or tumuli, but no tower. However, it may have been standing by 1796, for the original triangulation point appears not to have been in the location of the present trig point, as discussed above, but on slightly lower ground to the south. This was perhaps because there was some structure preventing use of the more logical, higher position and a schedule of the property of Isaac Donnithorne Harris of St Agnes of 1797 confirms this, for it includes mention of ‘Unwin’s Castle erected on St Agnes Hill in memory of the contract made with the East India Company on a piece of ground on lease to Mr Donnithorne.’⁷ Donnithorne was one of the wealthiest men in St Agnes parish at the time, with considerable interests in mining. As chairman of the Cornish Association of Tinnerns he was responsible for striking a deal with George Unwin of the East India Company for supply of tin to China; the summerhouse commemorated their contract. Although initially beneficial to Cornish miners, before long it resulted in financial loss. This may explain events leading to the tower’s destruction soon after it had been built.

The first published reference to the tower is in a plan of secondary and tertiary triangulation stations for west Cornwall, which notes that “St Ann’s Summer House and St Agnes Beacon are so near each other that they cannot both be shown on this scale.”⁸ Similarly in 1806 Lysons mentions the ancient cairn with a beacon on it and the summer-house built near “from which there is a fine view of St Ives.” The summer-house or ‘castle’ is actually shown on two maps. On the Ordnance Survey’s first edition one-inch map of 1813 (*figure 3*), a tiny circular dot at the southern end of the Beacon is probably it; and in the *Plan of Sundry Lands in St Agnes, the Property of the Late John James of Rosemundy*, made in 1814, a pen and ink drawing of the Beacon forms a backdrop to the plan of fields and cottages from Mingoose to Rosemundy (*figure 4*). On top of the Beacon is a rather squat but two-storied tower with crenellations, doors, and

⁷ Information from Philip Mitchell of St Agnes.

⁸ Referenced in H Margary (ed), *The Old Series Ordnance Survey Maps of England and Wales, Vol II, Devon, Cornwall, and West Somerset*, 1977.

windows. Sadly the building survived for a few years only. On 13 and 20 March 1812, the *West Briton* published the following notice:

‘10 guinea reward offered by Matthew Sylvester for anyone supplying information on the persons who broke open the summer-house called Donnithorne and Unwin’s Castle, broke and carried off the window frames, and broke floors and doors.’

Matthew Sylvester had been one of the subscribers to the original construction of the tower.⁹ This vandalism seems to have initiated the dereliction of the building, for although an entry in the *Cornwall Gazetteer* of 1817 refers to a summer-house lately erected on the Beacon, a footnote records that it had been “blown or taken down since that account was printed.” Evidently it was only partly ruined at this date, for a sketch made in 1819 still shows a tall building on top of the Beacon with a ragged uneven top suggesting that the roof had collapsed and the tops of the walls started to crumble.¹⁰ Despite the fact that it clearly exaggerates the vertical element in the interests of dramatic effect, the sketch also indicates that the summer-house stood at the southern end of the Beacon. This is the point where the trig pillar now stands on top of a substantial flat-topped mound, perhaps the remains of the tower.



Figure 3 : Ordnance Survey 1st edition one-inch map. 1813

⁹ Information from Philip Mitchell of St Agnes.

¹⁰ Unpublished sketch by F.W.L. Stockdale in the Courtney Library of the Royal Institution of Cornwall.

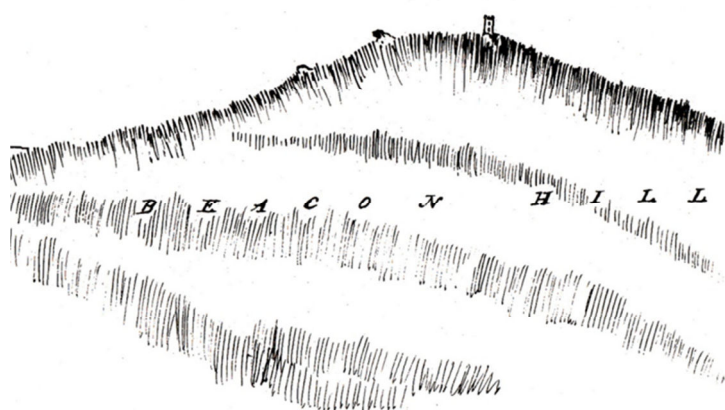
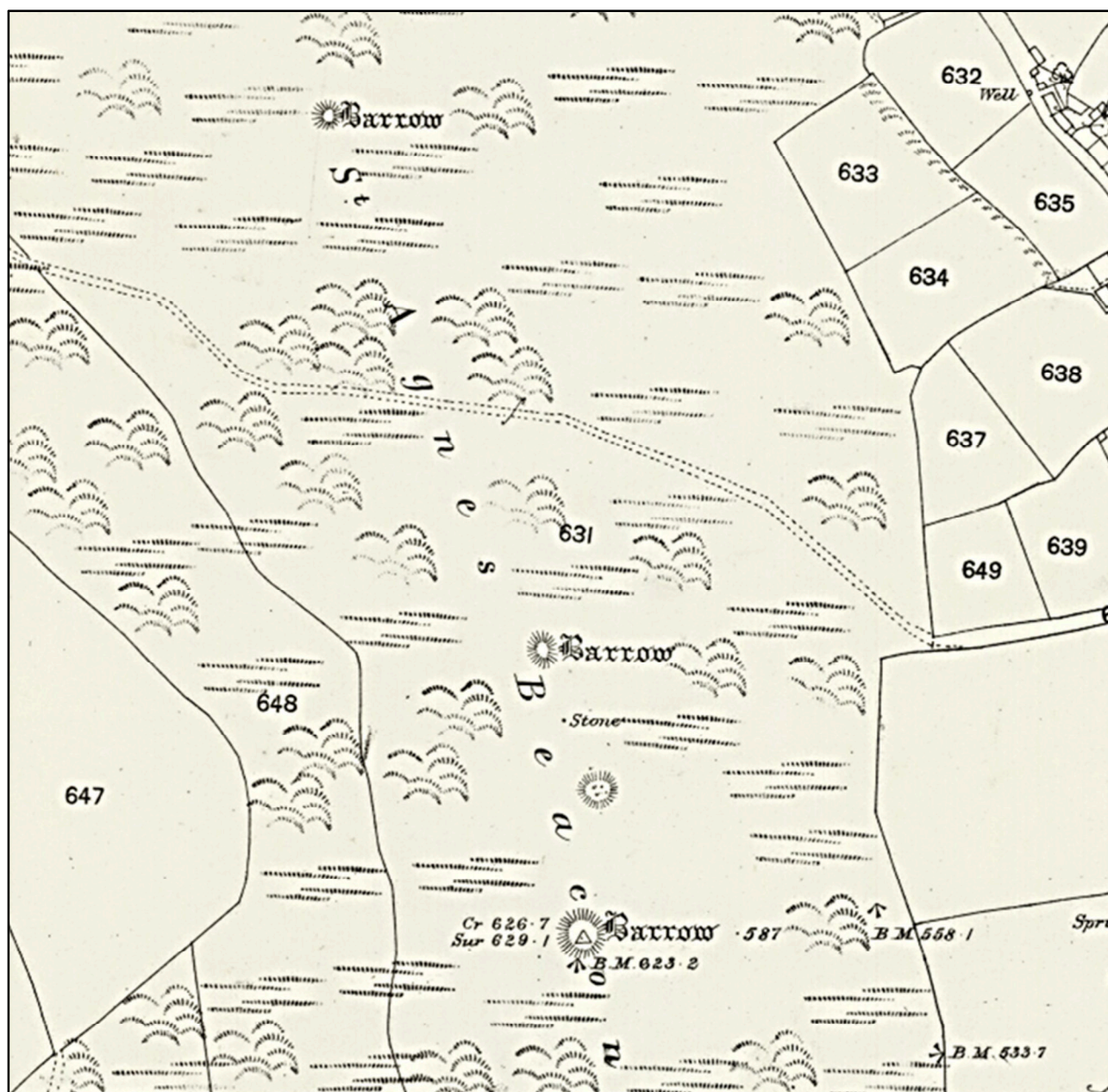


Figure 4 (left): sketch from plan of lands 'the Property of the Late John James of Rosemundy', 1814. Reproduced by kind permission of the Courtney Library of the Royal Institution of Cornwall (catalogue number CAR/1/23).

Figure 5 (below): Ordnance Survey 1st edition 1:2500 map, 1880 (Courtesy NLS).



By the 1840s, the summer-house must have deteriorated or been robbed to little more than a pile of rubble, for neither the Tithe Map of 1841 nor the more detailed map of the Assessionable Manor of Tywarnhayle of 1846 (*figure 2*) show any building up here. In 1876 the Ordnance Survey was able to use the top of the pile of rubble for its triangulation station, and it appears as a ‘barrow’ on the subsequent first edition twenty-five inch (1:2500) map (*figure 5*).

Fortunately, a little more is known of the summer-house. In JT Tregellas’ story of Mousey Cock,¹¹ “the great round pleasure-house” up “Bickin Hill” is one of the sights of St Agnes shown by Mousey to any visiting gentry. By the time Tregellas (1792-1863) was writing, the pleasure house can have been no more than a memory, and so in a footnote he added that “a round white tower stood on the top of Beacon Hill within the writer’s remembrance, which was called the Pleasure House; it was used by picnic parties.” This is a small but precious fragment; it is the only description known to exist.

Is there anything left of the summer-house to be seen now? I believe that there is. Careful consideration of all the evidence, a search of the top of the Beacon, and a survey of any significant piles of stone up there have led to the conclusion that the prominent mound on which the trig pillar is set may represent the ruined summer-house, itself perhaps built on the site of a Bronze Age barrow and beacon also occupying this commanding position.

Such a tower on St Agnes Beacon would not have been unique; it fits well with contemporary concepts of landscape design. The eighteenth century was particularly notable for the introduction of eye-catching architectural elements into landscapes and parks surrounding the houses of the wealthy. Towers broadly contemporary with that on St Agnes Beacon were also built at Cotehele (the Prospect Tower); on Doyden Point, St Endellion; at Castle an Dinas in Ludgvan; and on Kit Hill. The last two, like the tower on St Agnes Beacon, were not set within a designed parkland landscape but stood on prominent heathy hilltops. Compared to these, ‘Unwin’s Castle’ may have proved a fleeting and ephemeral feature but both it and the trig point had important roles in the landscape and the history of the Beacon and Cornwall.

¹¹ JT Tregellas 1879. *Peeps into the Haunts and Homes of the Rural Population of Cornwall*, 86.