

RESULTS OF GEOPHYSICAL SURVEYS AT TWO BARROW SITES IN CHEDDAR AND PRIDDY PARISHES, MENDIP

by

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ABSTRACT

Geophysical surveys at two undated oval mounds, one near the Longwood Valley, Cheddar and the other near Hunter's Lodge Inn, Priddy, revealed both to be the remains of pairs of Bronze Age round barrows. The oval mounds were presumably created by ploughing, with the two separate round mounds transformed into a single elongated mound. These results indicate that caution should be exercised when classifying earthworks by their external form alone.

INTRODUCTION

During research into the Neolithic and Bronze Age of Mendip, geophysical surveys were conducted at two monument sites of uncertain date and function. Both took the form of low oval mounds and have been variously suggested to be Neolithic long barrows, Bronze Age round barrows and natural mounds. A fluxgate gradiometer was chosen for the survey as it was hoped this might detect the presence of ditches. If the ditches proved to be parallel a Neolithic date would be probable, whereas a circular, all-enclosing ditch would suggest a Bronze Age date. If the surveys revealed nothing it might indicate that the mounds were in fact natural. The sites are considered individually, below.

LONGWOOD MOUND, CHEDDAR

Site Background

To the west of the Longwood valley, in the parish of Cheddar, is an oval mound at NGR ST4844 5550 (Figure 1). It measures 28 m in length, 13 m in width and 1.1 m in height. It is aligned SE-NW and is placed running along and between the 235 m and 240 m contours. The mound was first suggested to be a long barrow by A.T. Wicks (1924) and later confirmed by Crawford. Dobson (1931) also agreed with this interpretation but subsequent researchers have suggested it to be a natural outcrop (Tratman, 1938) or a misshapen round barrow (Grinsell, 1971). The mound is classified as CHEDDAR 17 in the Grinsell (1971) barrow list and the site is a Scheduled Ancient Monument (number 109).

The fieldwork was carried out on 5 October 1998 and the weather conditions during the survey were dry, but dull and windy.

The geology of the area is Carboniferous Limestone (Black Rock Limestone) and the soils are of the Nordrach Association.

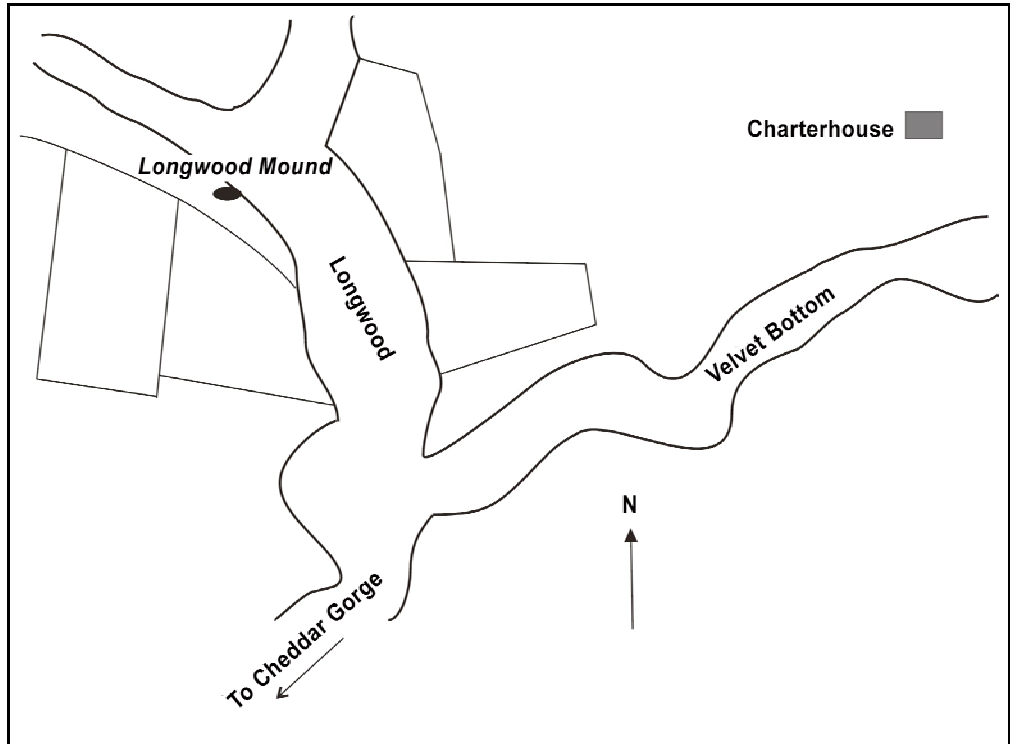


Figure 1. Sketch map showing the location of the Longwood mound.

Method

A total of four 20 m x 20 m grids were surveyed using a Geoscan FM36 fluxgate gradiometer with readings taken at 0.5 m intervals at traverses with 1m separation. Traverses were walked in a north-south direction to enhance sensitivity to magnetic signals. The steep drop to the north of the site meant that partial grids were surveyed in this area.

Results were downloaded to a computer running the Geoscan Research Geoplot program version 2.02 and printed out as both shade and dot density plots. The data needed little filtering with discontinuities removed using the zero mean grid function, which sets the background mean of each grid sampled to zero. A low pass filter was then applied in the attempt to enhance large, weaker features.

Results

The survey shows two adjacent circular negative features (Figure 2). Each complete circular feature measures approximately 8.5 m in diameter. These negative anomalies are fairly regular in width, though the ring of the most northerly circle is slightly wider. The ring of the southerly circle measures between 1.2 m - 2 m in width whereas that of the northerly circle is between 1.2 m - 2.5 m. Both average 2 m. There is a break in the ring of the northern circle that seems to correspond with a break in the southern ring. The areas with higher readings within the rings measure approximately 4.5 m. Within the northernmost circle there is also a small negative feature at the centre.

There is also a suggestion of a linear negative anomaly that runs from the east and swoops round the southern edges of the circular features. This is 1.5 m in width and runs for a length of 27 m. It is unclear what happens to it once it curves around the southernmost circular feature.

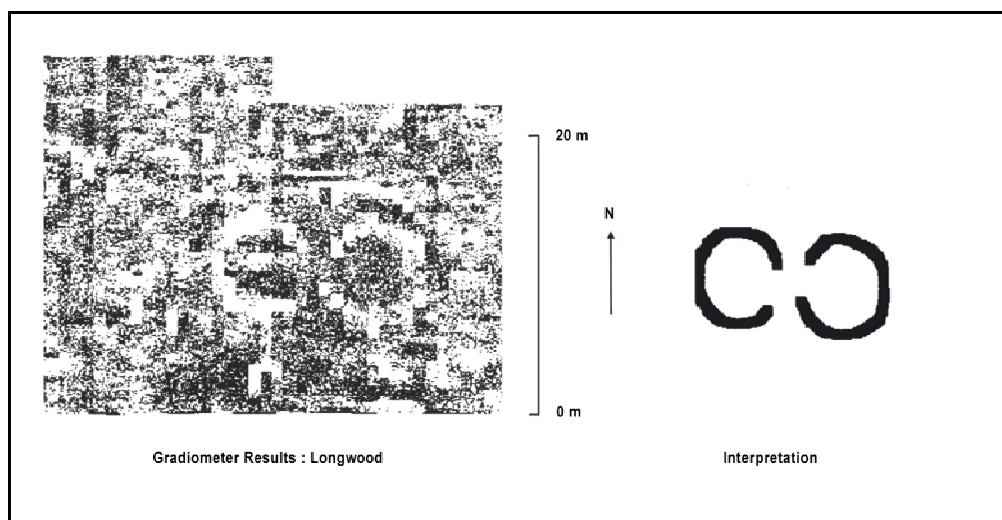


Figure 2. *Longwood mound : Results and Interpretation.*

Interpretation

The results strongly indicate that the Longwood mound is in fact two adjacent round barrows of Bronze Age date. The circular negative features appear to be the ditches of the round barrows with the higher readings from within them representing mound material. The most northerly barrow would seem to contain a pit or cist that shows as a negative anomaly. Causeways through the ditches appear to be a feature of both barrows and it is interesting to note that the causeways face each other. In both cases the ditch terminals narrow towards the causeways. The two barrows would have been placed only approximately 1m apart.

It is unclear what the linear feature is, as it does not show strongly. It may be a natural geological feature or alternatively it may be man-made. If man-made it is likely to be a boundary of sorts, such as a field system. At present it is undatable but it is interesting to note that a geophysical survey by the author at another round barrow in the parish of Cheddar showed how the monument was incorporated into a later 'Celtic' field-system of Bronze-Age - Roman date (Lewis and Mullin, 2000).

HUNTER'S LODGE MOUND

Site Background

A mound in the parish of Priddy, approximately 600 m south-east of the Hunter's Lodge Inn at NGR ST5549 4979 (Figure 3), was suggested to be two round barrows by Wicks (1914). However, investigations by Crook and Tratman (1948, p.49) led to the suggestion that the two barrows were in fact the ploughed remains of a long barrow. Crook and Tratman gave

the measurements as 80 ft by 60 ft and less than 2 ft high (*ibid*). The mound was said to be orientated east-west and be higher and wider at the east (*ibid*). Grinsell, however, argued that this was in fact a single round barrow with a diameter of 25 m (1971). It is classified by the Somerset SMR as an oval mound with a 14 m diameter, being 0.75 m high. They suggest it is a spread bowl barrow and it is scheduled as such. The mound is classified as PRIDDY 51 in the Grinsell (1971) barrow list and the site is a Scheduled Ancient Monument (number 13872).

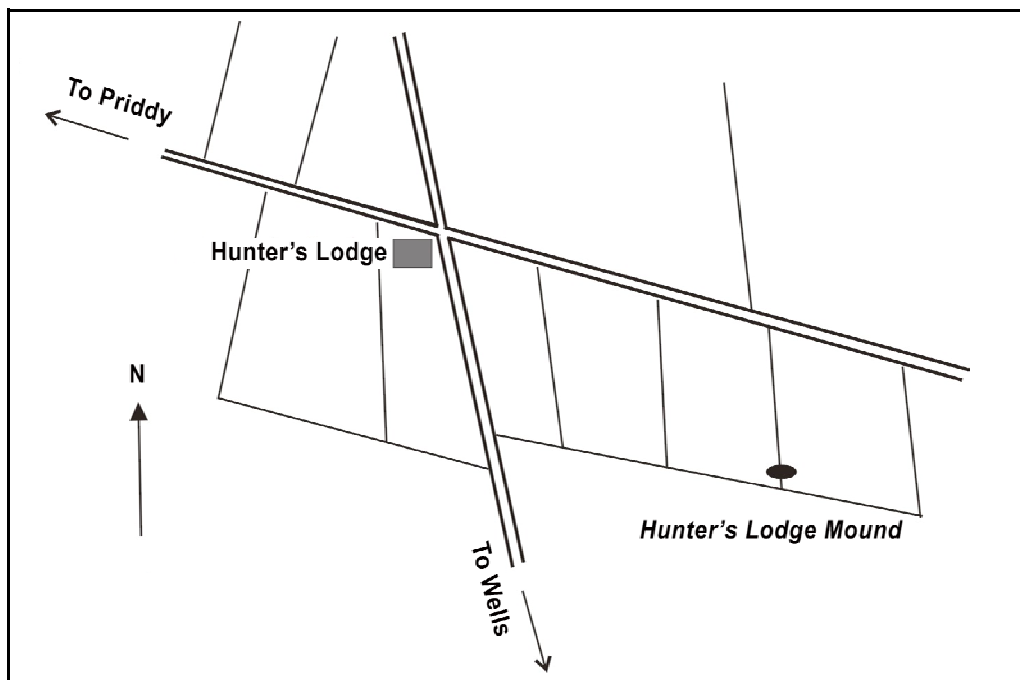


Figure 3. Sketch map showing the location of the Hunter's Lodge mound.

Today the monument is ephemeral but still just possible to see, with a wall crossing the western terminal. The mound is oval, measuring approximately 23 m by 16 m with some length obviously lost to ploughing. However, when viewed from the south, the mound looks rectangular, with a squared-off higher and wider east end. The north side has a scoop taken out of it, representing either quarrying activities or illicit excavation. The mound sits in a flat-bottomed valley with Pen Hill running parallel to it on the south and Stock Hill to the north.

The fieldwork was carried out on 26 October 1998 and the weather conditions during the survey were cold but dry.

The geology of the area is Carboniferous Limestone (Burrington Oolite) and the soils are of the Nordrach Association.

Methods

A total of six 20 m x 20 m grid were surveyed using a Geoscan FM36 fluxgate gradiometer with readings taken at 0.5 m intervals at traverses with 1 m separation. Traverses were walked in a north-south direction to ensure maximum sensitivity to magnetic signals. A stone wall ran north-south across the barrow mound and this necessitated the insertion of dummy logs

where readings could not be recorded. To save time only 6 readings were taken in grid 3, to the east of the mound, as there was no visible earthwork in this area.

Results were downloaded to a computer running the Geoscan Research Geoplot program version 2.02 and printed out as both shade and dot density plots. Filters were then applied to the data to clarify detail. The best results were obtained after de-spiking and applying a low pass filter.

Results

There are two provisos that must be outlined before the results are described. Firstly, the results are made less clear by the necessity of the line of dummy logs running north-south through the survey. This was essential as a stone wall, approximately 1 m wide, runs across the site. Secondly, a metal gate in this wall may be responsible for masking some of the results in the southern part of the survey.

There are two very similar features that show on the plot of the survey data (Figure 4). These are semicircles of low readings, showing as two white rings, adjacent to each-other. The most northerly ring is almost complete though its northerly arc seems to just fall outside the surveyed area. The width of the ring varies between 1.5 m - 2.1 m. Only the northern half of the southern ring is visible even though the survey area covers where the other half of the ring would be. It is likely that the southern half of the ring does not show because this is the area of the metal gate, which has 'drowned out' any weaker signals. Nonetheless, it is possible to appreciate that the ring varies in width between 1.8 m - 2.4 m. The north and south rings are approximately 5 m apart and the wall crosses both features. Within the northern ring is a weak negative anomaly. There is also a band of higher readings within the southern ring but the afore-mentioned 'noise' from the gate makes it less clear what is happening within the ring. It is possible to estimate a diameter of approximately 20 m for the northern circle and 25 m for the southerly circle.

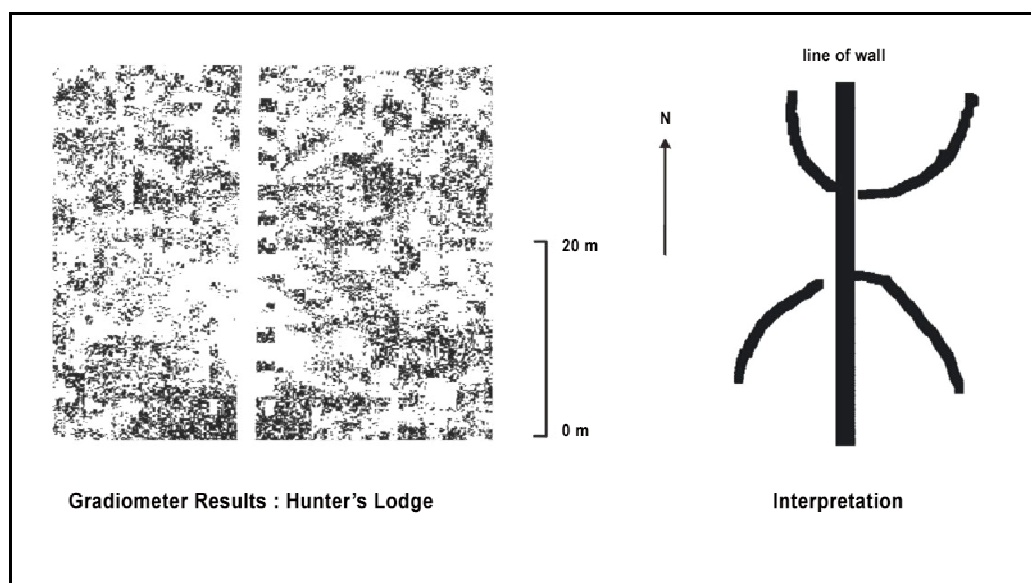


Figure 4. *Hunter's Lodge mound : Results and Interpretation.*

Interpretation

It appears that the two semi-circular negative anomalies represent parts of the circuit of two round barrow ditches. This would suggest a Bronze Age date for the site and confirm Wicks' original interpretation (*ibid*). However, the barrows have obviously suffered some quite severe disturbance as the mound that exists today stretches in an east-west direction whilst the barrows actually run north-south. The barrows, with diameters of 20 m and 25 m, would have stood 5 m apart, before being turned into one oval shaped mound, presumably by the action of the plough. Much material is missing as the one mound today measures only 23 m by 16 m.

CONCLUSIONS

It is now possible to end nearly a century of speculation on the status of the oval mounds at Longwood, Cheddar and Hunter's Lodge, Priddy. At Longwood the oval mound is in fact the remains of two small round barrows that have become one, probably through ploughing. The proximity of the barrows to the nearby henge monument of Gorsey Bigbury is worth noting; Gorsey Bigbury is only 300 m to the north, making the Longwood barrows the closest monuments to the henge.

At Hunter's Lodge the oval mound also appears to be the remains of two round barrows that have been reduced into a low spread oval mound, once again probably by ploughing. Two other round barrows are situated close to the oval mound, one at NGR ST5555 4975 and one at ST5554 4969. The discovery that the oval mound represents the remains of a further two round barrows makes this a significant grouping. Only 300 m to the west is the Hunter's Lodge "henge"¹; it was previously thought that the closest barrow cemetery to this monument was the group on Pen Hill 1 km to the south but the discovery of the new cemetery changes this.

This investigation, in demoting two supposed or possible long barrows to pairs of round barrows underlines just how rare early Neolithic monuments are on the high Mendip plateau, with the Priddy long barrow (Lewis, 2002) one of the few acceptable examples. This may support ApSimon's (1997) contention that the main early Neolithic land use of the plateau was for hunting and wood pasture.

Classifying earthworks by their external appearance is complicated, as we are seeing the result of hundreds, and sometimes thousands, of years of transformation processes. Methods such as geophysics provide a non-intrusive and relatively inexpensive means of testing assumptions about sites and monuments, sometimes providing new and unexpected answers.

ACKNOWLEDGEMENTS

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¹ See Lewis (2001) for a detailed reconsideration of the Hunter's Lodge "henge".

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