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Short Report form no. 2016-05v5R

1 Name of site: Drayton Barrow

2 Purpose of survey:

A magnetometry survey was carried out to see if it could give additional information on this area which was being researched by the client.
A note of the client's earlier work is appended to this report.

3 Client: Abingdon Area Archaeological and Historical Society (AAAHS).

4 Location **County:** Oxfordshire**, District:** Vale of White Horse, **Parish:** Drayton
The site is in a field to the west of the B4017 between Drayton and Abingdon, UK.
The grid location plan gives the grid references which are probably good to approx 0.5 metres as a Trimble pro XR gps was used with beacon differential correction.
NGR grid reference: Main area centred on SU477951
Nearest postcode: OX14 4HL

Survey on Google Earth air photo

5 Start date: 15 February 2015 **End date**: 10 February 2016 **Report date**: 18 March 2016.

6 Geology at site

From the BGS Map sheet 253 the geology is given as Kimmeridge clay overlain by third terrace deposits. Excavation by the AAAHS has shown this to be overlain by a clayey silt brickearth type deposit.

7 Topography

The area is fairly level at approx 64m OD. The ground slopes down to the east and west with the “barrow” being on the ridge and having good views to Boars Hill and to the east.

8 Known archaeological sites / monuments covered by the survey

English Heritages Pastscape system says:-

MONUMENT NO. 233931 Prehistoric or Roman Barrow at Sutton Wick[SU 4775 9510] TUMULUS [G.T.] (site of) (1)
Large, roughly circular, ploughed mound, c. 55ft. diameter and 5ft. high, near Barrow Road on Sutton Wick Field, Drayton. Lat 51 39' 8", Long 1 18' 35" [Agrees with O.S. siting]. (2)
This is a very spread and ploughed over barrow, c. 1.5 m high, with no trace of a ditch. Surveyed at 1/2500. (3)
Sherds of 1st.-2nd. C. A.D. pottery were collected by members of Reading Mus. from the ploughed surface of a mound at Sutton Wick. Acc. No. 61:62/1-11. (4)

Mr Wymer identified the mound as that at SU 47759510. Revisited and further sherds of R.B. pottery were exposed on the surface. (5)

This barrow is situated in a field that has been intensively ploughed over in recent years therefore the feature was only barely discernable during field investigation of the area by OS Reviser. (6)

MONUMENT NO. 1105832 Cropmark remains of fragmented rectilinear enclosures and ditches of a possible field system of unknown date centred at SU 4773 9513.
To the south-west there are a number of ditches which may be part of enclosures of a different phase. Some of these may be of geological origin. At SU 4775 9513 is a single small ring ditch, possibly a hut circle, of unknown date. (Morph No.TG.332.3.1). (1)

Oxfordshire HER’s Heritage Search system has the barrow as PRN 2655 which is described as both modern on the basis of it not appearing on old maps and is also allocated a date of 800BC to 42 AD as a round barrow.

The AAAHS work and part of this survey have been noted in South Midlands Archaeology 45, 2015 p 57. In addition to finding Roman pottery in its small excavations, AAAHS members have also found flints in the vicinity and Anni Byard has kindly identified a sestertius of Philip II as Caesar (AD 244-247), obverse legend 'M IVL PHILIPPVA CAES, reverse legend PRINCIPI IVVENT, Philip standing right with spear and globe, which was shown to us by a local resident who said they had found it in the area.

9 Archaeological sites / monument types detected by the survey
Ditches on 2 alignments, possibly of Roman date; a large elliptical ditched enclosure, possibly prehistoric; a mound; 2 possible round houses or similar and various other probable pits and areas of burning.

10 Surveyor Abingdon Archaeological Geophysics, Roger Ainslie, Sally Ainslie

11 Archives Location of:

a) Primary archive, i.e. raw data, electronic archive etc
Abingdon Archaeological Geophysics.
Also with client

b) Full report:
ditto

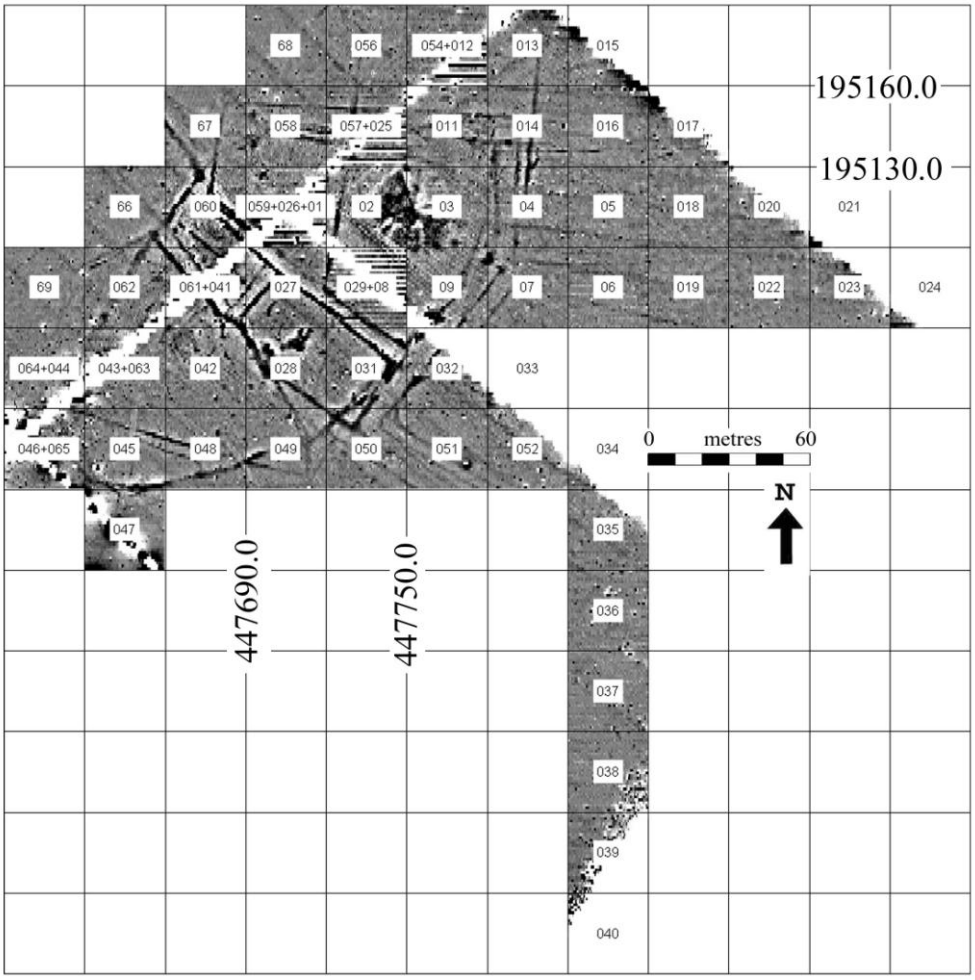
12 Type of survey
A Magnetometer

Area surveyed: 4.25 hectares. Traverse separation: 1 metre
Reading / sample interval: 8 per metre.
Type, make and model of instrumentation: Bartington Grad 601/2 fluxgate gradiometer.

13 Land use at the time of survey
Arable – short crop.

14 Additional remarks
30 metre grids on National Grid. First line of all grids started NW corner going east zig zag.

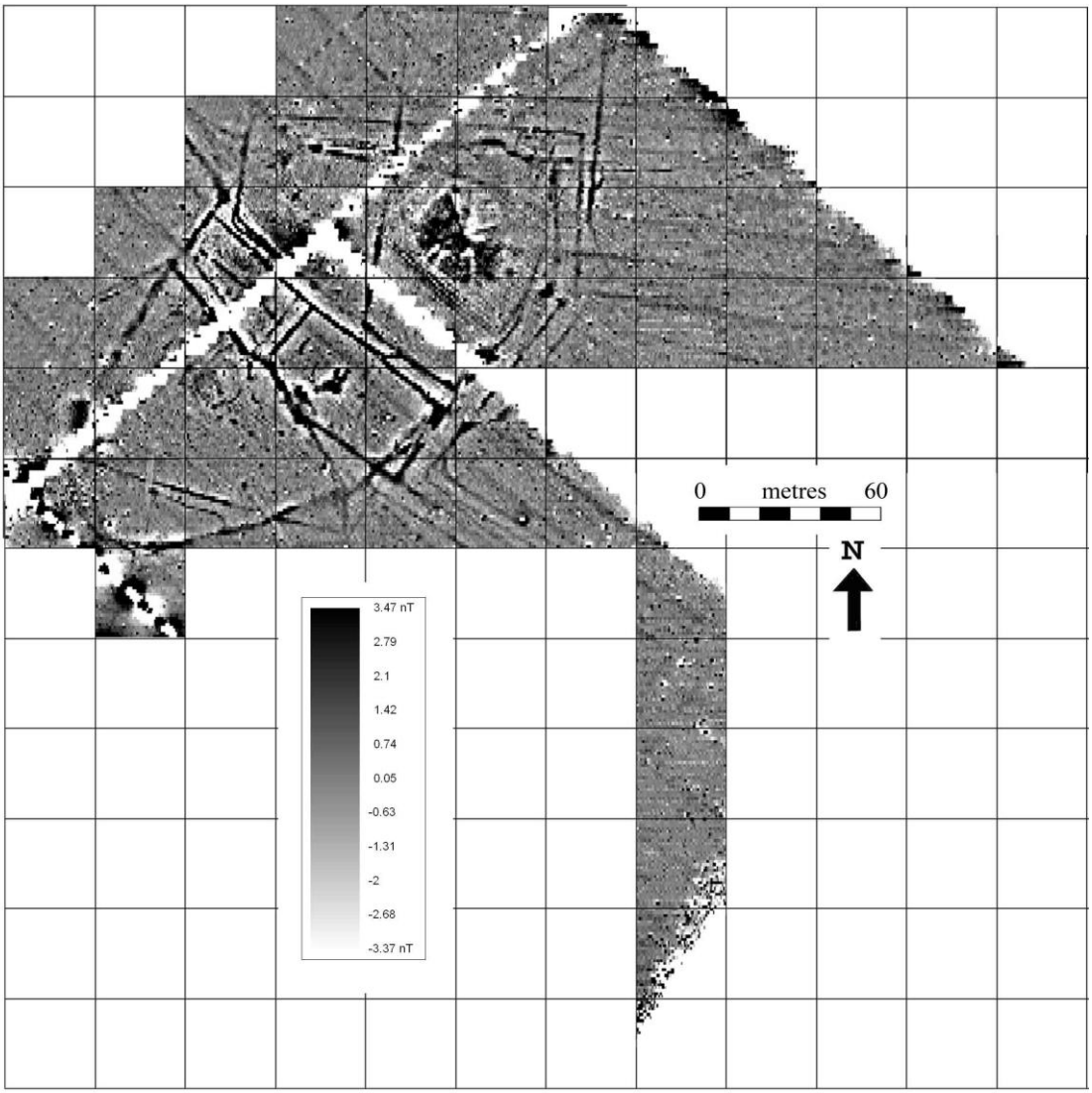
Location



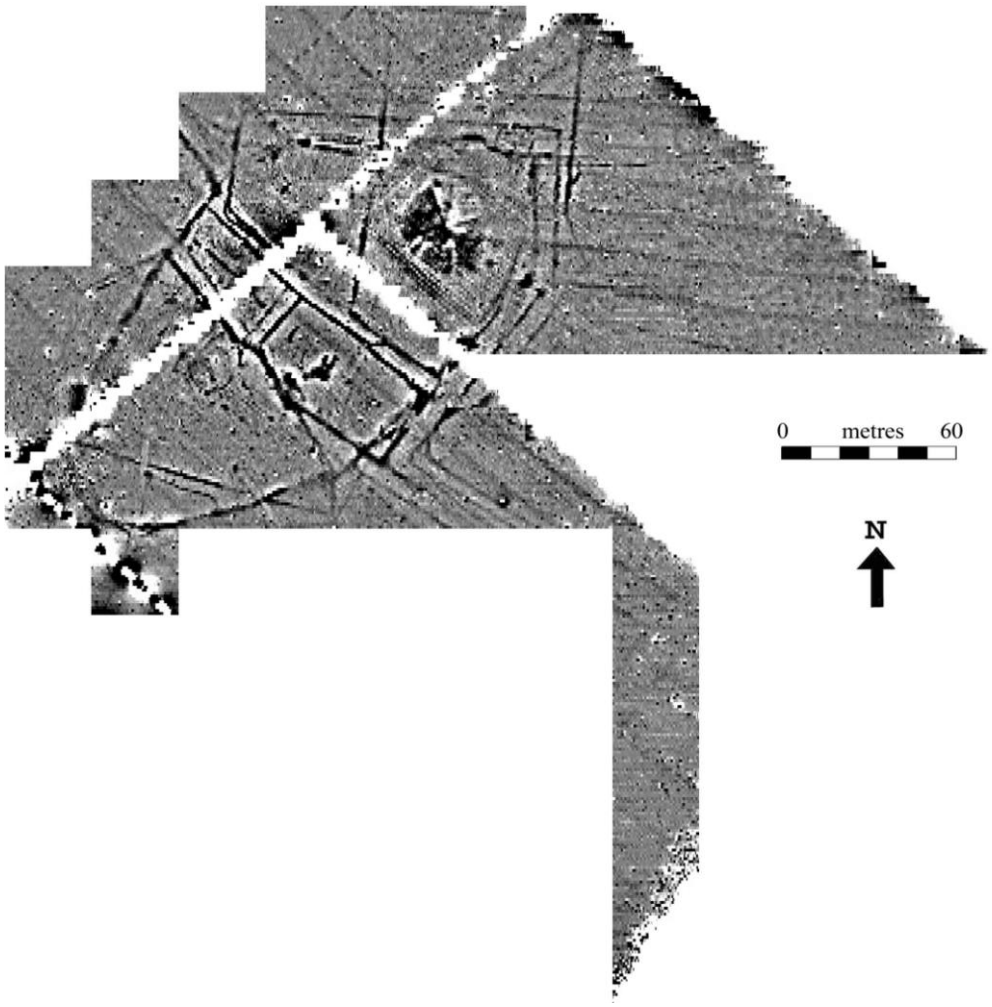
Location and grid order

15 Results (refer to plans below)

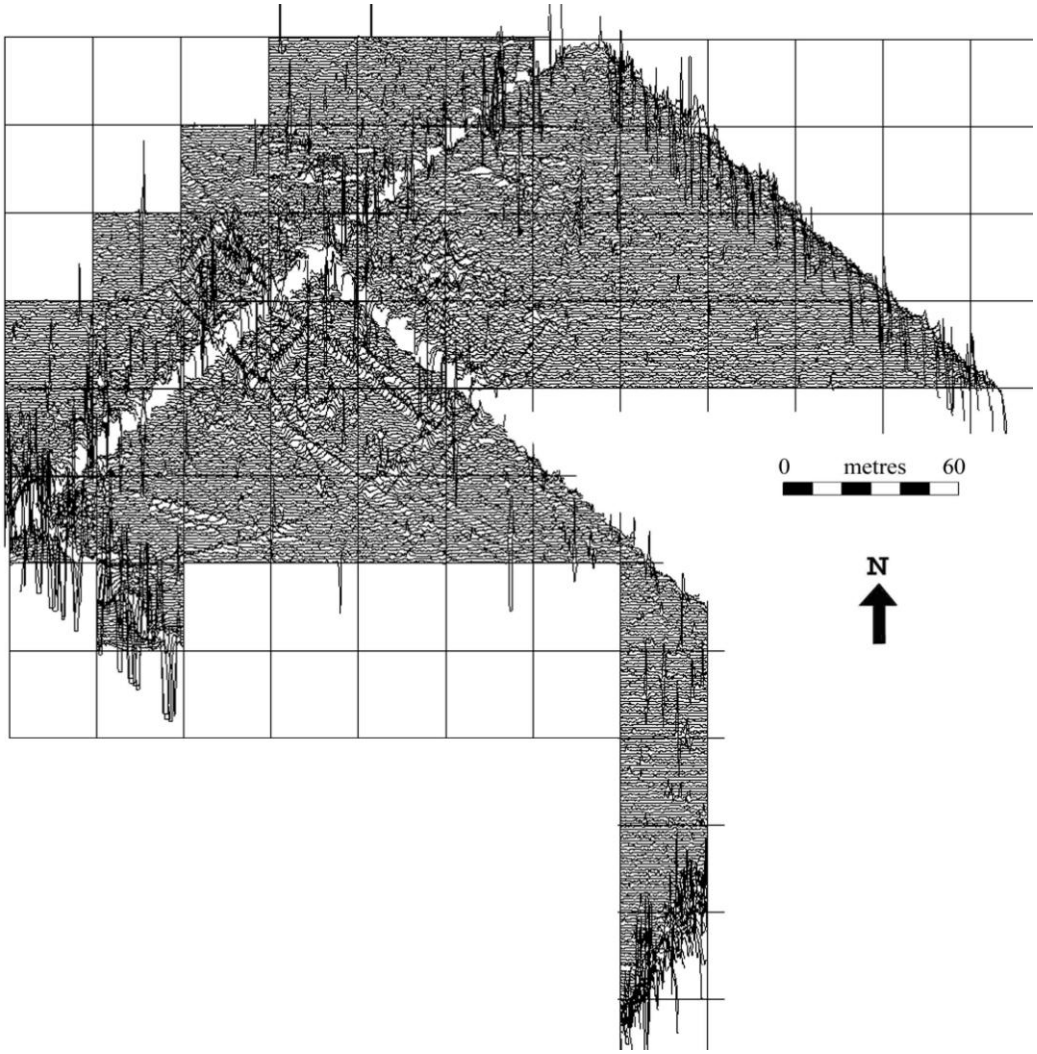
Magnetometry



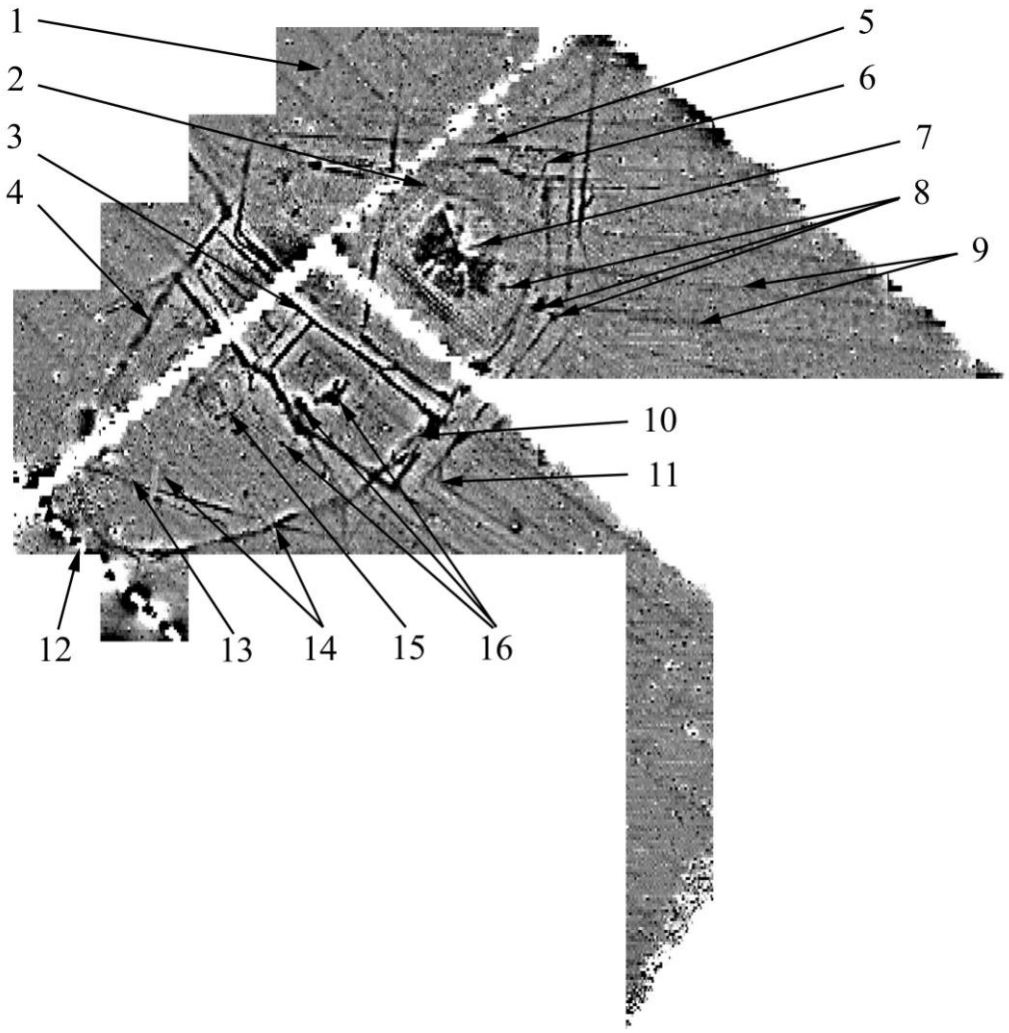
Greyscale with scale



Greyscale without grid lines



Trace plot



16 Interpretation

1 Line of a probable modern pipe or similar.

2 Slight ditch which appears to curve to respect the “barrow”. This could be related to the ridge and furrow, although this is not clear.

3 An area of ditches on a NW-SE alignment and at right angles to it. The high strength of the magnetic anomalies in parts of these may indicate burning and hence occupation in the area.

4 Western side of elliptical ditch.

5 An area of ditches on an E-W alignment and at right angles to it.

6 A possible small circular gully of the type found with round houses.

7 The main “barrow” mound.

8 Pit- like anomalies.

9 Ridge and furrow.

10 Eastern side of elliptical ditch.

11 Curved corner of ditches. This indicates a field system or similar extending away from the main occupation area.

12 Ferrous anomaly. This was found to be a steel water pipe approx 25mm diameter.

13 Ditch-like anomaly

14 Slight negative anomalies which may well be some of the archaeological evaluation trenches.

15 Circular gully- like anomaly. Possibly a round house.

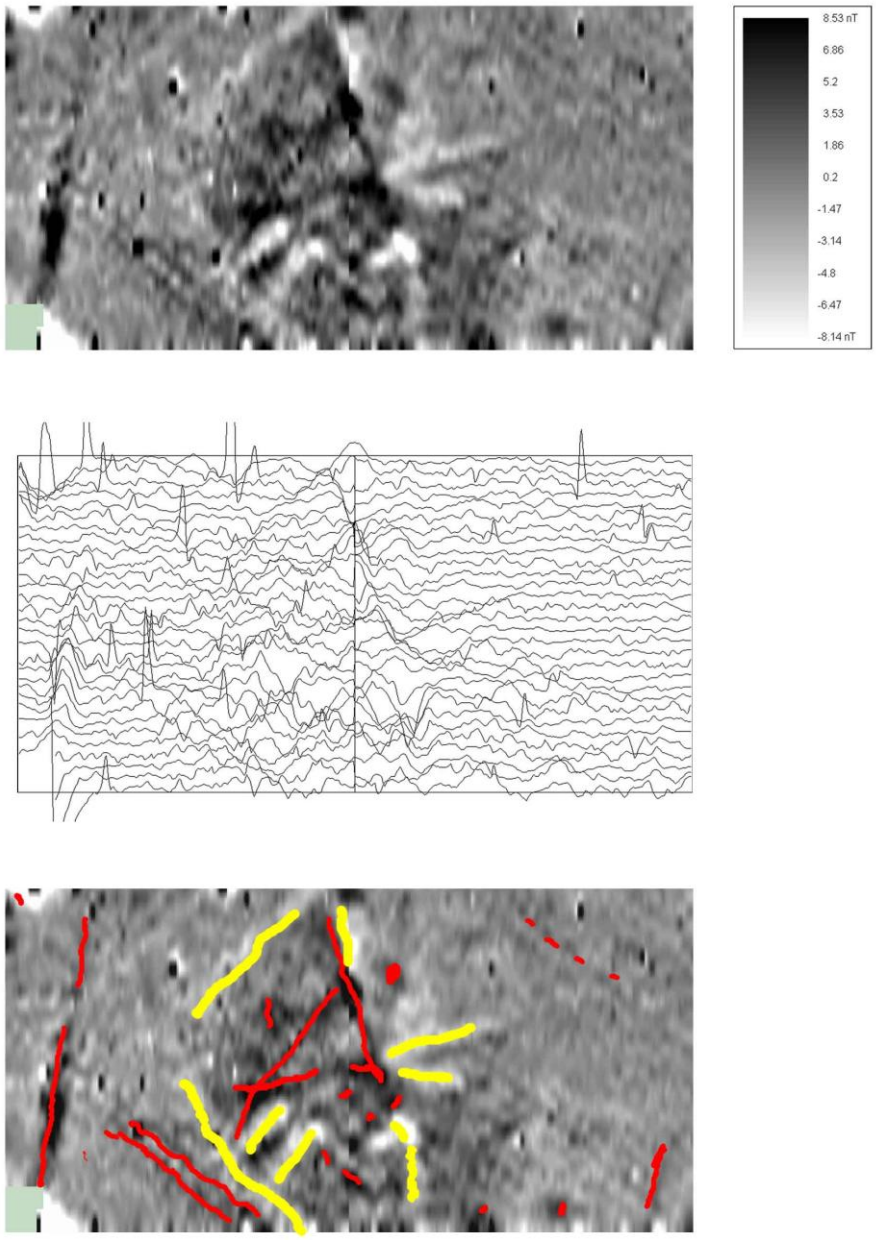
16 A probable pit and 2 areas of probable burnt material.

17 Discussion

Geophysics alone cannot give a date to remains and all one can do is rely on whether the anomalies resemble those on sites of a known date.
The archaeological work done by the AAAHS and by Cotswold Archaeology may well enable more information to be gained from this site.

A geophysical survey was submitted as part of planning application P14/V2504/FUL considered by the Vale of White Horse District Council. It is in the supporting documentation and is part of the archaeology desk based assessment (p67 onwards).

In terms of the anomalies detected, the survey may shed some light on the mound. If there had been a ditch around it in the manner of the usual Bronze Age barrow then it would probably have been detected. If the mound is recent then it is quite a coincidence that it was placed in a space between large ditches which had probably been invisible for approximately 1000 years. The mound appears to have various anomalies but none of these appears to be a ditch, which could indicate a barrow, or cross trees which could be the footings for a windmill as the partial cross shape has longer arms than would be expected.



Grids 2 and 3, the mound area. High magnetic readings = red, low = yellow
30 metre grids

The northern arrangement of ditches appears to but onto the southern ones and may well therefore be later in date.

The features are less detectable magnetically to the south and east of the main survey area. This could be caused by a greater depth of topsoil as one goes down the slope, that features have less magnetically enhanced material the further they are from the main centre of occupation and burning or possibly that there is little there.

18 Conclusions

In terms of detection, if the circular gully (15) had been ploughed out above the top of the natural gravel then its volume of the bottom of the gully is so small that, unless the magnetic characteristics of the feature were very different from those of the surrounding soil, it should not have been detectable by magnetometry under the approx 75cms of soil above it. Our results suggest that some of it was surviving at a higher level when the survey was carried out.

This survey can be compared with the earlier survey which was carried out as part of the planning application. Whilst the caesium sensors used in the planning application survey are supposed to be more sensitive than the single vertical axis fluxgate sensors used in this survey, the fluxgate appears to have been better at detecting ditches and round houses whilst the caesium sensors appear to be better at detecting the ridge and furrow.

The reasons for this are unclear as the planning application survey was carried out by a reputable organisation with experienced staff. It may be that the caesium survey only collected readings every 0.3 metres whilst the fluxgate survey collected every 0.125 metres. It could also be because the fluxgates were in a gradiometer arrangement whilst the caesium sensors were not. Another factor could be the data processing as English Heritage surveyors obtained good results from caesium magnetometers (Archaeological Prospection 2007p151-166) but also processed the data to simulate it being a gradiometer with a 1m space between the top and bottom sensors.

19 Acknowledgements

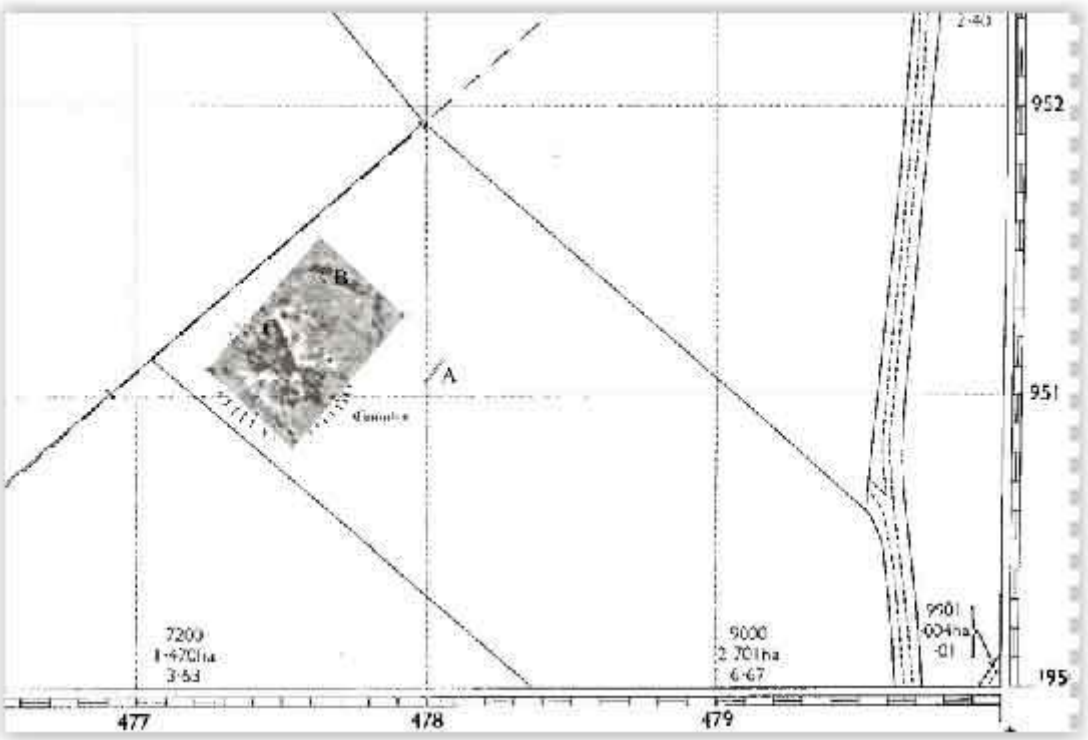
We would like to thank Terry Stopps for asking us to do the survey and Paul Caudwell for permitting access.

20 REMINDER

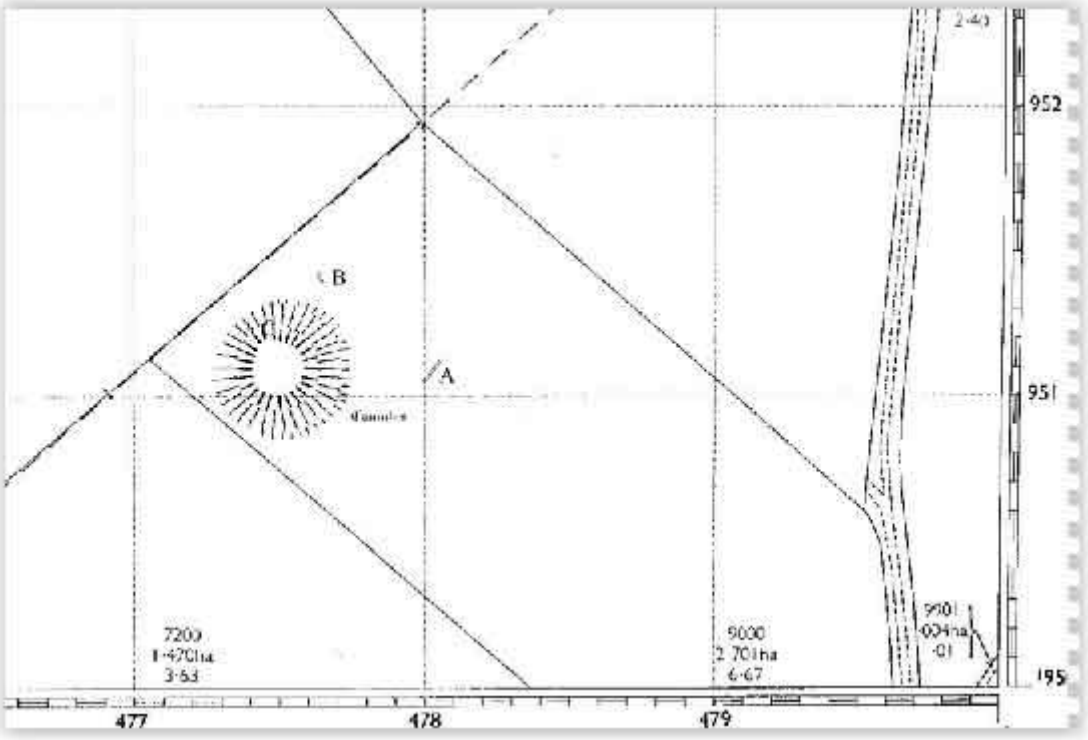
Many features cannot be located by using magnetometry. Features including flint scatters and burials may well exist which are not detectable by this survey method. Failure to locate features does not mean that they are not there.

The earlier work by the AAAHS

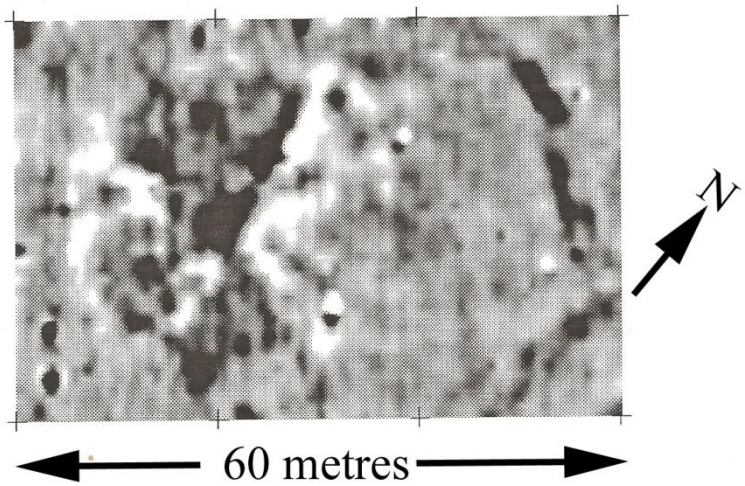
Drayton, Oxon AAAHS excavation
Drayton Barrow SU4775 9511



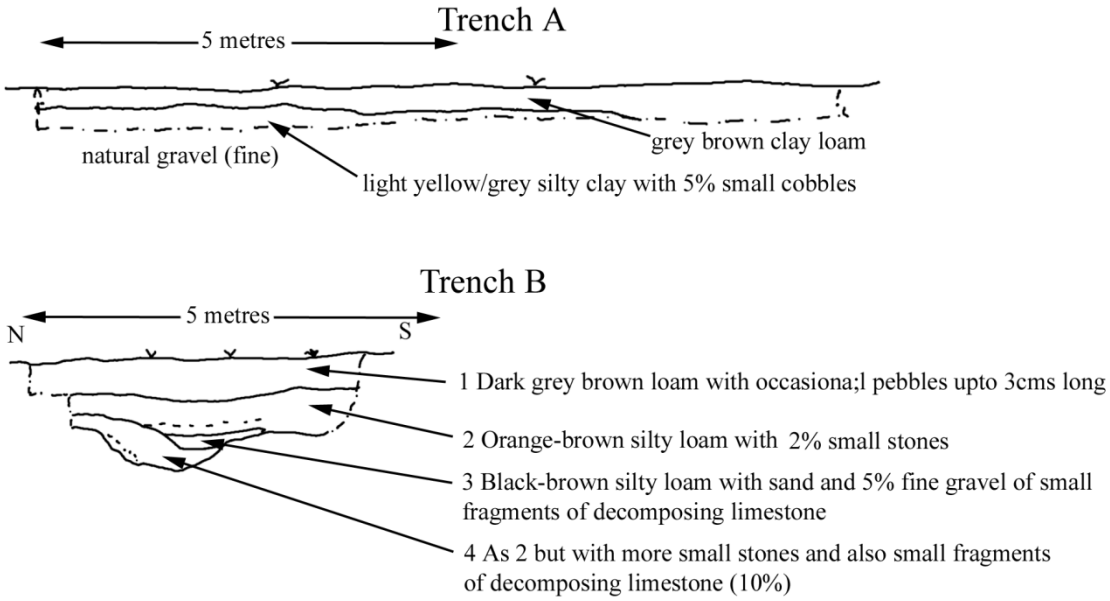
Alister Bartlett's magnetometry survey



Trench locations



Alister Bartlett magnetometry



Trench A
9.5m long 1.5m wide 0.5m deep
Top: Grey brown clay loam
Bottom: Yellow grey silty clay
Natural gavel at 0.5m
Finds: flint (4) and modern china (1)

Trench B
4m long, 1.3m deep ,0.5m wide
Layer 1 grey brown loam.
Finds: Flint (3); Pot Roman (7) including Samian: tile etc (6).
Layer 2. Orange brown loam
Finds: bone (24)(cattle, sheep, pig, dog); flint (1)(leaf shaped arrowhead); Roman pot (18); IA or Saxon pot (1); tile etc (5)
Layer 3

Finds: Modern china (1); Roman pot (2); IA pot (16); bone (11) (incl polished sheep metatarsial – poss weaving)
Initial conclusion IA ditch (or earlier with IA ditch cutting it).

Trench C

2m long, 1m wide, 0.5m deep not bottomed to natural.
Layer 1 dark brown clay loam.
Finds: Flint(1); Roman pot (12) incl piece of grey poppy beaker; Poss IA pot (1); tile (1); bone (1)
Layer 2
Finds; bone (5); flint (2)

Archive
Oxfordshire museums code 1996/116 dated 23/9/1996 but not yet deposited.