

ABINGDON ARCHAEOLOGICAL GEOPHYSICS

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Short Report form no. 2016-01

Survey Details

Name of site: SAXON PRIMARY SCHOOL, BRIAR ROAD, SHEPPERTON TW17 0JB

Purpose of survey:

Magnetometry and earth resistance surveys were carried out to see if these methods could assist in locating archaeological remains as Saxon ditches and similar remains had been discovered when the school was built and extended..

Client: Surrey County Archaeological Unit, Surrey History Centre, 130 Goldsworth Road, Woking, Surrey, GU21 6ND

County: Surrey

Parish: Littleton

NGR grid reference: Main area centred on TQ 070676

Nearest postcode: TW17 0JB

Start date: 9 January 2016 **End date:** 10 January 2016 **Report date:** 13 January 2016.

Geology at site

From the Geology of Britain Viewer the geology is understood to be Bagshot Formation – Sand overlain by Shepperton Gravel Member - Sand and Gravel. The previous excavations however located brickearth over these terrace gravels.

Known archaeological sites / monuments covered by the survey

The site is a Scheduled Ancient Monument no: 1005939 and a Section 42 licence has been obtained for this survey, case No:SL00120447.

Saxon burials and other ditch, pit and posthole remains have been found in the past.

The clients have carried out a Heritage Statement of the potential of this site which gives the sources of information on this site. Previous work has been published in the proceedings of the London and Middlesex Archaeological Society for 1979 and 2005.

Archaeological sites / monument types detected by the survey

Possible ditches of unknown date.

Surveyor Abingdon Archaeological Geophysics, Roger Ainslie, Sally Ainslie

Location of:

a) Primary archive, i.e. raw data, electronic archive etc

Abingdon Archaeological Geophysics.

Also with client

b) Full report:

ditto

Technical Details

Type of survey

A Magnetometer

Area surveyed: 0.35 hectares

Traverse separation: 1 metre

Reading / sample interval: 8 per metre

Type, make and model of instrumentation: Bartington Grad 601/2 fluxgate gradiometer.

B Earth Resistance

Method 1

Area surveyed: 0.08 hectares

Traverse separation: 1 metre

Reading interval: 1 metre

Filter: 1.5 seconds

Mobile probe spacing: 0.5 metres

Method 2

Area surveyed: 0.065 hectares

Traverse separation: 0.5 metre

Reading interval: 0.5 metre

Filter: 1.5 seconds

Mobile probe spacing: 0.75 metres

Type, make and model of instrumentation: CIA/TR Systems Resistance meter.

Land use at the time of survey

School field – short grass.

Additional remarks

30 metre grids. First line start NW corner going east zig zag.

There were ground leakage currents which meant that there was a variation in any one reading of over 3 ohms which was corrected by setting the resistance meter at 1.5 seconds per reading rather than the usual 0.5 seconds.

Processing. Magnetometry used destagger to remove the lag between the readings being taken and being logged. It also used clipping to prevent very

high readings from dominating the appearance of the survey. Earth resistance used despite to remove occasional bad readings and clipping to improve the appearance of the survey.

Location

30 metre grids with NE corner of survey area at corner of northern car park area where it abuts the grassed area.

GPS grid references

NW corner magnetometry grid 1	506976.9E	167713.4N
NW corner magnetometry grid 2	506971.5E	167683.6N
NW corner magnetometry grid 3	506966.3E	167654.8N
NE corner magnetometry grid 1	507006.7E	167708.6N
NE corner magnetometry grid 2	507001.3E	167670.0N
NE corner magnetometry grid 3	506996.0E	167649.5N
NE corner magnetometry grid 4	507036.0E	167703.0N

The earth resistance used the same grid positions although those surveys covered a smaller area and were in the areas of magnetometry grids 4,5 and 6. The earth resistance area using a half metre reading interval was smaller than the 1 metre resistivity survey

Results (refer to plans below)

Magnetometry

- 1 Interference probably caused by ferrous material in rubber matting under grass.
- 2 Interference caused by chain link fencing. There is similar interference on the southern side of the survey area.
- 3 Isolated piece of ferrous material. There are many of these in the area.
- 4 Ferrous material in the covering of the long jump sand pit.
- 5 Probably bricks or similar fired ceramic material.

Earth Resistance

- 6 Area of high resistance. This has a straight edge on its eastern side. Cause unknown but could be related to services or modern works.
- 7 High and low readings on a NE-SW alignment. Readings in this area could be misleading as the rubber material under the grass may have influenced the percolation of rainwater and thus the readings. If it is archaeological it could be a ditch cut down through the brickearth into the gravel with the upcast on its sides.
- 8 An area of high readings. Cause unknown but could be modern service related.
- 9 An approximately circular anomaly of high readings. This could be a pit or similar which has been cut into the gravel with the gravel upcast around its edge.
- 10 Small anomalies on a NE-SW alignment, including two anomalies which could be pits or large post holes.
- 11 Large area of high readings. This could be geological or it could well be dumping associated with the building of the school.

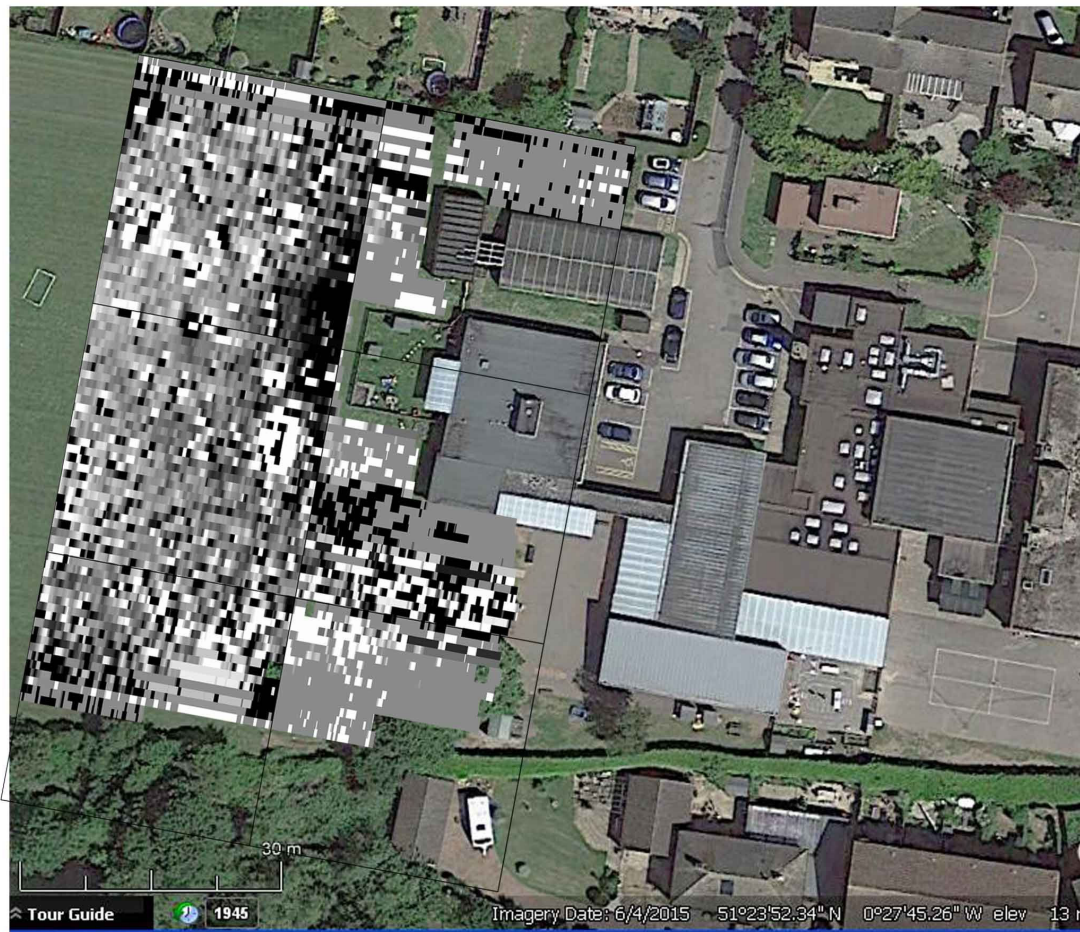
Conclusions

This site had difficulties for geophysics which are usual in this type of location. The nearby buildings and fences with ferrous material adversely affected magnetometry and earth leakage currents made earth resistance difficult.

The only possible useful results were obtained using earth resistance and even these anomalies, 7, 9 and 10 above, could have non archaeological as well as archaeological causes and will need to be further investigated.

REMINDER

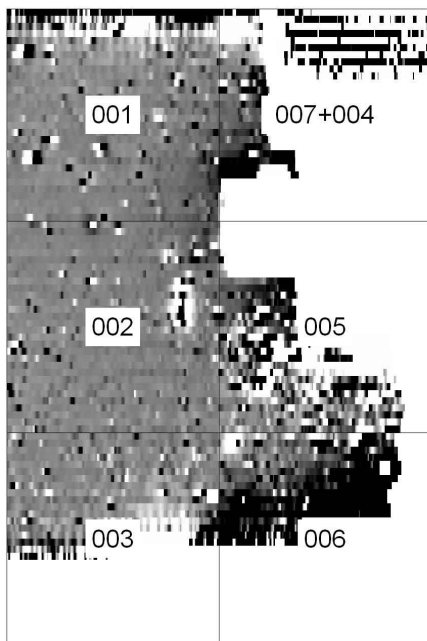
Many features cannot be located by using magnetometry or resistivity. Features including flint scatters and burials may well exist which are not detectable by these survey methods. Failure to locate features does not mean that they are not there.



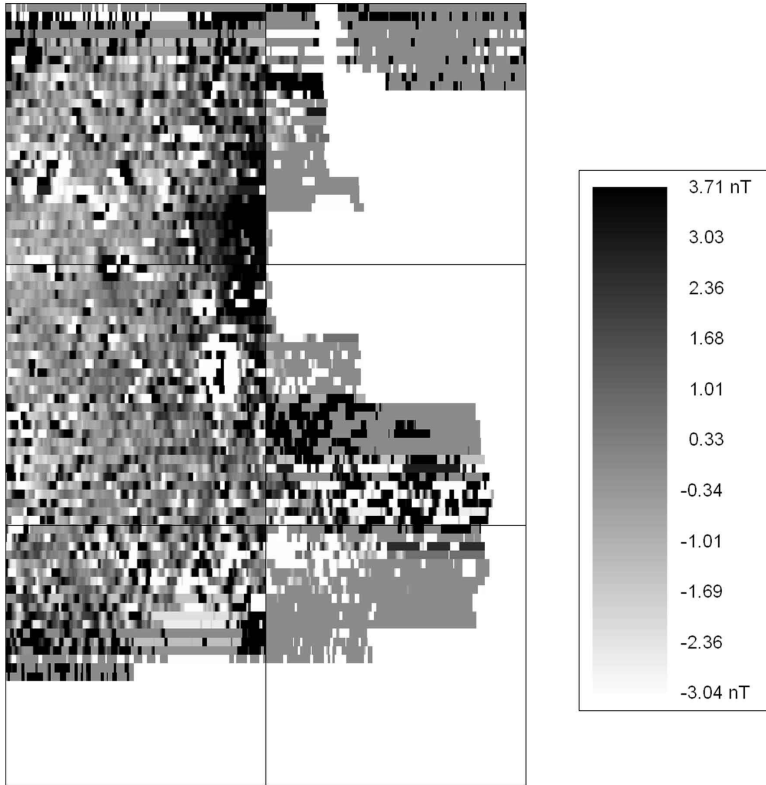
Magnetometry on Google earth base.



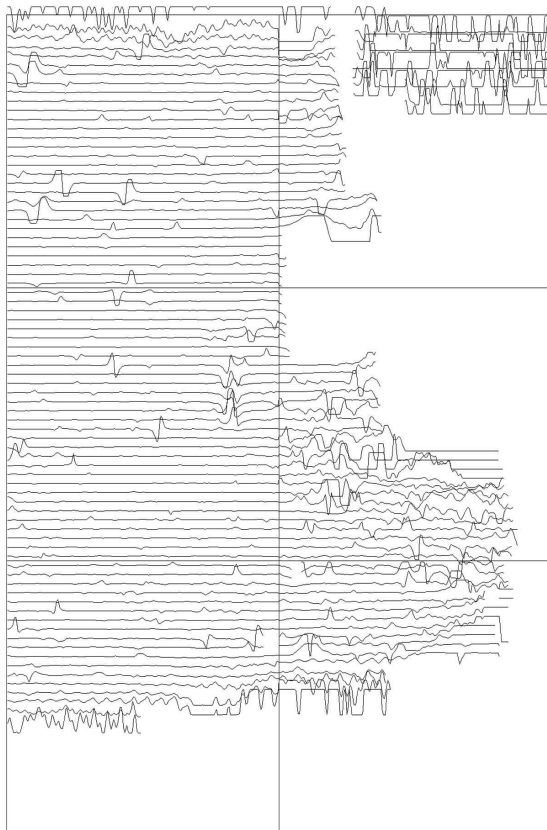
1 metre earth resistance on Google earth base



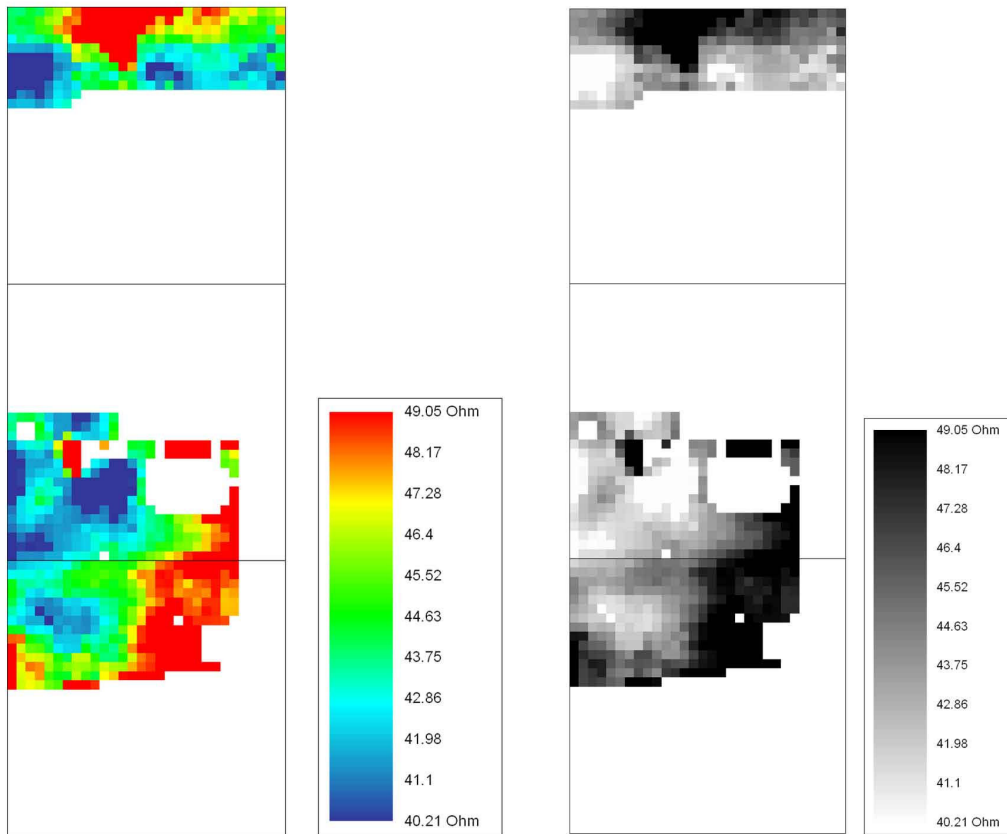
LOCATION grid order



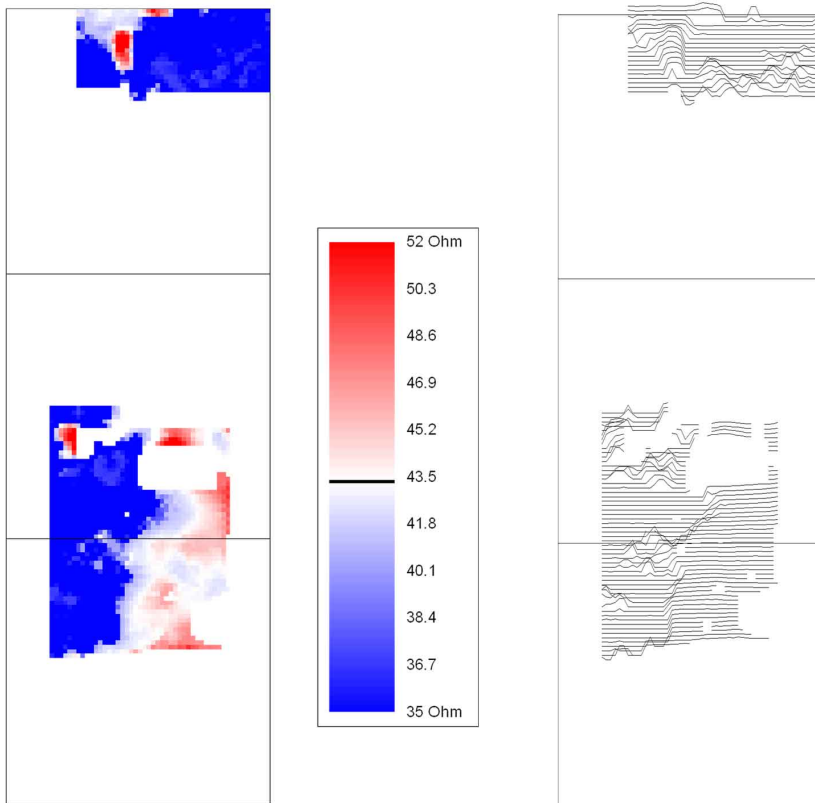
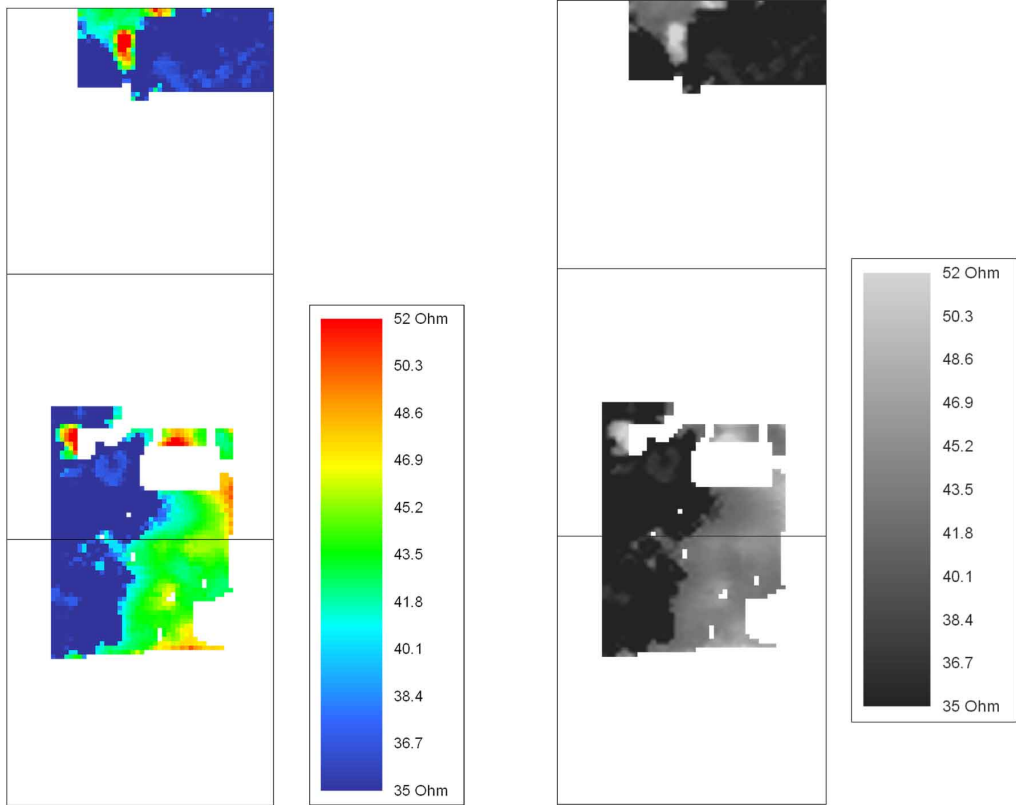
Magnetometry Greyscale with scales



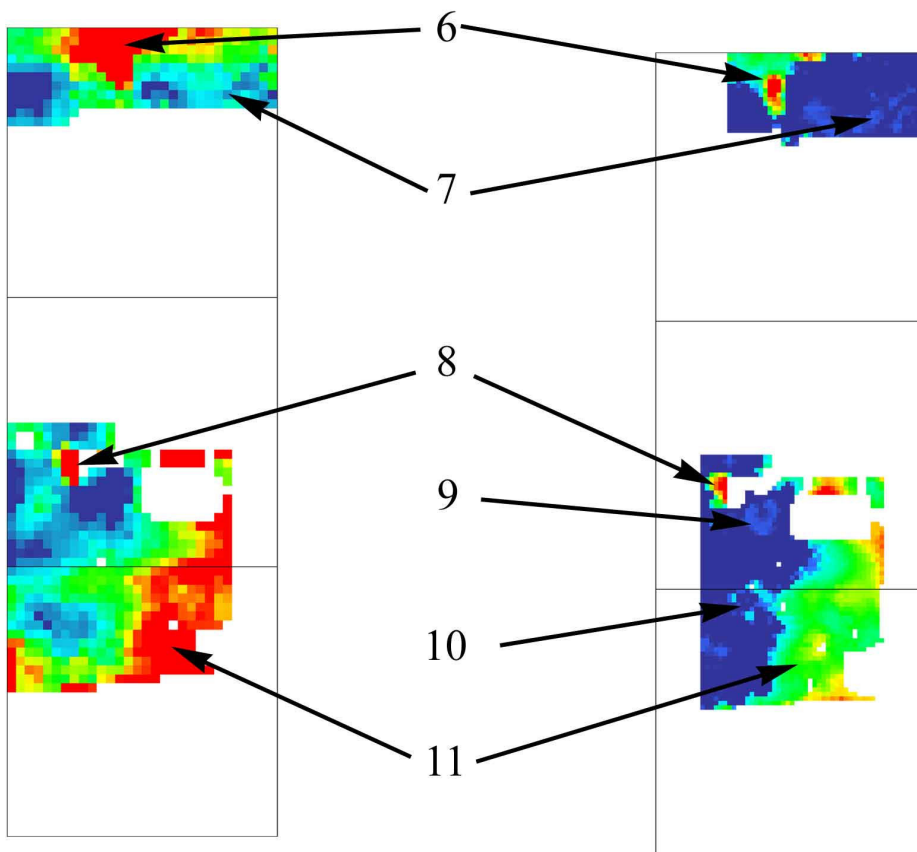
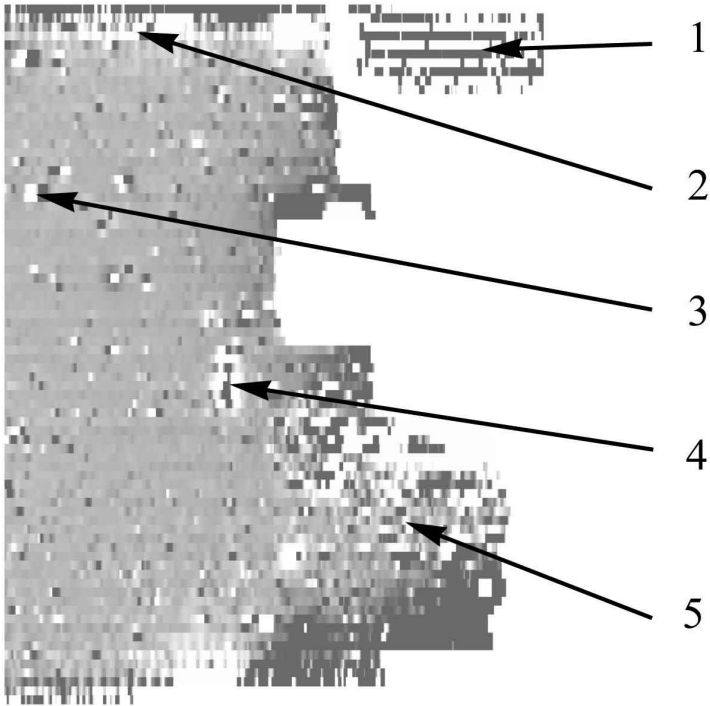
Magnetometry trace plot clipped to +/-100nT



1m Earth resistance



0.5m earth resistance



Interpretation