

ABINGDON ARCHAEOLOGICAL GEOPHYSICS

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‘Barn Piece’ field, Holton, Oxford Roger Ainslie with a contribution by Paul Booth



Report number 2019-01

08 February 2019

**‘Barn Piece’ field, Holton, Oxford by Roger Ainslie with a
contribution by Paul Booth
08 February 2019**

Summary

Documentary research, geophysics and test trenching on this known site (NGR SP608059) show that it is probably of late Iron Age and early Roman date, although its nature could not be ascertained. The field appears to have had soil dumped over it, possibly as part of the A40 or other construction works. The report discusses the effectiveness of magnetometry, earth resistance, hand excavation and machine excavation. On this site comparing hand excavation with the machine removal of upper layers indicates that machined trenches missed some 85% of the finds. This may have wider implications if similar comparisons are carried out on other excavations.

Background

The owner of this area had childhood memories of seeing excavations in the field and asked if more research could be carried out. Various records were examined, geophysical surveys carried out and test trenches excavated.

Records

The following sources provided information on the site:

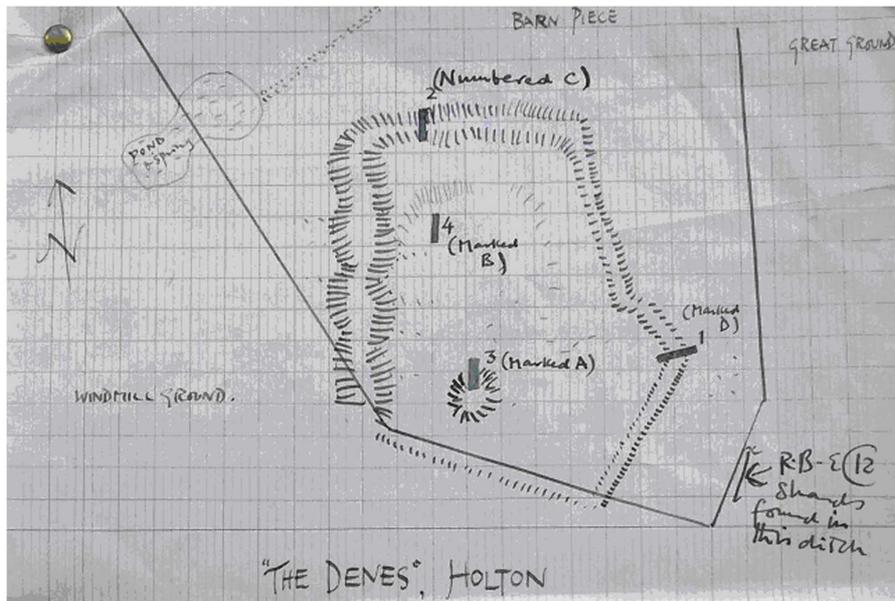
Pastscape

The Historic England Pastscape system has this note – SP 607059: stone footings with Medieval sherds, quarry-pits probably of Medieval date and a ditch with 2nd century Romano-British coarseware pottery were found in Barn Piece, Holton, a field south of the minor road between Wheatley and Worminghall. *Oxoniensia* 24 1959 100 (E V Roberts).

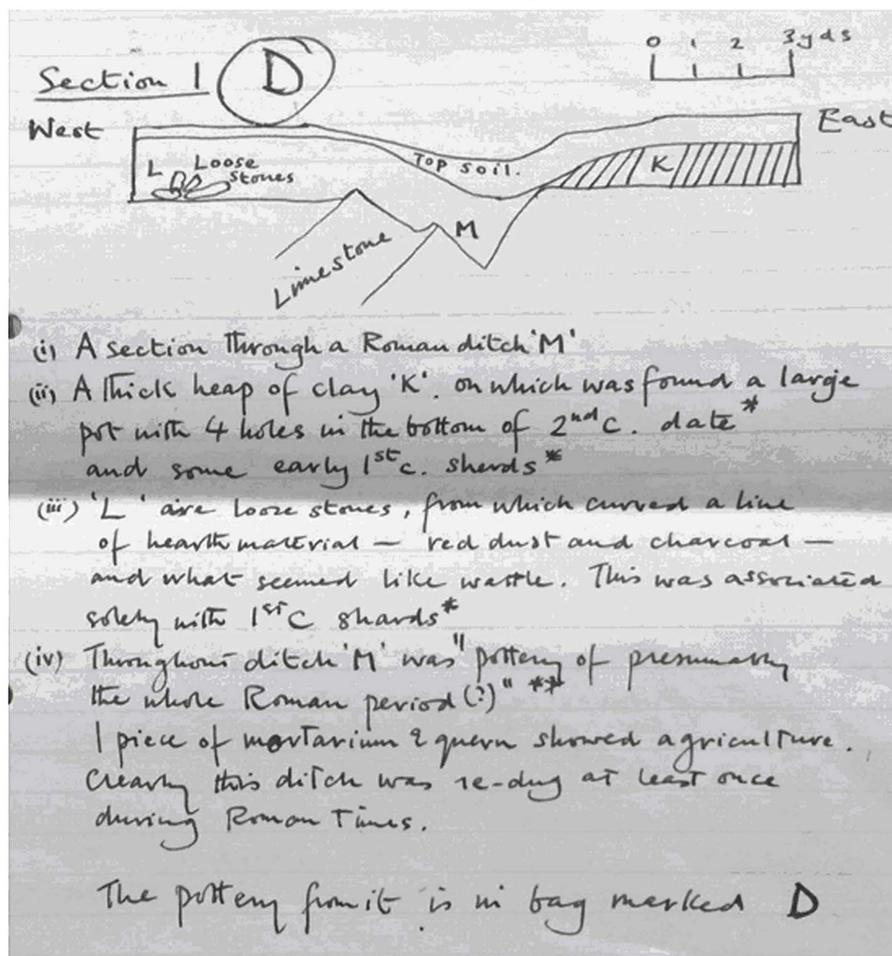
Previous excavation

Notes obtained from the Ashmolean Museum suggest that parts of Barn Piece were excavated in 1956; the notes appear to be from 1961, intended to clarify earlier records (now lost) of "an ill-planned excavation in 1956". The Ashmolean records included a cutting from the Oxford Mail of 16 March 1956, in which it appears that Edward Roberts got his fellow Magdalen School students to excavate, assisted by John Smallwood and Barry Harrison of Wadham College. The Ashmolean museum's Jope archive records provide notes and sections of 4 trenches, but the location plan is difficult to relate to the OS map.

The trenches appear to have been investigating a mound and an enclosure ditch. Trench 4 (B) apparently had the most stratigraphy and was excavated to approximately 0.75m. It contained a stone wall and medieval pottery. Trench D cut through a Roman ditch and located limestone at its bottom, although the scale on the section may be in feet, rather than yards as shown. Whether the limestone was natural geology, as indicated, is also open to question as it does not appear to agree with the information from the BGS Geology of Britain viewer (which has Amptill clay and mudstone) and appears to be dipping in the wrong direction. There is a possibility that the stone could be building-related rather than natural geology.



1956 excavation plan



Detail of area "D".

Images reproduced with kind permission of Ashmolean Museum, University of Oxford.

Lidar

The Houseprices Lidar website shows ridge and furrow on the field to the south, but Barn piece has an irregular surface. This is reproduced in the magnetometry report, Appendix 1.

Aerial photography

Aerial photographs sourced from the Historic England Archives in Swindon suggested that archaeology at Barn Piece could be deeper than indicated in the 1956 excavation notes, as a consequence of soil dumping carried out in the 1960s. The archives included a photograph dated 4 December 1943, which showed the enclosure ditch.



Barn Piece, Holton, 1943.

By permission of Historic England Archive (USAAF Photography)

A later photograph (dated 11 May 1965) showed the A40 being open and Lady Spencer Churchill College (now Oxford Brookes Wheatley branch) being built. It also appeared to show dumping taking place on the enclosure area (possibly excess soil from the A40 or college construction).



Barn Piece, Holton, 1965.

By permission of Historic England Archive

Geophysical surveys

The magnetometry report is included as Appendix 1 and an Earth Resistance note is Appendix 4

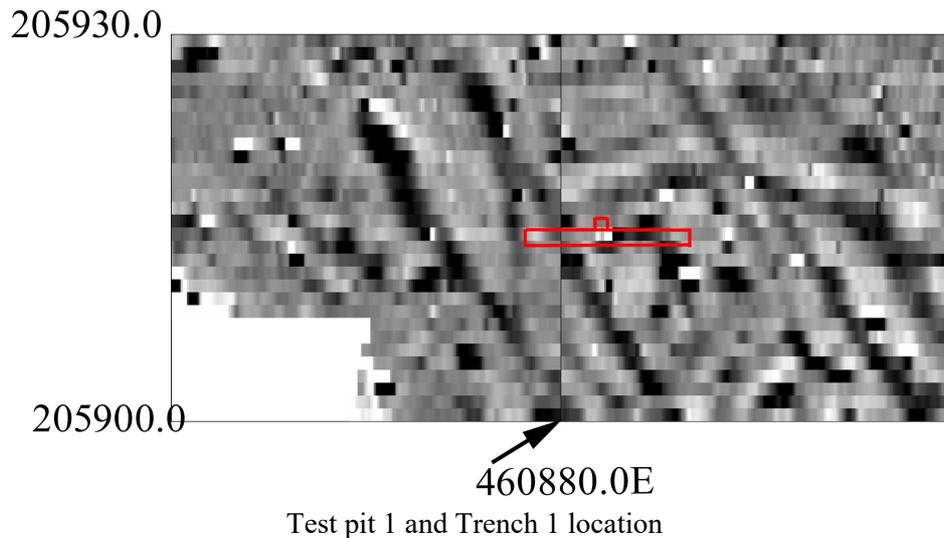
Magnetometry showed numerous anomalies that could indicate the presence of a site, but the earth resistance results did not reflect many of these. This may have been because the spring of 2017 was very dry – the high electrical resistance of the silty soil when dry made it difficult to get readings, so surveys had to be timed to happen after rain. Poor results may also have been caused by soil dumping, which may have buried archaeological remains to a depth where their moisture content was essentially the same as that of the surrounding soil, thus preventing any contrast being detected.

This left a strong possibility that even the magnetometry results could have related to the 1960s soil dumping rather than earlier archaeology.

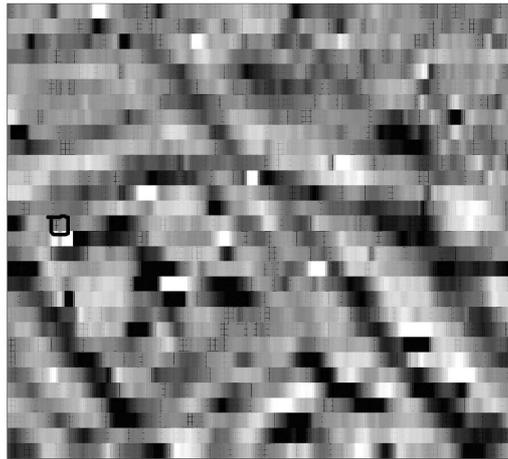
Test pits and trenches

In September 2017 two 1m x 1m test pits were hand excavated, but not sieved, on the basis of magnetometry and earth resistance results. Two 1.3m wide machine trenches were subsequently located in the same areas.

Test pit 1 and Trench 1 (E-W) were sited in the southern part of the field to examine whether an area of high resistance was the result of building rubble. Coordinates for the NW corner of the test pit were 460882.5E 205916.0N



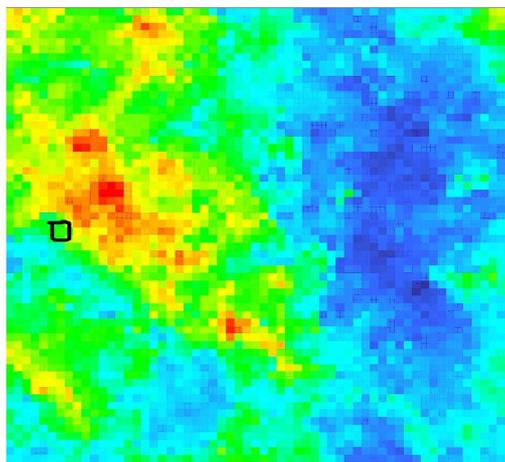
205930.0N



magnetometry

460880.0E

test pit 1
NW corner at
460882.5E
205916.0N



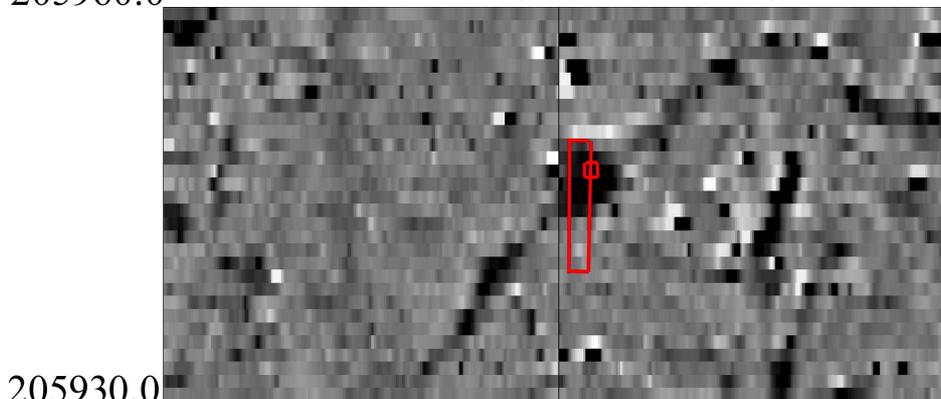
205900.0N

Earth resistance with 0.5m mobile probe separation

Test Pit 1 location on magnetometry and earth resistance plots

Test pit 2 was located near a large pit-like magnetic anomaly where it was crossed by a ditch-like anomaly. Coordinates for the NW corner were 460912.0E 205948.0N. It was followed by a 10m N-S trench with NE corner coordinates at 460912.6E 205950.0N.

205960.0

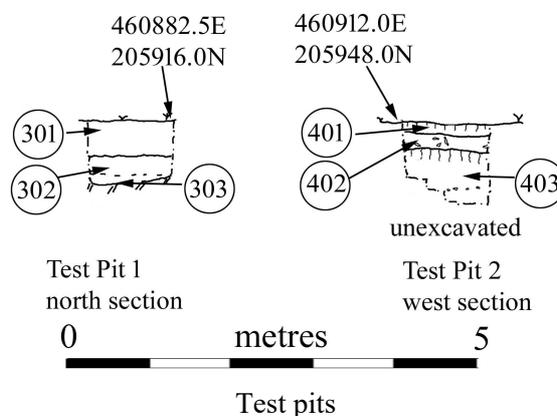


205930.0

460910.0E

Test pit 2 and Trench 2 location on magnetometry plot

Test pit stratigraphy and finds are set out in detail below. Test pit excavation results indicated that soil dumping occurred in Test Pit 2 but it was not visible as a separate layer in Test Pit 1. The 1965 air photo however appears to show dumping in the central southern part of the field, in the vicinity of test pit 1. Soil dumping probably occurred in both areas, but the nature of the soil varied with the dumping near trench 2 being more visible. Both test pits produced pottery sherds, the bulk of which were Roman.



Trial trenches

Two 10m trial trenches were excavated in November 2017. The principal aims of the excavation were to test the effectiveness of magnetometry and to record subsoil features to provide further information on the date, character and function of the site. The upper layers were removed by mechanical excavator until archaeological contexts were located, after which work proceeded by hand. Exposed subsoil features in each trench were recorded in plan and in section at a scale of 1:20. Spoil heaps were not scanned for metal finds. As part of the backfilling operation the bottoms of both trenches were mechanically excavated for approx 10 cms and trench1 extended for approx 2m to clarify the ditch at the western end of trench 1 and the pit at the northern end of trench 2. The finds from these extensions were not submitted for the finds report although they are included in the photos in Appendix3.

Excavation results

Test Pit 1

1x1m test pit aligned on the national grid. NW corner located at 460882.5E 205916N. The test pit appeared to have a mixed soil down to 0.75m, where the edge of a ditch seemed to appear on its northern side. This did not bear much relation to the earth resistance results but was thought to be the edge of a large ditch-like anomaly in the magnetometry results.

Table 1: Test Pit 1 stratigraphy and finds identified by the excavators

Layer	Description	Inclusions	Thickness
301	Topsoil. Medium grey fine silty soil.	One small stone. One piece of thick sand tempered dark grey pot. One large and one small piece of bone, one small thin flat piece of glass.	Approximately 0.40m.
302	Subsoil. Dark grey silty soil.	Occasional pieces of ironstone and approximately six pieces of perished limestone. All 30x30mm or smaller: one piece of small flint (undiagnostic); one piece of 40mm x10mm x	Approximately 0.30m.

		10mm corroded iron (possibly part of a rod); two possibly Iron Age pottery sherds (one thick flint tempered sherd, one small plain rim sand tempered); 10 possibly Roman pottery sherds (including one piece of mortarium and one piece of Samian); three pieces of possible Medieval pottery, including a sand tempered rim, found near the bottom of the layer.	
303	A gully-like depression on the northern side of the test pit, running E-W. It was filled with layer 2 looking soil. Possibly the edge of a larger feature.	Nil.	Approximately 0.10m.
304	Natural. Yellowish silty clay with approx 60% fine sand.		

Test Pit 2

1m x 1m test pit aligned on the national grid. NW corner located at 406912.0E 205948N, over a pit-like magnetic anomaly.

Table 2: Test Pit 2 stratigraphy

Layer	Description	Inclusions	Thickness
401	Topsoil. Grass in grey brown sandy silt.	One piece of probable post medieval roof tile.	Approximately 0.15m
402	Subsoil. Grey-brown sandy silt with patches of yellow silty clay and pieces of ironstone.	Two pieces of roof tile; one possible potsherd (undated); a chunk of rusted iron - looks like chain link fence.	Approximately 0.18m
403	Mid-grey sandy silt. Top 0.15m darker than the rest (likely earlier topsoil).	One sherd possible Iron Age rim; 24 sherds Roman greyware; one sherd Roman colour coat; one thick sherd (possible Roman amphora); one sherd possible medieval flint temper pot; three pieces of tile or burnt clay; one iron nail; one piece modern glass; one clay marble; four pieces of bone.	At least 0.57m thick – from 0.33m to excavated depth of 0.90m.
404	Natural. Yellowish silty clay with approx 60% fine sand.		

The magnetometry suggested a pit-like anomaly in this area, but the top of this pit must have been over 0.60m down. The earth resistance results were limited and exhibited patchiness in much of the rest of the 30m grid square. This may be because the mobile probes were 50cms apart and are assumed to give readings at 0.50m deep. The later dumping may have increased the depth of features from a usual 50 cms topsoil depth by an additional 30cms – so the readings may have been too shallow to detect much. The clay content in soil dumping would have affected the percolation of rainwater and hence the earth resistance results. Layer 3 should have been subdivided as it has some modern, but mainly Roman, finds. Presumably the modern finds were in the earlier topsoil layer, before it was dumped over.

Trench excavations

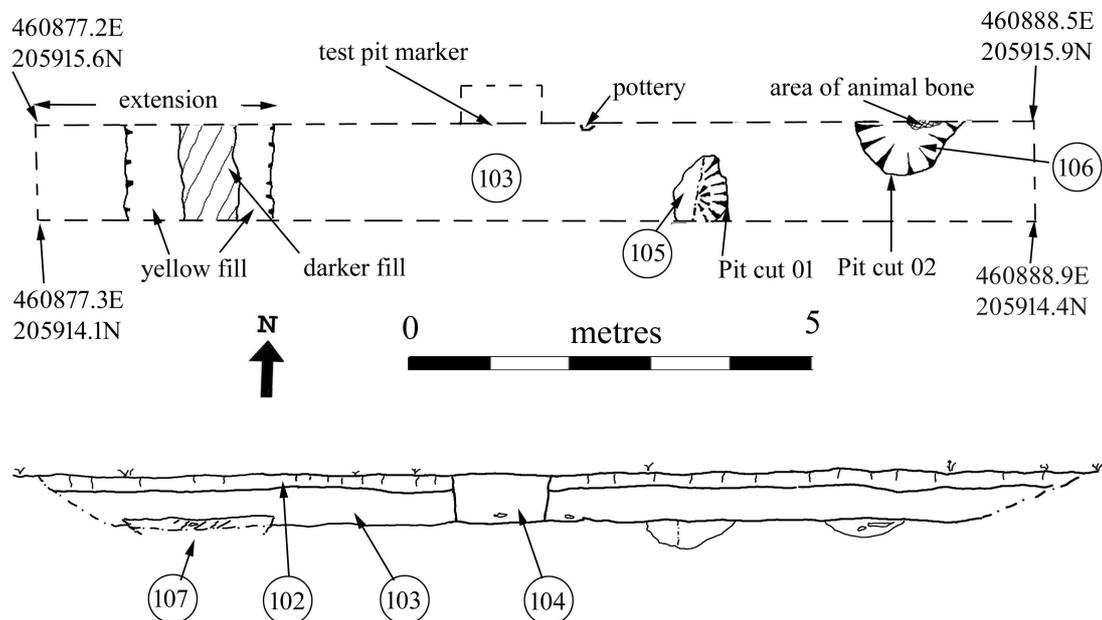
In November 2017, two 10m by 1.3m trenches were set out (using GPS) over areas of interest identified in magnetometry. Each trench was machine-stripped using a Komatsu mini-excavator with a 1.3m wide bucket, then further excavated and cleaned by hand.

Trench 1 (aligned East/West) was placed across an area in which magnetometry suggested ditches and pits. GPS coordinates for trench ends were: 460880 E, 205915 N (W end) and 460890 E, 205915 N (E end). Trench 1 was later extended westwards to expose the top of a large (circa 2m wide) ditch that had been suggested by magnetometry.

Trench 2 (aligned North/South) was placed across an area in which magnetometry (and Test Pit 2) suggested a large pit or ditch. GPS coordinates for trench ends were: 460912 E, 205950N (N end) and 460912 E, 205940 N (S end).

Trench 1

Archaeological features appeared at a depth of 0.6m. The trench was machined uniformly to this level, then excavated and recorded in section and in plan.



Barn Piece, Holton, Trench 1 - Plan and Section

Table 3: Trench 1 stratigraphy

Context No.	Description	Inclusions	Thickness and extent
101	Surface	-	-
102	Topsoil. Friable, light grey-brown	Frequent organic inclusions (especially in upper 0.15m),	Extends throughout trench, maximum

	fine-grained sediment, occasional sandy patches.	with infrequent, poorly sorted sub-angular to sub-rounded pebbles and stones (including ironstone).	thickness 0.30m.
103	Subsoil. Soft, dark brown-grey fine-grained sediment.	Occasional organic inclusions, various pottery sherds (separately described), some ironstone and occasional limestone mortar.	Extends throughout trench, maximum thickness 0.48m.
104	Redeposited fill of Test Pit 1 (excavated 13/9/2017). Friable, mid-brown fine-grained sandy silt.	Infrequent organics. Test pit marker (foil crisp packet) near pit base, 0.52m below surface.	Extent 1.20m (in section). Thickness 0.64m.
105	Fill of pit cut [01]. Soft, dark grey fine-grained sediment, with yellow sandy streaks (tending to natural).	Occasional fragments of fired clay (possible CBM?) and chalk nodules.	Excavated extent 0.66m. Thickness 0.38m.
106	Fill of pit cut [02]. Soft dark grey/black silty sand.	Mid to late 1 st C AD pottery sherds, associated with animal bones (probably cow bone).	Excavated extent 0.98m. Thickness 0.21 m.
107	Fill of ditch at W end	Roman pottery	Western extension when backfilling.
Natural	Yellow sandy silt (approx. 60% sand content).	-	

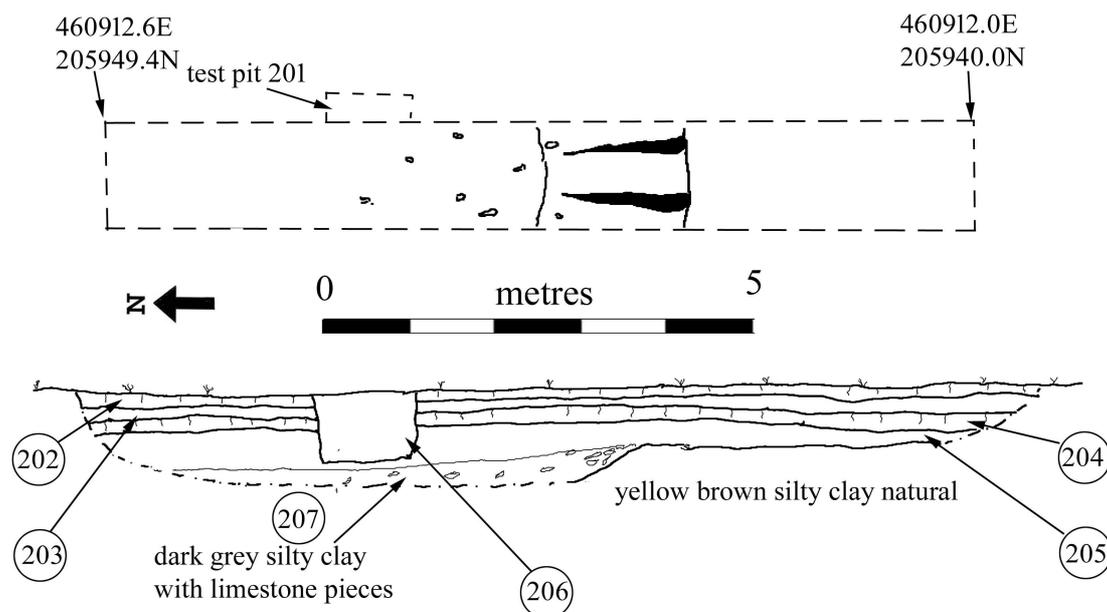
Stratigraphy and depth of features suggested that soil dumping did not occur in Trench 1 area during the 1960s, as it did elsewhere in the field (including Trench 2), although based on Test Pit 1 finds, and the air photo, dumping may have occurred, but not have been visible. Pottery sherds suggest chronological stratigraphy is largely intact in the trench – Pit 2 contained mid to late 1st century AD grog-tempered Belgic pottery, while upper layers (103) contained pottery sherds dated late 1st century AD or later. Test pit 1 pottery shows some anomalies – pottery excavated from the lowest layer (layer 2) is dated to sometime after 240 AD (3rd century Roman), but pottery from the layer above (layer 1) is dated to an *earlier* time period (late 1st C AD). Test pit 1 pottery dating matches that of pottery recovered from the adjacent Trench 1 at the same depth, so it was considered likely that the more recent pottery in Test Pit 1 layer 2 (including one sherd of Oxford white-slipped mortarium fabric) was the anomaly. This could however indicate that the earlier pottery in the upper layer was derived from elsewhere and came in with soil dumping.

Three features were evident in Trench 1: two shallow pits located near the eastern end of the trench (pit cut [01] on the south side; pit cut [02] on the north side) and a roughly 2m wide ditch on the western edge. Pit 1 contained some fragments of fired clay (possibly CBM). The fragments themselves are undateable: this, and the lack of any stratigraphic relationship between pit cuts [01] and [02], makes it impossible to tell whether the two pits are from the same phase of activity on site. The sherds of mid-late 1st C AD pottery were associated with animal bone (probably cow bone). This is interpreted as deliberate deposition, likely midden/domestic refuse.

Extending the trench to the west by approximately 2m located the ditch, which had a dark grey central area with yellow grey layers as it approached the natural. It contained some decayed limestone pieces in its fill.

Trench 2

Trench 2 was initially machined to a depth of approximately 0.78m, then excavated (at the northern end of the trench) using hand tools to a depth of 0.96m in an effort to expose the archaeology, which was much deeper than anticipated. Further machining to a depth of 0.9m was required over much of the bottom of the trench to expose the edge of the large pit (approximate diameter 5m) suggested by magnetometry. The trench and features were excavated and recorded in section.



Barn Piece, Holton, Trench 2 - Plan and Section

Table 4: Trench 2 stratigraphy

Context No.	Description	Inclusions	Thickness and extent
201	Surface	-	-
202	Topsoil. Friable, light grey-brown fine-grained sediment, occasional sandy patches.	Frequent organic inclusions. Infrequent, poorly sorted sub-angular to sub-rounded pebbles and stones.	Extends throughout trench (cut by (206)), maximum thickness 0.17m.
203	Subsoil. Soft, mid brown-grey fine-grained sediment.	Occasional organic inclusions. Infrequent, poorly sorted sub-angular to sub-rounded pebbles and stones. Contained pieces of iron, possibly chain link fence, and a large nail.	Extends throughout trench (cut by (206)). Maximum thickness 0.21m.
204	Earlier topsoil. Friable, dark brown fine-grained sandy silt.	Some organic inclusions.	Extends throughout trench (cut by (206)). Maximum thickness 0.22m.
205	Earlier subsoil.	Occasional organic inclusions,	Extends throughout

	Friable, mid-yellowish brown fine-grained sediment.	mixed pottery sherds including samian ware, a late BB1 flanged bowl and post-Medieval CBM. Some ironstone and occasional limestone mortar.	trench (cut by (206)). Maximum thickness 0.50m.
206	Redeposited fill of Test Pit 2 (excavated 13/9/2017). Friable, mid-brown fine-grained sandy silt.	Infrequent organics.	Extent 1.24m (in section). Excavated to a thickness of 0.98m.
207	Fill of large pit at N end. Dark grey clay.	Limestone pieces. Roman pottery	Part of deepening when backfilling.
Natural	Yellow sandy silt (approx. 60% sand content).		

The depth of archaeology (particularly in comparison to Trench 1) and the presence of mixed post-Medieval CBM and Roman pottery in the upper levels of subsoil suggests that soil dumping occurred in the area of Trench 2 during the 1960s, as it did elsewhere in the field. Pottery sherds retrieved from subsoil (context 205) are not related to features but provide broad dating evidence. Deeper excavation (via machine) revealed the pit, which had a dark grey fill with frequent (approx. 3%) limestone pieces. As the finds were probably Iron Age or Roman in date, the feature was not investigated further.

Conclusions

Whilst we can say little more than that there is a 1 hectare or larger late Iron Age to Roman settlement in this area, in terms of more general guidance the following points may be useful:-

- 1 Much of the Roman pottery could have been mistakenly identified as Medieval by non-experts, as some Roman pottery has sand and other inclusions that are also found in other periods.
- 2 Comparing pottery recovery rates of hand dug test pits and machining down until archaeological contexts were identified, (usual in commercial archaeology), indicates that machine trenching missed some 84% to 87% of the finds. This percentage will vary from area to area and would have been larger here if the finds from layer 106 were excluded.
38 pottery sherds came from the hand dug test pits and 69 from the areas where the top layers were removed by machine until archaeological contexts were identified, but the test pits occupied 2 square metres compared with 26 square metres which were machined.

Colin Haselgrove in *Archaeology from the ploughsoil, 1985*, argues that the ploughsoil should be seen as an archaeological resource in its own right (p2) and that horizontal displacement of artefacts is only a problem where there is significant surface creep.

The vertical movement of artefacts in soils has been the subject of various studies since Charles Darwin noticed that an 18th century coin had got into the same layer as fourth century coins in a Roman villa at Abinger. He attributed it to worm action – now called bioturbation.

The excavation by Dean and others on the Staffordshire hoard, showed the finds there were in the topsoil or very top of the subsoil. This indicates that if it had been on a modern commercial excavation they would have been machined into the spoil heap and the archaeologists would have concentrated on the features cut into the subsoil - which produced no finds.

If this site had been arable, it could have been fieldwalked to establish any clustering of artefacts to compare with the excavated results. At least here with our test pits we can form a view as to whether examining 14% of the finds population is able to properly record that resource. I would suggest that a similar exercise is carried out on all excavations in order that the sample rate can be ascertained. It is of little use for Cattermole to observe, "...that the majority of grey literature reports do not include details of the sampling and recovery strategies in the project methodology," when discarding the majority of finds by machining isn't mentioned.

Gill Hey and Mark Lacey considered various evaluation techniques, but concentrated on the location of features rather than scatters. They say (p29) "... but it is very hard to envisage a situation where test pits out-perform machine trenching. Nevertheless, sieving pits at the end of such trenches can be a very valuable exercise for evaluating post-depositional disturbance and dating build-up." As to whether this test pitting check is ever done is doubtful.

- 3 There may be quite a lot of unauthorised dumping which is masking archaeology. Here the soil dumping does not appear to have obscured many of the magnetometry anomalies. However, by being more deeply buried, some of the slighter anomalies will have been lost. It did however badly affect earth resistance and lidar results. It may be best to have test pits to test for this and to ascertain the depth of overburden before deciding that there is no archaeology in the area. This can then also inform the mobile probe separation of any earth resistance survey.

Next Steps

Comprehensive interpretation of the general arrangement and phases of the site would require removal of topsoil in most of the south-east corner of the field to fully expose archaeological features. Whilst ground penetrating radar could give better information on remains, excavation and the post-excavation work for a site of approximately 1 hectare, would be a major undertaking.

Archive and Dissemination

A copy of this report together with a CD containing the data and the finds will be deposited with the Oxfordshire Museums Service, reference OXCMS : 2018.75. The bone and iron finds will be discarded before the archive is put into store as these have conservation liabilities and, whilst the chain link fence pieces tell us about later dumping on the site, it can tell us little more. The layer numbering in the test pits has been altered from those initially recorded to give a single context system and avoid confusion. We also hope to put a copy of the report on the Archaeology Data Services grey literature website. A short note referring to this could be put into South Midlands Archaeology and a longer note into Oxoniensia.

Acknowledgements

The landowner, Ella May, commissioned the work and has kindly financed it. Alexandra Caples of the Oxford Institute of Archaeology directed the machine trenching. The geophysics was carried out by Roger and Sally Ainslie, of Abingdon Archaeological Geophysics. The excavation team comprised volunteers from Oxford Archaeology, James Masterson from the University of Oxford's Institute of Archaeology, and Jeff Wallis and Terry Stopps from the Abingdon Area Archaeological and Historical Society. Paul Booth from Oxford Archaeology identified the pottery and Alison Roberts of the Ashmolean Museum located the previous

records in the Jope archive.

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Barn Piece field, Holton, Oxford OX33 1PR

Short Report no. 2016-14

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This short report format omits certain aspects which the English Heritage 2008 guidance says should be in reports. This is because these relate to the general description of geophysics techniques and other matters which are repeated in reports and which can be found in better detail on our website and in the English Heritage Guidance

Survey Details

Name of site: Barn Piece field, Holton, Oxford OX33 1PR

Purpose of survey:

A magnetometry survey was carried out to see whether remains could be detected as the landowner recalled finds being made here in the 1950's.

Client: Ella May

County: Oxfordshire **District:** South Oxfordshire **Parish:** Holton

NGR grid reference: Area approximately centred on SP 608059

Nearest postcode: OX33 1PR

Start date: 19-11-2016 **End date:** 02-12-2016 **Report date:** 08-12-2016.

Geology at site Geology (from the BGS Geology of Britain viewer): The geology is understood to be Beckley Sand Member - Sandstone with, to the east, Ampthill Clay Formation - Mudstone. They are both Jurassic in date. The centre of the field has a band of Quaternary river terrace gravels running across it.

Topography: The field is fairly level but undulating at approx 70 metres OD.

Land use at the time of survey: Sheep pasture although nettles and thistles could be a problem in warmer months.

Known archaeological sites / monuments covered by the survey

The Historic England Pastscape system has this note:-

SP 607059: Stone footings with Medieval sherds, quarry-pits probably of Medieval date and a ditch with 2nd century Romano- British coarse ware pottery were found in 'Barn Piece', Holton, a field south of the minor road between Wheatley and Worminghall.

Oxoniensia 24 1959 100 (E V Roberts)

Archaeological sites / monument types detected by the survey

Two areas of anomalies were detected. One near the centre of the field had rectangular ditch and possible wall arrangements. The other area was to the south eastern part of the field and this was a complex of ditch- like anomalies which appear

to have several phases. Geophysics cannot give a date to remains, particularly if their shape is not distinctive.

Surveyor : Abingdon Archaeological Geophysics, Roger Ainslie, Sally Ainslie.

Location of:

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

Abingdon Archaeological Geophysics and with client.

b) Full report: ditto

Technical Details

Type of survey

A Magnetometer

Area surveyed: 1.69 hectares

Traverse separation, if regular: 1metre

Reading / sample interval: 8 per metre

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

Additional remarks

30 metre grids. First line start NW corner going east zig zag. Grids aligned on National grid using Trimble pro XR GPS with beacon differential correction - probably accurate to 0.5 metres. NW corner of grid 8 at 460850.0E 205990.0N.

A few lines of earth resistance were carried out but these indicated that the ground was too damp for good results and further work could best be done in drier months.

Results (refer to plans below)

Magnetometry

- 1 Small pieces of ferrous. Probably modern from road.
- 2 Scatter of ferrous - like anomalies. Probably modern - eg where a car has been broken up.
- 3 Square ditched enclosure.
- 4 Possible wall.
- 5 Linear scatter of high anomalies. Probably where igneous stone chippings have been laid to give access to the pond.
- 6 Parallel ditches. Purpose not known - could be agricultural.
- 7 Straight anomaly - could well be a plastic pipe or a cable route.
- 8 D-shaped ditched enclosure.
- 9 Mass of ditches, apparently of several phases. Detail and purpose unknown.

Conclusions

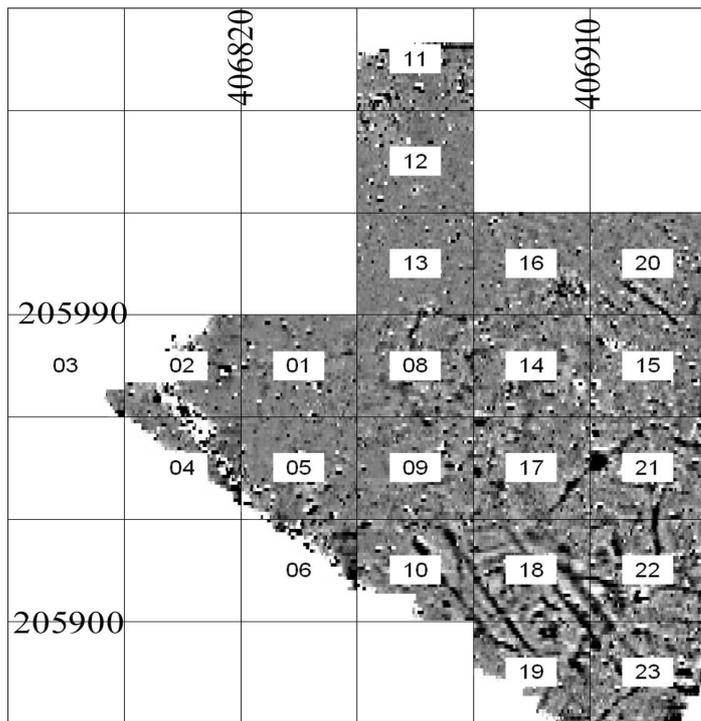
The magnetometry located two main areas of anomalies, (3 and 4 and 9 above), which could guide further researches, such as documentary work, earth resistance survey or excavation. The lack of much relationship between the lidar and the magnetometry is of interest. One shows human action - mainly burning, and the other shows the result of the natural and man made alterations to the ground surface.

Disclaimer

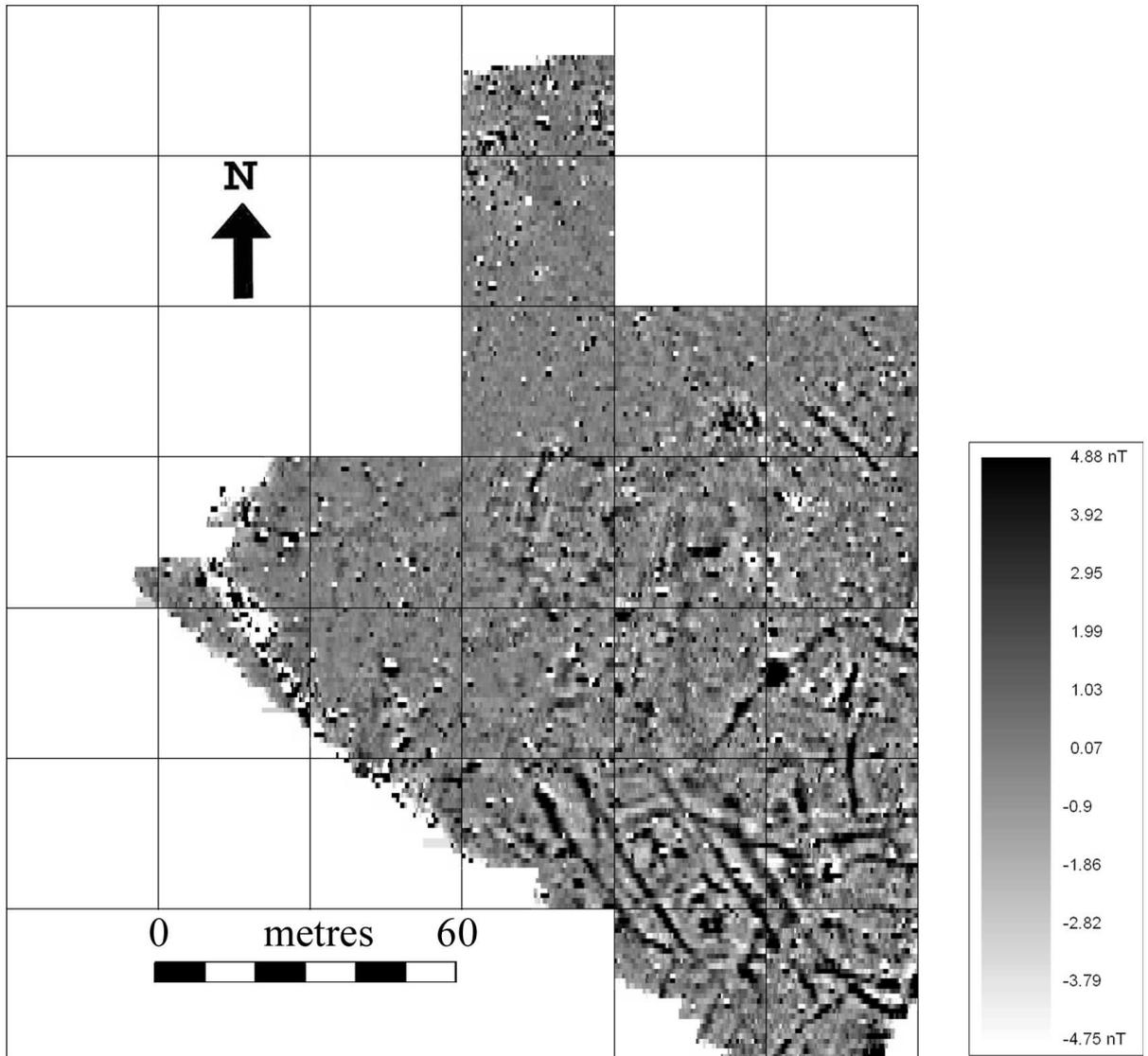
Geophysics is not always successful in locating sites. Whilst we do our reasonable best to locate features we cannot influence ground conditions and the state of preservation of remains. Graves and spreads of material are seldom located. The failure to locate remains does not mean that they are not there.



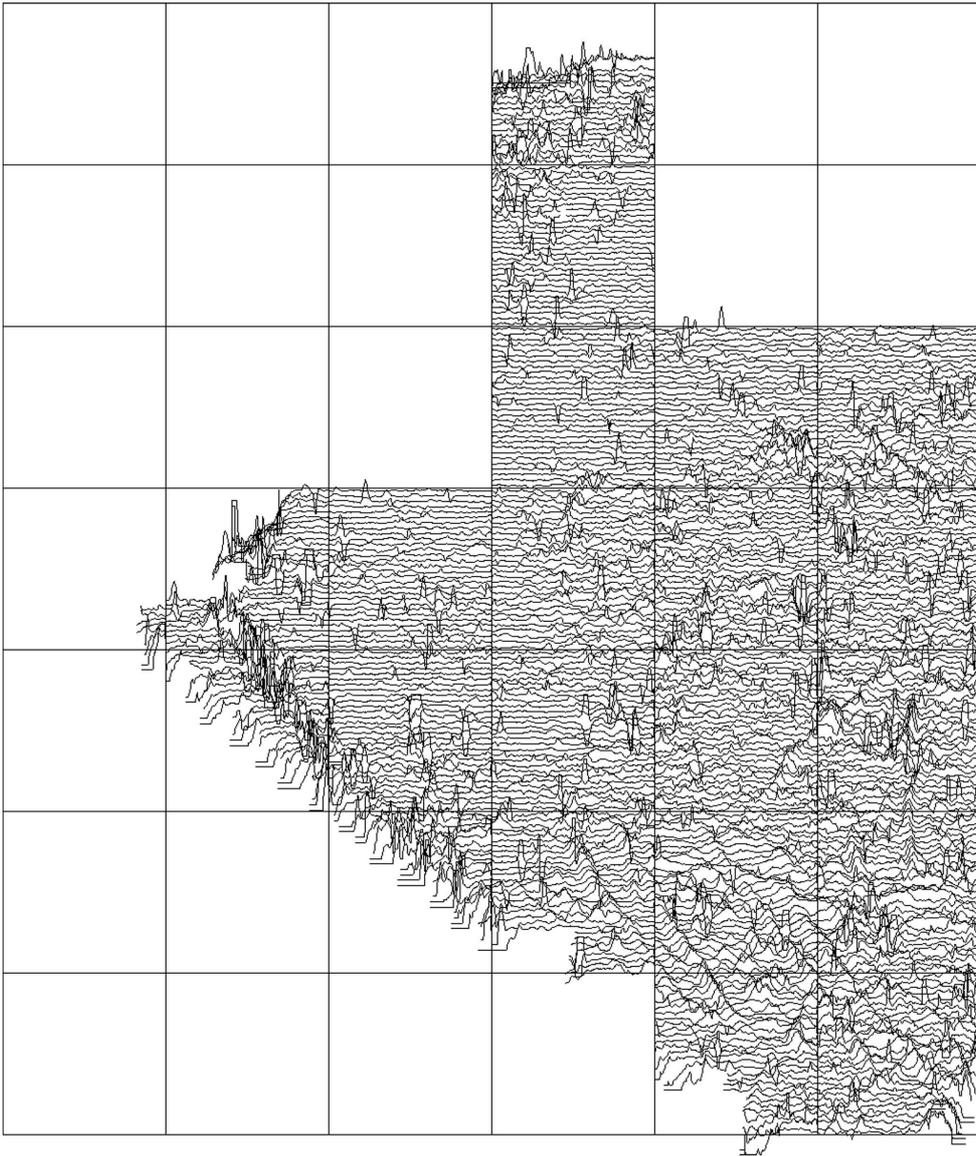
LOCATION on Google Earth base



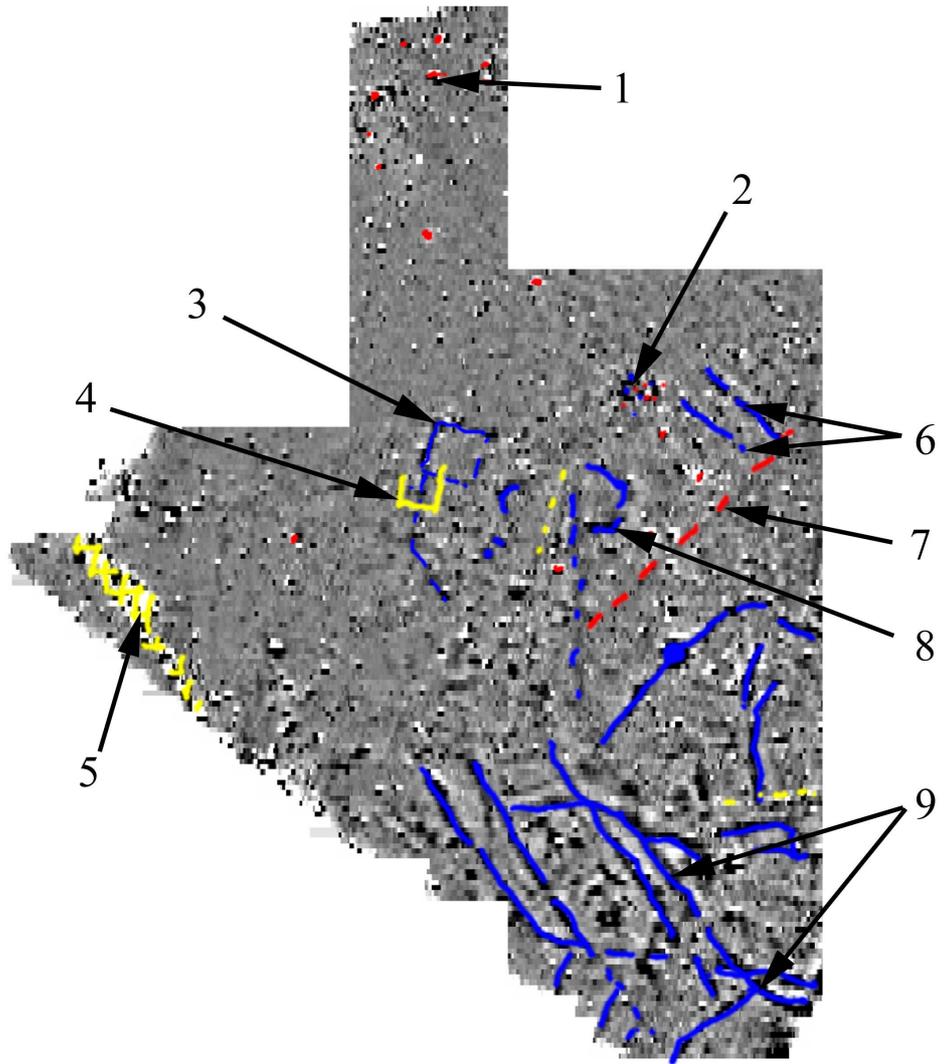
Grid order



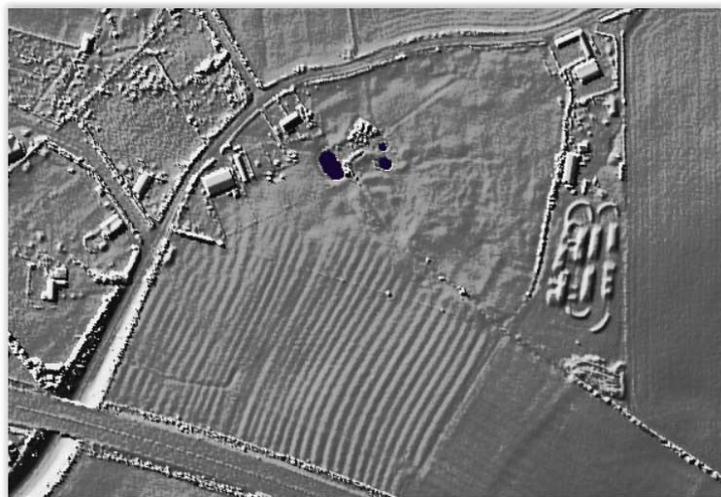
Greyscale with grids and scales



Trace plot



Interpretation



Lidar from Houseprices website

Appendix 2 Finds report

The finds by Paul Booth

The excavation produced 106 sherds (984g) of pottery, mostly of late Iron Age-early Roman date. The pottery was scanned rapidly and noted using the codes set out in the Oxford Archaeology recording system for later prehistoric and Roman pottery (Booth 2014). Quantification was by sherd count, weight and rim count for vessels. Much of the pottery was well fragmented, with an overall mean sherd weight of 9.3g. The surface condition of most of the sherds was moderate to poor. The pottery is summarised by context and period in the table below.

Fabrics and forms

Prehistoric

A single tiny handmade sherd (3g) in a shell and flint-tempered fabric is not closely datable, though it might perhaps be assigned to the middle to late Bronze Age.

Late Iron Age-Roman

The majority of the pottery is of late Iron Age-early Roman date, with fabrics in the 'Belgic' tradition (cf Thompson 1982), particularly grog-tempered fabrics of the E80 ware group, well represented. The introduction of such fabrics may date from the late 1st century BC and they continued in use, if not manufacture, after the Roman conquest. The fabrics present are listed below in the sequence of ware groups commonly used in OA analyses, with 'fine and specialist ware' groups preceding the principal coarse wares.

- S. Samian ware unspecified. 2 sherds, 2g.
- S20. South Gaulish samian ware? 1 sherd, 1g.
- S30. Central Gaulish samian ware. 2 sherds, 3g. Dish rim.
- F50. Oxidised red-brown colour-coated fine ware. 1 sherd, 1g.
- M31. Oxford white-slipped mortarium fabric. 1 sherd, 10g.
- E20. Fine sand-tempered LIA/ERB fabrics. 2 sherds, 29g. Dish rim.
- E80. Grog-tempered LIA/ERB ('Belgic type') fabrics. 22 sherds, 451g. 4 jar rims.
- O10. Fine oxidised wares. 16 sherds, 42g. ?Jar rim.
- O19. Fine oxidised 'Abingdon type' fabric. 1 sherd, 2g.
- O20. Coarse sand-tempered oxidised wares. 2 sherds, 53g.
- O80. Coarse grog/grog and sand-tempered oxidised wares. 6 sherds, 59g.
- R10. Fine reduced wares. 24 sherds, 121g. Jar rim
- R20. Coarse sand-tempered reduced wares. 11 sherds, 122g. Dish rim
- R30. Medium sand-tempered reduced wares. 6 sherds, 22g.
- R90. Coarse grog-tempered reduced wares. 3 sherds, 23g.
- B11. Dorset black-burnished ware (BB1). 2 sherds, 27g. Dish rim.
- C. Calcareous-tempered fabrics (general). 1 sherd, 23g.
- C10. Shell-tempered fabrics. 2 sherds, 2g.

The only imports were five tiny fragments of samian ware (6g), and there were two sherds of later Roman black-burnished ware from Dorset. Otherwise the pottery was probably all from local or regional sources, though specific sources for the LIA/ERB fabrics are not known. Most of the oxidised and reduced coarse wares are probable Oxford industry products (Young 1977). A single mortarium sherd (fabric M31) was certainly from this industry and a fragment of generic fabric F50 might also have been an Oxford product, but was too tiny for this to be certain. These two sherds and one of the black-burnished ware rims are the only pieces for which a date after the middle of the 3rd century is certain, though the group from layer 2 in TP1 is more consistently later Roman in character than most.

Ten vessels were represented by rim sherds, of which six were from jars of varying form and size and four from dishes. Most are very small and not closely diagnostic. The rim of a single flanged bowl in BB1 was incomplete and not counted as such, though the form is identifiable. Pottery finds are summarised in Table 1, below.

Table 5: Quantification of pottery by context

Context	Prehistoric Nosh/wt	Roman Nosh/wt	Context ceramic date	Comment
Trench 1 Pit 1				Fired clay
Trench 1 Pit 2		25/462	Mid-late 1C	Mostly E80
Trench 1 Subsoil (103)		10/114	Late 1C or later	Mostly E80, small sherds of R10- R30 and F50 might be intrusive
Trench 2 (205)		34/165	Post- medieval CBM	Mixed group includes samian ware and late BB1 flanged bowl
Test Pit 1 Layer 301		2/25	late 1C or later	R10 and R20
Test Pit 1 Layer 302		15/66	After AD 240	Mixed group includes M31
Test Pit 2 Layer 403	1/3	20/152	2C?	Group dominated by reduced coarse wares
TOTAL	1/3	106/984		

The majority of the activity reflected by the pottery is likely to have occurred in the 1st century AD, almost certainly commencing before the Roman conquest. Allowing for the limitations of size, the main characteristics of the assemblage are consistent with local trends and suggest a fairly typical rural settlement drawing most of its pottery from local sources with smaller quantities from well-recognised extra-regional and continental sources. Activity in the vicinity seems to have continued into the later Roman period, but this may have been at a reduced level; alternatively, the focus of later Roman activity could have been further removed from the location of the trenches. The presence of a small quantity of limestone mortar in both trenches does suggest structures nearby.

Summary of findings

The complex of ditches and pit features suggested in the initial geophysics survey were shown by excavation to include a circa 2m wide ditch (aligned NW-SE) and two small, shallow pit features in Trench 1, and a very large pit in Trench 2.

Neither trench yielded direct evidence of structures, although infrequent limestone pieces in both suggest possible structures nearby – perhaps associated with the stone wall mentioned in the notes on the 1956 excavation, but more likely with buildings not identified through geophysical survey. A quantity of diagnostic pottery was recovered from sub-soil and pit features in both trenches. An assessment of the pottery recovered indicated that the deposits represented the remains of a probable settlement site at Barn Piece, predominantly of Iron Age date, with possible Romano-British occupation during the 2nd or 3rd century AD.

Appendix 3 Finds photos

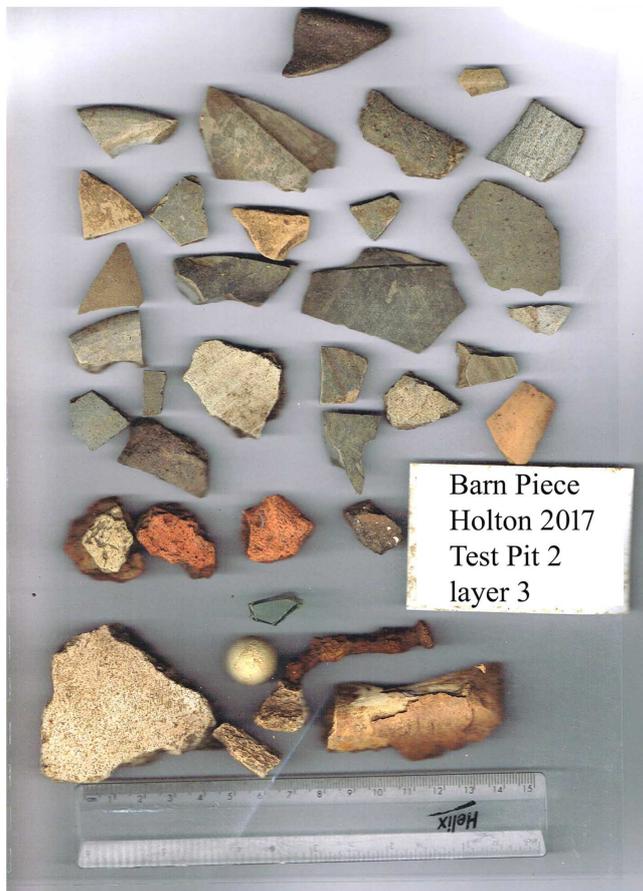




Barn Piece
Holton
Test Pit 2
Layer 1



Barn Piece
Holton 2017
Test Pit 2
Layer 2



Barn Piece
Holton 2017
Test Pit 2
layer 3





Note on Earth Resistance surveys at Barn Piece Holton

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Author R Ainslie, Abingdon Archaeological Geophysics

Date 29 January 2019

1 Summary

This is only a note rather than a report as the earth resistance results were very poor - presumably as there had been soils dumped over the field - presumably in the 1960's. Even tests with wide mobile probe spacings failed to get useful results.

2 Location

The same grid layout was used for the earth resistance as had been used for the magnetometry. The magnetometry report has more details.

3 General details

Earth Resistance

Area surveyed: 0.5 hectares

Traverse separation, if regular: 0.5 metre.

Reading / sample interval: 0.5 metre, except grid 8 where 0.5 was used on one axis and 1m on the other.

Type, make and model of instrumentation: TR Systems meter Mark 2.

Array: Twin probe. 0.5m mobile probe spacing.

A 20x20m area was also surveyed at 3 mobile probe spacings 0.75, 1m and 1.25m.

Processing

We have used TerraSurveyor for this.

Data was processed to replace erroneous readings - usually caused by hitting stones.

It has then been clipped to reveal features.

Additional remarks

Grids set out on the National Grid using a Trimble pro XR differentially corrected GPS, probably accurate to 0.5metres.

Survey - except depth survey - carried out in 30 metre grids.

First line start NW corner going east zig zag.

Mobile probes on frame with 4 probes and thus capable of taking 3 readings parallel to each other.

4 The surveys

2016 resistivity

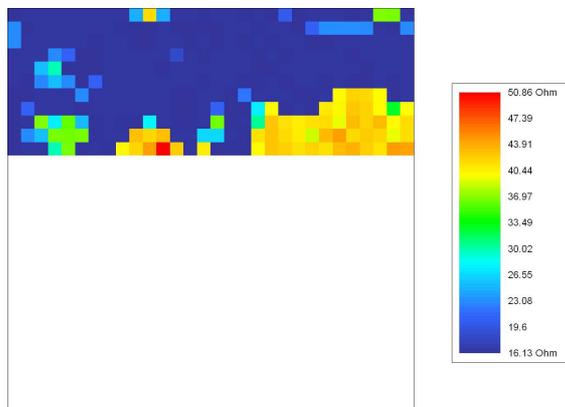
NW corner grid 1 at 460850E 205990N

30 m grids start NW going E

1x1 with 0.5m mobile probes

Twin probe array. Only part grid surveyed

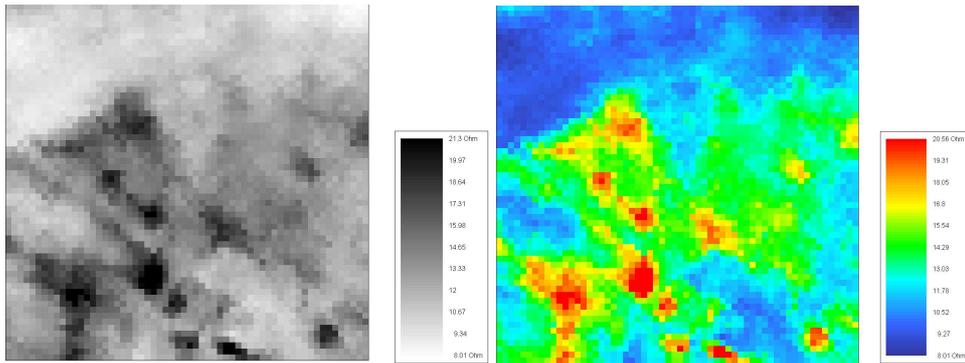
18 Nov 2016



Grid 8

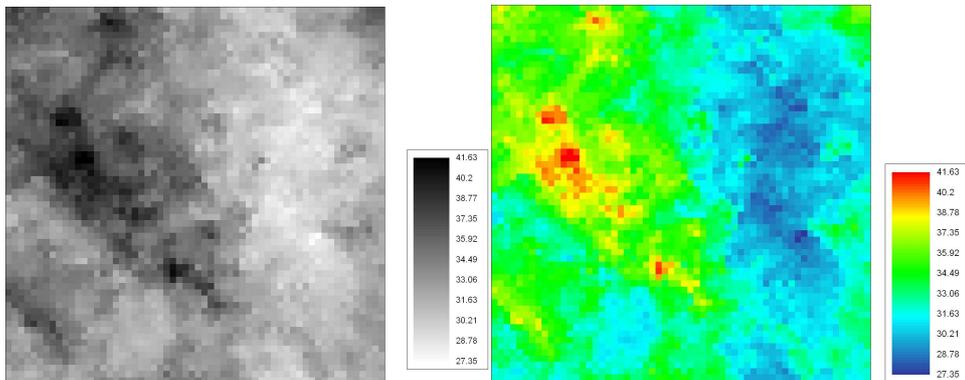
24 March 2017

same grids as mag 30 readings E-W. 60 readings N-S



grid 18

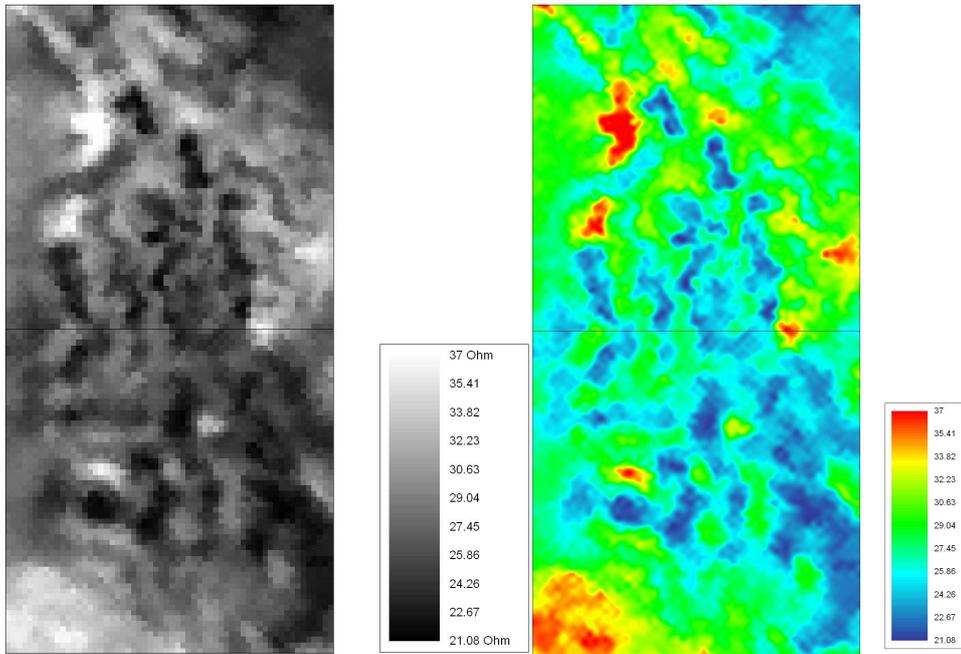
12 September 2017 Same grid as mag.



Grids 15-21

22 April 2017. Same grids as mag.

Grid 21 had the large pit investigated by Trench 2. It is however not on the resistivity plot - presumably as the half metre mobile probe separation could not see through the later dumping which is presumably responsible for the ripple effect.



Depth survey

12 September 2017

20mx20mxhalf start NW going E. The TR Systems meter currently only gives a maximum of 40 x 40 readings at its 3 depths setting.

Mobile probes at 0.75,1 and 1.25m spacing. Twin probe array

Grid 1 NW corner at 406860E 295960N = NE corner of Mag grid 8

grid 2 NW corner at 406900E 205920N = SE corner mag grid18 SW corner 22

The southern lines of grid 2 was not surveyed as there was an equipment problem.

B at 1.25m depth could be a small ditch, but it has no resemblance to the magnetometry results.

In the area of grids 18 and 22 C at 1m remote probe spacing bears a passing resemblance to the magnetometry, but not enough to rely on.