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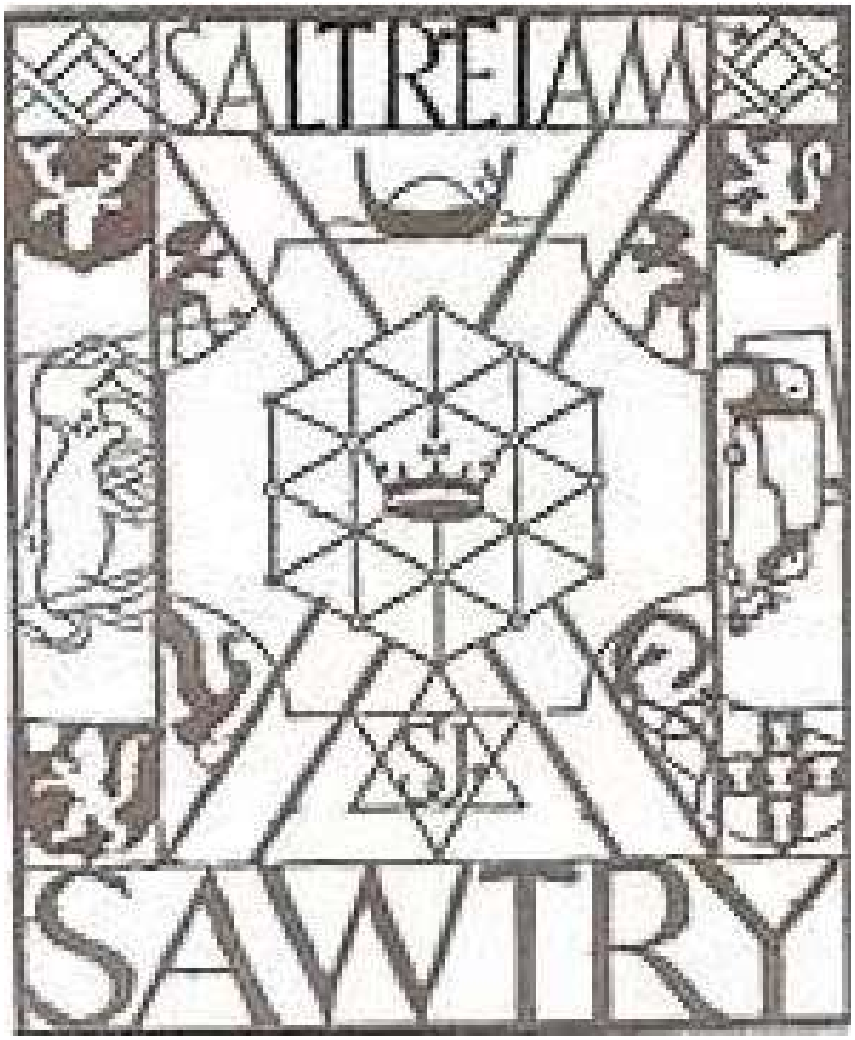

ARCHAEOLOGICAL GEOPHYSICAL SURVEY INTERIM REPORT
SHS17-1_IR-10

GEOPHYSICAL EARTH RESISTANCE AND MAGNETOMETRY SURVEY (10 - 18 APR 21) - HILL TOP, ALCONBURY WESTON

18 October 2023

by

Kevin Redgate MA
& Phil Hill BA(Hons), PCIfA

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ACKNOWLEDGEMENTS

SHS gratefully acknowledges the help and assistance of the following:

Kay Chapman	Landowner
John Steele	Tenant Farmer
Philip Smith	Landowners Historical Research Group (LHRG)
David Wood	Sedgeford Historical and Archaeological Research Project (SHARP) Geophysicist - Magnetometry

Participating volunteers

OASIS REPORT FORM

PROJECT DETAILS	**OASIS No:**	
Project name	Geophysical earth resistance and magnetometry survey of Hill Top field in Alconbury Weston	
Short description	An earth resistance survey (Res171-4) was undertaken over the central area of the site previously surveyed by earth resistance (Res171-1) where the coins and metal artefacts find plot, and the earlier field walking survey, suggest a concentration of activity spanning several centuries; this survey was undertaken at a higher density resolution than Res171-1. A second earth resistance survey (Res171-5) was undertaken over the entirety Hill Top field east of survey Res171-4. A magnetometry survey (Mag171-2) was also undertaken over the central area of Hill Top field.	
Project type	Geophysical survey	
Site status	N/A	
Previous work	1. Desk-top research into previous archaeological investigations undertaken by local and commercial archaeologists prior to 2009. 2. Desk-top analysis of the results of metal detecting undertaken by the Landowners Historical Research Group (LHRG) from 2009 to 2018. 3. Geophysical magnetometry survey, 24 Feb 17. 4. Geophysical earth resistance survey, 7-8 May 17. 5. Field walking survey undertaken over two sessions, 30 Sep and 6 Oct 17. 6. Geophysical earth resistance survey, 14 May 18. 7. Evaluation excavation undertaken over four sessions over the period 30 Oct 18 - 18 Feb 19. 8. Evaluation excavation undertaken, 22 Feb - 8 Mar 20. 9. Geophysical earth resistance survey, 5 - 8 Mar 20.	
Current land use	Arable farming	
Future work	Geophysical survey and excavation	
Monument type/ period	Iron-Age/Romano-British, *circa* 100 BC to AD 410	
Significant finds	N/A	
PROJECT LOCATION		
County	Cambridgeshire	
Site address	Hill Top, Alconbury Weston	
Study area	Res171-4 - 9,200m^2 (0.92ha) Res171-5 - 23,200m^2 (2.32ha) Mag171-2 - 19,200m^2 (1.92ha)	
OS grid reference	TL18374 77628	
Height OD	48m	
PROJECT CREATORS		
Organisation	Sawtry History Society	
Project brief originator	Sawtry History Society	
Project design originator	N/A	
Director/Supervisor	Phil Hill	
Project Manager	Kevin Redgate	
Sponsor or funding body	Sawtry History Society	
PROJECT DATE		
Start date	10 Apr 21	
End date	18 Apr 21	
ARCHIVES	Location	Content
Physical		
Paper		

Digital	SHS Archaeological Digital Archive	SHS Archaeological Digital Records and Media
BIBLIOGRAPHY		
Title	Geophysical Earth Resistance and Magnetometry Survey (10 - 18 Apr 21) - Hill Top, Alconbury Weston	
Serial title & volume	N/A	
Author(s)	Kevin Redgate & Phil Hill	
Page numbers	18, plus 3 Annexes and 3 Enclosures	
Date	18 October 2023	

1. **Introduction**.

1.1. Hill Top has provided tantalizing evidence of a potentially significant Romano-British settlement through the antiquarian investigations of Dr J R Garrood MD in the 1932, and the developer led commercial archaeological evaluations of the both the Archaeology Section of Cambridgeshire County Council (CCCAFU) and Birmingham University Field Archaeology Unit (BUFAU) 1990s. This evidence has been significantly reinforced, not just by the quantity of coins and metal artefacts detected during the period 2009 to 2018, but by the presence of numerous artefacts of high status and significance within the metal finds assemblage, by the finds recovered during the earlier field walking survey and by previous geophysical magnetometry and earth resistance surveys.

1.2. The survey consisted of two earth resistance survey over different areas and at differing resolution and one magnetometry survey carried out over the period 10 - 18 Apr 21, the purpose of which was to gain greater clarity of result data in the central area and expand earth resistance coverage east of previous surveys, and expand magnetometry coverage east and west in the central area.

2. **Site Details**.

2.1. **Event Number**. ECB5117.

2.2. **Location**. The site consists of Hill Top field and Long Nines field to the south-east. It is located west of the A1 and east of Vinegar Hill in the centre of Alconbury Weston Civil Parish (Figure 2.1), and centrally in the northern half of National Grid Reference (NGR) square TL1877 (Figures 2.2 and 2.3).

Figure 2.1: Site relative to Alconbury Weston (Google Earth, 2016)

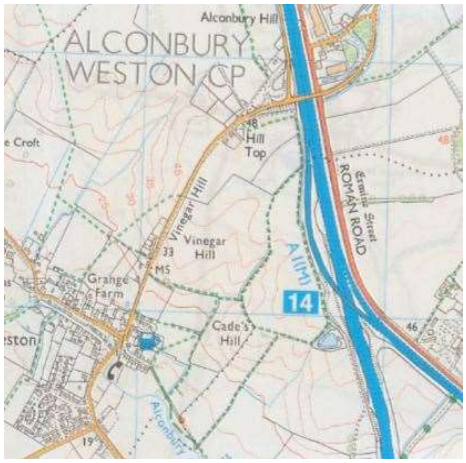

Figure 2.2: Site relative to Alconbury Weston (Ordnance Survey, 2006)

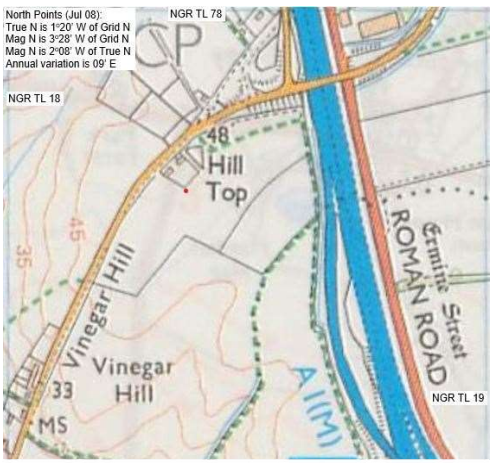

Figure 2.3: Hill Top site with SBM (red dot) (Ordnance Survey, 2006)

2.3. **Site Benchmark (SBM)**. This has been set on the edge of the tree line adjacent to the south corner of the residential gardens at NGR TL 18374 77628, as shown by the red dot (Figure 2.3).

2.4. **Site Grid**. The site grid can be found at Annex A.

2.5. **Geology**. The site sits on the west edge of a plateau on the 45m contour that overlooks the Alconburys. The bedrock is Oxford Clay Formation-Mudstone with Oadby Member-Diamicton superficial deposits, above which are varying depths of plough-soil (Figure 2.4).

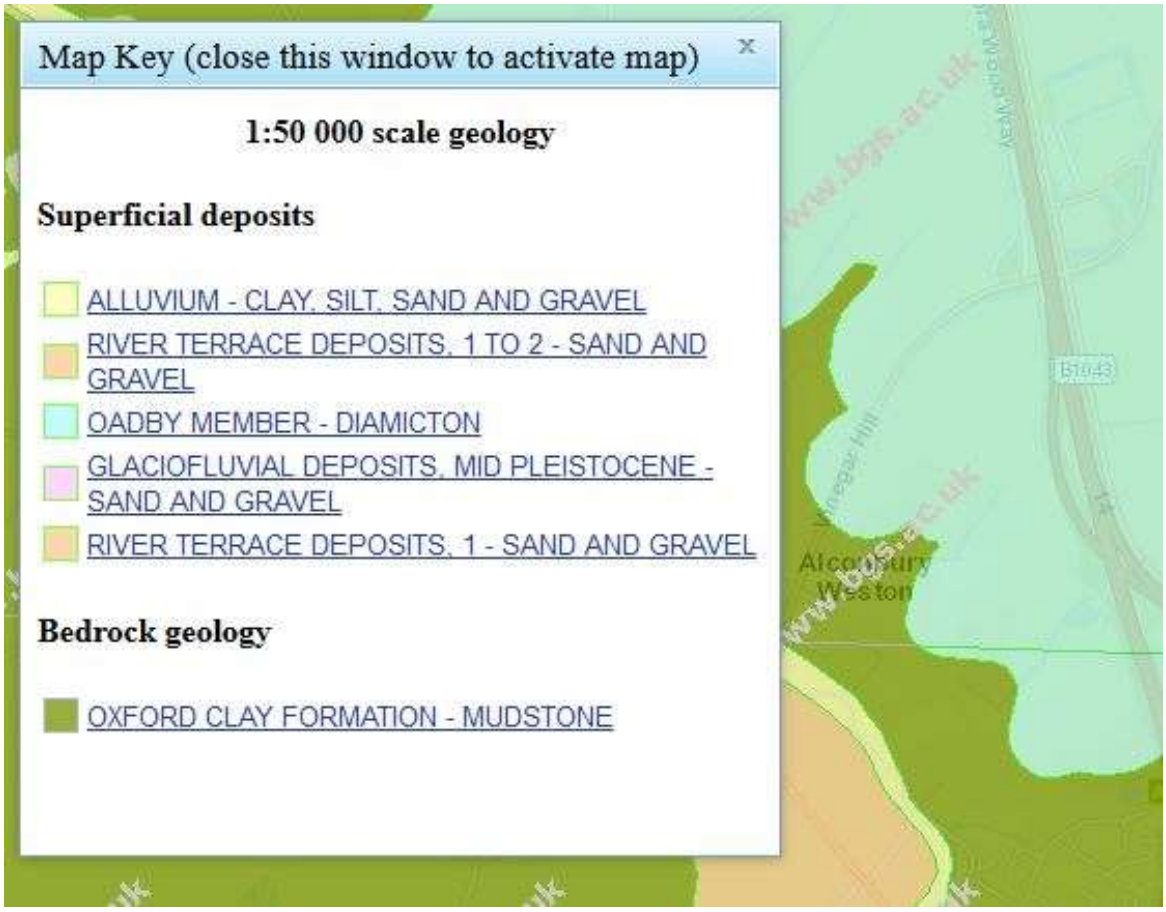

Figure 2.4: Site geology (British Geological Survey, 2017)

2.5.1. **Oxford Clay Formation-Mudstone**. A sedimentary bedrock formed approximately 157 to 166 million years ago in the Jurassic Period where the local environment was previously dominated by shallow seas. These sedimentary rocks are shallow-marine in origin and are detrital, ranging from coarse- to fine-grained (locally with some carbonate content) forming interbedded sequences.

2.5.2. **Oadby Member-Diamicton**. Superficial Deposits formed up to 2 million years ago in the Quaternary Period where the local environment was previously dominated by ice age conditions. These sedimentary deposits are glacigenic in origin and are detrital, created by the action of ice and meltwater - they can form a wide range of deposits and geomorphologies associated with glacial and inter-glacial periods during the Quaternary.

2.6. **Protection**. The site is not protected or within a conservation area.

2.7. **Land Use**. The two fields that comprise the site were used for arable farming and, as such, subjected to modern farming methods including ploughing and harrowing for crops,

and deeper mole ploughing for drainage. From early 2018, Hill Top was held as grassland for hay and sileage.

2.8. **Utilities**. An active branch of the ex-government fuel oil pipeline (now under private ownership) runs through the west end of the site, whilst a medium pressure gas pipeline runs through the site on a north/south alignment west of the Hill Top cottages. There is also a short low voltage (230V/480V) supply line serving the new barn in the berm enclosure and a low voltage supply line to the north of Hill Top Cottages that serves a sewage kiosk; suggesting that there is an underground sewage tank at the northeast of Hill Top Cottages (see Figure 2.5).

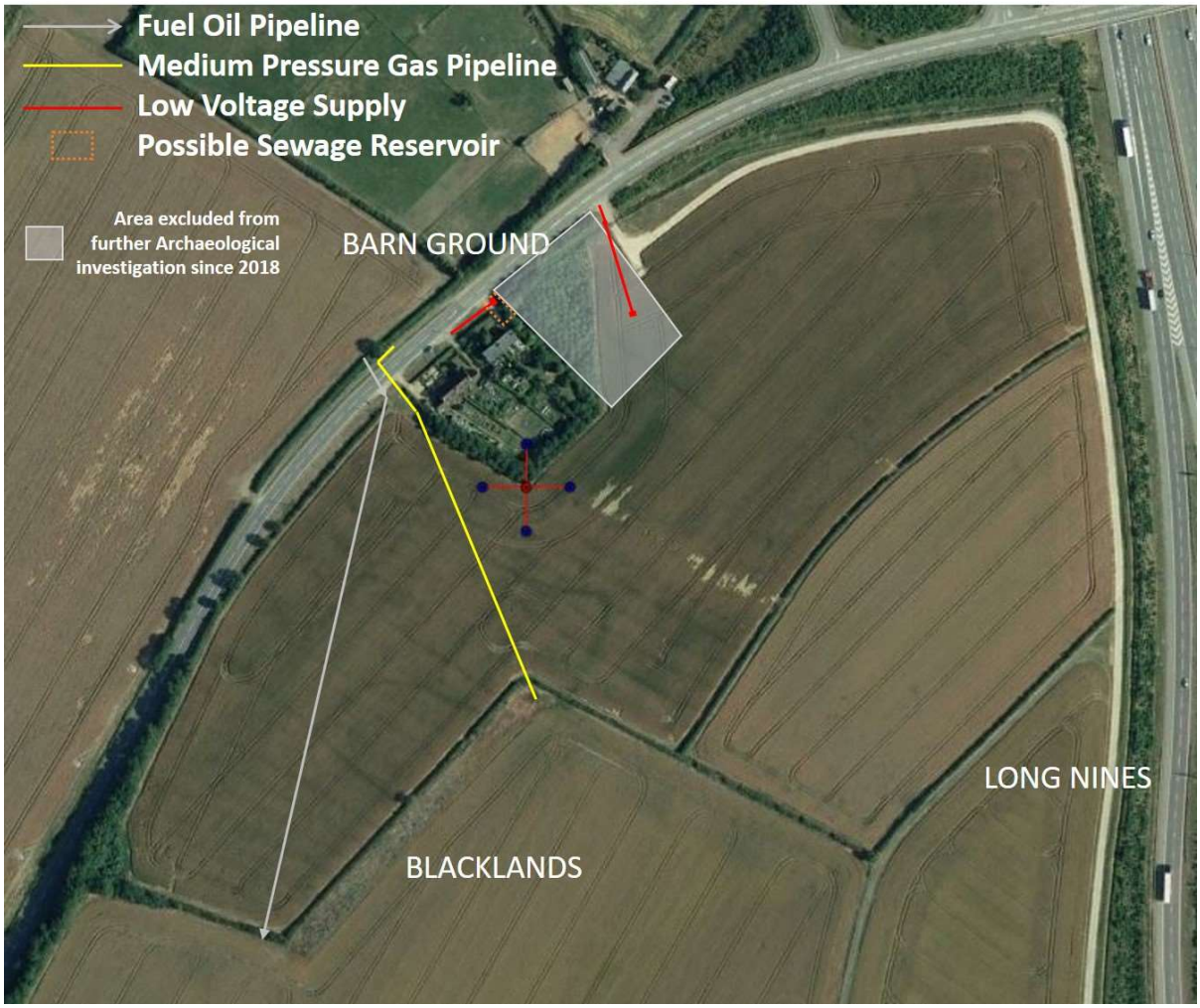

Figure 2.5: Utilities (Google Earth, 2016)

2.9. **Historical Background**. In 1932 Dr J R Garood MD, a local antiquarian of the Cambridgeshire & Huntingdonshire Archaeological Society (CHAS), began investigating the fields of Blacklands and Barn Ground (the previous field names of the field now known as Hill Top) as part of a wider investigation of Iron Age and Roman-British settlement sites on Alconbury Hill. Further archaeological investigations were undertaken by the Archaeology Field Unit of Cambridgeshire County Council (CCCAFU) in 1991, 1992 and 1995 in advance of A1 widening. Archaeological investigations were also carried out by Birmingham University Field Archaeology Unit (BUFAU) in 1996 also in advance of A1 widening. Since 2009 the two fields of the site have undergone methodical metal detecting which has produced a considerable volume of Roman artefacts ranging from coins to high status jewellery spanning four centuries of Roman occupation. Incidental to the metal finds was a wealth of ceramic artefacts including pot sherds, Ceramic Building Material (CBM) and *tesserae*. Sawtry Archaeology, under the auspice of Sawtry History Society, has undertaken periodic, and ongoing, archaeological investigations since 2017.

3. **Methods**.

3.1. **Survey Grids**.

3.1.1. **Earth Resistance Survey 171-4**. The survey area consisting of twenty-three 20m x 20m squares was established from the site grid as shown at Figure 3.1.

3.1.2. **Earth Resistance Survey 171-5**. The survey area consisting of fifty-eight 20m x 20m squares was established from the site grid as shown at Figure 3.2.

3.1.3. **Magnetometry Survey 171-2**. The survey area consisting of fourteen 40m x 40m squares was established from the site grid as shown at Figure 3.3.

Figure 3.1: Site grid with Res 171_4 survey area highlighted (Google Earth, 2016)

Figure 3.2: Site grid with Res 171_5 survey area highlighted (Google Earth, 2016)

Figure 3.3: Site grid with Mag 171_2 survey area highlighted (Google Earth, 2016)

3.2 **Earth Resistance Surveys**.

3.2.1. **Earth Resistance Survey 171-4**. The survey was carried out using the Geoscan Research RM85 Resistance Meter System and PA20 Probe Array assembly. Each survey square consisted of twenty traverse lines with readings being taken at 0.25 metre intervals along each traverse. The survey started in the southwest square of the survey area, traverses in each survey square started in the SW corner and followed a north-south zig-zag pattern to end in the SE corner. The Survey Record Sheet is at Annex B.

3.2.2. **Earth Resistance Survey 171-5**. The survey was carried out using the Geoscan Research RM85 Resistance Meter System and PA20 Probe Array assembly. Each survey square consisted of twenty traverse lines with readings being taken at one metre intervals along each traverse. The survey started in the southwest square of the survey area, traverses in each survey square started in the SW corner and followed a north-south zig-zag pattern to end in the SE corner. The Survey Record Sheet is at Annex B.

3.3. **Magnetometry Survey 171_2**. This survey was carried out using the Bartington Fluxgate Gradiometer Grad601 with twin sensor. Each 40m x 40m survey square consisted of 40 traverses, with 160 samples along each traverse. The Survey Record Sheet is at Annex B.

4. **Results**.

4.1. **Earth Resistance Survey 171-4**. Survey data was imported into Snuffler (version 1.21) as a single data set. The data plots presented in Figures 4.1 to 4.5 are presented in the default linear display option and greyscale display type; other display options and types are provided at Annex C:

black = low resistance; pits, ditches, clay dumps
white = high resistance; walls, rubble, paving areas
red = areas not surveyed
linear = display colour blocks are assigned to equal ranges of values
non-linear = display colour blocks are assigned to equal numbers of readings
relief plot = displays results as a 3D image
- high resistance readings are high points
- low resistance readings are low points

4.1.1. **Raw Data Plots**. Raw data plots are provided in pairs; the first plot without grid lines in order to present an uninterrupted picture, the second plot with grid lines in order to aid with orientation (Figure 4.1).

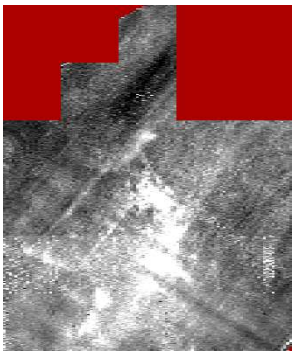

Figure 4.1a: Raw data

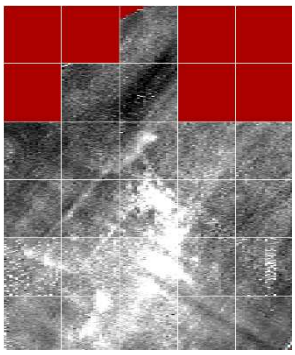

Figure 4.1b: Raw data

4.1.2. **Corrected Data Plots**. Corrected data plots are provided in pairs; the first plot without grid lines in order to present an uninterrupted picture, the second plot with grid lines in order to aid with orientation. Correction to the raw data was applied in two stages, firstly through the application of clip, de-spike and edge correction (Figure 4.2) and secondly through the further application of sharpen (Figure 4.3).

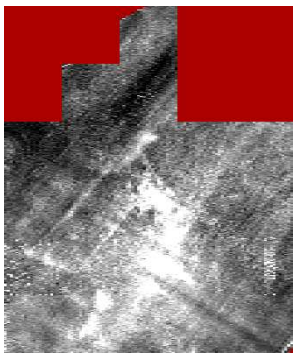

Figure 4.2a: Corrected data #1

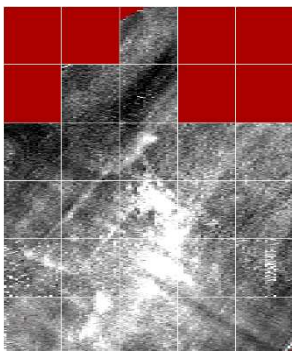

Figure 4.2b: Corrected data #1

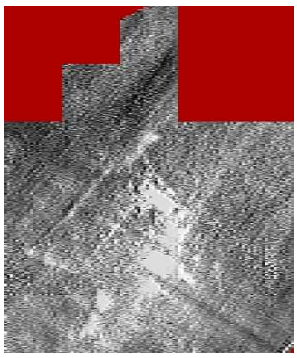

Figure 4.3a: Corrected data #2

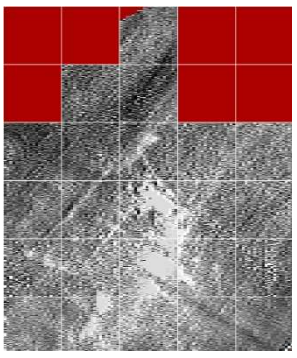

Figure 4.3b: Corrected data #2

4.1.3. **Filtered Data Plots**. Filtered data plots are provided in pairs; the first plot without grid lines in order to present an uninterrupted picture, the second plot with grid lines in order to aid with orientation. The corrected earth resistance data plots in Figures 4.2 and Figures 4.3 were both filtered by the application of interpolate (x2) (Figures 4.4 and 4.5).

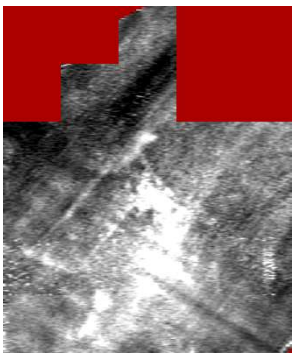

Figure 4.4a: Filtered data #1

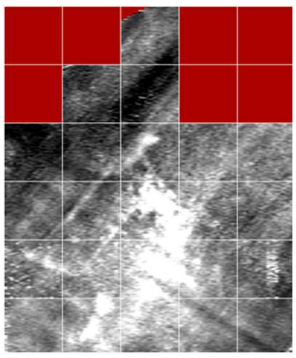

Figure 4.4b: Filtered data #1

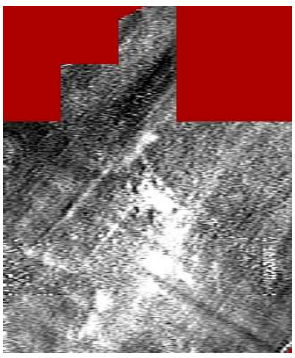

Figure 4.5a: Filtered data #2

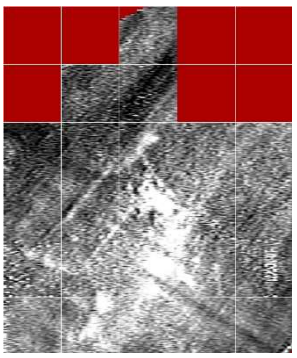

Figure 4.5b: Filtered data #2

4.2. **Earth Resistance Survey 171-5**. Survey data was imported into Snuffler (version 1.21) as a single data set. The data plots presented in Figures 4.6 to 4.10 are presented in the default linear display option and greyscale display type; other display options and types are provided at Annex C:

black = low resistance; pits, ditches, clay dumps
white = high resistance; walls, rubble, paving areas
red = areas not surveyed
linear = display colour blocks are assigned to equal ranges of values

non-linear = display colour blocks are assigned to equal numbers of readings
relief plot = displays results as a 3D image
- high resistance readings are high points
- low resistance readings are low points

4.2.1. **Raw Data Plots**. Raw data plots are provided in pairs; the first plot without grid lines in order to present an uninterrupted picture, the second plot with grid lines in order to aid with orientation (Figure 4.6).

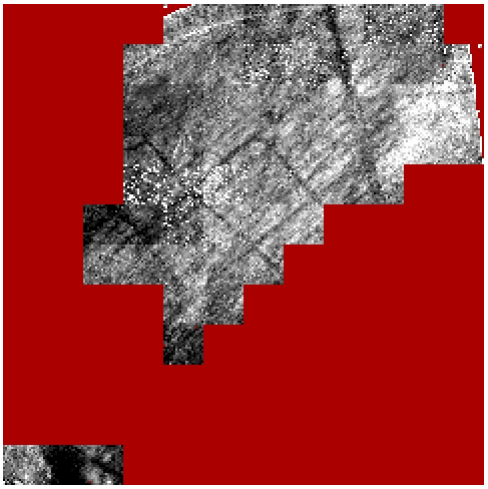

Figure 4.6a: Raw data

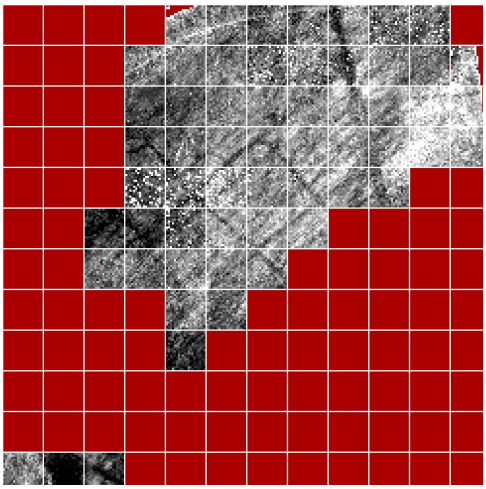

Figure 4.6b: Raw data

4.2.2. **Corrected Data Plots**. Corrected data plots are provided in pairs; the first plot without grid lines in order to present an uninterrupted picture, the second plot with grid lines in order to aid with orientation. Correction to the raw data was applied in two stages, firstly through the application of clip, de-spike and edge correction (Figure 4.7) and secondly through the further application of sharpen (Figure 4.8).

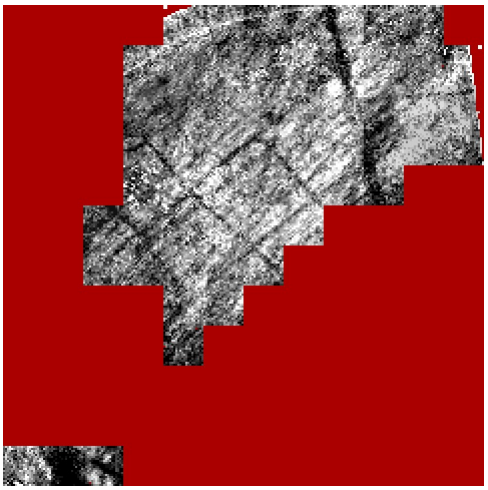

Figure 4.7a: Corrected data #1

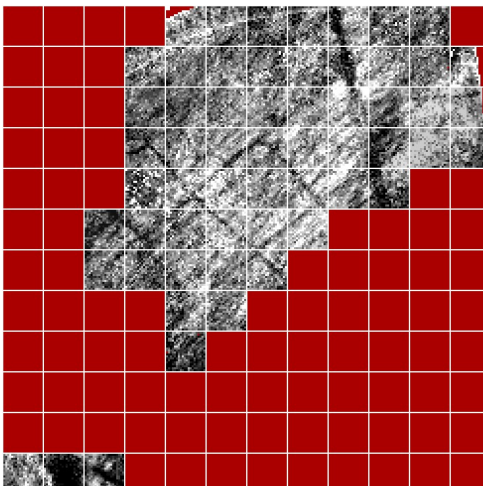

Figure 4.7b: Corrected data #1

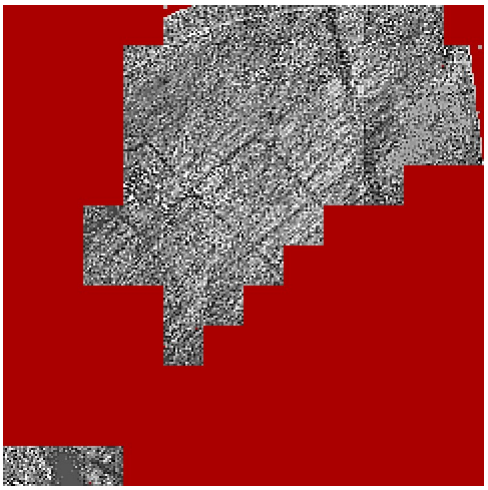

Figure 4.8a: Corrected data #2

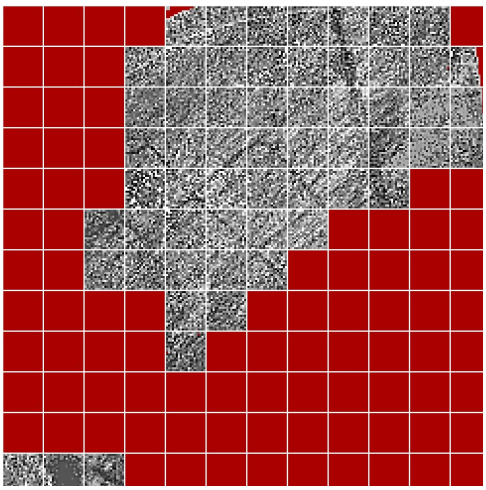

Figure 4.8b: Corrected data #2

4.2.3. **Filtered Data Plots**. Filtered data plots are provided in pairs; the first plot without grid lines in order to present an uninterrupted picture, the second plot with grid lines in order to aid with orientation. The corrected earth resistance data plots in Figures 4.7 and Figures 4.8 were both filtered by the application of interpolate (x2) (Figures 4.9 and 4.10).

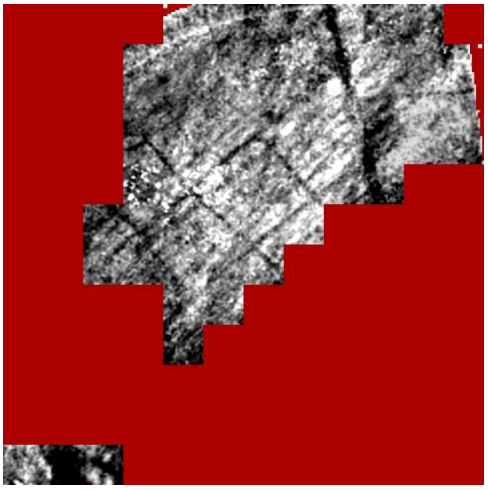

Figure 4.9a: Filtered data #1

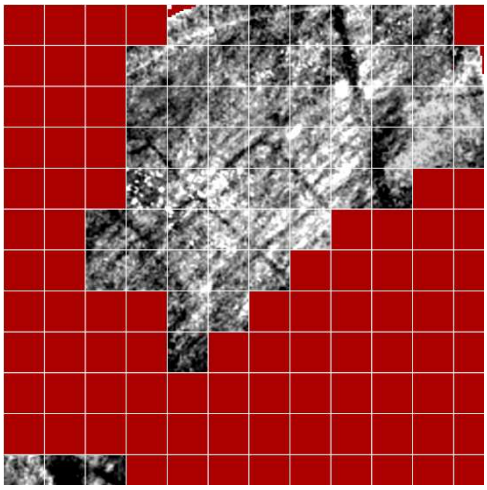

Figure 4.9b: Filtered data #1

Figure 4.10a: Filtered data #2

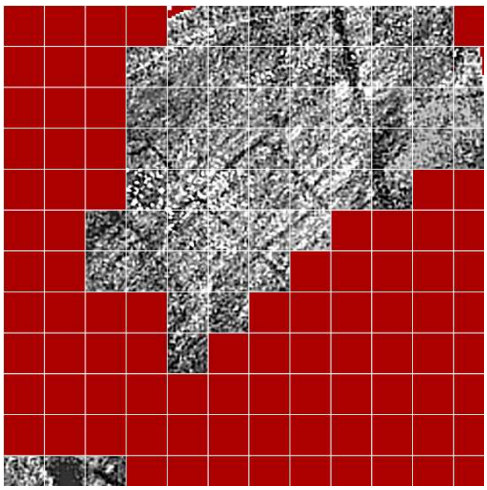

Figure 4.10b: Filtered data #2

4.3. **Magnetometry Survey 171_2**. Survey data was processed using TerraSurveyor version 3.0.34.10:

black = high magnetic response; iron, steel, brick, burned soil, kilns, hearths, ditches, pits
white = low magnetic response; stone features
solid black = areas not surveyed

Results are provided as a pair in Figure 4.11; the first plot without grid lines in order to present an uninterrupted picture, the second plot with grid lines in order to aid with orientation shown.

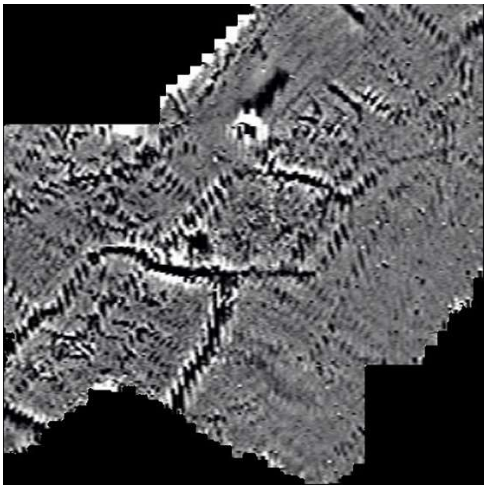

Figure 4.11a: Survey results (Wood, 2023)

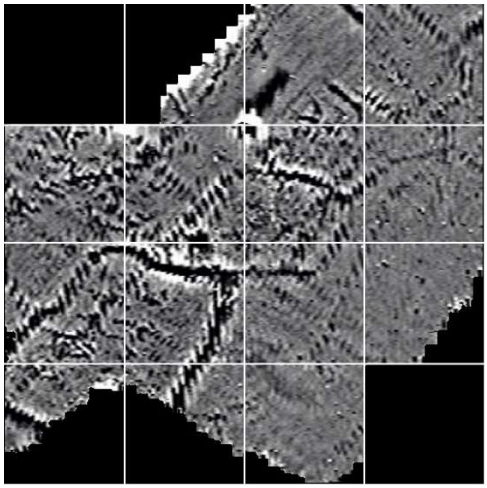

Figure 4.11b: Survey results (Wood, 2023)

5. **Analysis**.

5.1. **Earth Resistance Survey 171-4**. The filtered results in Figures 4.4 and 4.5, reproduced here as Figures 5.1 and 5.2, show a number of distinct anomalies that are discussed below. Survey squares are numerically referenced from left to right and bottom to top.

black = low resistance; pits, ditches, clay dumps
white = high resistance; walls, rubble, paving areas
red = areas not surveyed

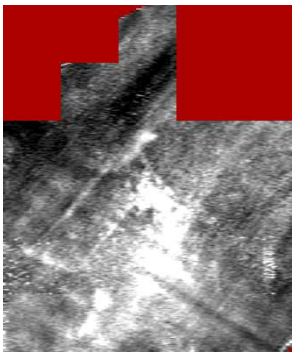

Figure 5.1a: Filtered data #1

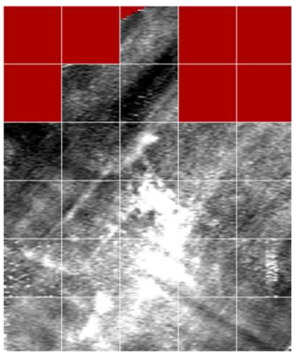

Figure 5.1b: Filtered data #1

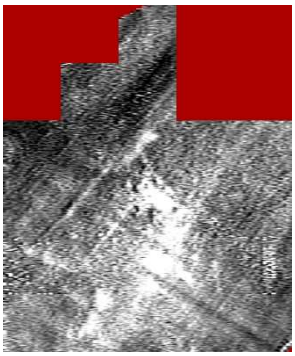

Figure 5.2a: Filtered data #2

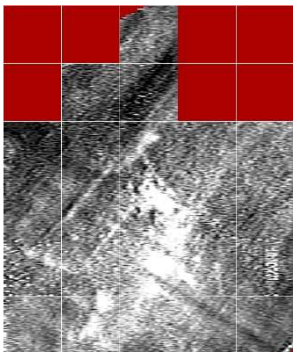

Figure 5.2b: Filtered data #2

5.1.1. The first anomaly is a possible single range building, approximately 40m x 28m on a northeast/southwest alignment.

5.1.1.1. The strong high resistance response of both the southeast and southwest right-angled linear anomalies in survey squares 1,2, 2,2, 2,3 and 3,3 are suggestive of in-situ walls.

5.1.1.2. The weak high resistance linear response in survey squares 1,2, 1,3, 2,3 and 2,4 is a possible central wall that may have elements in-situ.

5.1.2. The strong high resistance mass across survey squares 2,1, 3,1, 4,1, 3,2, 4,2, 3,3, 4,3 and 5,4 is indicative of the compacted building debris that constituted context 1003 in Trench 1 (Interim Report 7 (forthcoming)). The high density sampling of this survey provided results with greater clarity than those from Earth Resistance Survey 171-1 over the same area (Redgate & Hill, 2021a: 6).

5.1.3. The low resistance linear anomaly on a northwest/southeast alignment through survey squares 3,2, 4,1 and 5,1 is unaligned with modern ploughing and medieval ridge-and-furrow and may well be evidence of the deep mole ploughing known to have been undertaken or possibly of field drains. There is a parallel low resistance linear anomaly, visible as a cut in the high resistance mass in survey square 3,2, approximate 9.7m northeast of the first linear anomaly.

5.1.4. The strong low resistance mass, formed of a circular anomaly centred on the junction of survey squares 2,4, 3,4, 2,5 and 3,5 and a broad northeast spread through survey squares 4,5 and 4,6, matches a high magnetic anomaly in the Magnetometry Survey 171-1 (Redgate & Hill, 2021b: 5) results that was assessed as being a pit or well, or the site of intense burning over a long period of time (such as a kiln, furnace or similar fire chamber). The northeast spread is assessed as material from the circular anomaly being dragged by repeated modern ploughing which reinforces the circular feature of the anomaly being the primary feature comprised of high magnetic response and/or moisture retaining material and the spread being a residual feature of the anomaly.

5.2. **Earth Resistance Survey 171-5**. The filtered results in Figures 4.9 and 4.10, reproduced here as Figures 5.3 and 5.4, show a number of distinct anomalies that are discussed below. Survey squares are numerically referenced from left to right and bottom to top.

black = low resistance; pits, ditches, clay dumps
white = high resistance; walls, rubble, paving areas
red = areas not surveyed

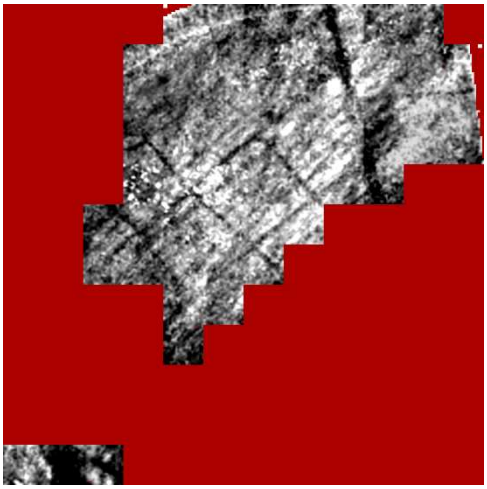

Figure 5.3a: Filtered data #1

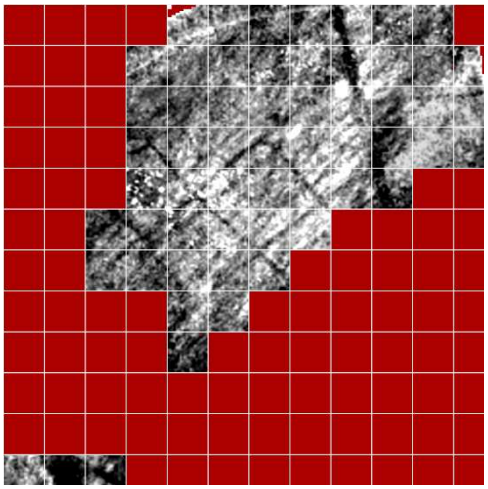

Figure 5.3b: Filtered data #1

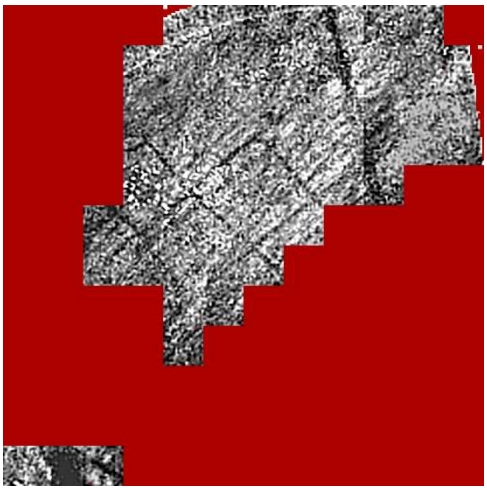

Figure 5.4a: Filtered data #2

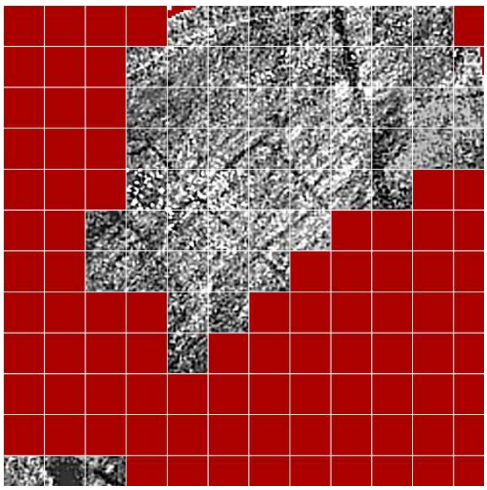

Figure 5.4b: Filtered data #2

5.2.1. A complex of two complete and two partial rectilinear features can be seen across survey squares 4,6, 5,6, 6,6, 7,6, 3,7, 4,7, 5,7, 6,7, 7,7, 8,7, 4,8, 5,8, 6,8, 7,8, 8,8, 4,9, 6,9 and 7,9.

5.2.1.1. The larger of the two complete rectilinear features, across survey squares 6,7, 7,7, 8,7, 5,8, 6,8, 7,8, 8,8, 6,9 and 7,9, is approximately 40m x 40m and formed by low resistance linear anomalies that are suggestive of robbed-out stone wall or timber wall foundation cuts, or ditches.

5.2.1.2. The smaller of the two complete rectilinear features, across survey squares 4,6, 5,6, 6,6, 7,6, 4,7, 5,7, 6,7 and 5,8, is approximately 40m x 30m formed by low resistance linear anomalies that are also suggestive of robbed-out stone wall foundation or timber wall foundation cuts, or ditches.

5.2.1.3. The first of the partial rectilinear features, across survey squares 4,7, 4,8, 5,8 and 4,9, is approximately 30m x 30m formed by low resistance linear anomalies that too are suggestive of robbed-out stone wall or timber wall foundation cuts, or ditches. Although truncated by the non-survey area, the likelihood is that low resistance linear anomalies extend into the non-surveyed area to form a complete rectilinear feature. In the centre of this feature is a cluster of small strong high resistance anomalies that are indeterminate.

5.2.1.4. The other partial rectilinear feature, across survey squares 7,6, 7,7 and 8,7, is approximately 40m in width (northeast to southwest) formed by low resistance linear anomalies that are also suggestive of robbed-out stone wall or timber wall foundation cuts, or ditches. Although truncated by the field boundary hedge, there is a high expectation that this feature extends into the adjacent field Long Nines.

5.2.1.5. The spread of high resistance results across these rectilinear features and further to the northeast are indicative of compacted building rubble identified in other geophysical survey results (Redgate & Hill, 2021a: 6; Redgate & Hill, 2022a: 5) and the excavations in trenches 1 and 1a (Interim Reports 7 and 8 (forthcoming)). This strongly suggests these features are one or more buildings or standing structures - although other enclosed spaces, such as stock enclosures (as suggested by the high quantity and prevalence of cattle bones revealed by the 1996 BUFAU (Ellis *et al*, 1996: 11-12; Mould *et al*, 1996: 20-21, 34-36, Tables 2-3) excavation at the northeast edge of the Hill Top site) cannot be discounted.

5.2.2. A broad strong low resistance linear feature, across survey squares 10,8, 10,9, 9,10, 9,11 and 9,12, is approximately 5m in width and suggestive of a boundary

ditch. The weaker low resistance section of the feature in survey square 9,10, along with what appear to be plough marks, suggests this section of the feature has been ploughed-out, although the weaker anomaly could represent the existence of an entrance - the high resistance patches either side of the ditch at the north end of the weaker anomaly may be indicative of an entrance structure.

5.2.3. A narrow high resistance curvilinear feature, across survey squares 4,11, 5,12, 6,12, 7,12 and 8,12, respects the concrete track along the north edge of Hill Top, but does not appear to have any relationship with other features in the results.

5.2.4. A narrow weak low resistance linear feature, across survey squares 10,10, 11,10 and 12,10, appears to connect with the linear feature at para 5.2.2. above, and is suggestive of a robbed-out stone wall or timber wall foundation cut, or ditch.

5.2.5. A feint high resistance linear feature that cuts through survey squares 6,5, 6,6, 7,7, 7,8, 7,9, 7,10, 8,11 and 8,12, is on a north-northeast to south-southwest alignment that appears to cut through the other features. It is similar in appearance to the medium pressure gas pipeline evident in Resistance Survey 171-3 (Redgate & Hill, 2022b: 6); however, there are no known utilities in this part of the site.

5.2.6. A cluster of small strong high resistance anomalies can be seen in survey square 8,11, with a small cluster of similar anomalies to the southwest on the juncture of survey squares 6,10, 7,10, 6,10 and 7,11, both of which are indeterminate.

5.2.7. A series of linear anomalies on a northeast to southwest alignment, across survey squares 5,4, 5,5, 6,5, 3,6, 4,6, 5,6, 6,6, 7,6, 3,7, 4,7, 5,7, 6,7, 7,7, 8,7, 5,8, 6,8, 7,8, 8,8, 9,8, 6,9, 7,9, 8,9, 9,9, 10,9, 6,10, 7,10, 8,10, 9,10 and 10,10, are of uniform width and equal spacing of approximately 5m that, as they appear to cut through the high resistance results at para 5.2.1.5. above, are suggestive of mole-ploughing. Although evidence of medieval ridge and furrow ploughing was identified in trench 1 (Interim Reports 7 and 8 (forthcoming)) and magnetometry survey undertaken by the Contracts Section of the Northamptonshire County Council Archaeology Unit on behalf of Cambridgeshire County Council Archaeology Field Office (Pelling & Leith, 1992: 37; Kemp & Reynolds, 1995: 11), the spacing between the linear striations in the results and lack of curvature make it unlikely that these anomalies are evidence of ridge and furrow (Aston & Rowley, 1974: 144; Aston, 1985: 120-123; Historic England, 2018: 8).

5.2.8. Survey square 1,1 contains a high resistance mass, survey square 2,1 contains a strong low resistance mass and survey square 3,1 contains a strong low resistance linear anomaly on a northwest/southeast alignment approximately 15m by 2m, all of which are indeterminate.

5.3 **Magnetometry Survey 171-2**. The results in Figure 4.11, reproduced here as Figure 5.5, show a number of distinct anomalies that are discussed below. Survey squares are numerically referenced from left to right and bottom to top.

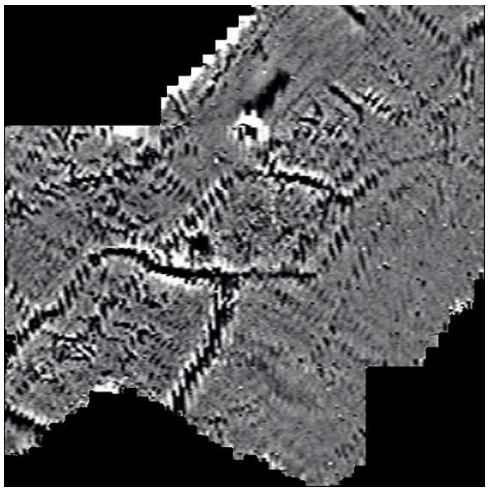

Figure 5.5a: Survey results (Wood, 2023)

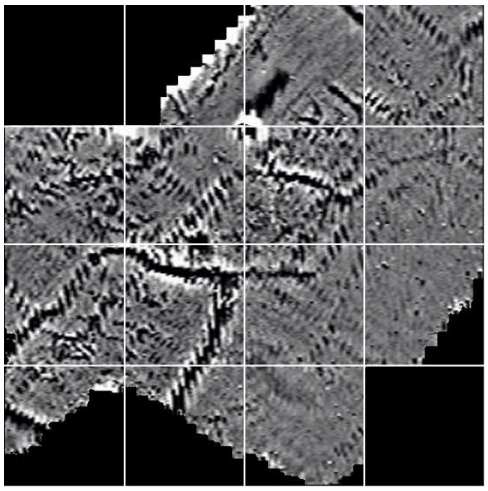

Figure 5.5b: Survey results (Wood, 2023)

5.3.1. Survey squares 2,2, 2,3, 3,3, 4,3, 3,4 and the southeast quadrant of 2,4 were re-surveys of the area surveyed by Magnetic Survey 171-1 (Redgate & Hill, 2021b: 5). The linear anomalies in the results in Figure 5.5 are, unfortunately distorted, and do not have the same clarity of detail as the earlier survey for these squares; and do not reveal anything new.

5.3.2. Survey squares 1,1, 2,1, 3,1, 1,2, 3,2, 4,2, 1,3, 2,4 and 4,4 extend the area of the site surveyed by magnetometry. The continuation of the magnetic anomaly in survey squares 2,1, and 2,2, identified as an Iron Age enclosure ditch (Redgate & Hill, 2020:8; Redgate & Hill, 2021b: 5; Redgate & Hill, 2022a: 6; Redgate & Hill, 2022b: 6) and visible in the 2016 Google Earth imagery, into survey squares 1,2 and 1,1 reinforces the assessment of the anomaly as such.

5.3.3. The strong circular response on the juncture of survey squares 2,3, 3,3, 2,4, and 3,4, along with the strong broad response that appears to spread northeast from it in survey 3,4, continues to be assessed as a pit, well, or the site of intense burning over a long period of time (such as a kiln, furnace or similar fire chamber) - see para 5.1.4 above.

5.3.4. The remaining anomalies are indeterminate due to their distortion.

6. **Summary**.

6.1. The purpose of undertaking the high density sampling survey Earth Resistance 171-4, in order to obtain greater clarity in the data results, proved successful. A number of high and low resistance anomalies considered to be archaeological were revealed, that were not visible in the data results of previous earth resistance surveys. Furthermore, the continued presence of high resistance masses is suggestive of significant areas of extremely dense and compacted building rubble that may well be masking further archaeological features; as was revealed in Trench 1.

6.2. A number of high and low resistance anomalies considered to be archaeological have been revealed by this survey; of particular interest being the set of rectilinear features that are indicative of buildings or other standing structures. Coupled with previous survey results, they indicate an extensive site, ranging from the east boundary to approximately 100m west of Vinegar Hill cottages and from the north boundary track extending into Long Nines; some 425m x 200m.

ANNEXES

A. Site Grid.
B. Sawtry History Society Geophysical Survey Record Sheet.
C. Additional Data Plot Display Options and Composite Plots.

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Wood, D. 2023. Email to Kevin Redgate, 12 July.

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