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Archaeological Services Ltd**



**A Geophysical Survey  
at  
The Wells,  
Stone Cross,  
East Sussex  
(Final Report)**

Project No. CBAS0425

by  
Chris Butler and David Staveley

September 2013

### *Summary*

*A magnetometry survey was carried out at The Wells, Stone Cross on a series of fields and paddocks situated between the B2191 and Peelings Lane, in advance of planning consent being granted for a new housing development.*

*The survey revealed an oval enclosure, a Roman road, a field system and possible evidence for settlement activity. Due to the potential importance of the archaeological remains revealed by the survey, it is recommended that a programme of evaluation excavation be undertaken to determine the dating, function and importance of the potential archaeology.*

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## **1.0 Introduction**

- 1.1** Chris Butler Archaeological Services Ltd was commissioned by Planning Potential Ltd on behalf of the joint landowners to carry out a geophysical survey of The Wells, Stone Cross, East Sussex (Fig. 1). An archaeomagnetic survey was required to survey an area covering 11.68ha situated between the B2191 and Peelings Lane (Fig. 2) in order to establish whether there was any potential for below-ground archaeological remains at the site.
- 1.2** The site is centred on TQ 62273 04422, and forms an L-shaped group of fields, bordered by housing development to the west, the B2191 Stone Cross to Westham Road with ribbon housing development to the south, Peelings Lane to the north and fields to the east. The application site also includes existing residential properties (The Oakes/Inglenook), various outbuildings, stables etc, although these were not covered by this survey.
- 1.3** The British Geological Survey (Sheet E319/334) identifies the underlying solid geology as Weald Clay Formation on the southern part of the site and Tunbridge Wells Sand Formation on the northern part. The site is set on generally sloping ground rising from c. 20m AOD in the southeast to c. 26m AOD in the northwest (Fig. 4).
- 1.4** The proposed residential development (WD/2013/1564/MAO) comprises the erection of up to 276 no. dwellings (including affordable housing provision), together with new vehicular and pedestrian access, associated car parking, landscaping and open space.
- 1.5** The proposed development is partly situated within an Archaeological Notification Area defining the course of a major Roman road and associated roadside activity, including a Roman settlement uncovered during recent housing development to the east at Dittons Road. In the wider landscape there is evidence of prehistoric, medieval and post-medieval occupation focused on the Dittons / Westham ridge and the adjacent wetland levels.
- 1.6** Dr Caroline Russell and Andrew Bradshaw carried out the survey over seven days between 11<sup>th</sup> September and the 20<sup>th</sup> September 2013. David Staveley was also on site for one day, and processed the results of the survey.

## **2.0 Archaeological and Historical Background**

**2.1** A full desk based assessment has been prepared for the site<sup>1</sup>. This showed that the application site has been shown to have low potential for all periods except the Roman, medieval and post medieval periods where the potential is considered low to moderate or moderate. Activity in the Roman period relates to an adjacent road while medieval activity is likely to comprise agricultural features beyond the known settlement sites at Cudnow, Shanfold Farm and Westham.

**2.2** The County Archaeologist suggested the archaeological potential and significance of this site is undefined due to a lack of archaeological fieldwork investigation, and requested a geophysical survey of the site and should be undertaken before the application for planning permission is decided, so that archaeological issues can be fully considered when the planning decision is made.

**2.3** The purpose of the geophysical survey is to:-

1. Establish the presence/absence of archaeological remains within the proposed development area.
2. Determine the extent, character, quality and if possible date of any archaeological remains present.

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<sup>1</sup> Heritage Collective 2013 *Archaeological Desk Based Assessment 'The Wells', Rattle Road, Stone Cross, East Sussex. Project 13/0363a*

### 3.0 Methodology

- 3.1** The area surveyed was divided into eight parts, labelled A to H on Fig. 2. The entire site was under grass at the time of the survey. The site was divided into two larger fields, each bounded by hedges and ditches, to the north and east, and in the south-west corner were a number of small paddocks divided by hedges and fencing.
- 3.2** Conditions were largely sunny and dry during the survey, but a prolonged spell of rain on Tuesday 17<sup>th</sup> and some showers on other days, slowed down the survey. The ground remained firm underfoot throughout the survey. Area G could not be surveyed due to the tall vegetation cover and other obstructions which prevented systematic survey, and significant part of Area G has previously been developed for outbuildings, large sheds, areas of hardstanding, and drainage. Area C also had high vegetation, and could not be surveyed, although we were informed a large drain ran through this area. Areas E, F & H, all had areas of bonfires, cars/trailers, or other obstructions (Fig. 3). The mains drain runs through area C connecting into Foxes Hollow to the west and to the north. It then runs through Area's H, F and E. There is a large man hole/ access cover in the centre of Area E which shows this alignment. Area's C and D have been used for a small holding and ploughed previously. Now they are stables/ a cattery and paddocks.



Plate 1: Areas C and D

- 3.3** The survey was carried out using a Bartington Grad601-2 fluxgate gradiometer within 40m x 40m grids. The grids were set out using a Topcon GTS 211D and Topcon GTS 213 on an arbitrary grid. Resection points were recorded for each field, and the outline of each field was partly surveyed to further aid the overlay of the survey results onto an OS base map / aerial mapping. The sample rate was four readings per metre along lines spaced 1m apart. Fig. 3 shows sketch plans for each field surveyed, which show the direction of survey and orientation of the grids. Areas A and H were surveyed north-south, and Areas B, C, E and F were surveyed east-west.

- 3.4** The data was processed using Snuffler geophysics software using zero mean line destripe filters, followed by interpolation from 1m x 0.25m samples to 0.5m x 0.25m. The display threshold is +/- 2 nT across the entire site.

## 4.0 Survey Results

4.1 The results for the survey areas are shown in Figs. 5 to 11.

4.2 Area A South-west part:

The south west part of Area A is dominated by the large track that continues to the east into area B. As in that area, it seems to disappear as it reaches the valley floor as the feature is buried by colluvium, which may suggest it is of some antiquity. Two linear features seem to respect this track by stopping at the edge, and so may be contemporary. The width of the track is 19m on the western side and 17m to the east.

The other linear features in the field form a large field system, with a 4m wide northeast-southwest trackway at the northern end which opens out as it heads westwards. Also at the northern end are two enclosure features, both open on the south side. The eastern one, which seems to overlay the small track, is roughly 10x6m and the western one is 19x9m. No features can clearly be seen within these enclosures. The fields appear to be divided by double ditched driveways heading north-west to south-east, and broadening to the southern ends. The entire field system is cut by Peelings Lane on its north side, so must predate that road.



Plate 2: Area A looking northeast

4.3 Area B, North-east part:

There are a number of slight linear features in this area that probably represent part of a field system, probably the same system seen in Area A. There is no sign of settlement at this location. If these boundaries are associated with a settlement of some sort, then that is most likely somewhere to the south or east, outside the area surveyed.



#### 4.4 Area B, Western part:

A pair of substantial ditches, possibly flanking a road, continue into this area from Area A. The truncation of this feature to the west is probably due to burial by colluvium. There are a number of pit and cut features, mainly associated with the north ditch of the trackway, which may indicate the presence of settlement or agricultural/industrial activity here.

A second pair of parallel ditches to the south of the above may represent a track or driveway, its truncation to the east is probably due to the feature having been ploughed out, although it is possible that it curves to the south and links up with a north-south field boundary. A number of linear features cross these tracks and are most likely temporary natural spring cuts due to the slope. A linear feature on roughly the same alignment running all the way across the western part of Area B is most likely an old field boundary, and may link up to one of the field boundaries in Area A.



Plate 3: Area B looking southeast



Plate 4: Area B looking southwest

#### 4.5 Area B, Southern part:

There are a number of linear features in this area forming three sides of a rectangular enclosure and further attached field systems. The enclosure contains a number of pit features in its eastern corner, which may constitute a small settlement.

#### 4.6 Area D:

There is no obvious archaeology in this area, although there may be features 'hidden' by the scatter of metallic objects in this area.

#### 4.7 Area E:

Despite the metal contamination and machine setup problems in this area, there is a possible large enclosure feature here, with one ditch visible to the north and two to the south. The ditch features are 3-4 metres wide and 4 metres apart at the southern end, curving to the north to join the northern ditch at the eastern end. Its form could be prehistoric, although the client informs us that the mains drain connects into Rattle Road roughly where the results show the curving ditch feature.



Plate 5: Area E looking east

#### 4.8 Area F:

This field has a large quantity of metal objects in the soil in the north-west corner, which make the results here difficult to interpret. There is a small linear feature at the south-east end, although this may be a fortuitous alignment of metal junk, however, it is parallel to the enclosure to the south in area E.

#### 4.9 Area H:

This field has a large quantity of metal objects in the soil, which make the results difficult to interpret. No archaeology can be seen, but this does not mean it is absent here.



Plate 6: Area H looking north-east

## 5.0 Conclusions

- 5.1** The survey has demonstrated that there is potential archaeology at the site. The area of small paddocks to the south-west contained large quantities of metal objects in the soil and obstructions/bonfires, but it was possible to determine some potential archaeology in this area. There was little adverse effect on the survey from geology, with a few geological features identified.
- 5.2** The earliest potential archaeology appears to be an oval enclosure at the southern end of the site (Fig. 7: A). The form of this enclosure suggests a small farmstead, possibly of Iron Age date situated on the slight west-facing slope overlooking Mountney Level, although there may be modern drainage works in this area which may have given a false impression of archaeology here, although the survey does not indicate the presence of a metal water main.
- 5.3** The next feature is the east-west road (Fig. 7: B), which could well be Roman in date, with the linear features showing being the flanking ditches. Parts of the line of the Roman road from Arlington through to Pevensey are uncertain. Margary shows the road following the line of Peelings Lane, to follow the ridge, thus avoiding the estuary of the Mountney Level<sup>2</sup>, and says that traces of metalling have been found in the verges of the present narrow lane. Further west archaeological monitoring was carried out at land adjoining Chaucer Business Park, Dittons Road, Polegate<sup>3</sup>, No trace of the Roman road was found, and it was suggested that rather than crossing the site, the Pevensey to Arlington Roman road may have instead followed Dittons Road, with the nearby Late Iron Age / Early Roman farmstead having been confined to its north side.
- 5.4** The route shown by the geophysics would be a more direct route to Pevensey, and does not necessarily conflict with Margary's discovery of metalling to the west of the site in Peelings Lane, because his Section No. 41 could also match this alignment. At the eastern end a series of pit like features may indicate settlement or industrial activity (Fig. 7: G), although the revised proposed layout would avoid development in this area.
- 5.5** To the south of the possible Roman road is another track or driveway (Fig. 7: C). It does not match the alignment of the Roman road or the possible field systems, but runs along the slope of ground at this point. It may well turn to the south and link in with a field boundary on the east side of D. There are no clues on the historic mapping for this feature so it must predate the 19<sup>th</sup> century at least.

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<sup>2</sup> Margary, I.D.1948 *Roman Ways in the Weald*, Pheonix House.

<sup>3</sup> Russell, C. 2013 Archaeological Monitoring at land adjoining Chaucer Business Park, Dittons Road, Polegate, East Sussex. CBAS0397

- 5.6** Set with a possible field system is a rectangular enclosure (Fig. 7: D) with a number of pit-like features in its south-eastern corner. Unfortunately problems with the magnetometer at this point meant that the area immediately south did not come out clearly. It is proposed that the revised development layout would avoid this area.
- 5.7** To the north of the Roman road is a clear field system (Fig. 7: E & F), with a possible trackway along its north edge, and some small enclosures. Between the fields, and running in a north-west to south-east direction are double ditched droveways, which appear to broaden at their southern ends. The alignment of this field system does not match that of the Roman road, and is also cut by Peelings Lane to the north, but does fit in with the fields and possible enclosure to the south (Fig. 7: D). The field system could be either prehistoric or Medieval, and it does appear to align with some of the existing field boundaries in Areas A and B, which form part of a larger system extending north-east into Hankham Level.
- 5.8** The County Archaeologist has advised that should archaeological remains be discovered, the following would need to be carried out:
1. An appraisal of the likely impact of the development proposals on any archaeology located.
  2. Prepare a mitigation strategy which states how the archaeology of the site is to be accommodated within the proposed development, either by preservation *in situ* or by record (i.e. through excavation, recording and publication) if this is considered necessary or appropriate.

It is therefore recommended that a programme of archaeological evaluation through excavation should be carried out prior to the finalisation of the potential layout of any scheme, subject to detailed planning consent, to confirm whether the features revealed by the geophysics are archaeology remains, and to determine their function, date and importance.

## **6.0 Acknowledgements**

- 6.1** We would like to thank Claire Temple of Planning Potential Ltd for commissioning this geophysical survey, and the landowners for their assistance and co-operation throughout the project.
- 6.2** The project was managed by Chris Butler. Greg Chuter, Assistant County Archaeologist, monitored the project for East Sussex County Council.

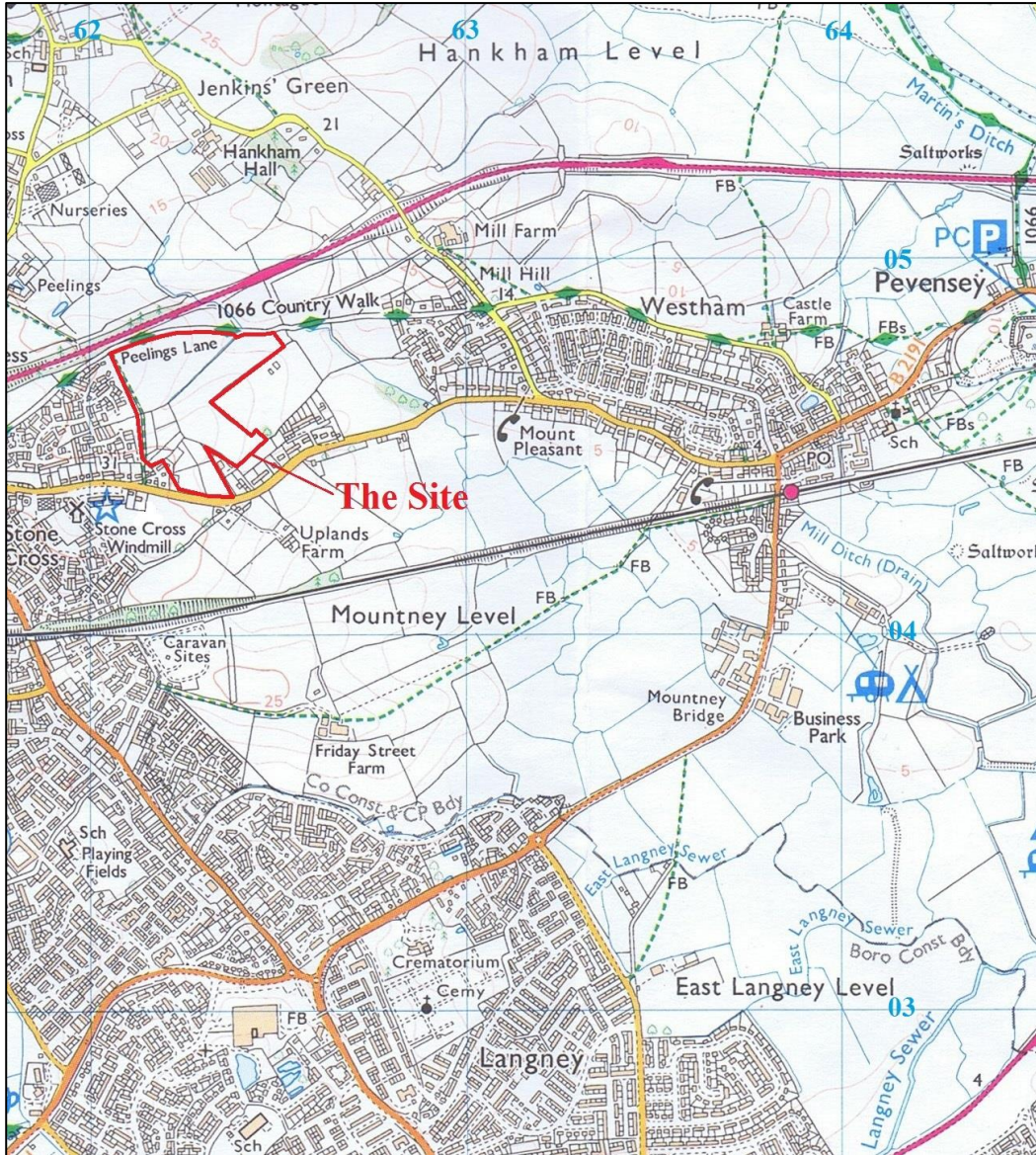
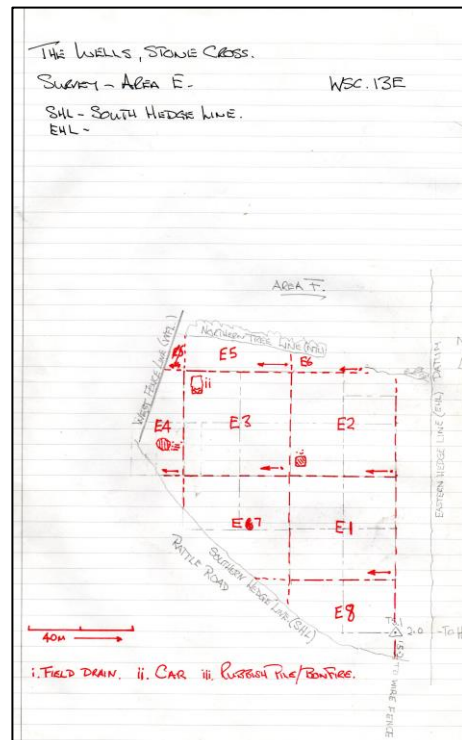
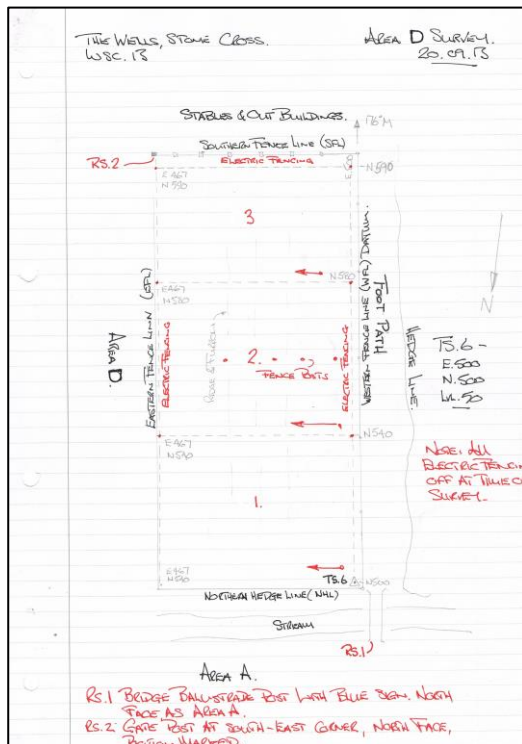
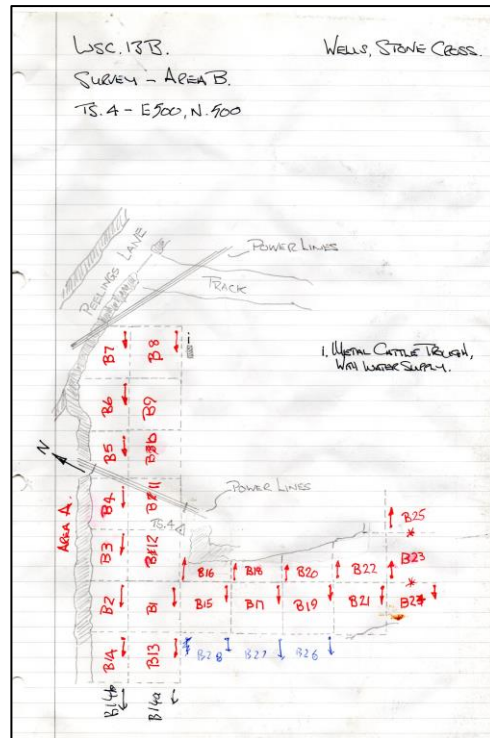
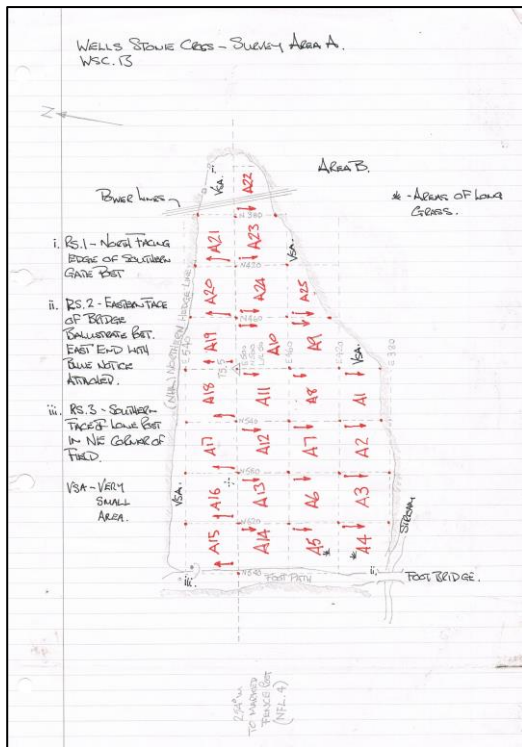


Fig. 1: The Wells, Stone Cross: Site location map  
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Fig. 2: The Wells, Stone Cross: Site Plan showing different survey areas referred to in text

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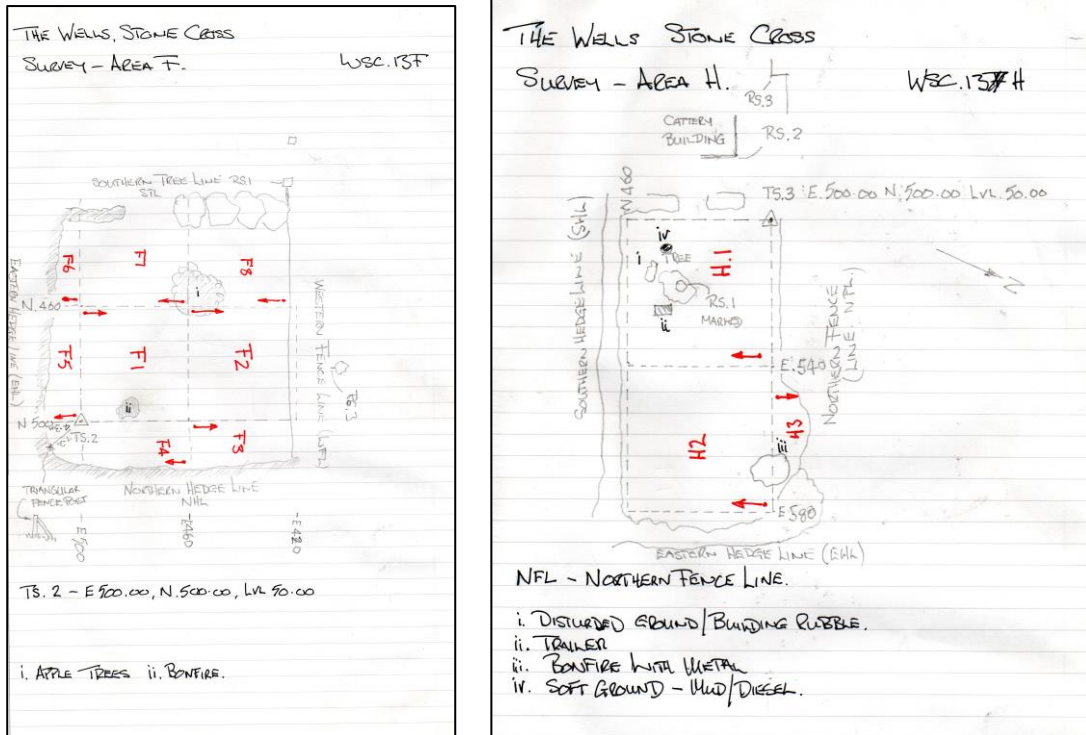


Fig. 3: The Wells, Stone Cross: Sketch plans showing fields surveyed



Fig. 4: The Wells, Stone Cross: Topographic survey

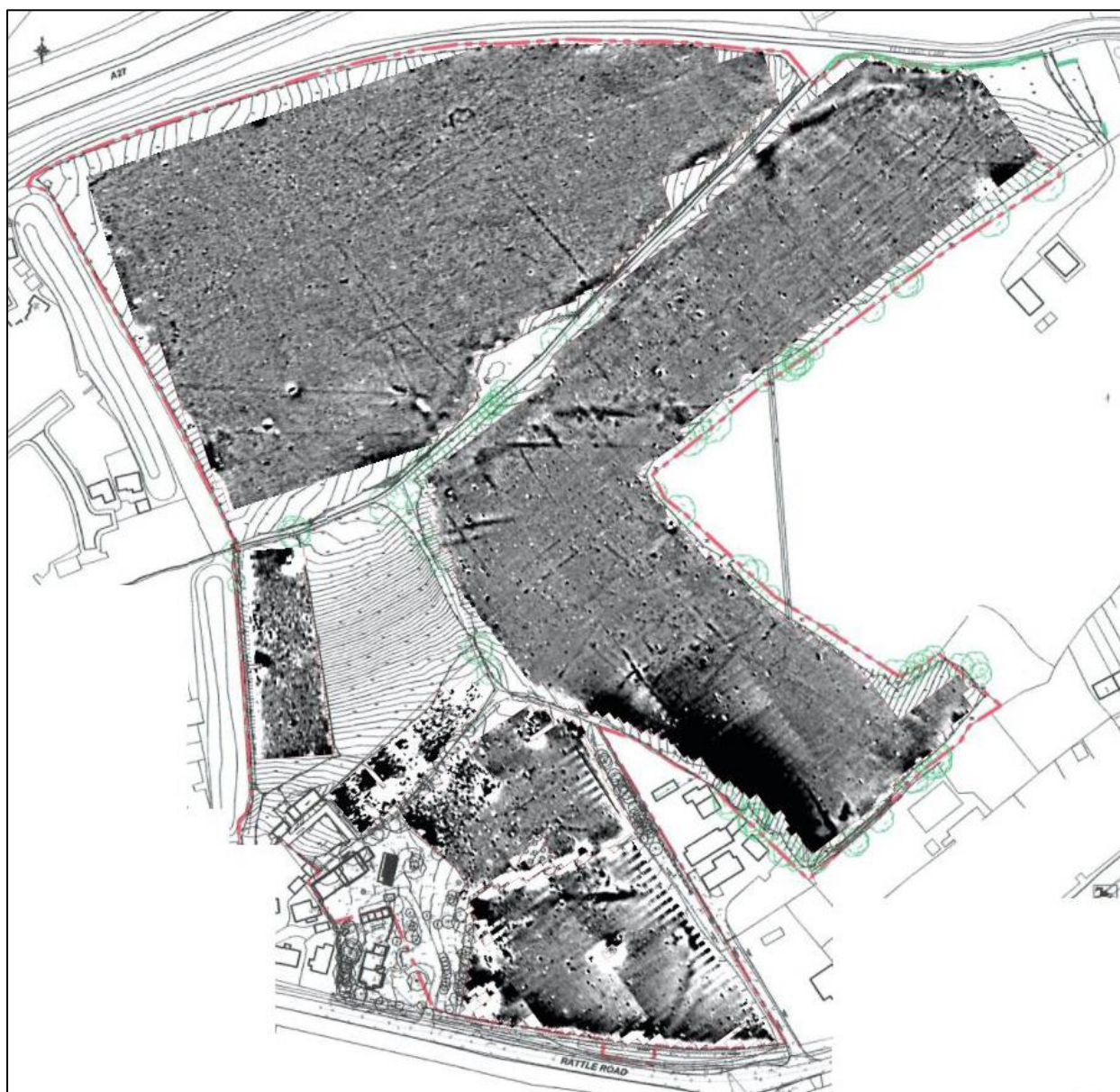


Fig. 5: The Wells, Stone Cross: Results of geophysics survey

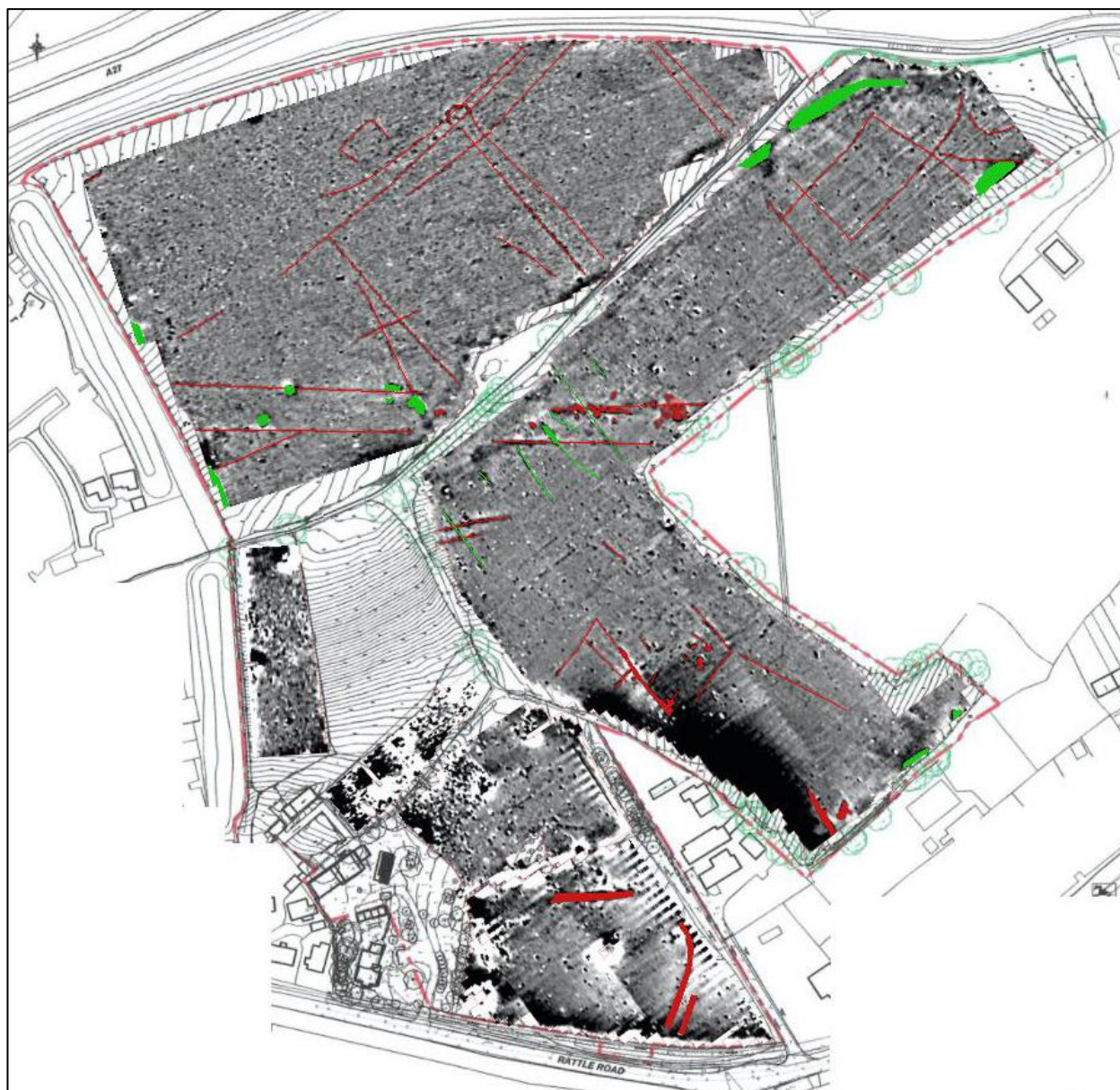


Fig. 6: The Wells, Stone Cross: Results of geophysics survey

Red = Potential Archaeology  
Green = Probable Geology

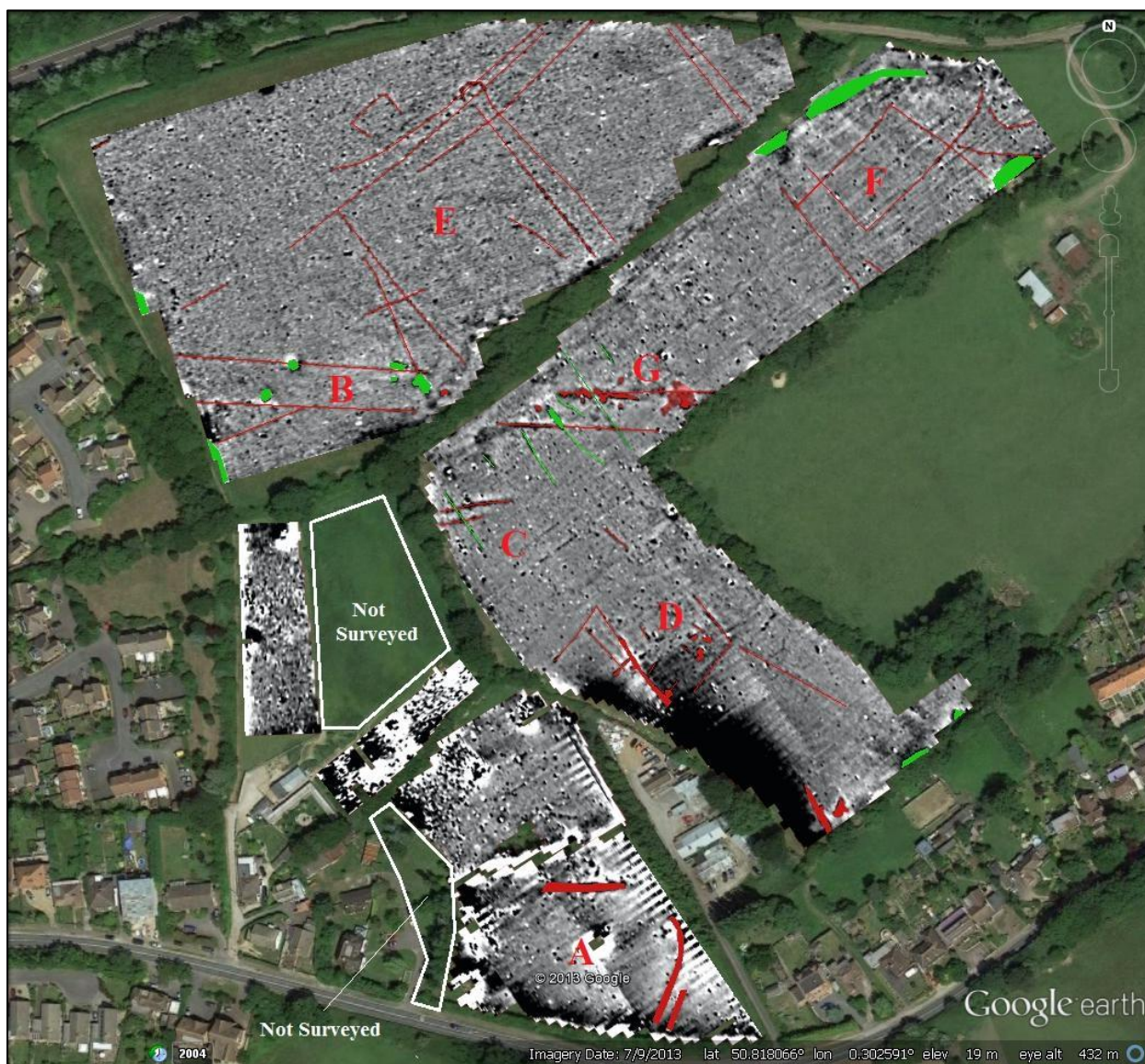


Fig. 7: The Wells, Stone Cross: Results of geophysics survey showing possible interpretations

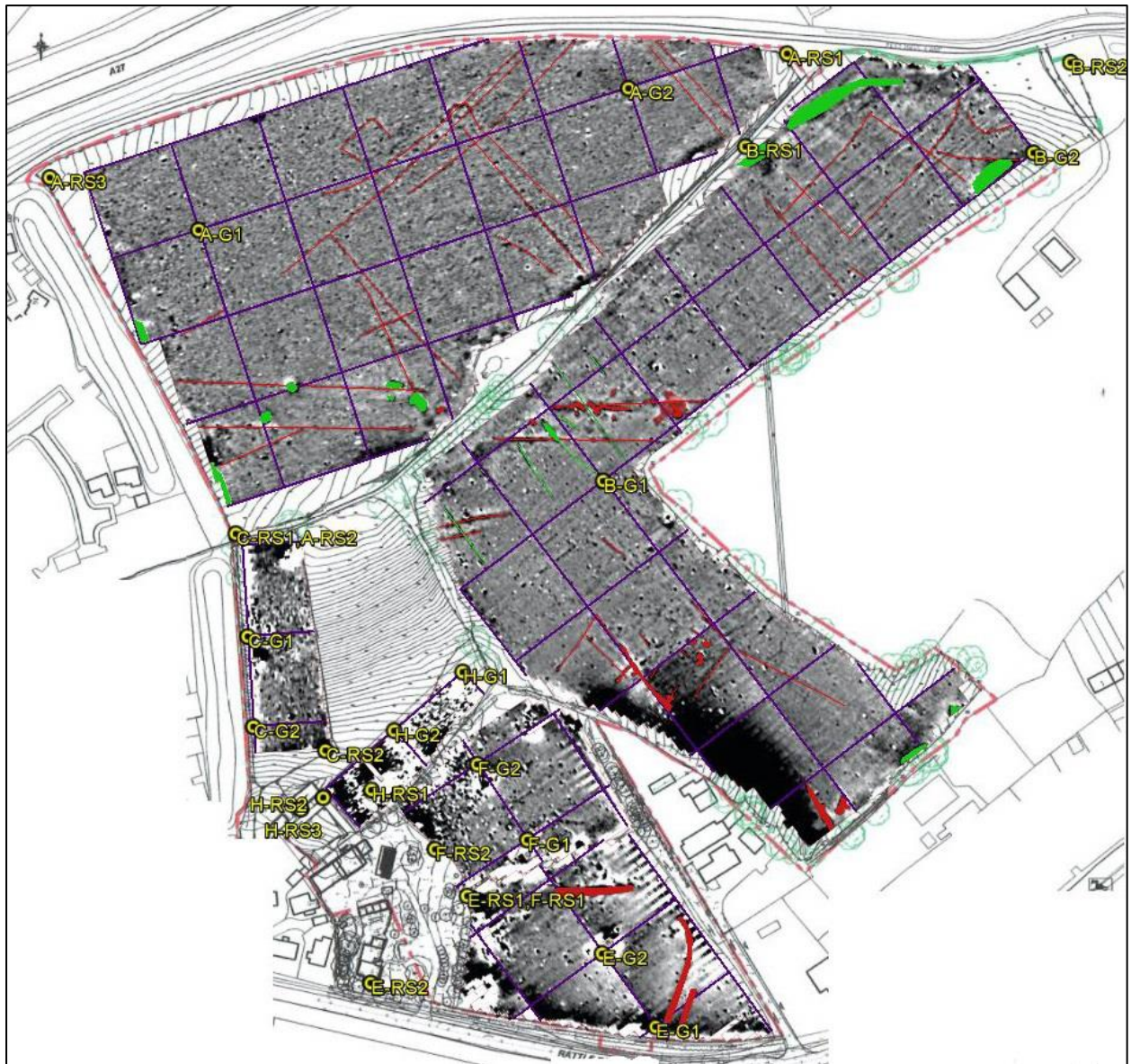


Fig. 8: The Wells, Stone Cross: Results of geophysics survey  
superimposed on OS map  
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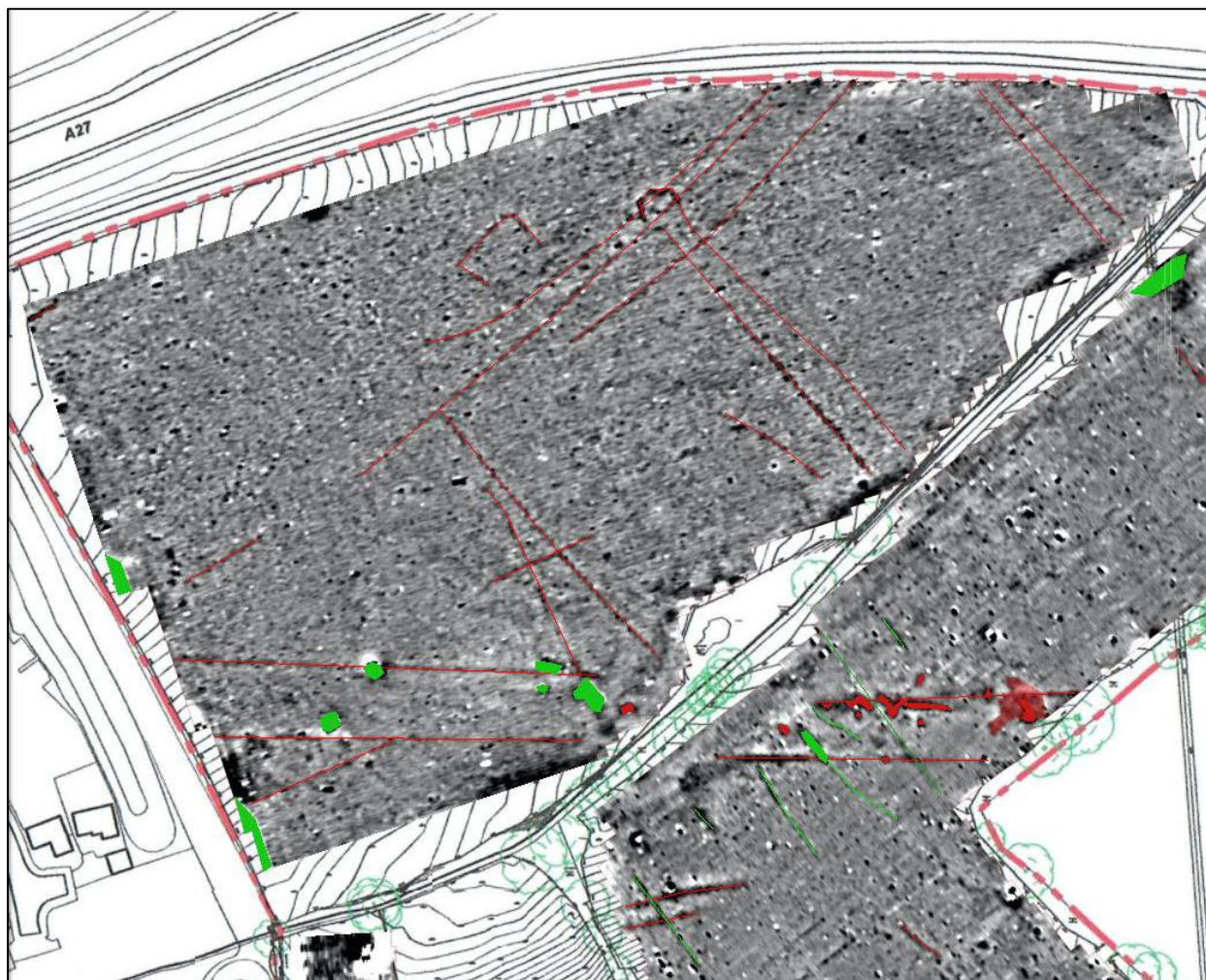


Fig. 9: The Wells, Stone Cross: Results of geophysics survey, north-west part of survey area

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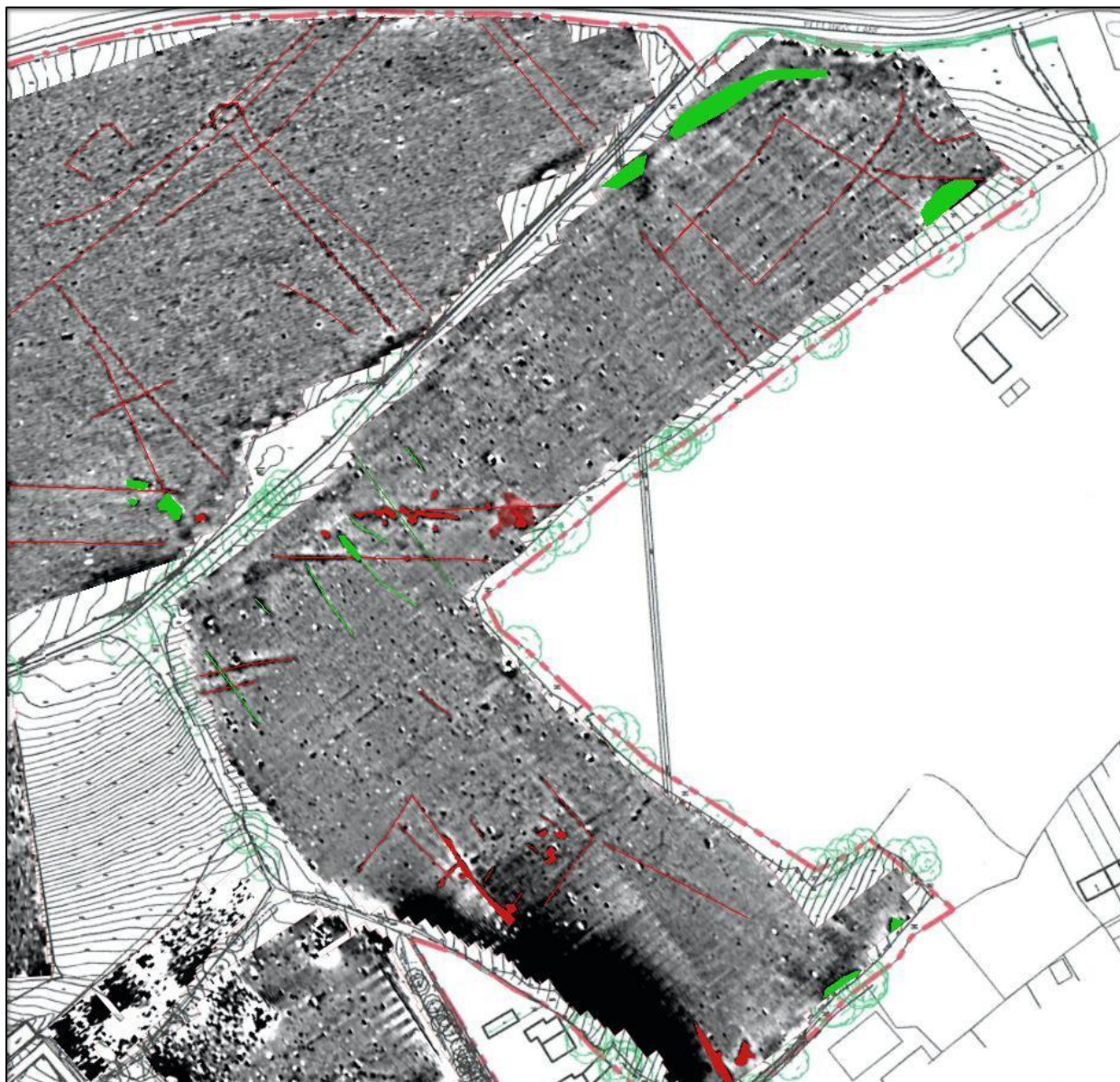


Fig. 10: The Wells, Stone Cross: Results of geophysics survey, north-east part of survey area  
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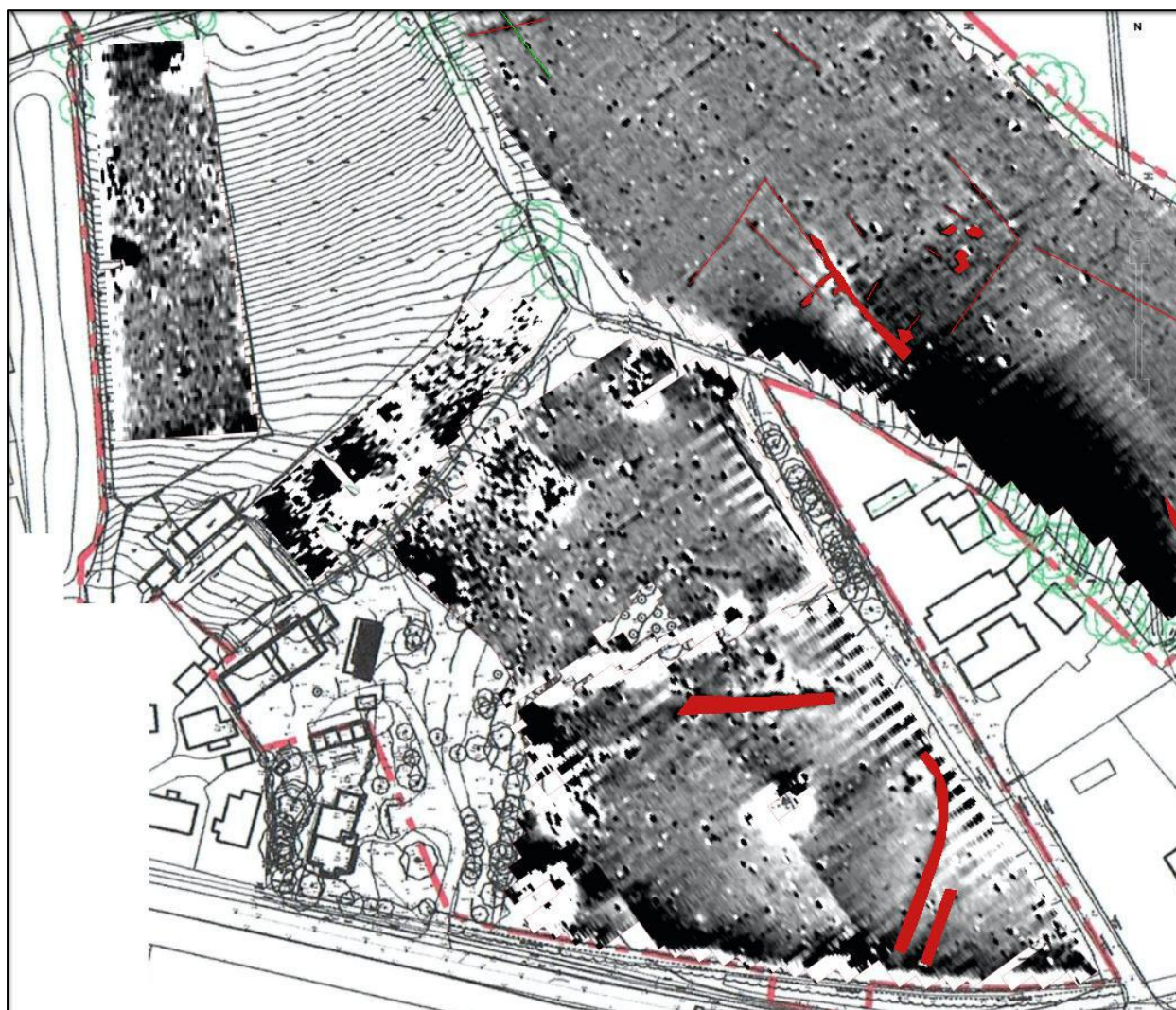


Fig. 11: The Wells, Stone Cross: Results of geophysics survey, southern part of survey area

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## Appendix 1 HER Summary Form

Site Code	WSC13					
Identification Name and Address	The Wells, Stone Cross, East Sussex					
County, District &/or Borough	Wealden District Council					
OS Grid Refs.	TQ 62273 04422 (centred)					
Geology	Weald Clay & Tunbridge Wells Sand					
Type of Fieldwork	Eval.	Excav.	Watching Brief	Standing Structure	Survey <b>X</b>	Other
Type of Site	Green Field <b>X</b>	Shallow Urban	Deep Urban	Other		
Dates of Fieldwork	Eval.	Excav.	WB.	Other 11 <sup>th</sup> to 19 <sup>th</sup> September 2013		
Sponsor/Client	Planning Potential Ltd					
Project Manager	Chris Butler MifA					
Project Supervisor	Caroline Russell/David Staveley					
Period Summary	Palaeo.	Meso.	Neo.	BA	IA <b>X?</b>	RB <b>X</b>
	AS	MED <b>X?</b>	PM	Other		
<p>100 Word Summary</p> <p><i>A magnetometry survey was carried out at The Wells, Stone Cross on a series of fields and paddocks situated between the B2191 and Peelings Lane, in advance of planning consent being granted for a new housing development.</i></p> <p><i>The survey revealed an oval enclosure, a Roman road, a field system and possible evidence for settlement activity. Due to the potential importance of the archaeological remains revealed by the survey, it is recommended that a programme of evaluation excavation be undertaken to determine the dating, function and importance of the potential archaeology.</i></p>						

## **Chris Butler Archaeological Services Ltd**

Chris Butler has been an archaeologist since 1985, and formed the Mid Sussex Field Archaeological Team in 1987, since when it has carried out numerous fieldwork projects, and was runner up in the Pitt-Rivers Award at the British Archaeological Awards in 1996. Having previously worked as a Pensions Technical Manager and Administration Director in the financial services industry, Chris formed **Chris Butler Archaeological Services** at the beginning of 2002.

Chris is a Member of the Institute of Field Archaeologists, and a committee member of the Lithic Studies Society. He was a part time lecturer in Archaeology at the University of Sussex, and until recently taught A-Level Archaeology at Bexhill 6<sup>th</sup> Form College having qualified (Cert. Ed.) as a teacher in 2006. He continues to run the Mid Sussex Field Archaeological Team in his spare time.

Chris specialises in prehistoric flintwork analysis, but has directed excavations, landscape surveys and watching briefs, including the excavation of a Beaker Bowl Barrow, a Saxon cemetery and settlement, Roman pottery kilns, and a Mesolithic hunting camp. He has recently undertaken large landscape surveys of Ashdown Forest and Broadwater Warren and is Co-Director of the Barcombe Roman Villa excavation project.

His publications include *Prehistoric Flintwork*, *East Sussex Under Attack* and *West Sussex Under Attack*, all of which are published by Tempus Publishing Ltd.

**Chris Butler Archaeological Services Ltd** is available for Flintwork Analysis, Project Management, Military Archaeology, Desktop Assessments, Field Evaluations, Excavation work, Watching Briefs, Landscape and Woodland Surveys & Fieldwalking, Post Excavation Services and Report Writing.

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