

STRATASCAN

Geophysical Survey Report

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for

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1 SUMMARY OF RESULTS

A geophysical survey was conducted over 132ha of agricultural land near Wakerley in Northamptonshire. The magnetic susceptibility survey revealed that the highest areas of enhancement were in the east, although much of the site was moderately enhanced. A detailed magnetic survey carried out over 32ha within eleven areas, revealed a density of positive linear, rectilinear and curvilinear anomalies in the east of the site, several of which can be interpreted as rectilinear enclosures. Areas of magnetic debris and several strong discrete dipolar anomalies are likely to be associated with iron working. The presence of positive area anomalies in the east of the site may be a response to the magnetically enhanced fill of channels. It is unclear whether these channels are purely geomorphological features or if they are associated with iron extraction and working.

2 INTRODUCTION

2.1 Background synopsis

Stratascan were commissioned by Archaeological Services and Consultancy Ltd (ASC) to undertake a geophysical survey of an area outlined for development of a quarry. This survey forms part of an archaeological investigation carried out by ASC on behalf of the Burghley House Preservation Trust who have put forward proposals for mineral extraction at a site near Wakerley in Northamptonshire.

2.2 Site location

The site is located southwest of Wakerley in Northamptonshire and is approximately centred on OS ref. SP 948 981. The site will comprise the extraction area plus an area of screen bund to the north. Currently the site is bounded by agricultural land to the north, Wakerley Great Wood to the south and a disused limestone quarry to the west.

2.3 Description of site

The survey area is an irregularly shaped parcel of land covering approximately 132ha. The north of the site is used for agriculture and the south comprises a disused airfield. The site consists of a generally flat plateau at 100m OD in the south and gently dipping north to the River Welland. The underlying geology is on the junction of Jurassic Inferior and Great Oolite series with overlying Boulder Clay deposits (British Geological Survey 2001, 1977). The overlying soils are known as Ragdale soils which are pelo-stagnogley soils. These consist of slowly permeable seasonally waterlogged clayey and fine loamy over clayey soils. There are also soils of the Elmton 1 association in the north and west of the site which are brown rendzinas. These consist of shallow well drained brashy calcareous fine loamy soils over limestone (Soil Survey of England and Wales 1983).

2.4 Site history and archaeological potential

The proposed development site lies within an area of historical and archaeological interest although no dated sites have been identified within the proposal site. Several prehistoric pits and flint assemblages have been found to the north of the site as has

evidence for Iron Age and Roman settlement and possible industrial activity. Several undated iron smelting furnaces were discovered to the west and a Saxon cemetery was excavated 300m northwest of the proposal site. The surrounding land has been used for limestone quarrying and in 1943 an airfield was constructed within the western half of the proposal area. Aerial photographs have also revealed cropmarks of two undated enclosure ditches within the eastern part of the site (Fell 2003). Although no actual archaeological activity or remains have been identified within the proposal site, considering the amount of archaeology identified within the adjacent area there is great potential of the site to yield further evidence for archaeology from the prehistoric to modern periods.



Plate 1 Looking east from the south-western corner of the former airfield.



Plate 2 Looking east across the eastern part of the site towards the densest area of geophysical anomalies

2.5 Survey objectives

The objective of the survey was to locate any features of possible archaeological significance in order that they may be assessed prior to development.

2.6 Survey methods

The reconnaissance technique of magnetic susceptibility was employed over the whole 132ha of the survey area. From this ten areas of enhancement were targeted with detailed magnetometer survey together with an area of low enhancement to act as a control. More information regarding these techniques is included in the Methodology section below.

3 **METHODOLOGY**

3.1 Date of fieldwork

The fieldwork was carried out over 7 weeks from the 8th of November 2004 to the 19th of January 2005.

3.2 Grid locations

The magnetic susceptibility survey grid nodes were located using a Leica GS50 GPS with readings logged manually. The majority of the detailed magnetic survey grids were also located using the GS50 with others set out using a Leica 750auto Total Station and referenced to suitable topographic features around the perimeter of the survey areas. The location of the detailed magnetic survey grids has been plotted in Figure 3.

3.3 Description of techniques and equipment configurations

3.3.1 Magnetic Susceptibility

Alteration of iron minerals in topsoil through biological activity and burning can enhance the magnetic susceptibility (MS) of that soil. Measuring the MS of a soil can therefore give a measure of past human activity and can be used to target the more intensive and higher resolution techniques of Magnetometry and Resistivity. Measurements of MS were carried out using a field coil which provides a rapid scan and has the benefit of allowing "insitu" readings to be taken.

The equipment used on this contract was an MS2 Magnetic Susceptibility meter manufactured by Bartington Instruments Ltd. A field coil known as an MS2D was used to take field readings. This assessed the top 200mm or so of topsoil. To overcome the problem of ground contact all readings were taken 4 or 5 times and an average taken. All obvious localised "spikes" were ignored.

3.3.2 Magnetometer

Although the changes in the magnetic field resulting from differing features in the soil are usually weak, changes as small as 0.2 nanoTesla (nT) in an overall field strength of 48,000nT, can be accurately detected using an appropriate instrument.

The mapping of the anomaly in a systematic manner will allow an estimate of the type of material present beneath the surface. Strong magnetic anomalies will be generated by buried iron-based objects or by kilns or hearths. More subtle anomalies such as pits and ditches can be seen if they contain more humic material which is normally rich in magnetic iron oxides when compared with the subsoil.

To illustrate this point, the cutting and subsequent silting or backfilling of a ditch may result in a larger volume of weakly magnetic material being accumulated in the trench compared to the undisturbed subsoil. A weak magnetic anomaly should therefore appear in plan along the line of the ditch.

The magnetic survey was carried out using a dual sensor Grad601-2 Magnetic Gradiometer manufactured by Bartington Instruments Ltd. Readings relate to the difference in localised magnetic anomalies compared with the general magnetic background. The Grad601-2 consists of two high stability fluxgate gradiometers suspended on a single frame. Each sensor has a 1m separation between the sensing elements giving a strong response to deep anomalies.

3.4 Sampling interval, depth of scan, resolution and data capture

3.4.1 Sampling interval

Magnetic susceptibility

The magnetic susceptibility survey was carried out on a 20 m grid with readings being taken at the node points.

Magnetometer

Readings were taken at 0.25m centres along traverses 1m apart. This equates to 3600 sampling points in a full 30m x 30m grid.

3.4.2 Depth of scan and resolution

Magnetic Susceptibility

The MS2D coil assesses the average MS of the soil within a hemisphere of radius 200mm. This equates to a volume of some 0.016m³ and maximum depth of 200mm. As readings are only at 20m centres this results in a very coarse resolution but adequate to pick up trends in MS variations.

Magnetometer

The Grad 601-2 has a typical depth of penetration of 0.5m to 1.0m. This would be increased if strongly magnetic objects have been buried in the site. The collection of

data at 0.25m centres provides an appropriate methodology balancing cost and time while maintaining a high resolution.

3.4.3 Data capture

Magnetic susceptibility

The readings are logged manually on to a Leica GS50 GPS and then downloaded into GIS software that allows it to be displayed as a colour plot.

Magnetometer

The readings are logged consecutively into the data logger which in turn is daily downloaded into a portable computer whilst on site. At the end of each job, data is transferred to the office for processing and presentation.

3.5 Processing, presentation of results and interpretation

3.5.1 Processing

Magnetic susceptibility

No processing of the data has been undertaken.

Magnetometer

Processing is performed using specialist software known as *Geoplot 3*. This can emphasise various aspects contained within the data but which are often not easily seen in the raw data. Basic processing of the magnetic data involves 'flattening' the background levels with respect to adjacent traverses and adjacent grids. 'Despiking' is also performed to remove the anomalies resulting from small iron objects often found on agricultural land. Once the basic processing has flattened the background it is then possible to carry out further processing which may include low pass filtering to reduce 'noise' in the data and hence emphasise the archaeological or man-made anomalies.

The following schedule shows the basic processing carried out on all processed magnetometer data used in this report:

<i>Zero mean grid</i>	<i>Threshold = 0.25 std. dev.</i>
<i>Zero mean traverse</i>	<i>Last mean square fit = off</i>
<i>Despike</i>	<i>X radius = 1 Y radius = 1</i>
	<i>Threshold = 3 std. dev.</i>
	<i>Spike replacement = mean</i>

3.5.2 Presentation of results and interpretation

Magnetic susceptibility

The presentation of the data for this site involves an interpolated colour plot of the field measurements overlain onto a site plan (see Figure 2). The data ranges from 0 10⁻⁵ SI units to 180 10⁻⁵ SI units.

Magnetometer

The presentation of the data for each site involves a print-out of the raw data both as grey scale (e.g. Figure 5) and trace plots (e.g. Figure 6 and 7), together with a grey scale plot of the processed data (e.g. Figure 8). Magnetic anomalies have been identified and plotted onto the 'Abstraction and Interpretation of Anomalies' drawing for the site (e.g. Figure 9).

4 RESULTS

4.1 Magnetic susceptibility

The magnetic susceptibility survey shows that the highest magnetic enhancement is in the east of the site (Figure 2). Levels of enhancement in this region are generally between 60 and 120 10^{-5} SI units, with the highest readings within the slopes of the dry valleys and corresponding to concentrations of slag identified in the field. These highest areas of magnetic enhancement have been targeted with detailed magnetic survey (Areas 1, 4, 8 and 9) with others having moderate to high enhancement also targeted (Areas 2, 3, 10 and 11). In the west of the survey area, within the bounds of the former airfield, levels of magnetic enhancement were generally low. Where areas of higher enhancement occur, these have been targeted with detailed magnetic survey (Areas 5 and 7) and one area of low enhancement has been targeted to act as a control (Area 6).

4.2 Detailed magnetometry

The detailed magnetic survey located a number of geophysical anomalies across the survey area. Ten areas were targeted within moderate to high regions of magnetic enhancement located during the magnetic susceptibility survey, with one area of low enhancement to act as a control.

Anomalies located within the survey areas can be generally classified as positive linear anomalies of a possible archaeological origin, positive linear anomalies of an uncertain origin, positive linear anomalies associated with agricultural activity, positive area and discrete low magnitude anomalies possibly relating to cut features, positive area anomalies as responses to the magnetically enhanced fill of former channels, areas of magnetic debris associated with spreads of thermoremnant material, strong discrete dipolar anomalies possibly responses to thermoremnant features, and strong discrete dipolar anomalies which are responses to ferrous objects. Each survey area has been plotted separately and will be discussed below. In complex areas anomalies have been coded for ease of reference.

Area 1 (Figures 4-9) (approximately centred on SP 9506 9863)

In the centre of Area 1 a series of linear, rectilinear and curvilinear anomalies can be seen. These anomalies appear to form a series of three enclosures (1, 2, and 3) with a general longitudinal axis oriented northeast to southwest. Areas of magnetic debris with a very high magnitude (4) are located within and around these enclosures and are likely to be responses to thermoremnant material with a very high ferrous content. The magnitude of these areas of magnetic debris suggest that they may be responses to

spreads of bloomery material associated with former iron smelting. It is possible that several strong discrete dipolar anomalies (5) are also associated with iron smelting furnaces.

A substantial positive area anomaly (6) extends from close to the southwest corner to the northeast corner of the site. It is likely that this feature represents the enhanced fill of a dry valley which may have originated as a palaeo-channel within the Pleistocene period. This feature has subsequently infilled through colluviation incorporating magnetically enhanced soils derived from nearby industrial areas. Similar features can also be seen to the east in Areas 8 and 9. At least one positive linear anomaly extends northeastwards from anomaly (1) and crosses (6). The fill of the linear anomaly is stronger than (6) and it is difficult to determine the relationship between them.

Several discrete low magnitude anomalies (7) can be seen across the site, and it is possible that these are a response to the magnetically enhanced fill of cut features such as pits.

Within the site are several positive linear and curvilinear anomalies (8) and although it is difficult to determine their origin, archaeology could be considered. A positive linear anomaly (9) extends across the site from the north-north-west to the south-south-east. This orientation is similar to the adjacent field boundary and the series of parallel positive linear anomalies (10) that are likely to have been caused by agricultural activity.

Several strong discrete positive anomalies with negative returns (11) are located within the site. It is likely that these anomalies are responses to ferrous objects, however, the presence of large amounts of magnetic debris (4) and other strong discrete anomalies (5) make it difficult to ascertain the origin of these ferrous objects.

Area 2 (Figures 10-15) (approximately centred on SP 9460 9863)

Several moderately enhanced positive linear and fragmented linear anomalies are oriented northeast to southwest within the site. It is possible that these are responses to the magnetically enhanced fill of cut ditches with an archaeological origin, although geology should be considered.

Close to the southeast corner of the survey area is a positive annular anomaly and a linear anomaly. Although it is difficult to accurately determine the origin of these anomalies, archaeology could be considered. To the south of these anomalies a negative linear anomaly is oriented east-north-east to west-south-west. This anomaly appears to have a similar orientation to the modern field boundary 40m to the east, and it is possible that it also relates to a former field boundary.

Several positive area anomalies are also evident within the survey area, and although they are likely to be a response to the magnetically enhanced fill of cut features it is difficult to ascertain their origin.

A series of parallel linear anomalies extend across the survey area from the northwest to the southeast and have been caused by agricultural activity.

Several strong dipolar anomalies are located within the site and they are likely to be responses to ferrous objects within the topsoil, although it is impossible to determine if these relate to slag debris or modern objects.

Area 3 (Figures 16-21) (approximately centred on SP 9536 9884)

A positive linear anomaly, oriented east-north-east to west-south-west, extends across the survey area. This linear anomaly is parallel to the modern field boundary located 43m to the south. It is possible that this feature has a modern origin, such as a land drain, however it has a similar magnitude and orientation to other cut features seen in Areas 1, 4 and 9 and so an archaeological origin could be considered.

Several discrete positive area anomalies can be seen in this survey area which may relate to cut features.

A series of parallel linear anomalies extend across the site with a northwest to southeast orientation. These features can also be seen in Areas 1, 2, 4, 8 and 10 with a similar orientation, and have been caused by agricultural activity.

Strong positive dipolar anomalies are likely to be responses to ferrous objects within the topsoil.

Area 4 (Figures 22-27) (approximately centred on SP 9487 9854)

A moderately enhanced “L” shaped positive anomaly (12) is located within the centre of the survey area. This anomaly appears to form two sides of a rectilinear feature with a curving south-western corner and has observable dimensions of approximately 63m by 44m. Approximately 35m along the longest edge there appears to be a 2.5m gap, which may represent an entrance. This “L” shaped anomaly corresponds to the extent of the cropmarks identified from aerial photography within this field (Fell 2003). Although anomaly (12) appears to end abruptly, it is possible that another low magnitude “L” shaped anomaly (13) forms the north-western corner of this possible enclosure, although it is not certain if they are associated.

Several positive linear anomalies (14) extend north-eastwards from the western edge of the survey area, with one positive linear anomaly (15) extending towards (12). These anomalies do not appear to extend beyond the location of anomaly (12) and it is possible that they are responses to cut features associated with anomaly (12).

Approximately 47.5m to the northeast of (12) is a positive rectilinear anomaly (16). This anomaly appears to form an irregular enclosure with at least one possible entrance with dimensions of 18m by between 10m and 15.5m. Within this anomaly there is an amorphous positive anomaly (17) which may relate to the fill of a cut feature.

To the north of anomaly (12) are several positive area anomalies (18). These are generally of a relatively low magnitude which suggests that large amounts of ferrous or thermoremnant material have not been incorporated. It is possible that (18) have

become enhanced through anthropogenic activity and an archaeological origin should be considered.

Two low magnitude positive linear anomalies (19 and 20) can be seen in the centre of the site and although it is possible that they relate to cut features, and may be associated with anomaly (12), this is not certain.

A series of parallel linear anomalies (21) extend across the site from the northwest to the southeast and have been caused by agricultural activity.

Several strong discrete dipolar anomalies can be seen within the site. Anomaly (22) is a very strong anomaly in excess of +3000nT and is likely to be a response to a ferrous object.

Area 5 (Figures 28-33) (approximately centred on SP 9460 9800)

Several areas of magnetic debris and discrete dipolar anomalies can be seen within this survey area. Situated within the disused airfield, the site may contain modern material associated with its former use. However it is possible that these discrete features are associated with former iron working.

A positive linear anomaly in the northwest of the survey area has become enhanced with magnetic debris. Another positive linear anomaly, oriented north-north-west to south-south-east, is of a low magnitude and both have a possible archaeological origin.

Several parallel linear anomalies are oriented northeast to southwest and are likely to have been caused by agricultural activity.

Another series of positive linear anomalies, located in the southeastern corner of the site, are oriented west-north-west to east-south-east. These parallel anomalies are relatively moderately enhanced and may relate to a land drainage system.

Area 6 (Figures 34-39) (approximately centred on SP 9467 9757)

Area 6 was selected from an area of low magnetic enhancement in the magnetic susceptibility survey and this is reflected in the magnitude of the responses in the detailed magnetic survey.

Several discrete low magnitude positive anomalies can be seen within this survey area and although of uncertain origin it is possible that they relate to the fill of cut features such as pits.

Extending west-north-west to east-south-east across the survey area are at least two low magnitude positive linear anomalies. Although it is difficult to ascertain the origin of these anomalies it is possible that they have been caused by agricultural activity. A series of positive linear anomalies with a general northeast to southwest orientation are likely to relate to features caused by agricultural activity.

Several strong dipolar anomalies are likely to be responses to ferrous objects within the topsoil.

Area 7 (Figures 40-45) (approximately centred on SP 9418 9757)

Several areas of magnetic debris are located within this survey area and correspond to the highest responses in the magnetic susceptibility survey. One area corresponds to the metallised surface of an access route within the airfield site. Other areas of magnetic debris generally are less strongly enhanced and are less dense in form than the metallised track but are also likely to have a high ferrous content. It is possible that they are associated with positive linear anomalies and strong discrete dipolar anomalies located in the vicinity. Although the positive linear anomalies may relate to cut features and the areas of magnetic debris to spreads of thermoremanent material it is difficult to determine if these anomalies have an archaeological origin or if they are more likely to be associated with the former use of the site as an airfield. The strong dipolar anomalies may relate to ferrous objects or material derived from the magnetic debris.

Area 8 (Figures 46-51) (approximately centred on SP 9541 9865)

In the centre of the survey area a positive rectilinear anomaly (24) has approximate dimensions of 46.5m by 31m which may relate to an enclosure with an archaeological origin. This appears to cut or be cut by a positive linear anomaly (25) which extends across (24) from the north. It is difficult to accurately determine the origin of anomaly (25) as it has a similar sinuous appearance to the south-westerly extent of positive area anomaly (26). It is possible that (26) is a response to the magnetically enhanced fill of a former channel which may be associated with iron working. A similar positive anomaly (27) can also be seen in the west of the site and is likely to have a similar origin to (26).

Positive linear anomaly (28) is oriented northeast to southwest and anomaly (29) may extend towards it from the southeast. It is difficult to ascertain the derivation of these anomalies although it is possible that they have an archaeological origin. The site also contains rectilinear (30) and curvilinear (31) anomalies, but because of the fragmentary nature of these responses it is difficult to be certain of their cause.

A positive linear anomaly (32) extends across the eastern half of the site and is oriented southwest to northeast. This anomaly has the same orientation as a series of parallel linear anomalies (35) which have been caused by agricultural activity. Although it is likely that anomaly (32) also relates to agricultural activity it seems to delimit these agricultural marks and it should be noted that this anomaly also appears to extend to the east into the adjacent Area 9.

There are several positive area anomalies (33) and areas of magnetic debris (34) within this survey area. It is likely that the areas of magnetic debris, which are strongly enhanced, are associated with former iron workings and it may be that (33) are also associated with waste material. A possible positive circular anomaly (36) may also be associated with positive area anomalies in the south of the site although this is not certain.

Primarily seen in the south-western corner of the survey area, a series of positive linear anomalies (37) are oriented north-north-west to south-south-east. These parallel anomalies are likely to have been caused by agricultural activity, where ploughing has cut into magnetically enhanced material and incorporated it into cut features.

Area 9 (Figures 52-57) (approximately centred on SP 9563 9884)

Extending across the northern part of the survey area with a general east-north-east to west-south-west orientation, is a positive linear anomaly (38). Extending towards it from the southeast is positive linear anomaly (39). It is possible that these anomalies are responses to the magnetically enhanced fill of cut features representing former land boundaries, and although an archaeological origin should be considered, it is possible that these anomalies may be more recent in origin. Another positive linear anomaly (40), oriented almost east to west also appears to extend towards (38) and may be associated with it.

In the south and southeast of the survey area, several positive annular anomalies (41) are located. These have dimensions of between 12m and 17m and may relate to the fill of cut features with an archaeological origin. In the east of the site several positive linear and curvilinear anomalies (42) can be seen. It is difficult to accurately determine the origin of these anomalies although archaeology is possible.

Clusters of strong discrete dipolar anomalies and areas of magnetic debris (43) primarily in the north and south of the survey area indicate that thermoremnant material is located within the site. It is likely that this material is associated with iron smelting and it is possible that some of the strong discrete dipolar anomalies may represent thermoremnant features such as furnaces.

Within this survey area are two positive area anomalies (44 and 45) which are oriented generally north to south. Similar features can be seen in adjacent survey Area 8 to the west and although they may be associated with the underlying geomorphology, the enhancement could also be related to nearby former iron working activity. A discrete positive area anomaly (46) can be seen close to (44) and may also be associated with it.

Close to the north-western corner of the survey area are two parallel positive linear anomalies (47). These anomalies are oriented northeast to southwest but are of uncertain origin.

In the southwest of the survey area a positive linear anomaly (48) extends from the edge to the northeast where it may be associated with linear anomaly (42). This anomaly appears to extend from anomaly (32) within Area 8 and although of uncertain origin, may be associated with the series of positive linear anomalies (49) situated to the southeast. Anomalies (49) are likely to have been created by agricultural activity. The continuation of anomalies (48 and 32) together with anomalies (35 and 49) suggests that this agricultural activity predates the current field boundary that separates Areas 8 and 9 but postdates the areas of magnetic debris and positive area anomalies as this material has become incorporated into them.

Several strong discrete dipolar anomalies (50) are located within the site, but due to the presence of large amounts of slag it is difficult to determine if these are isolated ferrous objects or are associated with the iron slag.

Area 10 (Figures 58-63) (approximately centred on SP 9428 9845)

Two short positive linear anomalies and a discrete low magnitude positive anomaly are located within the grid. It is possible that they relate to cut features but due to the small scale of the survey area it is difficult to determine their origin.

A series of linear anomalies extends across the grid from the northwest to the southeast and have been caused by agricultural activity.

Area 11 (Figures 64-69) (approximately centred on SP 9473 9845)

A series of six positive linear and fragmented linear anomalies can be seen within this survey area. They are all approximately oriented northeast to southwest and at least three appear to extend in a north-easterly direction towards anomalies (14) seen in Area 4 (see above and Figure 71). It is possible that these linear anomalies form a series of land divisions and they may be associated with other cut features located within areas to the east. However it is also possible that these anomalies have a geological cause.

Within this survey area are a number of discrete low magnitude positive responses that may indicate the location of cut pit like features with a possible archaeological origin.

A series of parallel linear anomalies extend across the survey area from the northwest to the southeast and have been caused by agricultural activity. These anomalies have the same orientation as the modern land boundaries and can also be seen elsewhere across the site.

There are several strong discrete positive anomalies with negative returns which indicate the presence of ferrous objects within the topsoil.

5 CONCLUSION

The magnetic susceptibility survey located a number of areas of high enhancement primarily in the east of the site. Levels of enhancement within this area are generally between 60 and 120 10^{-5} SI units and correspond to spreads of ironstone nodules and iron slag. Ten areas were targeted for detailed magnetic survey over the higher readings with one in a relatively low area of enhancement as a control.

In the east of the site the detailed magnetic survey located a number of geophysical anomalies that are likely to be archaeological in origin. There is a strong correlation between the highest areas of magnetic enhancement located during the magnetic susceptibility survey and concentrations of geophysical anomalies. Many of the anomalies relate to spreads of magnetic debris and strong discrete dipolar anomalies that are likely to relate to material and features associated with the production of iron. Such features have also been identified within Areas 5 and 7 in the southwest of the site and

although these may be associated with the former use of the site as an airfield, an archaeological origin cannot be ruled out.

Within Areas 1, 8 and 9 there are positive area anomalies which extend generally from the south and southwest to the north of the site. Although it is possible that these features are palaeo-channels infilled with colluvium it may be that they are directly associated with the iron workings in the area. It is possible that they are associated with hushing channels that have subsequently been infilled with magnetically enhanced material derived from the magnetic debris within the vicinity.

Positive linear anomalies and rectilinear anomalies have been located within Areas 1, 4 and 8 that may represent enclosures with an archaeological origin. There is a correlation between several geophysical anomalies and cropmarks identified from aerial photographs. Several positive annular anomalies have also been identified in Area 9 which may also have an archaeological origin.

6 REFERENCES

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