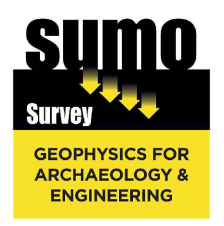


Area 2



**KEY**

	Probable archaeology (discrete anomaly / trend)
	Possible archaeology (discrete anomaly / trend / enhanced response)
	Uncertain Origin (discrete anomaly / trend / enhanced response)
	Agriculture (plough)
	Natural (e.g. geological / pedological)
	Service
	Ferrous



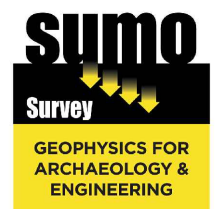
Title: Magnetometer Survey - Interpretation - Area 2

Client: Pegasus Group

Project: 00920 - Sholden, Kent

Scale: 0 metres 100  
1:2000 @ A3

Fig No: 07



Title: 2007 Google Earth Image showing cropmark features

Client: Pegasus Group

Project: 00920 - Sholden, Kent

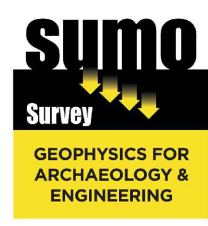
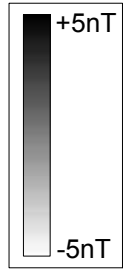
Scale: 0 metres 150  
1:3000 @ A3

Fig No: 08



Area 1

Area 2



Title: Minimally Processed Data - Greyscale Plot

Client: Pegasus Group

Project: 00920 - Sholden, Kent

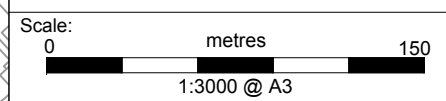
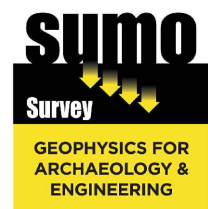


Fig No: 09



15nT



Title: Magnetometer Survey - XY Traceplots clipped at +/-15nT - Overview

Client: Pegasus Group

Project: 00920 - Sholden, Kent

Scale: 0 metres 150  
1:3000 @ A3

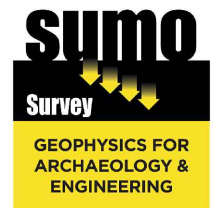
Fig No: 10



Area 1



15nT



Title: Magnetometer Survey -  
XY Traceplots clipped at +/-15nT - Area 1

Client: Pegasus Group

Project: 00920 - Sholden, Kent

Scale: 0 metres 75  
1:1500 @ A3

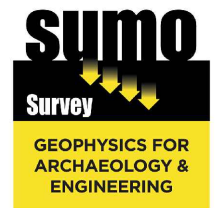
Fig No: 11



Area 2



15nT



Title: Magnetometer Survey -  
XY Traceplots clipped at +/-15nT - Area 2

Client: Pegasus Group

Project: 00920 - Sholden, Kent

Scale: 0 metres 100  
1:2000 @ A3

Fig No: 12

## Standards & Guidance

This report and all fieldwork have been conducted in accordance with the latest guidance documents issued by Historic England (EH 2008) (then English Heritage), the Chartered Institute for Archaeologists (CIfA 2014) and the European Archaeological Council (EAC 2016).

### Grid Positioning

For hand held gradiometers the location of the survey grids has been plotted together with the referencing information. Grids were set out using a Trimble R8 Real Time Kinematic (RTK) VRS Now GNSS GPS system.

An RTK GPS (Real-time Kinematic Global Positioning System) can locate a point on the ground to a far greater accuracy than a standard GPS unit. A standard GPS suffers from errors created by satellite orbit errors, clock errors and atmospheric interference, resulting in an accuracy of 5m-10m. An RTK system uses a single base station receiver and a number of mobile units. The base station re-broadcasts the phase of the carrier it measured, and the mobile units compare their own phase measurements with those they received from the base station. This results in an accuracy of around 0.01m.

Technique	Instrument	Traverse Interval	Sample Interval
Magnetometer	Bartington Grad 601-2	1m	0.25m

### Instrumentation: **Bartington Grad 601-2**

Bartington instruments operate in a gradiometer configuration which comprises fluxgate sensors mounted vertically, set 1.0m apart. The fluxgate gradiometer suppresses any diurnal or regional effects. The instruments are carried, or cart mounted, with the bottom sensor approximately 0.1-0.3m from the ground surface. At each survey station, the difference in the magnetic field between the two fluxgates is measured in nanoTesla (nT). The sensitivity of the instrument can be adjusted; for most archaeological surveys the most sensitive range (0.1nT) is used. Generally, features up to 1m deep may be detected by this method, though strongly magnetic objects may be visible at greater depths. The Bartington instrument can collect two lines of data per traverse with gradiometer units mounted laterally with a separation of 1.0m. The readings are logged consecutively into the data logger which in turn is daily down-loaded into a portable computer whilst on site. At the end of each site survey, data is transferred to the office for processing and presentation.

### Data Processing

Zero Mean	This process sets the background mean of each traverse within each grid to zero.
Traverse	The operation removes striping effects and edge discontinuities over the whole of the data set.
Step Correction (De-stagger)	When gradiometer data are collected in 'zig-zag' fashion, stepping errors can sometimes arise. These occur because of a slight difference in the speed of walking on the forward and reverse traverses. The result is a staggered effect in the data, which is particularly noticeable on linear anomalies. This process corrects these errors.

### Display

Greyscale/ Colourscale Plot	This format divides a given range of readings into a set number of classes. Each class is represented by a specific shade of grey, the intensity increasing with value. All values above the given range are allocated the same shade (maximum intensity); similarly, all values below the given range are represented by the minimum intensity shade. Similar plots can be produced in colour, either using a wide range of colours or by selecting two or three colours to represent positive and negative values. The assigned range (plotting levels) can be adjusted to emphasise different anomalies in the data-set.
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## **Presentation of results and interpretation**

The presentation of the results includes a 'minimally processed data' and a 'processed data' greyscale plot. Magnetic anomalies are identified, interpreted and plotted onto the 'Interpretation' drawings.

When interpreting the results, several factors are taken into consideration, including the nature of archaeological features being investigated and the local conditions at the site (geology, pedology, topography etc.). Anomalies are categorised by their potential origin. Where responses can be related to other existing evidence, the anomalies will be given specific categories, such as: Abbey Wall or Roman Road. Where the interpretation is based largely on the geophysical data, levels of confidence are implied, for example: Probable, or Possible Archaeology. The former is used for a confident interpretation, based on anomaly definition and/or other corroborative data such as cropmarks. Poor anomaly definition, a lack of clear patterns to the responses and an absence of other supporting data reduces confidence, hence the classification Possible.