

Axford & Ogbourne Licence Reduction Scheme (Axford Pipeline)

MAGNETOMETER SURVEY REPORT

for



Kerry Donaldson & David Sabin

November 2015

Ref. no. 619

ARCHAEOLOGICAL SURVEYS LTD

**Axford & Ogbourne
Licence Reduction Scheme
(Axford Pipeline)**

Magnetometer Survey Report

for



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Primary archive location - Archaeological Surveys Ltd, Yatesbury, Wiltshire

Survey dates – August to November 2015 & January 2016

Ordnance Survey Grid Reference – **SU 15147 89883 to SU 19923 76498**



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SUMMARY

A geophysical survey was carried out by Archaeological Surveys Ltd along the route of the new Axford to Ogbourne Licence Reduction Scheme water pipeline between Blunsdon and Whitefield Reservoirs near Swindon. Detailed magnetometry was used along several sections of the 18.2km pipeline route which is to be constructed in four phases. Phase 1 in the northern part of the route, extends from Blunsdon Reservoir to the Honda factory site, and within this route, two areas containing potential archaeological remains were located. In Phase 2, which extends around the scheduled Roman town at Wanborough, a large complex of linear ditches, rectilinear enclosures, trackways and pits were located. Further surveys were conducted at Nythe Farm to record the extent of the archaeology and a re-route was surveyed to the north of the original line which aims to avoid the archaeology. Further evidence for a continuation of the Roman town to the south of the scheduled area was also located to the south of the Wanborough Road. In Phase 3, to the north of Great Moor Leaze, several linear and rectilinear ditches were located along the line of the pipe and a wider survey was undertaken to put them in context. The wider survey revealed a complex of rectilinear and curvilinear enclosures containing possible ring ditch features. Structural remains indicate at least one possible Roman building. Phase 4 extends from the M4 southwards to the Whitefield Reservoir near Ogbourne St George. Within this zone, two ring ditches have been located, one possibly indicating an isolated round house feature, the other a possible barrow ditch. Further south is a complex of cut features with ditches, enclosures and pits that appear to relate to a previously unrecorded Roman roadside settlement.

1 INTRODUCTION

1.1 *Survey background*

- 1.1.1 Archaeological Surveys Ltd was commissioned by Andrew Holmes of Atkins, on behalf of Eight₂O, to undertake a magnetometer survey along the route of a new water pipeline between the Blunsdon and Whitefield Reservoirs near Swindon. It is a requirement of the Environment Agency that Thames Water reduce water abstractions at the Axford and Ogbourne boreholes in order to improve water quality in the River Kennet. The laying of the new 18.2km pipeline will ensure there is sufficient water to supply current and potential future demand around Swindon. The survey aims to provide information on the archaeological potential of land likely to be disturbed during construction of the pipeline by Eight₂O on behalf of Thames Water. The survey forms part of an archaeological assessment of the site.
- 1.1.2 The geophysical survey was carried out in accordance with a Written Scheme of Investigation (WSI) produced by Archaeological Surveys (2015) and issued to Melanie Pomeroy-Kellinger, county archaeologist for Wiltshire Council, prior to commencing the fieldwork.

1.2 *Survey objectives and techniques*

- 1.2.1 The objective of the survey was to use magnetometry to locate geophysical anomalies that may be archaeological in origin so that they may be assessed prior to groundworks associated with the pipeline. The methodology is considered an efficient and effective approach to archaeological prospection.

1.2.2 The survey and report generally follow the recommendations set out by: English Heritage (2008) *Geophysical survey in archaeological field evaluation*; and Institute for Archaeologists (2002) *The use of Geophysical Techniques in Archaeological Evaluations*. The work has been carried out to the Chartered Institute for Archaeologists (2014) *Standard and Guidance for Archaeological Geophysical Survey*.

1.3 Site location, description and survey conditions

- 1.3.1 The pipeline runs from the Blunsdon Reservoir, to the north east of Swindon, for approximately 18.2km south to the Whitefield Reservoir near Ogbourne St George, Wiltshire. The pipeline will be constructed in four phases with Phase 1 between the Blunsdon Reservoir to the Honda factory site, Phase 2 between the Honda site and the Dorcan valve chamber, Phase 3 from the Dorcan valve chamber to the M4 and Phase 4 from the M4 to the Whitefield C Reservoir at Ogbourne St George. It is located between Ordnance Survey National Grid Reference (OS NGR) SU 15147 89883 to SU 19923 76498, see Fig 01.
- 1.3.2 The survey was carried out over 27 survey areas as they became available along the route. The numbering system for the survey areas was based on land ownerships supplied by land agents Bruton Knowles. Although these are labelled consecutively, not all land plots were outlined for survey and some were unsuitable, therefore there are several gaps in the numbering system. Phase 1 consists of Areas 1, 3, 4, 5, 6, 7 & 9, Phase 2 consists of Areas 13, 14, 15, 18 & 19, Phase 3 begins in Area 19 and continues within Areas 21, 22, 24, 25, 27, 28, 29, 30, 31 & 32. Phase 4 consists of Areas 34, 36, 37, 38 & 39.
- 1.3.3 The geophysical survey was commissioned over approximately 40ha within a 30m wide corridor, along the majority of the 18.2km length. During the survey period, several additional re-routes were subsequently undertaken along with wider surveys around areas of archaeological features, and a total of approximately 58ha was covered.
- 1.3.4 The ground conditions along the survey corridor were variable and related to a combination of use, mainly agricultural, and weather conditions.

1.4 Site history and archaeological potential

- 1.4.1 An Archaeological Desk-Based Assessment has been carried out for the route (Atkins, 2014). The route of the pipe is in parts of the northern section generally parallel with the Roman road Ermin Street (Margary 41b) and in the south with the Roman road extending northwards from Mildenhall (*Cunetio*) (Margary 433). It diverts around the scheduled area of the Roman Town West of Wanborough House (List Entry No: 1004684/ AM 888), understood to be *Durocornovium*.
- 1.4.2 Other non-designated sites, such as the Roman settlement north of Great Moor Leaze and a number of cropmark features, exist along route with the majority of cropmarks recorded along the southern part of the corridor where it rises up onto the chalk. The majority of these cropmarks belong to linear, enclosure and ring ditch features, with further possible Roman and medieval settlement features also recorded.

- 1.4.3 The location of a number of known archaeological sites and cropmarks within the pipeline corridor indicates that there is a high potential for the survey to locate geophysical anomalies that relate to these and also previously unrecorded archaeological features.

1.5 *Geology and soils*

- 1.5.1 The underlying solid geology in the northern part of the site (Phase 1) is limestone from the Stanford Formation (Areas 1, 6, 7 & 9), Oxford Clay (Areas 3 & 4) and Hazelbury Bryan Formation and Kingston Formation (sandstone, siltstone and mudstone) (Area 5). To the south of the Honda plant (Phase 2), the geology is from the Ampthill Clay Formation and Kimmeridge Clay Formation (Areas 14-19) progressing on to the Gault Formation as it heads southwards towards the M4 (Phase 3, Areas 21-32). To the south of the M4, the corridor slopes up to the south, across a small section of Upper Greensand Formation, where it then continues within a large zone of West Melbury Marly Chalk Formation and Zig Zag Chalk Formation (Phase 4, Areas 34-39). There are some alluvial deposits within the zones containing the River Cole and its tributaries (BGS, 2015).
- 1.5.2 The overlying soils within the northern part of the site are from the Sherborne association on the Stanford Formation, which consists of shallow, well drained, brashy, calcareous, clayey soils and are brown rendzinas (Areas 1, 6, 7 & 9). The Oxford Clay and Hazelbury Bryan Formations have Evesham 2 soils which are slowly permeable, calcareous, clayey soils and are typical calcareous pelosols (Areas 3-5). The Ampthill and Kimmeridge Clay and much of the Gault Clay has soils from the Denchworth association which consists of slowly permeable, seasonally waterlogged, clayey soils known as pelo-stagnogleys (Areas 14-31). There are also some soils from the Wickham 3 association over the Gault Clay and alluvium which are slowly permeable and seasonally waterlogged typical stagnogleys. Located close to the M4 is a small zone of the Block association which consists of moderately permeable, calcareous, loamy soils over chalky drift and are gleyic brown calcareous earths (Area 32). The chalk geology has zones of Upton 1 association soils which consist of shallow, well drained, calcareous, silty soils that are grey rendzinas, and also some Coombe 1 soils which are also well drained, calcareous, silty soils but are typical brown calcareous earths (Areas 34-39) (Soil Survey of England and Wales, 1983).
- 1.5.3 Magnetometry survey carried out across similar soils and range of geologies has produced variable results. Many of the geologies can have very low magnetic susceptibility, and there can be a poor contrast between the fill of cut features and the material into which they are cut. However, especially in zones associated with long term occupation, the soils can become enhanced resulting in moderate to strong magnetic contrast. The underlying geology and soils are considered acceptable for magnetic survey.

2 METHODOLOGY

2.1 *Technical synopsis*

- 2.1.1 Magnetometry survey records localised magnetic fields that can be associated with features formed by human activity. Magnetic susceptibility and magnetic thermoremnance are factors associated with the formation of localised fields. Additional details are set out below and within Appendix A.

- 2.1.2 Iron minerals within the soil may become altered by burning and the break down of biological material; effectively the magnetic susceptibility of the soil is increased, and the iron minerals become magnetic in the presence of the Earth's magnetic field. Accumulations of magnetically enhanced soils within features, such as pits and ditches, may produce magnetic anomalies that can be mapped by magnetic prospection.
- 2.1.3 Magnetic thermoremnance can occur when ferrous minerals have been heated to high temperatures such as in a kiln, hearth, oven etc. On cooling, a permanent magnetisation may be acquired due to the presence of the Earth's magnetic field. Certain natural processes associated with the formation of some igneous and metamorphic rock may also result in magnetic thermoremnance.
- 2.1.4 The localised variations in magnetism are measured as sub-units of the Tesla, which is a SI unit of magnetic flux density. These sub-units are nano Teslas (nT), which are equivalent to 10^{-9} Tesla (T).

2.2 *Equipment configuration, data collection and survey detail*

- 2.2.1 The detailed magnetic survey was carried out using a SENSYS MAGNETO@MXPDA 5 channel cart-based system. The instrument has 5 fluxgate gradiometers spaced 0.5m apart with readings recorded at 20Hz. The gradiometers have a range of recording data between 0.1nT and 10,000nT. The system is linked to a Leica GS10 RTK GPS with data recorded by SENSYS MAGNETO@MXPDA software on a rugged computer.
- 2.2.2 Data are collected along a series of parallel survey tracks wherever possible. The length of each track is variable and relates to the size of the survey area and other factors including ground conditions. A visual display aids accurate placing of tracks and their separation.
- 2.2.3 Data are not collected within fixed grids and data points are considered to be random even though the data are collected in a systematic manner covering all accessible areas (Aspinall, Gaffney and Schmidt, 2009).

2.3 *Data processing and presentation*

- 2.3.1 Magnetic data collected by the MAGNETO@MXPDA cart-based system are initially prepared using SENSYS MAGNETO@DLGPS software. Survey tracks are analysed and georeferenced raw data (UTM Z30N) are then exported in ASCII format for further analysis and display using TerraSurveyor.
- 2.3.2 The data are collected between limits of ± 10000 nT and clipped for display at between ± 1 nT and ± 5 nT. Data are interpolated to a resolution of effectively 0.5m between tracks and 0.15m along each survey track. A zero median traverse function is required in order to remove fixed offset values present within the sensors which do not undergo a zeroing procedure in the field. The approach ensures that the gradiometer sensors are very accurately aligned and fixed to the vertical magnetic field and are not influenced by localised magnetic fields or disturbed by vibration. Although a zero median traverse algorithm can remove anomalies aligned with the survey tracks, in practice this rarely occurs due to the use of long traverses, high

resolution measurement and variability within the magnetic susceptibility of long linear features.

- 2.3.3 Appendix C contains metadata concerning the survey and data attributes and is derived directly from TerraSurveyor. Reference should be made to Appendix B for further information on any processes, such as clipping, carried out on the data.
- 2.3.4 A TIF file is produced by TerraSurveyor software along with an associated world file (.TFW) that allows automatic georeferencing (OSGB36 datum) when using GIS or CAD software. The main form of data display used in the report is the minimally processed greyscale plot.
- 2.3.5 The raster images are combined with base mapping using ProgeCAD Professional 2014, creating DWG (2010) file formats. All images are externally referenced to the CAD drawing in order to maintain good graphical quality. The CAD plots are effectively georeferenced facilitating relocation of features using GPS, resection method, etc.
- 2.3.6 An abstraction and interpretation is also drawn and plotted for all geophysical anomalies located by the survey. Anomalies are abstracted using colour coded points, lines and polygons. All plots are scaled to landscape A3 for paper printing.
- 2.3.7 A brief summary of each anomaly, with an appropriate reference number, is set out in list form within the results (Section 3) to allow a rapid and objective assessment of features within each survey area.
- 2.3.8 A digital archive is produced with this report, see Appendix D below. The main archive is held at the offices of Archaeological Surveys Ltd.

3 RESULTS

3.1 *General assessment of survey results*

- 3.1.1 The detailed magnetic survey was carried out over a total of 27 numbered survey areas but within 48 separate land parcels covering approximately 58ha. The majority of the survey was conducted within the 30m design width corridor, with further re-routes and larger area surveys also carried out.
- 3.1.2 Magnetic anomalies located can be generally classified as positive and negative responses of archaeological potential, positive and negative anomalies of an uncertain origin, anomalies associated with land management, linear anomalies of an agricultural origin, anomalies associated with quarrying, areas of magnetic debris and disturbance, strong discrete dipolar anomalies relating to ferrous objects, strong multiple dipolar linear anomalies relating to buried services or pipelines and anomalies relating to natural features. Anomalies located within each survey area have been numbered and are described below.

3.2 *Statement of data quality*

- 3.2.1 Data are considered representative of the magnetic anomalies present within the site. There are no significant defects within the dataset. Localised zones of magnetic disturbance may obscure weak features.

3.3 Data interpretation

3.3.1 The list of sub-headings below attempts to define a number of separate categories that reflect the range and type of features located during the survey. A basic explanation of the characteristics of the magnetic anomalies is set out for each category in order to justify interpretation, a basic key is indicated to allow cross referencing to the abstraction and interpretation plot. CAD layer names are included to aid reference to associated digital files (.dwg/.dxf). Sub-headings are then used to group anomalies with similar characteristics for each survey area.









Report sub-heading CAD layer names and plot colour	Description and origin of anomalies
<p>Anomalies with archaeological potential</p> <p>AS-ABST MAG POS LINEAR ARCHAEOLOGY AS-ABST MAG POS DISCRETE ARCHAEOLOGY AS-ABST MAG POS ARCHAEOLOGY AS-ABST MAG POS CURVILINEAR RING DITCH AS-ABST MAG ENCLOSURE DITCH AS-ABST MAG NEG STRUCTURAL ARCHAEOLOGY</p> 	<p>Anomalies have the characteristics (mainly morphological) of a range of archaeological features such as pits, ring ditches, enclosures, etc.. Negative linear and rectilinear anomalies may be indicative of former structural remains.</p>
<p>Anomalies with an uncertain origin</p> <p>AS-ABST MAG POS LINEAR UNCERTAIN AS-ABST MAG NEG LINEAR UNCERTAIN AS-ABST MAG POS DISCRETE UNCERTAIN AS-ABST MAG POS UNCERTAIN</p> 	<p>The category applies to a range of anomalies where <u>there is not enough evidence to confidently suggest an origin</u>. Anomalies in this category <u>may well be related to archaeologically significant features, but equally relatively modern features, geological/pedological features and agricultural features should be considered</u>. Positive anomalies are indicative of magnetically enhanced soils that may form the fill of 'cut' features or may be produced by accumulation within layers or 'earthwork' features; soils subject to burning may also produce positive anomalies. Negative anomalies are produced by material of comparatively low magnetic susceptibility such as stone and subsoil.</p>
<p>Anomalies relating to land management</p> <p>AS-ABST MAG BOUNDARY AS-ABST MAG LAND DRAIN</p> 	<p>Anomalies are mainly linear and may be indicative of the magnetically enhanced fill of cut features (i.e. ditches). The anomalies may be long and/or form rectilinear elements and they may relate to topographic features or be visible on early mapping. Associated agricultural anomalies (e.g. headlands, plough marks and former ridge and furrow) may support the interpretation. Land drains can appear in a classic herringbone pattern of interconnected multiple dipolar linear anomalies, or as parallel linear anomalies. The multiple dipolar response indicates a ceramic land drain.</p>
<p>Anomalies with an agricultural origin</p> <p>AS-ABST MAG AGRICULTURAL AS-ABST MAG RIDGE AND FURROW</p> 	<p>The anomalies are often linear and form a series of parallel responses or are parallel to extant land boundaries. Where the response is broad, former ridge and furrow is likely; narrow response is often related to modern ploughing.</p>
<p>Anomalies associated with possible quarrying</p> <p>AS-ABST MAG QUARRYING</p> 	<p>Magnetically variable anomalies, which may be negative, indicating a response to geology/drift deposits and/or positive indicating an increased depth of topsoil. Very strongly magnetic anomalies are a response to highly magnetic material which can be used to infill a depression. A negative response may be a response to a band of rock near the surface, or at the edge of a depression.</p>
<p>Anomalies associated with magnetic debris</p> <p>AS-ABST MAG DEBRIS AS-ABST MAG STRONG DIPOLAR</p> 	<p>Magnetic debris often appears as areas containing many small dipolar anomalies that may range from weak to very strong in magnitude. It often occurs where there has been dumping or ground make-up and is related to magnetically thermoremanent materials such as brick or tile or other small fragments of ferrous material. This type of response is occasionally associated with kilns, furnace structures, or hearths and <u>may therefore be archaeologically significant</u>. Strong discrete dipolar anomalies are responses to ferrous objects within the topsoil.</p>
<p>Anomalies with a modern origin</p> <p>AS-ABST MAG DISTURBANCE AS-ABST MAG SERVICE</p> 	<p>The magnetic response is often strong and dipolar indicative of ferrous material and may be associated with extant above surface features such as wire fencing, cables, pylons etc.. Often a significant area around such features has a strong magnetic flux which may create magnetic disturbance; such disturbance can effectively obscure low magnitude anomalies if they are present. Fluxgate sensors may respond erratically and with hysteresis adjacent to strong magnetic sources. Buried services may produce characteristic multiple dipolar anomalies dependant upon their construction.</p>
<p>Anomalies with a natural origin</p> <p>AS-ABST MAG NATURAL FEATURES</p> 	<p>Naturally formed magnetic anomalies are caused by localised variability in the magnetic susceptibility of soils, subsoils and other drift or solid geologies. Anomalies may be amorphous, linear or curvilinear and may appear 'fluvial' or discrete; the latter are <u>almost impossible to distinguished from pit-like anomalies with an anthropogenic origin</u>. Fluvial, glacial and periglacial processes may be responsible for their formation within drift material and subsoil.</p>

Table 1: List and description of interpretation categories

3.4 *List of anomalies - Area 1*

Area located between OS NGR 415148 189884 to 415486 189814, see Fig 02.

Anomalies with an uncertain origin

(1) - Positive linear and possible rectilinear anomalies. Some have a similar orientation to land drains (2); however, cut features should be considered.

Anomalies associated with land management

(2) - A series of negative linear anomalies appear to relate to land drains.

Anomalies associated with magnetic debris

(3) - The survey area contains a number of patches of magnetic debris, with a very strong magnetic response at the south eastern end. This is likely to relate to dumped material.

Anomalies with a modern origin

(4) - The strong magnetic linear anomaly is a response to an existing pipe.

3.5 *List of anomalies - Area 3*

Area located between OS NGR 415786 189890 to 415942 189963, see Fig 03.

Anomalies with an uncertain origin

(5) - Positive linear anomalies may indicate cut features, although this is not certain.

Anomalies associated with land management

(6) - Positive linear anomaly relates to a former land boundary.

Anomalies with an agricultural origin

(7) - A series of parallel linear anomalies relate to former ridge and furrow.

3.6 *List of anomalies - Area 4*

Area located between OS NGR 415963 189973 to 416339 189988, see Fig 04.

Anomalies with an uncertain origin

(8) - A fragmented positive linear anomaly may relate to a cut feature. Several other weak positive and negative linear and discrete positive responses have also been located.

Anomalies with an agricultural origin

(9) - A series of parallel linear anomalies relate to former ridge and furrow.

3.7 *List of anomalies - Area 5*

Area located between OS NGR 416362 189980 to 416650 189806, see Fig 05.

Anomalies of archaeological potential

(10) - Positive linear, rectilinear and discrete responses are located at the western end of the survey area. It is possible that they relate to cut features and an archaeological origin should be considered.

(11) - A positive curvilinear anomaly may relate to an enclosure feature. However, topographically it lies on a north west facing steep slope.

3.8 *List of anomalies - Area 6*

Area located between OS NGR 416649 189796 to 416943 189294, see Figs 06 & 07.

Anomalies with an uncertain origin

(12) - The survey area contains a number of positive linear and discrete responses. They lack a coherent morphology preventing confident interpretation.

Anomalies associated with land management

(13) - A positive linear anomaly and a zone of magnetic debris are associated with a formerly mapped field boundary.

3.9 *List of anomalies - Area 7*

Area located between OS NGR 416953 189289 to 416991 189254, see Fig 07.

Anomalies with an uncertain origin

(14) - The survey area contains a small number of weakly positive linear anomalies.

3.10 *List of anomalies - Area 9*

Area located between OS NGR 417104 188581 to 417374 188219, see Figs 08 & 09.

Anomalies of archaeological potential

(15) - Positive linear and rectilinear anomalies appear to relate to cut linear features and enclosures. Although truncated by modern pipes and close to the edge of the survey area, their morphology indicates a possible archaeological origin.

Anomalies with an uncertain origin

(16) - The survey area contains a small number of weakly positive linear anomalies. They are poorly defined and lack a coherent morphology preventing confident interpretation.

(17) - At the south eastern edge of the survey area is a large amorphous positive response. This type of response generally indicates a natural feature, but this is not certain.

3.11 *List of anomalies - Area 13*

Area located between OS NGR 418810 186286 to 418895 186155, see Fig 10.

The survey area contains only one short positive linear anomaly of uncertain origin. The majority of the responses are associated with land drainage and magnetic debris.

3.12 *List of anomalies - Area 14*

Area located between OS NGR 418904 186141 to 418921 189945, see Fig 11.

Anomalies of archaeological potential

(18) - Positive linear, rectilinear and discrete anomalies are very weak; however, given the close proximity to the scheduled area of the Roman town and the parallel nature of the anomalies to other features seen in Area 15 to the south, an archaeological origin should be considered.

Anomalies with an uncertain origin

(19) - A small number of short, weakly positive linear and amorphous positive responses have been located. It is not possible to determine their origin.

3.13 *List of anomalies - Area 15 west*

Area located between OS NGR 418931 185931 to 419343 185826 see Figs 12 & 13.

Anomalies of archaeological potential

(20) - Positive linear anomalies appear to form part of an enclosure feature. To the south east is another parallel weakly positive linear anomaly with a number of pit-like responses close by. These are located just to the north of the scheduled Roman town and are likely to be associated.

(21) - A weakly positive linear anomaly is located in the northern part of re-routed survey area. The orientation of the anomaly is similar to part of (20) and the response may indicate a linear cut feature.

Anomalies with an uncertain origin

(22) - A number of weakly positive linear anomalies are located in the vicinity of anomaly (21). They are generally short and lack a coherent morphology.

(23) - Located within a small paddock within the central part of the survey area (Area 15.2) are a group of positive and negative rectilinear anomalies. This type of response indicates former structural remains. They are generally parallel with the trend of the archaeological responses seen to the east and west, close to the scheduled area and an archaeological origin should be considered. However, they are also parallel with the field boundary to the east and close to the farm buildings at Nythe Farm and an association with former farm buildings or stalls is possible.

(24) - Area 15 contains a number of weakly positive linear anomalies and discrete positive responses. They are generally short and indistinct and their origin is uncertain.

(25) - In the northern part of the survey area are a group of discrete positive responses. There are some curvilinear attributes, and it is not possible to determine if they relate to a former river meander, or pits/areas of burning. A land drain is located in the vicinity, but it is not clear if it is associated.

Anomalies with a modern origin

(26) - Extending southwards and northwards is a water pipe that is associated with a former wind pump, recorded on the base mapping, but related to a deep hole in the ground.

3.14 *List of anomalies - Area 15 east*

Area located between OS NGR 419149 185704 to 419562 185738, see Figs 14 & 15.

(27) - A group of positive linear, rectilinear and discrete positive responses form a complex group of linear ditches and enclosures containing pits and possible areas of burning. Located immediately north of the scheduled Roman town, these are a continuation of the Roman features. Numerous Romano-British pottery sherds were visible on the surface within the survey area, along with small sarsen stones.

(28) - Two positive linear anomalies appear to flank a possible trackway within the complex of anomalies (27). A trackway with a similar position and orientation was located 200m to the south west, within the Roman town, by a previous geophysical survey at Lotmead Farm.

(29) - A positive linear anomaly, oriented north west to south east extends across the eastern part of Area 15.3. It extends through a pond and corresponds to a linear depression in the field. It also appears to relate to a direct extension to one of the linear ditches, associated with a track, seen to the south within a geophysical survey at Lotmead Farm. It has to be considered, therefore, that this anomaly is a continuation of the trackway ditch.

Anomalies with an uncertain origin

(30) - A positive linear anomaly is located in the eastern part of 15.3. It is parallel with the main axis of the archaeological features (27) and perpendicular with linear anomaly (29); however, it does appear to extend towards a pond in the field. It is not possible to determine if it relates to a linear ditch with an archaeological origin, or a ditch or drain associated with the pond.

(31) - The eastern part of the survey area contains a number of discrete positive responses. While some are clustered, others are more isolated. They appear to relate to pit-like features, but their origin is uncertain.

(32) - The survey area contains a number of weak, short, positive linear anomalies and several discrete positive responses. From their morphology it is not possible to determine if they relate to cut features, but given their proximity to archaeological features, this should be considered.

Anomalies associated with land management

(33) - A linear arrangement of strong discrete positive responses relates to the line of a former field boundary.

Anomalies associated with magnetic debris

(34) - Patches of magnetic debris are evident mainly within the north western part of Area 15.3. Much of this is associated with ground consolidation and former field boundaries.

Anomalies with a modern origin

(35) - Two strong, multiple dipolar linear anomalies are located in the north western corner of the survey area. The response indicates buried services.

3.15 *List of anomalies - Area 18*

Area located between OS NGR 420100 185040 to 420023 184657 see Fig 16.

Anomalies with an uncertain origin

(36) - A small cluster of weakly positive discrete anomalies is located in the southern part of the survey area. Other isolated anomalies can be seen elsewhere. They lack a coherent morphology, and it is possible that they relate to natural features.

Anomalies associated with magnetic debris

(37) - A linear zone of magnetic debris relates to a removed field boundary. Other zones of magnetic debris are evident mainly adjacent to the eastern field boundary. This type of response indicates dumped magnetically thermoremanent material.

3.16 *List of anomalies - Area 19*

Original Area located between OS NGR 419867 184788 to 419593 184317 with re-route located between OS NGR 420008 184645 to 419627 184514, see Figs 17-19.

Anomalies of archaeological potential

(38) - A group of positive linear, rectilinear and discrete responses form a complex of cut linear ditches, enclosures and pits. The location of the anomalies is immediately adjacent to the Roman road of Ermin Street and the scheduled area is located only 90m to the north west. The orientation and morphology of the anomalies indicates that these are a continuation of the Roman town outside of the scheduled area. They extend 50m from the Roman road, with a very well defined outer ditch and no obvious archaeological features beyond. It is possible that structural remains lie within the enclosures, but there is not a clear response. The anomalies are located within a zone of very dark brown/black soil.

Anomalies with an uncertain origin

(39) - Two negative linear anomalies appear to extend through the archaeological features. They do not have a similar orientation to the archaeology and the response may indicate a modern service/drain.

(40) - A small number of isolated weakly positive discrete anomalies lie to the south west of the archaeological features (38). Their weak response and lack of associated features prevents confident interpretation.

(41) - Positive linear anomalies located in Area 19.2. Although close to the Roman road, they are not parallel with it or the archaeological features (38) to the north.

(42) - A number of broad, very weakly positive anomalies are located in 19.3. The field contains extant linear ditches, although it is not possible to determine if they are associated.

Anomalies associated with land management

(43) - A former land boundary is represented by a line of strong dipolar responses.

Anomalies with a modern origin

(44) - Strong, dipolar anomalies with surrounding magnetic disturbance are a response to collars or joints on the existing pipeline in the southern part of the survey area (see Fig 19). These can be seen in places within most of the survey areas within Phase 3 between here and the M4.

3.17 *List of anomalies - Area 21*

Area located between OS NGR 419595 184166 to 419597 184038, see Fig 20.

Anomalies with an uncertain origin

(45) - Weakly positive linear anomalies cannot be easily interpreted.

3.18 *List of anomalies - Area 22*

Area located between OS NGR 419598 184014 to 419607 183858, see Fig 20.

Anomalies with an uncertain origin

(46) - Positive linear and curvilinear anomalies may relate to cut features, but they are weak and also close to strong responses associated with the existing pipeline.

3.19 *List of anomalies - Area 24*

Area located between OS NGR 419615 183668 to 419617 183537, see Fig 21.

The survey area contains strong magnetic responses associated with the existing pipeline.

3.20 *List of anomalies - Area 25*

Area located between OS NGR 419617 183529 to 419622 183377, see Fig 21.

Anomalies of archaeological potential

(47) - Two parallel linear anomalies have been truncated by ridge and furrow (49). To the south are pit-like anomalies and another linear anomaly. These appear to be a continuation of archaeological cut features seen to the south within Areas 27 & 28.

Anomalies with an uncertain origin

(48) - Positive linear anomalies are parallel with the ridge and furrow (49). While they may be associated with the ridge and furrow, an archaeological origin should be considered.

Anomalies with an agricultural origin

(49) - A series of parallel linear anomalies relates to ridge and furrow. They have truncated earlier features (47). They can be seen clearly to continue southwards into Areas 27 & 28.

3.21 *List of anomalies - Area 27*

Area located between OS NGR 419622 183369 to 419625 183236, see Figs 22 & 23.

Anomalies of archaeological potential

(50) - Negative rectilinear anomalies relate to structural remains associated with a number of enclosures. The dimensions are 23.5m by 13m, with evidence of internal walling and possible burning. Other examples of structural remains can be seen to the east and south east.

(51) - To the south of anomaly (50) is a negative curvilinear anomaly located within an enclosure. It appears to relate to some form of structure and is associated with pits or possible areas of burning.

(52) - A number of positive linear and possible rectilinear anomalies relate to linear ditches and enclosures that extend southwards into Area 28. A number of pits and also possible heavily truncated ring ditches are also evident. Further linear anomalies can be seen elsewhere, but they are fragmented. The anomalies have been truncated by ridge and furrow.

Anomalies with an uncertain origin

(53) - Extending from close to the eastern boundary towards the south west is a negative linear anomaly. This anomaly extends around structural remains (50) in an irregular zig-zag formation associated with the extant ridge and furrow. A similar anomaly can then be seen 110m further west which extends throughout the western part of Area 28. The origin of this anomaly is not certain, but it is likely to be modern in origin.

(54) - A number of negative linear anomalies extend across the survey area. At least one relates to a modern gully or pipe.

3.22 *List of anomalies - Area 28*

Area located between OS NGR 419625 183231 to 419632 182880, see Figs 22-24.

Anomalies of archaeological potential

(55) - Positive linear, rectilinear and curvilinear anomalies relate to further enclosures that extend south westwards from Area 27 (52). There is some evidence for at least one truncated ring ditch with a 10.5m diameter which may relate to a former round house.

Anomalies with an uncertain origin

(56) - A number of positive curvilinear anomalies can be seen just to the east of the pipeline corridor. One appears to overlie the current pipeline; however, there is possible evidence of truncation by ridge and furrow.

(57) - The southern part of the survey area contain a number of short positive and negative linear anomalies. Their origin cannot be determined.

3.23 *List of anomalies - Area 29*

Area located between OS NGR 419647 182864 to 419650 182813, see Fig 25.

Area 29 contains only a short, weakly positive linear anomaly and the existing pipeline.

3.24 *List of anomalies - Area 30*

Area located between OS NGR 419640 182755 to 419647 182263, see Figs 25-26.

Area 30 extends over a series of paddocks. It contains positive anomalies that may indicate natural features. Weakly positive linear anomalies in the south are of uncertain origin and large discrete dipolar anomalies are a response to the iron/steel collars of the existing water pipeline.

3.25 *List of anomalies - Area 31*

Area located between OS NGR 419645 182220 to 419414 181572, see Figs 27-29.

Anomalies of archaeological potential

(58) - A positive linear anomaly extends across the northern part of the survey area (see Fig 27) and appears to relate to a cut linear ditch.

Anomalies of archaeological potential

(59) - In the southern part of the survey area is a positive linear anomaly (see Fig 29). Although adjacent to and parallel with the boundary ditch to the north, the responses indicates a cut, linear ditch and an archaeological origin is possible.

Anomalies with an uncertain origin

(60) - The survey area contains a number of groups of weakly positive linear anomalies.

These are generally poorly defined and lack coherent characteristics preventing interpretation as cut features.

Anomalies with a natural origin

(61) - Weakly positive and negative responses appear to relate to natural features.

3.26 *List of anomalies - Area 32*

Area located between OS NGR 419401 181558 to 419539 180931, see Figs 30-31.

Anomalies of archaeological potential

(62) - Fragmented positive linear anomalies may indicate cut features with an archaeological origin.

Anomalies with an uncertain origin

(63) - The survey area contains a number of short, weakly positive linear anomalies. They lack a coherent morphology preventing confident interpretation.

(64) - In the northern part of the survey area are several weak anomalies. This type of response may indicate natural features, although it is not possible to determine if they are of natural or anthropogenic origin.

(65) - Located at the south eastern edge of the survey area (see Fig 31) is a positive linear anomaly. It lies between two land drains (68), but is of a slightly different orientation. It is not possible to ascertain the date or function of this anomaly.

Anomalies associated with land management

(66) - A linear group of strong, discrete, dipolar anomalies are associated with the line of a former mapped field boundary in the western part of the site (see Fig 30). A similar response can be seen in the original route to the east (see Fig 31).

(67) - A former land boundary is mapped in the southern part of the site.

(68) - A series of parallel, weak, multiple dipolar, linear anomalies are regularly spaced and relate to land drains.

Anomalies associated with magnetic debris

(69) - The southern part of the survey area contains a zone of strongly magnetic debris. This relates to dumped magnetically thermoremanent material that may have been used for ground consolidation. An association with the M4, located immediately to the south, such as a construction compound is possible. The area was slightly raised with soil of slightly lighter colour than in the rest of the field.

3.27 *List of anomalies - Area 34*

Area located between OS NGR 419615 180646 to 419800 179769, see Fig 32-34.

Anomalies of archaeological potential

(70) - A positive linear anomaly extends across the width of the survey corridor and appears to relate to a linear ditch with archaeological potential (see Fig 32). Several discrete positive anomalies are located to the south and these may relate to associated pits.

(71) - Three parallel positive linear anomalies have been truncated by what appears to be the existing pipeline (76). These may relate to parallel linear ditches which have been recorded as cropmark features.

(72) - Located in the southern half of the survey area (see Figs 33 & 34) is a weakly positive curvilinear anomaly. There are several ring ditch cropmarks located 300m to the south east and it is possible this anomaly also relates to a ring ditch with a 13m diameter, which may indicate a round house feature.

Anomalies with an uncertain origin

(73) - There are a number of weakly positive, and a small number of negative, linear anomalies throughout the length of the survey area. They are generally short, fragmented, poorly defined and while it is possible that they relate to cut features, they lack a coherent morphology.

Anomalies associated with land management

(74) - At least two former field boundaries are mapped in the northern part of the survey area. They are associated with widespread magnetic debris.

(75) - Two sets of ridge and furrow are divided by a former mapped field boundary within the southern part of the site.

Anomalies with a modern origin

(76) - A positive linear anomaly, located in the northern part of the site (see Fig 32), appears to have truncated three parallel linear anomalies (71). This linear anomaly is in the vicinity of the existing pipeline, the anomaly may be a response to magnetically enhanced material, possibly derived from the truncated archaeology, re-incorporated into the backfilled pipe trench.

3.28 *List of anomalies - Area 36*

Area located between OS NGR 419795 179754 to 419717 197488, see Fig 35.

Anomalies of archaeological potential

(77) - A weakly positive linear anomaly extends partially across the central part of the survey area. A number of small, discrete, positive responses are located close by. Linear cropmarks are recorded in the vicinity, and it is possible that these relate to cut features with an archaeological origin.

(78) - At the southern edge of the survey area is a positive curvilinear anomaly. It relates to a ring ditch with a 30m diameter, which may indicate a possible former round barrow.

Anomalies with an uncertain origin

(79) - A weakly positive response and a small number of short weakly positive linear anomalies can be seen in the survey area.

3.29 *List of anomalies - Area 37*

Area located between OS NGR 419710 179468 to 419644 178020, see Fig 36-39.

Anomalies of archaeological potential

(80) - Located in the southern part of the survey area (see Fig 39) is a positive linear anomaly. Although it appears isolated, it is parallel with a number of linear features located 260m to the south (81). It is likely to relate to a linear ditch and its archaeological potential should be considered.

(81) - Positive linear, rectilinear and discrete anomalies relate to linear ditches, enclosures and pits which continue south into Areas 38 and Area 39. Located immediately adjacent to the Roman road from *Cunetio* to *Durocornovium*, the anomalies appear to relate to a Roman roadside settlement. A number of small sarsen stones were noted during the survey.

Anomalies with an uncertain origin

(82) - The survey area contains a number of positive linear, curvilinear and discrete responses, with a small number of negative linear responses. They are weak, indistinct, short and lack coherent morphology, although it is possible that some relate to cut features.

Anomalies associated with possible quarrying

(83) - A weakly positive response is similar in form and magnitude to a number of others located in a linear arrangement further south within Areas 38 and 39. These appear to relate to a series of pits, and given the relatively regular spacing and proximity to the Roman road 50m to the west, it is possible that they are associated with the construction or maintenance of the road.

Anomalies associated with magnetic debris

(84) - Located in the northern part of the survey area (see Fig 36) is a linear zone of magnetic debris. This is associated with a former track or boundary and is modern in origin.

3.30 *List of anomalies - Area 38*

Area located between OS NGR 419648 178003 to 419684 177804, see Fig 40.

Anomalies of archaeological potential

(85) - A cluster of positive linear and discrete positive responses is a continuation of

anomalies (84) at the southern edge of Area 37 and they relate linear ditches and a group of pits.

(86) - A strongly positive anomaly is located within the cluster of archaeological features (85). It has a form and dimensions similar to other anomalies that appear to be associated with quarrying (90); however, the strong response indicates that it has become infilled with magnetically enhanced material from within the Roman settlement.

(87) - Positive linear anomalies are located at the southern edge of the survey area and relate to a continuation of the archaeological features seen to the north and south.

Anomalies with an uncertain origin

(88) - Weakly positive anomalies with an irregular form. It is possible that they are associated with features (90).

(89) - The survey area contains a number of weakly positive linear anomalies that may relate to cut features.

Anomalies associated with possible quarrying

(90) - Positive anomalies with dimensions of approximately 4.5m by 8m appear at fairly regular intervals along the length of the pipeline route, 50m east of the Roman road. They appear to relate to chalk pits.

3.31 *List of anomalies - Area 39*

Area located between OS NGR 419687 177787 to 419923 176498, see Fig 41-44.

Anomalies of archaeological potential

(91) - At the northern edge of the survey area (Fig 41) are a continuation of the linear ditches and pits seen to the north in Areas 37 and 38.

(92) - Weakly positive curvilinear or rectilinear anomaly appears to relate to a cut feature to the south of anomalies (91). Other weak short linear and discrete anomalies are located nearby and an association is possible.

(93) - Located in the southern part of the survey area (see Figs 43 & 44) is a positive linear anomaly. This appears to relate to a linear ditch, parallel with others seen at the northern end of the survey area.

Anomalies with an uncertain origin

(94) - A number of weakly positive linear anomalies extend across the survey area. Due to their very weak response they are indistinct, but it should be considered that they relate to linear ditches, more isolated from the main areas of occupation.

(95) - In the central southern part of the survey area (see Fig 43) are a number of positive linear, curvilinear and discrete responses. It is not clear if they relate to natural or anthropogenic features.

(96) - In the southern part of the survey area are bands of weakly positive responses and positive linear anomalies. It is not clear if these are of anthropogenic or natural origin.

Anomalies associated with possible quarrying

(97) - A number of weakly positive responses can primarily be seen in the northern part of the survey area. These are a continuation of the quarry pits seen to the north.

Anomalies associated with magnetic debris

(98) - A patch of magnetic debris is located in a shallow dry valley that crosses the survey area. It is likely to relate to dumped magnetically thermoremanent material.

Anomalies associated with a natural origin

(99) - A series of parallel positive linear anomalies and several discrete positive responses are located in the central southern part of the survey area (see Fig 43). These appear to relate to natural features likely to be associated with periglacial processes.

4 CONCLUSION

- 4.1.1 Within Phase 1, at the northern end of the pipeline at Blunsdon, there are a number of weakly positive linear and discrete responses within most of the survey areas. However, the majority of these are incoherent except in Area 5 where a group of positive linear, rectilinear and a curvilinear anomaly may indicate archaeological features. A second group of positive linear and rectilinear features have been located in Area 9 in the southern part of the Triangle Site, just north of the A419.
- 4.1.2 Phase 2 extends around the scheduled Roman town at Wanborough and a number of geophysical anomalies have been located close to the scheduled area, both to the north and also to the south. A small number of positive linear and rectilinear anomalies have been located to the north and south of the River Cole. A wider area of survey was carried out at Nythe Farm (Area 15), immediately north of the scheduled area, and a number of positive linear, rectilinear and discrete features relate to Roman ditches, enclosures and pits. These appear to be bounded by a possible trackway heading northwards. To the south of Wanborough House and the Wanborough Road (Area 19), further archaeological features were located extending across a well defined zone 50m from the Roman road, 90m south east of the scheduled area. These appear to continue to the south east, although they cannot be seen another 150m further south eastwards.
- 4.1.3 In Phase 3 a number of linear ditches, rectilinear and curvilinear enclosures and pits have been located in a zone between The Marsh and the A419 (Areas 25, 27 & 28). Evidence for former structural remains, indicating a possible Roman building, has also been found within this zone of enclosures and other archaeological features. This is in the area of the Roman settlement north of Great Moor Leaze which is recorded on the Wiltshire HER. The anomalies have been heavily truncated by ridge

and furrow. A small number of further isolated ditches have been located further south within Phase 3.

- 4.1.4 Phase 4 extends between the M4 motorway and the Whitefield Reservoir, primarily on the chalk. Towards the northern end of this section is evidence for two possible ring ditch features (Areas 34 & 36), and a number of possible linear ditches. As the corridor extends southwards, it runs parallel with and 36m east of the A417, the Roman road from Cunetio to Wanborough. To the east of Draycot Foliat, where the road rises onto a crest, a complex of linear ditches, enclosures and pits indicates a Roman roadside settlement that extends for at least 400m (Areas 37, 38 & 39).

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Appendix A – basic principles of magnetic survey

Iron minerals are always present to some degree within the topsoil and enhancement associated with human activity is related to increases in the level of magnetic susceptibility and thermoremanent material.

Magnetic susceptibility is an induced magnetism within a material when it is in the presence of a magnetic field. This can be thought of as effectively permanent due to the presence of the Earth's magnetic field.

Thermoremanent magnetism occurs when ferrous material is heated beyond a specific temperature known as the Curie Point. Demagnetisation occurs at this temperature with re-magnetisation by the Earth's magnetic field upon cooling.

Enhancement of magnetic susceptibility can occur in areas subject to burning and complex fermentation processes on biological material; these are frequently associated with human settlement. Thermoremanent features include ovens, hearths, and kilns. In addition thermoremanent material such as tile and brick may also be associated with human activity and settlement.

Silting and deliberate infilling of ditches and pits with magnetically enhanced soil can create an area of enhancement compared with surrounding soils and subsoils into which the feature is cut. Mapping enhanced areas will produce linear and discrete anomalies allowing an assessment and characterisation of hidden subsurface features.

It should be noted that areas of negative enhancement can be produced from material having lower magnetic properties compared to the topsoil. This is common for many sedimentary bedrocks and subsoils which were often used in the construction of banks and walls etc. Mapping these 'negative' anomalies may also reveal archaeological features.

Magnetic survey or magnetometry can be carried out using a fluxgate gradiometer and may be referred to as gradiometry. The SENSYS gradiometer is a passive instrument consisting of two fluxgate sensors mounted vertically 65cm apart. The instrument is carried about 10-20cm above the ground surface and the upper sensor measures the Earth's magnetic field as does the lower sensor but this is influenced to a greater degree by any localised buried field. The difference between the two sensors will relate to the strength the magnetic field created by the buried feature.

There are a number of factors that may affect the magnetic survey and these include soil type, local geology and previous human activity. Situations arise where magnetic disturbance associated with modern services, metal fencing, dumped waste material etc., obscures low magnitude fields associated with archaeological features.

Appendix B – data processing notes

Clipping

Minimum and maximum values are set and replace data outside of the range with those values. Extreme values are removed improving colour or greyscale contrast associated with data values that may be archaeologically significant. It has been found that clipping data to ranges between $\pm 20\text{nT}$ and $\pm 10\text{nT}$ often improves the appearance of features associated with archaeology. Different ranges are applied to data in order to determine the most suitable for anomaly abstraction and display.

Zero (dstrip) Median/Mean Traverse

The median (or mean) of each traverse is calculated ignoring data outside a threshold value, the median (or mean) is then subtracted from the traverse. The process is used to equalise differences between the baseline value of gradiometer sensors.

High Pass Filtering

A mathematical process used to remove low frequency anomalies relating to survey tracks and modern agricultural features.

Appendix C – survey and data information

Area 1

Filename: J619-mag-Area1-proc.xcp
 Description: Imported as Composite from: J619-mag-Area1.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 415145.455981339, 189916.666519333 m
 Southeast corner: 415492.405981339, 189799.366519333 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 342300
 Dimensions
 Composite Size (readings): 2313 x 782
 Survey Size (meters): 347 m x 117 m
 Grid Size: 347 m x 117 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 5.53
 Min: -5.50
 Std Dev: 2.52
 Mean: 0.02
 Median: 0.02
 Composite Area: 4.0697 ha
 Surveyed Area: 1.1704 ha
 Processes: 1
 1 Base Layer
 GPS based Proce4
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 DeStripe Median Traverse:
 4 Clip from -5.00 to 5.00 nT

Area 3

Filename: J619-mag-Area3-proc.xcp
 Description: Imported as Composite from: J619-mag-Area3.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 415769.12103903, 189975.747157127 m
 Southeast corner: 415948.22103903, 189864.897157127 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 128300
 Dimensions
 Composite Size (readings): 1194 x 739
 Survey Size (meters): 179 m x 111 m
 Grid Size: 179 m x 111 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 5.53
 Min: -5.50
 Std Dev: 1.85
 Mean: 0.02
 Median: -0.06
 Composite Area: 1.9853 ha
 Surveyed Area: 0.50239 ha
 Processes: 1
 1 Base Layer
 GPS based Proce3
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 Clip from -5.00 to 5.00 nT

Area 4.1

Filename: J619-mag-Area4-1-proc.xcp
 Description: Imported as Composite from: J619-mag-Area4-1.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 415958.71606272, 190006.335570546 m
 Southeast corner: 416004.61606272, 189961.185570546 m
 Collection Method: Randomised
 Sensors: 1
 Dummy Value: 32702
 Source GPS Points: 37000
 Dimensions
 Composite Size (readings): 306 x 301
 Survey Size (meters): 45.9 m x 45.2 m
 Grid Size: 45.9 m x 45.2 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 5.53
 Min: -5.50
 Std Dev: 1.38
 Mean: 0.02
 Median: -0.10
 Composite Area: 0.20724 ha
 Surveyed Area: 0.12305 ha
 Processes: 1
 1 Base Layer
 GPS based Proce3
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 Clip from -5.00 to 5.00 nT

Area 4.2

Filename: J619-mag-Area4-2-proc.xcp
 Description: Imported as Composite from: J619-mag-Area4-2.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 416016.12219675, 190034.107863767 m
 Southeast corner: 416123.22219675, 189985.807863767 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 82300
 Dimensions
 Composite Size (readings): 714 x 322
 Survey Size (meters): 107 m x 48.3 m
 Grid Size: 107 m x 48.3 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 5.53
 Min: -5.50
 Std Dev: 1.51
 Mean: -0.30
 Median: -0.08
 Composite Area: 0.51729 ha
 Surveyed Area: 0.27565 ha
 Processes: 1
 1 Base Layer
 GPS based Proce3
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 Clip from -5.00 to 5.00 nT

Area 4.3

Filename: J619-mag-Area4-3-proc.xcp
 Description: Imported as Composite from: J619-mag-Area4-3.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 416131.442541343, 190049.21421208 m
 Southeast corner: 416341.592541343, 189962.21421208 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 284400
 Dimensions
 Composite Size (readings): 1401 x 580
 Survey Size (meters): 210 m x 87 m
 Grid Size: 210 m x 87 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 5.53
 Min: -5.50
 Std Dev: 1.44
 Mean: 0.12
 Median: -0.02
 Composite Area: 1.8283 ha
 Surveyed Area: 0.87552 ha
 Processes: 1
 1 Base Layer
 GPS based Proce3
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 Clip from -5.00 to 5.00 nT

Area 5.1

Filename: J619-mag-Area5-1.xcp
 Description: Imported as Composite from: J619-mag-Area5-1.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 416357.193078589, 189981.320661827 m
 Southeast corner: 416610.843078589, 189876.770661827 m
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 159300
 Dimensions
 Composite Size (readings): 1691 x 697
 Survey Size (meters): 254 m x 105 m
 Grid Size: 254 m x 105 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 0.91
 Mean: -0.03
 Median: 0.01
 Composite Area: 2.6519 ha
 Surveyed Area: 0.53719 ha
 Processes: 2
 1 Base Layer
 GPS based Proce4
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 DeStripe Median Traverse:
 4 Clip from -5.00 to 5.00 nT

Area 5.2

Filename: J619-mag-Area5-2.xcp
 Description: Imported as Composite from: J619-mag-Area5-2.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 416614.928084259, 189922.589629672 m
 Southeast corner: 416671.328084259, 189803.189629672 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 120300
 Dimensions
 Composite Size (readings): 376 x 796
 Survey Size (meters): 56.4 m x 119 m
 Grid Size: 56.4 m x 119 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 1.35
 Mean: -0.12
 Median: 0.02
 Composite Area: 0.67342 ha
 Surveyed Area: 0.36644 ha
 Processes: 2
 1 Base Layer
 2 Clip from -3.00 to 3.00 nT
 GPS based Proce4
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 DeStripe Median Traverse:
 4 Clip from -5.00 to 5.00 nT

Area 6

Filename: J619-mag-Area6-proc-hpf.xcp
 Description: Imported as Composite from: J619-mag-Area6.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 416601.28896499, 189797.141640564 m
 Southeast corner: 416946.28896499, 189282.641640564 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 893600
 Dimensions
 Composite Size (readings): 2300 x 3430
 Survey Size (meters): 345 m x 515 m
 Grid Size: 345 m x 515 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.32
 Min: -3.30
 Std Dev: 0.69
 Mean: 0.00
 Median: 0.00
 Composite Area: 17.75 ha
 Surveyed Area: 2.5244 ha
 Processes: 1
 1 Base Layer
 GPS based Proce5
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 DeStripe Median Traverse:
 4 High pass Uniform (median) filter: Window dia: 300
 5 Clip from -3.00 to 3.00 nT

Area 7

Filename: J619-mag-Area7.xcp
 Description: Imported as Composite from: J619-mag-Area7.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 416950.897487925, 189308.22471694 m
 Southeast corner: 417014.197487925, 189249.12471694 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 73100
 Dimensions
 Composite Size (readings): 424 x 394
 Survey Size (meters): 63.6 m x 59.1 m
 Grid Size: 63.6 m x 59.1 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 1.07
 Mean: -0.03
 Median: 0.01
 Composite Area: 0.37588 ha
 Surveyed Area: 0.1988 ha
 Processes: 2
 1 Base Layer
 2 Clip from -3.00 to 3.00 nT

GPS based Proce4

- 1 Base Layer.
- 2 Unit Conversion Layer (Lat/Long to OSGB36).
- 3 DeStripe Median Traverse:
- 4 Clip from -5.00 to 5.00 nT

Area 9

COMPOSITE

Filename: J619-mag-Area9-proc.xcp
 Description: Imported as Composite from: J619-mag-Area9.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 417100.72126571, 188598.80203348 m
 Southeast corner: 417381.67126571, 188208.80203348 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 469500
 Dimensions
 Composite Size (readings): 1873 x 2600
 Survey Size (meters): 281 m x 390 m
 Grid Size: 281 m x 390 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 1.52
 Mean: 0.02
 Median: 0.03
 Composite Area: 10.957 ha
 Surveyed Area: 1.5338 ha
 Processes: 2
 1 Base Layer
 2 Clip from -3.00 to 3.00 nT

GPS based Proce4

- 1 Base Layer.
- 2 Unit Conversion Layer (Lat/Long to OSGB36).
- 3 DeStripe Median Traverse:
- 4 Clip from -5.00 to 5.00 nT

Area 13.1

Filename: J619-mag-Area13-1.xcp
 Description: Imported as Composite from: J619-mag-Area13-1.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 418809.894771738, 186310.999403376 m
 Southeast corner: 418917.594771738, 186154.399403376 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 199800
 Dimensions
 Composite Size (readings): 718 x 1044
 Survey Size (meters): 108 m x 157 m
 Grid Size: 108 m x 157 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 1.19
 Mean: 0.03
 Median: 0.04
 Composite Area: 1.6866 ha
 Surveyed Area: 0.60424 ha
 Processes: 2
 1 Base Layer
 2 Clip from -3.00 to 3.00 nT

Area 14

Filename: J619-mag-Area14.xcp
 Description: Imported as Composite from: J619-mag-Area13-2.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 418870.404847879, 186170.856569607 m
 Southeast corner: 418953.804847879, 185941.956569607 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 359600
 Dimensions
 Composite Size (readings): 556 x 1526
 Survey Size (meters): 83.4 m x 229 m
 Grid Size: 83.4 m x 229 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 2.00
 Min: -2.00
 Std Dev: 0.69
 Mean: 0.02
 Median: 0.02
 Composite Area: 1.909 ha
 Surveyed Area: 1.0774 ha
 Processes: 2
 1 Base Layer
 2 Clip from -2.00 to 2.00 nT

GPS based Proce4

- 1 Base Layer.
- 2 Unit Conversion Layer (Lat/Long to OSGB36).

3 DeStripe Median Traverse:

- 4 Clip from -5.00 to 5.00 nT

Area 15.1

Filename: J619-mag-Area15-1-proc.xcp
 Description: Imported as Composite from: J619-mag-Area15-1.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 418918.842067796, 185942.428312363 m
 Southeast corner: 419077.992067796, 185769.778312363 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 257600
 Dimensions
 Composite Size (readings): 1061 x 1151
 Survey Size (meters): 159 m x 173 m
 Grid Size: 159 m x 173 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 0.97
 Mean: 0.03
 Median: 0.01
 Composite Area: 2.7477 ha
 Surveyed Area: 0.76813 ha
 Processes: 2
 1 Base Layer
 2 Clip from -3.00 to 3.00 nT

GPS based Proce4

- 1 Base Layer.
- 2 Unit Conversion Layer (Lat/Long to OSGB36).
- 3 DeStripe Median Traverse:
- 4 Clip from -5.00 to 5.00 nT

Area 15.1a

Filename: J619-Area15-1a.xcp
 Description: Imported as Composite from: J619-Area15-1a.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 418948.169148428, 186006.617358268 m
 Southeast corner: 419177.249148428, 185893.337358268 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 304700
 Dimensions
 Composite Size (readings): 1909 x 944
 Survey Size (meters): 229 m x 113 m
 Grid Size: 229 m x 113 m
 X Interval: 0.12 m
 Y Interval: 0.12 m
 Stats
 Max: 2.00
 Min: -2.00
 Std Dev: 0.70
 Mean: -0.06
 Median: -0.07
 Composite Area: 2.595 ha
 Surveyed Area: 1.0449 ha
 Processes: 2
 1 Base Layer
 2 Clip from -2.00 to 2.00 nT

GPS based Proce3

- 1 Base Layer.
- 2 Unit Conversion Layer (Lat/Long to OSGB36).
- 3 Clip from -2.00 to 2.00 nT

Area 15.2

Filename: J619-mag-Area15-2-proc.xcp
 Description: Imported as Composite from: J619-mag-Area15-2.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 419040.539421477, 185777.046156248 m
 Southeast corner: 419150.039421477, 185703.396156248 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 135300
 Dimensions
 Composite Size (readings): 730 x 491
 Survey Size (meters): 110 m x 73.7 m
 Grid Size: 110 m x 73.7 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 1.84
 Mean: 0.00
 Median: 0.01
 Composite Area: 0.80647 ha
 Surveyed Area: 0.42721 ha
 Processes: 2
 1 Base Layer
 2 Clip from -3.00 to 3.00 nT

GPS based Proce4

- 1 Base Layer.
- 2 Unit Conversion Layer (Lat/Long to OSGB36).
- 3 DeStripe Median Traverse:

4 Clip from -5.00 to 5.00 nT

Area 15.2a

Filename: J619-Area15-2a-proc.xcp
 Description: Imported as Composite from: J619-Area15-2a.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 419179.49364997, 185962.51849301 m
 Southeast corner: 419363.39364997, 185816.41849301 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 248600
 Dimensions
 Composite Size (readings): 1226 x 974
 Survey Size (meters): 184 m x 146 m
 Grid Size: 184 m x 146 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 2.00
 Min: -2.00
 Std Dev: 0.59
 Mean: -0.06
 Median: -0.06
 Composite Area: 2.6868 ha
 Surveyed Area: 0.71744 ha
 Processes: 2
 1 Base Layer
 2 Clip from -2.00 to 2.00 nT

GPS based Proce3

- 1 Base Layer.
- 2 Unit Conversion Layer (Lat/Long to OSGB36).
- 3 Clip from -3.00 to 3.00 nT

Area 15.3

Filename: J619-mag-Area15-3-proc.xcp
 Description: Imported as Composite from: J619-mag-Area15-3.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 419141.283569431, 185846.785230943 m
 Southeast corner: 419563.833569431, 185608.435230943 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 2097000
 Dimensions
 Composite Size (readings): 2817 x 1589
 Survey Size (meters): 423 m x 238 m
 Grid Size: 423 m x 238 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 1.00
 Min: -1.00
 Std Dev: 0.50
 Mean: -0.06
 Median: -0.07
 Composite Area: 10.071 ha
 Surveyed Area: 6.0717 ha
 Processes: 3
 1 Base Layer
 2 Clip from -2.00 to 2.00 nT
 3 Clip from -1.00 to 1.00 nT

GPS based Proce3

- 1 Base Layer.
- 2 Unit Conversion Layer (Lat/Long to OSGB36).
- 3 Clip from -3.00 to 3.00 nT

Area 18.1

Filename: J619-mag-Area18-1-proc.xcp
 Description: Imported as Composite from: J619-mag-Area18-1.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y): OSGB36
 Northwest corner: 420010.31370249, 185046.350439695 m
 Southeast corner: 420146.86370249, 184645.400439695 m
 Collection Method: Randomised
 Sensors: 1
 Dummy Value: 32702
 Source GPS Points: 425000
 Dimensions
 Composite Size (readings): 909 x 2673
 Survey Size (meters): 136 m x 401 m
 Grid Size: 136 m x 401 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 1.14
 Mean: -0.07
 Median: -0.06
 Composite Area: 5.467 ha
 Surveyed Area: 1.42 ha
 Processes: 2
 1 Base Layer
 2 Clip from -3.00 to 3.00 nT

GPS based Proce3

- 1 Base Layer.
- 2 Unit Conversion Layer (Lat/Long to OSGB36).
- 3 Clip from -5.00 to 5.00 nT

Area 18.2

Filename: J619-mag-Area18-2-proc.xcp
 Description: Imported as Composite from: J619-mag-Area18-2.asc
 Instrument Type: Sensys DLMGPS

Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y):
 Northwest corner: 419973.026384653, 184656.058896354 m
 Southeast corner: 420019.226384653, 184582.738896354 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 36800
 Dimensions
 Composite Size (readings): 385 x 611
 Survey Size (meters): 46.2 m x 73.3 m
 Grid Size: 46.2 m x 73.3 m
 X Interval: 0.12 m
 Y Interval: 0.12 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 0.83
 Mean: -0.10
 Median: -0.06
 Composite Area: 0.33874 ha
 Surveyed Area: 0.15333 ha
 Processes: 2
 1 Base Layer
 2 Clip from -3.00 to 3.00 nT
 GPS based Proce3
 1 Base Layer
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 Clip from -5.00 to 5.00 nT

Area 18.3

Filename: J619-mag-Area18-3-proc.xcp
 Description: Imported as Composite from: J619-mag-Area18-3.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y):
 Northwest corner: 419835.857564375, 184631.591475516 m
 Southeast corner: 419970.207564375, 184492.391475516 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 160200
 Dimensions
 Composite Size (readings): 897 x 928
 Survey Size (meters): 135 m x 139 m
 Grid Size: 135 m x 139 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 0.65
 Mean: -0.07
 Median: -0.07
 Composite Area: 1.8729 ha
 Surveyed Area: 0.57592 ha
 Processes: 2
 1 Base Layer
 2 Clip from -3.00 to 3.00 nT
 GPS based Proce3
 1 Base Layer
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 Clip from -5.00 to 5.00 nT

Area 19.1

Filename: J619-mag-Area19.xcp
 Description: Imported as Composite from: J619-mag-Area19.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y):OSGB36
 Northwest corner: 419565.956461307, 184801.997359335 m
 Southeast corner: 419891.756461307, 184302.047359335 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 749000
 Dimensions
 Composite Size (readings): 2172 x 3333
 Survey Size (meters): 326 m x 500 m
 Grid Size: 326 m x 500 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 1.22
 Mean: -0.03
 Median: 0.03
 Composite Area: 16.288 ha
 Surveyed Area: 2.4271 ha
 Processes: 2
 1 Base Layer
 2 Clip from -3.00 to 3.00 nT
 GPS based Proce4
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 DeStripe Median Traverse:
 4 Clip from -5.00 to 5.00 nT

Area 19.2

Filename: J619-mag-Area19-2.xcp
 Description: Imported as Composite from: J619-mag-Area19-2.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y):
 Northwest corner: 419622.857357221, 184530.659708774 m

Southeast corner: 419809.907357221, 184491.959708774 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 158000
 Dimensions
 Composite Size (readings): 1247 x 258
 Survey Size (meters): 187 m x 38.7 m
 Grid Size: 187 m x 38.7 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 3.00
 Min: -3.00
 Std Dev: 0.68
 Mean: -0.06
 Median: -0.07
 Composite Area: 0.72388 ha
 Surveyed Area: 0.6472 ha
 Processes: 2
 1 Base Layer
 2 Clip from -3.00 to 3.00 nT
 GPS based Proce3
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 Clip from -5.00 to 5.00 nT

Area 21

Path: C:\Business\Jobs\J619 Axford pipeline\Data\Area
 21\comps\
 Filename: J619-mag-Area21.xcp
 Description: Imported as Composite from: J619-mag-Area21.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y):OSGB36
 Northwest corner: 419587.442631328, 184197.251639036 m
 Southeast corner: 419623.142631328, 184034.801639036 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 190700
 Dimensions
 Composite Size (readings): 238 x 1083
 Survey Size (meters): 35.7 m x 162 m
 Grid Size: 35.7 m x 162 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 5.53
 Min: -5.50
 Std Dev: 1.33
 Mean: 0.04
 Median: 0.03
 Composite Area: 0.57995 ha
 Surveyed Area: 0.42922 ha
 Processes: 1
 1 Base Layer
 GPS based Proce6
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 DeStripe Median Traverse:
 4 Clip from -5.00 to 5.00 nT
 5 High pass Uniform (median) filter: Window dia: 300
 6 Clip from -5.00 to 5.00 nT

Area 22

Filename: J619-mag-Area22-proc.xcp
 Description: Imported as Composite from: J619-mag-Area22.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y):OSGB36
 Northwest corner: 419578.987986208, 184023.936754573 m
 Southeast corner: 419626.387986208, 183855.636754573 m
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 230200
 Dimensions
 Composite Size (readings): 316 x 1122
 Survey Size (meters): 47.4 m x 168 m
 Grid Size: 47.4 m x 168 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 5.53
 Min: -5.50
 Std Dev: 2.60
 Mean: -0.15
 Median: 0.01
 Composite Area: 0.79774 ha
 Surveyed Area: 0.58268 ha
 Processes: 1
 1 Base Layer
 GPS based Proce4
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 DeStripe Median Traverse:
 4 Clip from -5.00 to 5.00 nT

Area 24.1

Path: C:\Business\Jobs\J619 Axford pipeline\Data\Area
 24-1\comps\
 Filename: J619-mag-Area24-1-proc.xcp
 Description: Imported as Composite from: J619-mag-Area24-1.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y):OSGB36
 Northwest corner: 419592.8174923, 183677.588514133 m
 Southeast corner: 419644.8674923, 183572.888514133 m
 Collection Method: Randomised

Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 78300
 Dimensions
 Composite Size (readings): 347 x 698
 Survey Size (meters): 52.1 m x 105 m
 Grid Size: 52.1 m x 105 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 5.53
 Min: -5.50
 Std Dev: 2.57
 Mean: -0.24
 Median: 0.09
 Composite Area: 0.54496 ha
 Surveyed Area: 0.27048 ha
 Processes: 1
 1 Base Layer
 GPS based Proce4
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 DeStripe Median Traverse:
 4 Clip from -5.00 to 5.00 nT

Area 24.2

COMPOSITE
 Path: C:\Business\Jobs\J619 Axford pipeline\Data\Area
 24-2\comps\
 Filename: J619-mag-Area24-2-proc.xcp
 Description: Imported as Composite from: J619-mag-Area24-2.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y):OSGB36
 Northwest corner: 419608.329621511, 183578.043336737 m
 Southeast corner: 419643.579621511, 183523.743336737 m
 Collection Method: Randomised
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 29800
 Dimensions
 Composite Size (readings): 235 x 362
 Survey Size (meters): 35.3 m x 54.3 m
 Grid Size: 35.3 m x 54.3 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 5.53
 Min: -5.50
 Std Dev: 3.54
 Mean: -0.33
 Median: 0.14
 Composite Area: 0.19141 ha
 Surveyed Area: 0.10398 ha
 Processes: 1
 1 Base Layer
 GPS based Proce4
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 DeStripe Median Traverse:
 4 Clip from -5.00 to 5.00 nT

Area 25.1

Filename: J619-mag-Area25-1-proc.xcp
 Description: Imported as Composite from: J619-mag-Area25-1.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y):OSGB36
 Northwest corner: 419597.793629533, 183533.571005315 m
 Southeast corner: 419637.843629533, 183442.221005315 m
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 92500
 Dimensions
 Composite Size (readings): 267 x 609
 Survey Size (meters): 40.1 m x 91.4 m
 Grid Size: 40.1 m x 91.4 m
 X Interval: 0.15 m
 Y Interval: 0.15 m
 Stats
 Max: 5.53
 Min: -5.50
 Std Dev: 1.25
 Mean: -0.10
 Median: 0.01
 Composite Area: 0.36586 ha
 Surveyed Area: 0.29572 ha
 Processes: 1
 1 Base Layer
 GPS based Proce4
 1 Base Layer.
 2 Unit Conversion Layer (Lat/Long to OSGB36).
 3 DeStripe Median Traverse:
 4 Clip from -5.00 to 5.00 nT

Area 25.2

Filename: J619-mag-Area25-2-proc.xcp
 Description: Imported as Composite from: J619-mag-Area25-2.asc
 Instrument Type: Sensys DLMGPS
 Units: nT
 UTM Zone: 30U
 Survey corner coordinates (X/Y):OSGB36
 Northwest corner: 419601.123326431, 183444.686343584 m
 Southeast corner: 419640.423326431, 183373.286343584 m
 Sensors: 5
 Dummy Value: 32702
 Source GPS Points: 63300
 Dimensions
 Composite Size (readings): 262 x 476
 Survey Size (meters): 39.3 m x 71.4 m

Grid Size: 39.3 m x 71.4 m
X Interval: 0.15 m
Y Interval: 0.15 m

Stats
Max: 5.53
Min: -5.50
Std Dev: 1.68
Mean: -0.07
Median: 0.00

Composite Area: 0.2806 ha
Surveyed Area: 0.20682 ha

Processes: 1
1 Base Layer

GPS based Proce4
1 Base Layer.

2 Unit Conversion Layer (Lat/Long to OSGB36).
3 DeStripe Median Traverse:
4 Clip from -5.00 to 5.00 nT

Area 27.1

Filename: J619-mag-Area27-1.xcp
Description: Imported as Composite from: J619-mag-Area27-1.asc

Instrument Type: Sensys DLMGPS
Units: nT

UTM Zone: 30U

Survey corner coordinates (X/Y):
Northwest corner: 419607.187345841, 183371.652137733 m

Southeast corner: 419645.137345841, 183231.402137733 m

Collection Method: Randomised
Sensors: 5

Dummy Value: 32702
Source GPS Points: 132300

Dimensions

Composite Size (readings): 253 x 935
Survey Size (meters): 38 m x 140 m

Grid Size: 38 m x 140 m
X Interval: 0.15 m

Y Interval: 0.15 m

Stats

Max: 5.53

Min: -5.50

Std Dev: 1.34

Mean: -0.07

Median: 0.01

Composite Area: 0.53225 ha

Surveyed Area: 0.46526 ha

Processes: 1

1 Base Layer

GPS based Proce6

1 Base Layer.

2 Unit Conversion Layer (Lat/Long to OSGB36).

3 DeStripe Median Traverse:

4 Clip from -5.00 to 5.00 nT

5 High pass Uniform (median) filter: Window dia: 300

6 Clip from -5.00 to 5.00 nT

Area 27.2

Filename: J619-mag-Area27-2.xcp
Description: Imported as Composite from: J619-mag-Area27-2.asc

Instrument Type: Sensys DLMGPS
Units: nT

UTM Zone: 30U

Survey corner coordinates (X/Y):
Northwest corner: 419521.496032563, 183394.122992486 m

Southeast corner: 419801.576032563, 183192.522992486 m

Collection Method: Randomised
Sensors: 5

Dummy Value: 32702
Source GPS Points: 892800

Dimensions

Composite Size (readings): 2334 x 1680

Survey Size (meters): 280 m x 202 m

Grid Size: 280 m x 202 m
X Interval: 0.12 m

Y Interval: 0.12 m

Stats

Max: 5.53

Min: -5.50

Std Dev: 1.69

Mean: 0.02

Median: 0.01

Composite Area: 5.6464 ha

Surveyed Area: 2.7767 ha

Processes: 1

1 Base Layer

GPS based Proce4

1 Base Layer.

2 Unit Conversion Layer (Lat/Long to OSGB36).

3 DeStripe Median Traverse:

4 Clip from -5.00 to 5.00 nT

Area 28

Filename: J619-mag-Area28.xcp
Description: Imported as Composite from: J619-mag-Area28.asc

Instrument Type: Sensys DLMGPS
Units: nT

UTM Zone: 30U

Survey corner coordinates (X/Y):
Northwest corner: 419516.277434895, 183268.762808511 m

Southeast corner: 419742.027434895, 182868.262808511 m

Collection Method: Randomised
Sensors: 5

Dummy Value: 32702
Source GPS Points: 1242700

Dimensions

Composite Size (readings): 1505 x 2670

Survey Size (meters): 226 m x 401 m

Grid Size: 226 m x 401 m
X Interval: 0.15 m
Y Interval: 0.15 m

Stats

Max: 5.53

Min: -5.50

Std Dev: 1.46

Mean: -0.03

Median: 0.02

Composite Area: 9.0413 ha

Surveyed Area: 3.9147 ha

Processes: 1

1 Base Layer

GPS based Proce4

1 Base Layer.

2 Unit Conversion Layer (Lat/Long to OSGB36).

3 DeStripe Median Traverse:

4 Clip from -5.00 to 5.00 nT

Area 29

Filename: J619-mag-Area29-proc.xcp
Description: Imported as Composite from: J619-mag-Area29.asc

Instrument Type: Sensys DLMGPS
Units: nT

UTM Zone: 30U

Survey corner coordinates (X/Y):OSGB36

Northwest corner: 419634.555546935, 182882.368272186 m

Southeast corner: 419678.805546935, 182811.418272186 m

Collection Method: Randomised
Sensors: 5

Dummy Value: 32702
Source GPS Points: 49700

Dimensions

Composite Size (readings): 295 x 473

Survey Size (meters): 44.3 m x 71 m

Grid Size: 44.3 m x 71 m
X Interval: 0.15 m

Y Interval: 0.15 m

Stats

Max: 11.05

Min: -11.00

Std Dev: 2.68

Mean: -0.14

Median: 0.09

Composite Area: 0.31395 ha

Surveyed Area: 0.18845 ha

Processes: 1

1 Base Layer

GPS based Proce5

1 Base Layer.

2 Unit Conversion Layer (Lat/Long to OSGB36).

3 DeStripe Median Traverse:

4 Clip from -15.00 to 15.00 nT

5 Clip from -10.00 to 10.00 nT

Area 30.1

Filename: J619-mag-Area30-1-proc.xcp
Description: Imported as Composite from: J619-mag-Area30-1.asc

Instrument Type: Sensys DLMGPS
Units: nT

UTM Zone: 30U

Survey corner coordinates (X/Y):OSGB36

Northwest corner: 419608.342208054, 182766.256301409 m

Southeast corner: 419659.792208054, 182614.156301409 m

Collection Method: Randomised
Sensors: 5

Dummy Value: 32702
Source GPS Points: 182900

Dimensions

Composite Size (readings): 343 x 1014

Survey Size (meters): 51.5 m x 152 m

Grid Size: 51.5 m x 152 m
X Interval: 0.15 m

Y Interval: 0.15 m

Stats

Max: 5.53

Min: -5.50

Std Dev: 1.78

Mean: -0.09

Median: 0.03

Composite Area: 0.78255 ha

Surveyed Area: 0.58128 ha

Processes: 1

1 Base Layer

GPS based Proce4

1 Base Layer.

2 Unit Conversion Layer (Lat/Long to OSGB36).

3 DeStripe Median Traverse:

4 Clip from -5.00 to 5.00 nT

Area 30.2

Filename: J619-mag-Area30-2-proc.xcp
Description: Imported as Composite from: J619-mag-Area30-2.asc

Instrument Type: Sensys DLMGPS
Units: nT

UTM Zone: 30U

Survey corner coordinates (X/Y):OSGB36

Northwest corner: 419609.041256628, 182609.241779306 m

Southeast corner: 419653.891256628, 182512.191779306 m

Collection Method: Randomised
Sensors: 5

Dummy Value: 32702
Source GPS Points: 110100

Dimensions

Composite Size (readings): 299 x 647

Survey Size (meters): 44.9 m x 97.1 m

Grid Size: 44.9 m x 97.1 m
X Interval: 0.15 m

Y Interval: 0.15 m

Stats

Max: 5.53

Min: -5.50

Std Dev: 1.36

Mean: -0.03

Median: 0.02

Composite Area: 0.43527 ha

Surveyed Area: 0.3494 ha

Processes: 1

1 Base Layer

GPS based Proce4

1 Base Layer.

2 Unit Conversion Layer (Lat/Long to OSGB36).

3 DeStripe Median Traverse:

4 Clip from -5.00 to 5.00 nT

Area 30.3

Filename: J619-mag-Area30-3-proc.xcp
Description: Imported as Composite from: J619-mag-Area30-3.asc

Instrument Type: Sensys DLMGPS
Units: nT

UTM Zone: 30U

Survey corner coordinates (X/Y):OSGB36

Northwest corner: 419606.873518672, 182504.720991653 m

Southeast corner: 419648.723518672, 182431.070991653 m

Collection Method: Randomised
Sensors: 5

Dummy Value: 32702
Source GPS Points: 81100

Dimensions

Composite Size (readings): 279 x 491

Survey Size (meters): 41.9 m x 73.7 m

Grid Size: 41.9 m x 73.7 m
X Interval: 0.15 m

Y Interval: 0.15 m

Stats

Max: 5.53

Min: -5.50

Std Dev: 1.39

Mean: -0.06

Median: 0.03

Composite Area: 0.30823 ha

Surveyed Area: 0.25629 ha

Processes: 1

1 Base Layer

GPS based Proce4

1 Base Layer.

2 Unit Conversion Layer (Lat/Long to OSGB36).

3 DeStripe Median Traverse:

4 Clip from -5.00 to 5.00 nT

Area 30.4

Filename: J619-mag-Area30-4-proc.xcp
Description: Imported as Composite from: J619-mag-Area30-4.asc

Instrument Type: Sensys DLMGPS
Units: nT

UTM Zone: 30U

Survey corner coordinates (X/Y):OSGB36

Northwest corner: 419605.798082187, 182422.900977958 m

Southeast corner: 419662.648082187, 182262.550977958 m

Collection Method: Randomised
Sensors: 5

Dummy Value: 32702
Source GPS Points: 177700

Dimensions

Composite Size (readings): 379 x 1069

Survey Size (meters): 56.9 m x 160 m

Grid Size: 56.9 m x 160 m
X Interval: 0.15 m

Y Interval: 0.15 m

Stats

Max: 5.53

Min: -5.50

Std Dev: 1.63

Mean: -0.16

Median: 0.03

Composite Area: 0.91159 ha

Surveyed Area: 0.53687 ha

Processes: 1

1 Base Layer

GPS based Proce4

1 Base Layer.

2 Unit Conversion Layer (Lat/Long to OSGB36).

3 DeStripe Median Traverse:

4 Clip from -5.00 to 5.00 nT

Area 31.1

Filename: J619-mag-Area31-1-proc.xcp
Description: Imported as Composite from: J619-mag-Area31-1.asc

Instrument Type: Sensys DLMGPS
Units: nT

UTM Zone: 30U

Survey corner coordinates (X/Y):OSGB36

Northwest corner: 419506.859419826, 182225.670008569 m

Southeast corner: 419671.70

2 Unit Conversion Layer (Lat/Long to OSGB36).
3 DeStripe Median Traverse:
4 Clip from -5.00 to 5.00 nT

Area 32.2

Filename: J619-mag-Area31-2-proc.xcp
Description: Imported as Composite from: J619-mag-Area31-2.asc
Instrument Type: Sensys DLMGPS
Units: nT
UTM Zone: 30U
Survey corner coordinates (X/Y):OSGB36
Northwest corner: 419406.412136007, 181679.600204755 m
Southeast corner: 419523.112136007, 181561.100204755 m
Collection Method: Randomised
Sensors: 5
Dummy Value: 32702
Source GPS Points: 122700
Dimensions
Composite Size (readings): 778 x 790
Survey Size (meters): 117 m x 119 m
Grid Size: 117 m x 119 m
X Interval: 0.15 m
Y Interval: 0.15 m
Stats
Max: 5.53
Min: -5.50
Std Dev: 0.75
Mean: 0.03
Median: 0.01
Composite Area: 1.3829 ha
Surveyed Area: 0.44041 ha
Processes: 1
GPS based Proce4
1 Base Layer
2 Unit Conversion Layer (Lat/Long to OSGB36).
3 DeStripe Median Traverse:
4 Clip from -5.00 to 5.00 nT

Area 32.1

Filename: J619-mag-Area32-1-proc.xcp
Description: Imported as Composite from: J619-mag-Area32-1.asc
Instrument Type: Sensys DLMGPS
Units: nT
UTM Zone: 30U
Survey corner coordinates (X/Y):OSGB36
Northwest corner: 419271.946835765, 181559.414072293 m
Southeast corner: 419458.846835765, 181140.764072293 m
Collection Method: Randomised
Sensors: 5
Dummy Value: 32702
Source GPS Points: 675300
Dimensions
Composite Size (readings): 1246 x 2791
Survey Size (meters): 187 m x 419 m
Grid Size: 187 m x 419 m
X Interval: 0.15 m
Y Interval: 0.15 m
Stats
Max: 3.00
Min: -3.00
Std Dev: 0.87
Mean: 0.01
Median: -0.01
Composite Area: 7.8246 ha
Surveyed Area: 1.9644 ha
Processes: 2
1 Base Layer
2 Clip from -3.00 to 3.00 nT
GPS based Proce4
1 Base Layer
2 Unit Conversion Layer (Lat/Long to OSGB36).
3 DeStripe Median Traverse:
4 Clip from -5.00 to 5.00 nT

Area 32.2

Filename: J619-mag-Area32-2-proc.xcp
Description: Imported as Composite from: J619-mag-Area32-2.asc
Instrument Type: Sensys DLMGPS
Units: nT
UTM Zone: 30U
Survey corner coordinates (X/Y):OSGB36
Northwest corner: 419394.328062621, 181318.089761607 m
Southeast corner: 419614.828062621, 180921.639761607 m
Collection Method: Randomised
Sensors: 5
Dummy Value: 32702
Source GPS Points: 810700
Dimensions
Composite Size (readings): 1470 x 2643
Survey Size (meters): 221 m x 396 m
Grid Size: 221 m x 396 m
X Interval: 0.15 m
Y Interval: 0.15 m
Stats

Max: 5.53
Min: -5.50
Std Dev: 2.13
Mean: -0.06
Median: 0.02
Composite Area: 8.7417 ha
Surveyed Area: 2.2971 ha
Processes: 1
1 Base Layer
GPS based Proce4
1 Base Layer.
2 Unit Conversion Layer (Lat/Long to OSGB36).
3 DeStripe Median Traverse:
4 Clip from -5.00 to 5.00 nT

Area 34

Filename: J619-mag-Area34-proc.xcp
Description: Imported as Composite from: J619-mag-Area34.asc
Instrument Type: Sensys DLMGPS
Units: nT
UTM Zone: 30U
Survey corner coordinates (X/Y):OSGB36
Northwest corner: 419608.07410149, 180656.756190901 m
Southeast corner: 419881.22410149, 179753.606190901 m
Sensors: 5
Dummy Value: 32702
Source GPS Points: 1089900
Dimensions
Composite Size (readings): 1821 x 6021
Survey Size (meters): 273 m x 903 m
Grid Size: 273 m x 903 m
X Interval: 0.15 m
Y Interval: 0.15 m
Stats
Max: 3.32
Min: -3.30
Std Dev: 0.99
Mean: 0.02
Median: 0.02
Composite Area: 24.67 ha
Surveyed Area: 3.4204 ha
Processes: 1
1 Base Layer
GPS based Proce4
1 Base Layer.
2 Unit Conversion Layer (Lat/Long to OSGB36).
3 DeStripe Median Traverse:
4 Clip from -3.00 to 3.00 nT

Area 36

Filename: J619-mag-Area36-proc.xcp
Description: Imported as Composite from: J619-mag-Area36.asc
Instrument Type: Sensys DLMGPS
Units: nT
UTM Zone: 30U
Survey corner coordinates (X/Y):OSGB36
Northwest corner: 419692.05122578, 179782.537976286 m
Southeast corner: 419807.10122578, 179481.337976286 m
Collection Method: Randomised
Sensors: 5
Dummy Value: 32702
Source GPS Points: 354300
Dimensions
Composite Size (readings): 767 x 2008
Survey Size (meters): 115 m x 301 m
Grid Size: 115 m x 301 m
X Interval: 0.15 m
Y Interval: 0.15 m
Stats
Max: 3.32
Min: -3.30
Std Dev: 0.78
Mean: 0.02
Median: 0.01
Composite Area: 3.4653 ha
Surveyed Area: 1.1823 ha
Processes: 1
1 Base Layer
GPS based Proce4
1 Base Layer.
2 Unit Conversion Layer (Lat/Long to OSGB36).
3 DeStripe Median Traverse:
4 Clip from -3.00 to 3.00 nT

Area 37

Filename: J619-mag-Area37-proc.xcp
Description: Imported as Composite from: J619-mag-Area37.asc
Instrument Type: Sensys DLMGPS
Units: nT
UTM Zone: 30U
Survey corner coordinates (X/Y):OSGB36
Northwest corner: 419562.217040106, 179472.022802179 m
Southeast corner: 419727.217040106, 178015.072802179 m
Sensors: 5
Dummy Value: 32702

Source GPS Points: 1523400
Dimensions
Composite Size (readings): 1100 x 9713
Survey Size (meters): 165 m x 1.46E003 m
Grid Size: 165 m x 1.46E003 m
X Interval: 0.15 m
Y Interval: 0.15 m

Stats
Max: 3.32
Min: -3.30
Std Dev: 0.71
Mean: 0.02
Median: 0.01
Composite Area: 24.04 ha
Surveyed Area: 4.8884 ha
Processes: 1
1 Base Layer
GPS based Proce6
1 Base Layer.
2 Unit Conversion Layer (Lat/Long to OSGB36).
3 DeStripe Median Traverse:
4 Clip from -5.00 to 5.00 nT
5 High pass Uniform (median) filter: Window dia: 300
6 Clip from -3.00 to 3.00 nT

Area 38

Filename: J619-mag-Area38-proc.xcp
Description: Imported as Composite from: J619-mag-Area38.asc
Instrument Type: Sensys DLMGPS
Units: nT
UTM Zone: 30U
Survey corner coordinates (X/Y):OSGB36
Northwest corner: 419632.892580923, 178005.47470566 m
Southeast corner: 419700.992580923, 177804.17470566 m
Sensors: 5
Dummy Value: 32702
Source GPS Points: 232600
Dimensions
Composite Size (readings): 454 x 1342
Survey Size (meters): 68.1 m x 201 m
Grid Size: 68.1 m x 201 m
X Interval: 0.15 m
Y Interval: 0.15 m
Stats
Max: 3.00
Min: -3.00
Std Dev: 0.83
Mean: 0.01
Median: -0.02
Composite Area: 1.3709 ha
Surveyed Area: 0.62799 ha
Processes: 2
1 Base Layer
2 Clip from -3.00 to 3.00 nT
GPS based Proce4
1 Base Layer.
2 Unit Conversion Layer (Lat/Long to OSGB36).
3 DeStripe Median Traverse:
4 Clip from -5.00 to 5.00 nT

Area 39

Filename: J619-mag-Area39-proc.xcp
Description: Imported as Composite from: J619-mag-Area39.asc
Instrument Type: Sensys DLMGPS
Units: nT
UTM Zone: 30U
Survey corner coordinates (X/Y):OSGB36
Northwest corner: 419666.807952305, 177789.722618486 m
Southeast corner: 419940.257952305, 176497.022618486 m
Collection Method: Randomised
Sensors: 5
Dummy Value: 32702
Source GPS Points: 1403600
Dimensions
Composite Size (readings): 1823 x 8618
Survey Size (meters): 273 m x 1.29E003 m
Grid Size: 273 m x 1.29E003 m
X Interval: 0.15 m
Y Interval: 0.15 m
Stats
Max: 3.00
Min: -3.00
Std Dev: 0.82
Mean: 0.00
Median: 0.01
Composite Area: 35.349 ha
Surveyed Area: 4.764 ha
Processes: 2
1 Base Layer
2 Clip from -3.00 to 3.00 nT
GPS based Proce4
1 Base Layer.
2 Unit Conversion Layer (Lat/Long to OSGB36).
3 DeStripe Median Traverse:
4 Clip from -5.00 to 5.00 nT

Appendix D – digital archive

Archaeological Surveys Ltd hold the primary digital archive at their offices in Wiltshire. Data are backed-up onto an on-site data storage drive and at the earliest opportunity data are copied to CD ROM for storage on-site and off-site.

A printed copy of the report and a PDF copy will be supplied to the Wiltshire Historic Environment Record. The report will also be uploaded to the Online Access to the Index of archaeological investigations (OASIS).

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