Substrata
Archaeological Geophysical Surveyors

An archaeological gradiometer and earth-resistance survey

Sittaford stone circle
Dartmoor Forest, Dartmoor
Devon

Ordnance Survey (E/N): 263014,82808

Report: 150615-2

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04 September 2015

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Client:
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Plate 1: Recumbent stones of Sittaford stone circle, looking towards Sittaford Tor ..... cover
(Copyright Adam Dean, 2015)

Accompanying CD-ROM

Report ..... Adobe PDF format
Copies of report figures ..... Adobe PDF format
Raw and processed grid & composite files ..... DW Consulting TerraSurveyor 3 formats
Minimal processing data plots and metadata ..... DW Consulting TerraSurveyor 3 formats
Final data processing data plots and metadata ..... DW Consulting TerraSurveyor 3 formats
GIS project, shape files and classification schema
GIS project ..... Manifold 8 '.map' file
GIS shape files ..... ESRI standard
GIS classification schema ..... Adobe PDF format
AutoCAD version of the survey interpretation ..... AutoCAD DXF

Website: substrata.co.uk

For an overview of Substrata, our archaeological geophysical surveying techniques and the results we obtain.

1 Survey description and summary

1.1 Survey

Type:	twin-sensor fluxgate gradiometer twin probe earth resistance
Date:	between 13 and 29 April 2015
Area:	gradiometer survey 0.72ha earth resistance survey 0.45ha
Author:	Ross Dean BSc MSc MA MIfA
Lead surveyor:	Mark Edwards BA

1.2 Client

Dartmoor National Park Authority, Parke, Bovey Tracey, Newton Abbot, Devon TQ13 9JQ

1.3 Location

Site:	Sittaford stone circle
Civil Parish:	Dartmoor Forest
District:	West Devon
County:	Devon
Planning Authority and Curator:	Dartmoor National Park Authority
NGR:	SX 630 828 (point)
NGR E/N:	263014,82808 (point)

1.4 Historic Environment Records

Historic Environment Record number: MDV110432

1.5 Archive

OASIS entry: 222606

At the time of writing, the archive of this survey will be held by Substrata and will be deposited with the ADS in due course. The Dartmoor National Park Authority hold the GIS shape files for the survey and a PDF copy of the report.

1.6 Introduction

This report was commissioned by the Dartmoor National Park Authority. The survey was designed to prospect the recently recorded Early Bronze Age stone circle at the above site to contribute to the understanding of the site and to inform its future management as specified in Section 2 below.

The survey area covers just over 0.72ha of moorland as shown in Figures 1 and 2. The stone circle was mapped for the Dartmoor National Park Authority in 2014 (Newman 2014).

1.7 Summary

Both the magnetic and earth resistance responses were sufficient to be able to differentiate anomalies representing possible archaeological features.

Twelve magnetic anomaly groups and ten earth resistance anomaly groups were identified as possibly representing archaeological deposits or features. The magnetic anomaly patterns indicate that a linear feature, or possibly an interlinked set of pits, trending northeast-southwest glances the south-eastern edge of Sittaford stone circle. There is also some evidence to support the view that the gap at that point in the circle may have had stones present in the past. The resistance data seems to indicate the presence of a linear feature trending west-north -west to east-south-east through north-eastern side of the stone circle although further archaeological investigations would be necessary to determine whether this feature was of natural or archaeological origin. The resistance data also shows what could be a curvilinear sequence of earthen deposits and stony deposits on the south and west of the stone circle and mirroring the circles curvature. Anomalies possibly representing a pit and a stone or stony deposit were identified on the western side of the circle.

2 Survey aims and objectives

2.1 Aims

1. Define and characterise any detectable archaeological remains on the site.
2. Inform any future heritage management and archaeological investigation of the area.

2.2 Objectives

1. A gradiometer and earth resistance survey will be completed across the agreed survey area
2. In addition to aim (1) above, the gradiometer survey will be specifically designed to locate and spatially define areas with in-situ burning.
3. In addition to the aim (1) above, the resistance survey will be designed to locate and spatially define areas of potential stone settings.
4. Any magnetic and earth resistance anomalies that may be related to archaeological deposits, structures or artefacts will be identified and accurately mapped.
5. Within the limits of the techniques and dataset, any such anomalies or patterns of anomalies will be archaeologically characterised.
6. A report based on the survey will be produced that is sufficiently detailed to inform any subsequent archaeological investigation and/or asset management process

3 Standards

The standards used to complete this survey are defined by the Chartered Institute for Archaeologists (2014a) and English Heritage (2010). The codes of approved practice that were followed are those of the Chartered Institute for Archaeologists (2014b) and Archaeology Data Service/Digital Antiquity Guides (undated). The document text was written using the house style of the Chartered Institute for Archaeologists (Chartered Institute for Archaeologists, undated).

4 Site description

4.1 Landscape and land use

Sittaford stone circle lies slightly to the west of a ridge of high ground, about 300 metres to the southwest of Sittaford Tor, at 525 metres above sea level, which is the highest altitude for any stone circle in southern England. The situation affords panoramic views in all directions apart from the north-east where Sittaford Tor sits prominently against the skyline (Plate 1). The Sittaford circle appears to form part of an arc of similar monuments around the north-eastern perimeter of Dartmoor (Marchand, 2015).

The survey area covers approximately 0.7ha of moorland on Dartmoor, Devon as shown in Figures 1 and 2.

4.2 Geology

The geology across the survey area and surrounds comprises a solid geology of granite of the Permian and Carboniferous Dartmoor Intrusion and a superficial geology of Quaternary Peat (British Geological Society undated).

5 Archaeological background

Dartmoor is the largest expanse of open moorland in southern Britain and, because of exceptional conditions of preservation, it is also one of the most complete examples of an upland relict landscape in the whole country. The great wealth and diversity of archaeological remains provide direct evidence for human exploitation of the Moor from the early prehistoric period onwards. The well-preserved and often visible relationship between settlement sites, major land boundaries, trackways, ceremonial and funerary monuments as well as later industrial remains, gives significant insights into successive changes in the pattern of land use through time (Historic England, undated b)

5.1 Historic landscape characterisation

Rough ground: rough grazing ground, heathland or moorland (Devon County Council, undated)

5.2 Known Heritage Assets

The following is a short summary of information obtained from the Devon and Dartmoor Historic Environment Record (DDHER) within approximately 1000m of the survey area and relevant to the understanding of the geophysical survey. Except where specifically cited, this information was obtained using the Heritage Gateway (Historic England, undated a).

5.2.1 Heritage Assets within the survey area

Sittaford stone circle (HER number MDV110432, NGR SX630828) is a recently recorded Early Bronze Age large stone circle. It lies slightly to the west of a ridge of high ground, about 300 metres to the southwest of Sittaford Tor, at 525 metres above sea level, which is the highest altitude for any stone circle in southern England. The situation affords panoramic views in all directions apart from the north-east where Sittaford Tor sits prominently against the skyline, perhaps marking the midsummer sunrise. The 34 metre diameter circle consists of 30 recumbent stones plus one other currently lying across a gap on the eastern side a couple of metres inside the perimeter. The stones, apparently undressed and gathered from the immediate vicinity (possibly from the tor itself), are of fairly uniform size, suggesting they were carefully chosen, and range from about 1.4 metres to 2.2 metres by 0.7 to 1.0 metres. When standing the circle would have been very impressive, dominating the surrounding landscape. It would have been similar in appearance to the twin stone circles of Grey Wethers that lie about 1 kilometre to the east-northeast.

A possible outlier stands about 15 metres to the east of the gap on the eastern side but has been incorporated into an enclosure wall with the apparent intention of being used as a gatepost.

The Sittaford circle appears to form part of an arc of similar monuments around the north-eastern perimeter of Dartmoor, suggesting planning and cooperation between communities in the late Neolithic to Early Bronze Age.

5.3.2 Heritage Assets within 1000m of the Application Area

A pair of restored Early Neolithic to Late Bronze Age (between 4000BC and 701 BC) stone circles known collectively as The Grey Wethers (HER MDV6758 and MDV6759) lie to the northeast of the site in a shallow valley between Sittaford Tor to the west and rising ground to the north-east (Figure 1). The area, under moorland pasture, has been disturbed by desultory amorphous diggings and shallow, natural erosion gullies. The northern circle measures 31.5 meters in diameter and is denoted by 20 upright granite slabs with an average height of 1.1 meters. The diameter of the southern circle is 33 meters and includes 29 standing stones varying in height between 1.0 and 1.4 meters. Excavations carried out by the Dartmoor Exploration Committee towards the end of the 19th century revealed a layer of charcoal covering the original ground surface.

About 320m south east of The Grey Wethers and east of the survey area is a small circular Bronze Age (between 2200 BC and 701 BC) enclosure (Figure 1). The bank forming the enclosure is composed of small stones and earth. The entrance is on the west side with one door jamb still standing (MDV6754).

A group of at least 20 freestanding Bronze Age hut circles (MDV6777) occupy both the broad shelf and lower south-eastern slopes of the valley of the Lade Hill Brook below Sittaford Tor (Figure 1). Six huts are fairly substantial however the majority are small and rather ragged. A short length of a wall links four huts otherwise no associated walling or field plots are visible in the area. The surrounding hillside is covered by a thick layer of peat which may hide archaeological features. The group probably represents the remains of a permanent unenclosed prehistoric settlement; it is similar to other hut groups in the vicinity of the broad sided valley, which forms a major topographical feature of the open moorland. Other monuments associated with the site include three cairns (MDV54672 and MDV59463) and a barrow with a diameter

of 4.9m and a height of 0.2m which lies amongst the hut circles (MDV6792). Excavations of the barrow in 1897/8 exposed a pit containing a little charcoal.

A collection of granite rocks by Ledehill stream (MDV13032, NGR SX639821) may be the remains of a Bronze Age chambered tomb bisected by a reave which extends down the hillslope before being lost in the deep peat and silt deposit on the broad valley immediately to the west.

A Bronze Age kerbed cairn and cist (MDV21894) some 5 metres in diameter and 0.75 metres high is surrounded by two rings of kerb stones up to 0.75 metres high lies 635 metres south-west of The Grey Wethers at NGR SX634826, southeast of the survey area. Many stones forming the outer ring are recumbent. The inner kerb is 2.8 metres diameter and the outer is 5 metres diameter. A slab in the centre may be an intact cist.

To the southeast of the survey area at NGR SX635820 lies a Post-prehistoric (after 42AD) structure overlying a curving Prehistoric (pre 42 AD) wall. A hut circle lies on the hillslope a few metres above the building (MDV55728 and MDV455729).

To the southwest of the survey area on Winneys Down (Figure 1) lies the Modern (1751 AD to 2009 AD) 'Stat's House' ruined hut (MDV7756). A few metres to the south is a Post-medieval (between 1540 AD to 1750 AD) shelter constructed over the remains of a Prehistoric cairn (MDV6776).

A number of Early Medieval to Post-medieval (between 1066AD and 1750AD) structures and sites in the area are associated with mining. These include a leat at Great Varracombe (MDV27287), the Whitehorse Leat at Sittaford (MDV27295), a leat on Winney's Down (MDV272277) and the Birch Tor and Vitifer Mine Leat (MDV6576).

West of the survey area at NGR SX626828 lies a rectangular ruined hut, not dated closer than Early Medieval to Post-medieval, with some evidence of tin streaming downstream (MDV7757). There is also evidence for tin streaming to the southeast of the survey area at NGR SX639818 (MDV27289).

6 Results, discussion and conclusions

This survey was designed to record magnetic anomalies. The anomalies themselves cannot be regarded as actual archaeological features and the dimensions of the anomalies shown do not represent the dimensions of any associated archaeological features. The analysis presented below identifies and characterises anomalies and anomaly groups that may relate to archaeological deposits and structures.

The terms 'archaeological features' and 'archaeological deposits' refer to any artefacts, material deposits or disturbance of natural deposits thought to be the result of human activity and not undertaken as recent land maintenance or farming.

The reader is referred to section 7.

6.1 Results

Results Figure 2 shows the interpretation of the gradiometer and earth resistance survey data. It includes the anomaly groups identified as relating to archaeological deposits along with their numbers. Table 1 is an extract of the detailed analysis of the survey data which is provided in the attribute tables of the GIS project on the accompanying CD-ROM and in the project archive.

Figure 2 and Table 1 comprise the analysis of the survey data.

Plots of the gradiometer and earth resistance interpretations are provided separately in Figures 3 and 4.

Various plots of the processed data are provided in Figures 5 to 8.

6.2 Discussion

6.2.1 General points

Not all anomalies or anomaly groups identified in Table 1 are necessarily discussed below. All identified anomaly groups are recorded in the GIS project on the accompanying CD-ROM.

Anomalies thought to relate to natural features were not mapped.

Anomalies relating to relatively recent man-made features such as peat cutting and extant tracks were not mapped.

There are numerous magnetic anomaly groups that could be interpreted as relating to large postholes or pits although most will have natural origins. Anomalies of this sort are only mapped as potential archaeology if they are clustered in groups or otherwise form recognisable patterns.

Figures 5 and 6 display numerous 'spikes' in the magnetic data set which are likely to relate to near-surface granitic bedrock and related natural deposits. Figure 6 provides a clear view of the more contrasting 'spikes'. No clear pattern of these 'spikes' could be assigned to the extant stones or to other potential groups of stones.

6.2.2 Data relating to historical maps and other records

Magnetic anomaly group **g12** coincides with an extant linear boundary. Whilst the coincidence is not exact as shown in Figures 2 and 3, this may be because of relatively minor positional errors occasionally found in Ordnance Survey maps of remote regions. On the other hand, it maybe that group g12 reflects a different feature.

Resistance anomaly group **r5** corresponds with sections of the boundary and is likely to be the resistance signal for parts of that boundary.

6.2.3 Data with no previous archaeological provenance

Referring to Figure 3, groups **g1** and **g9 to g11** may be natural deposits or archaeological deposits.

A clear linear anomaly group, **g7**, trends northeast-southwest to the south of the stone circle. Group **g8** is probably an extension of g7 and group **g2** may also be a part of the anomaly sequence. The shape of g7 is suggestive either of a linear feature disrupted by later actions such as peat cutting or a series of inter-linked pits.

Groups **g3, g4, g5 and g6** may be extensions of g7 but may also, or alternatively, be the result of erosion of pits. The latter explanation is likely for g5 and is an interesting possibility for g3 and g4 which lie in a gap between the extant stones.

Referring to Figure 4, resistance groups **r1 to r3** are interpreted as a sequence of relatively broad, parallel areas of low, high, low resistance. While this may represent a natural sequence of rock and sediment resulting from drainage there is a possibility that it represents a stony linear track or similar feature possibly flanked by ditches.

Group **r4** aligns with the magnetic anomaly sequence g2 to g8 and may reflect a different aspect of the same feature.

Group **r6** stands out in the dataset and has been enhanced during the data processing but is clear in the unprocessed data set. It may represent a pit or large posthole which may be archaeologically significant, given its position relative to the stone circle.

Group **r7** also stands out and may represent a stone or stony deposit.

Resistance groups **r8, r9 and r10** may represent natural deposits but are suggestive of a curvilinear sequence of earthen deposits (r10) and stony deposits (r8 and r9).

6.3 Conclusions

Both the magnetic and earth resistance responses were sufficient to be able to differentiate anomalies representing possible archaeological features.

Twelve magnetic anomaly groups and ten earth resistance anomaly groups were identified as possibly representing archaeological deposits or features. The magnetic anomaly patterns indicate that a linear feature, or possibly an interlinked set of pits, trending northeast-southwest glances the south-eastern edge of Sittaford stone circle. There is also some evidence to support the view that the gap at that point in the circle may have had stones present in the past. The resistance data seems to indicate the presence of a linear feature trending west-north-west to east-south-east through north-eastern side of the stone circle although further archaeological investigations would be necessary to determine whether this feature was of natural or archaeological origin. The resistance data also shows what could be a curvilinear sequence of earthen deposits and stony deposits on the south and west of the stone circle and mirroring the circles curvature. Anomalies possibly representing a pit and a stone or stony deposit were identified on the western side of the circle.

7 Disclaimer and copyright

The description and discussion of the results presented in this report are the authors, based on his interpretation of the survey data. Every effort has been made to provide accurate descriptions and interpretations of the geophysical data set. The nature of archaeological geophysical surveying is such that interpretations based on geophysical data, while informative, can only be provisional. Geophysical surveys are a cost-effective early step in the multi-phase process that is archaeology. The evaluation programme of which this survey is part may also be informed by other archaeological assessment work and analysis. It must be presumed that more archaeological features will be evaluated than those specified in this report.

8 Acknowledgements

Substrata would like to thank Jane Marchand, Senior Archaeologist, Dartmoor National Park Authority, for commissioning us to complete this survey.

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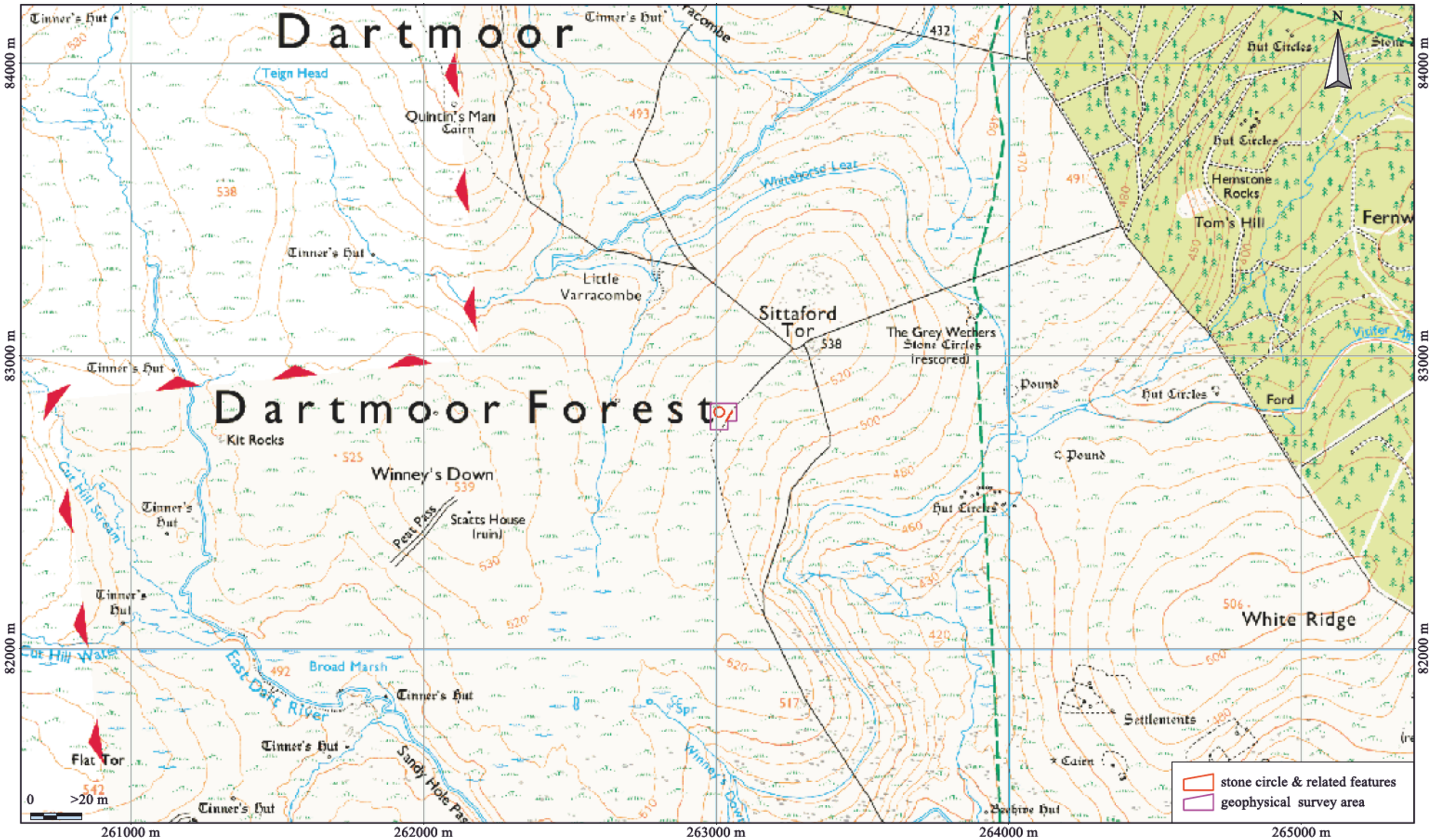
Appendix 1 Analysis table and supporting plots

General Guidance

The anomalies represented in the survey plots provided in this appendix are magnetic anomalies. The apparent size of such anomalies and anomaly patterns are unlikely to correspond exactly with the dimensions of any associated archaeological features.

A rough rule for interpreting magnetic anomalies is that the width of an anomaly at half its maximum reading is equal to the width of the buried feature, or its depth if this is greater (Clark, 2000: 83). Caution must be applied when using this rule as it depends on the anomalies being clearly identifiable and distinct from adjacent anomalies. In northern latitudes the position of the maximum of a magnetic anomaly will be displaced slightly to the south of any associated physical feature.



British Grid
centre X: 263004.58 m, centre Y: 82801.64 m

Scale: 1:12000 @ A3. Spatial Units: Meter. Do not scale off this drawing

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Figure 1: location map

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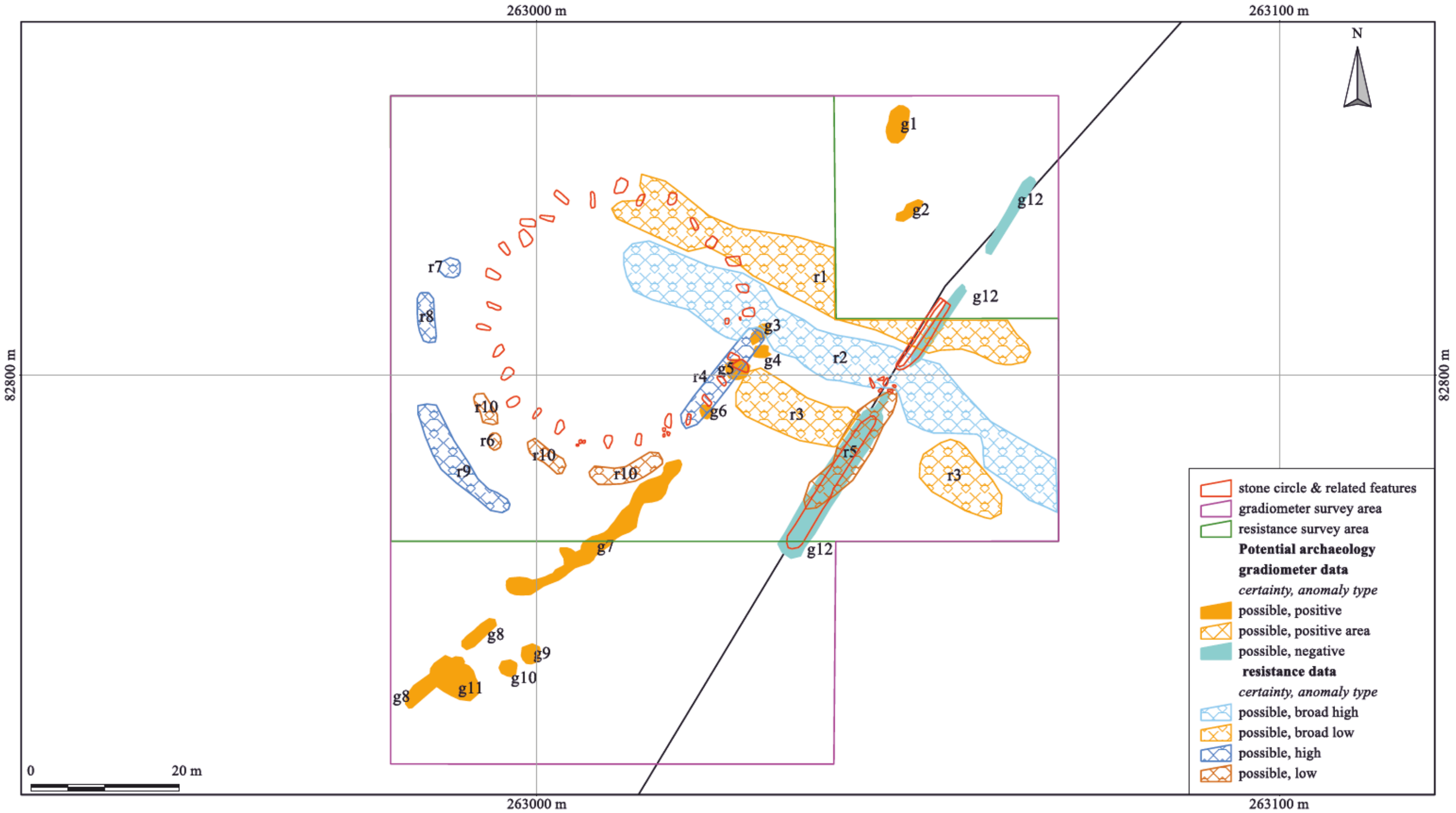

British Grid
centre X: 263025.74 m, centre Y: 82795.56 m

Scale: 1:500 @ A3. Spatial Units: Meter. Do not scale off this drawing

Notes:
1. All interpretations are provisional and represent potential archaeological deposits.
2. Anomalies designated "likely archaeology" have supporting evidence e.g. historical maps and or visible earthworks.
3. Anomalies likely to represent geological or other natural deposits are not mapped unless relevant to potential archaeological events or deposits.

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Figure 2: combined gradiometer and resistance data interpretation

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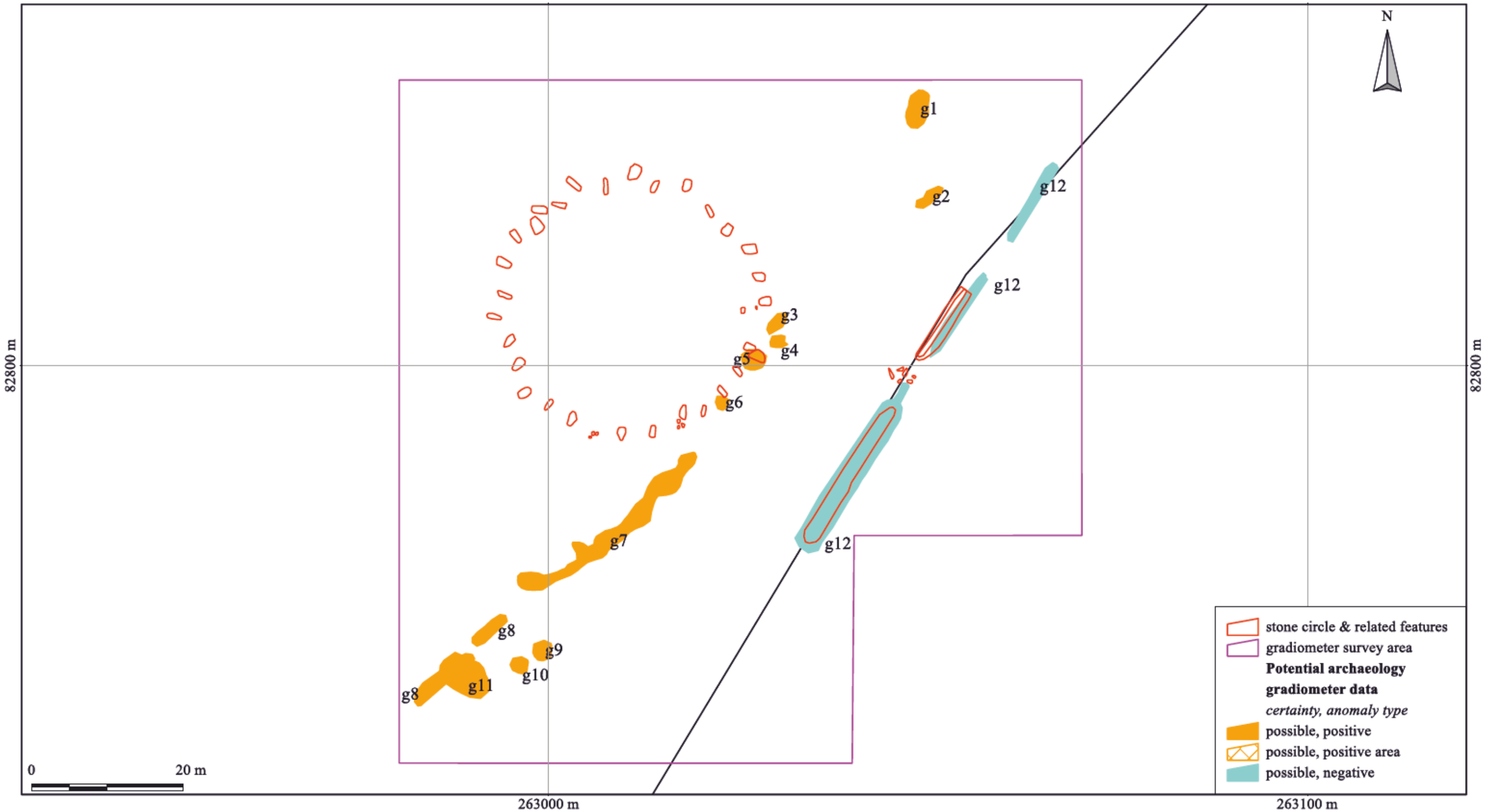
survey	anomaly group	anomaly characterisation certainty & class	anomaly form	additional archaeological characterisation	comments
magnetometer (gradiometer)	g1	possible, positive	broad linear	archaeological deposit or natural boggy feature	
	g2	possible, positive	linear		
	g3	possible, positive	oval	filled hollow	
	g4	possible, positive	oval	filled hollow	anomaly group may represent a hollow not associated with any extant stone
	g5	possible, positive	oval	filled hollow	anomaly group may represent a hollow associated with a nearby stone
	g6	possible, positive	oval	filled hollow	anomaly group may represent a hollow associated with a nearby stone
	g7	possible, positive	linear	ditch or joined pits	
	g8	possible, positive	disrupted linear		
	g9	possible, positive	oval	filled hollow	anomaly group may represent a hollow not associated with any extant stone
	g10	possible, positive	oval	filled hollow	anomaly group may represent a hollow not associated with any extant stone
	g11	possible, positive area	oval	archaeological deposit or natural boggy feature	
	g12	likely, negative	disrupted linear	extant bank	
earth resistance	r1	possible, broad low	linear	earthen linear	anomaly groups may represent archaeological or natural deposits with an archaeological origin more likely
	r2	possible, broad high	linear	stony linear	anomaly groups may represent archaeological or natural deposits with an archaeological origin more likely
	r3	possible, broad low	disrupted linear	earthen linear	anomaly groups may represent archaeological or natural deposits with an archaeological origin more likely
	r4	possible, high	linear	stony deposit	
	r5	possible, low	linear	ditch associated with extant linear	
	r6	possible, low	oval	pit	
	r7	possible, high	oval	stony deposit or stone	
	r8	possible, high	linear	stony deposit	
	r9	possible, high	linear	stony deposit	
	r10	possible, low	curvilinear	earthen deposit	

Table 1: data analysis



British Grid
centre X: 263025.74 m, centre Y: 82795.56 m

Scale: 1:500 @ A3. Spatial Units: Meter. Do not scale off this drawing

Notes:
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2. Anomalies designated "likely archaeology" have supporting evidence e.g. historical maps and or visible earthworks.
3. Anomalies likely to represent geological or other natural deposits are not mapped unless relevant to potential archaeological events or deposits.

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Figure 3: gradiometer data interpretation

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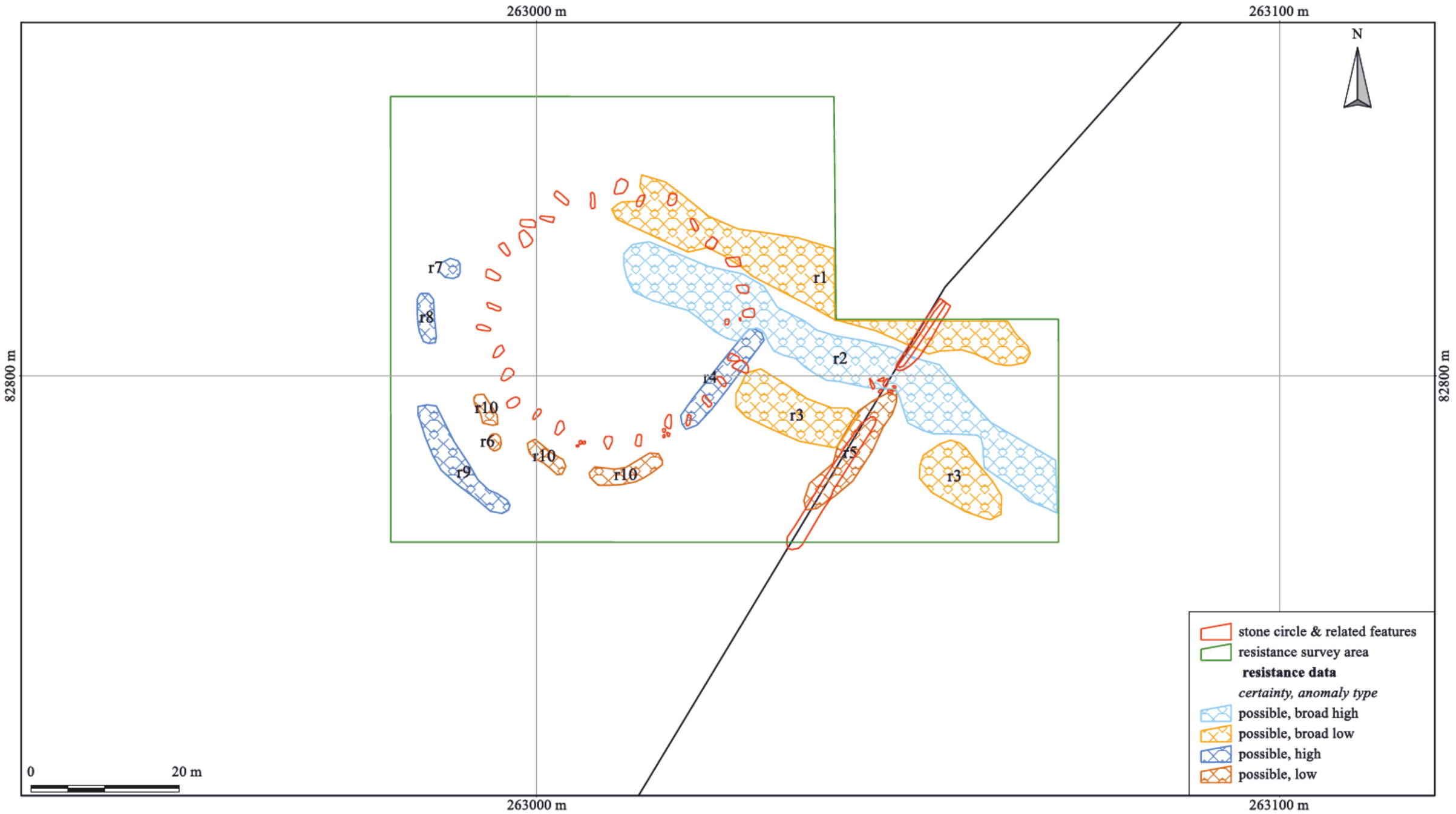

British Grid
centre X: 263025.74 m, centre Y: 82795.56 m

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Figure 4: resistance data interpretation

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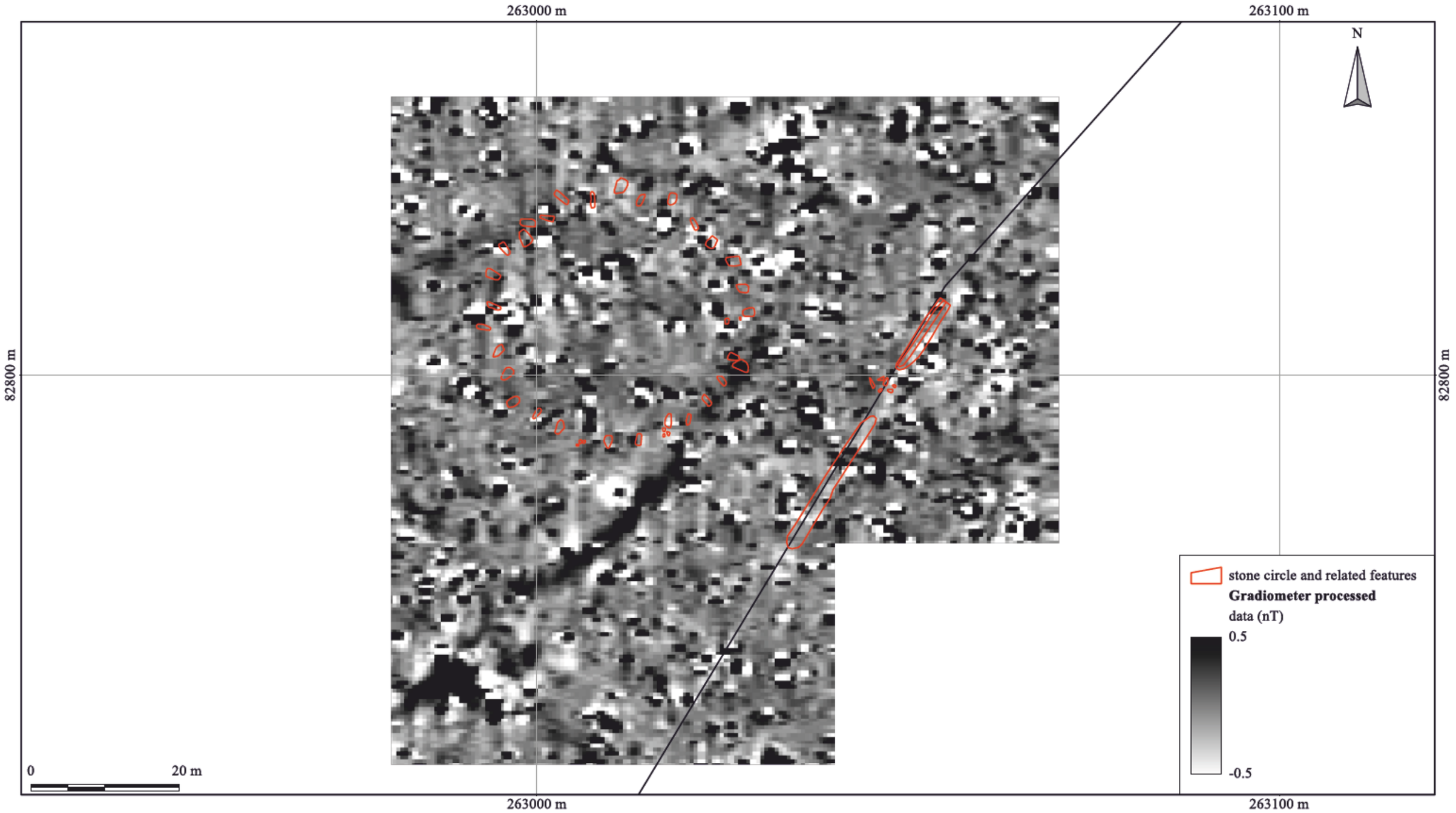

British Grid
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Figure 5: shade plot of processed gradiometer data

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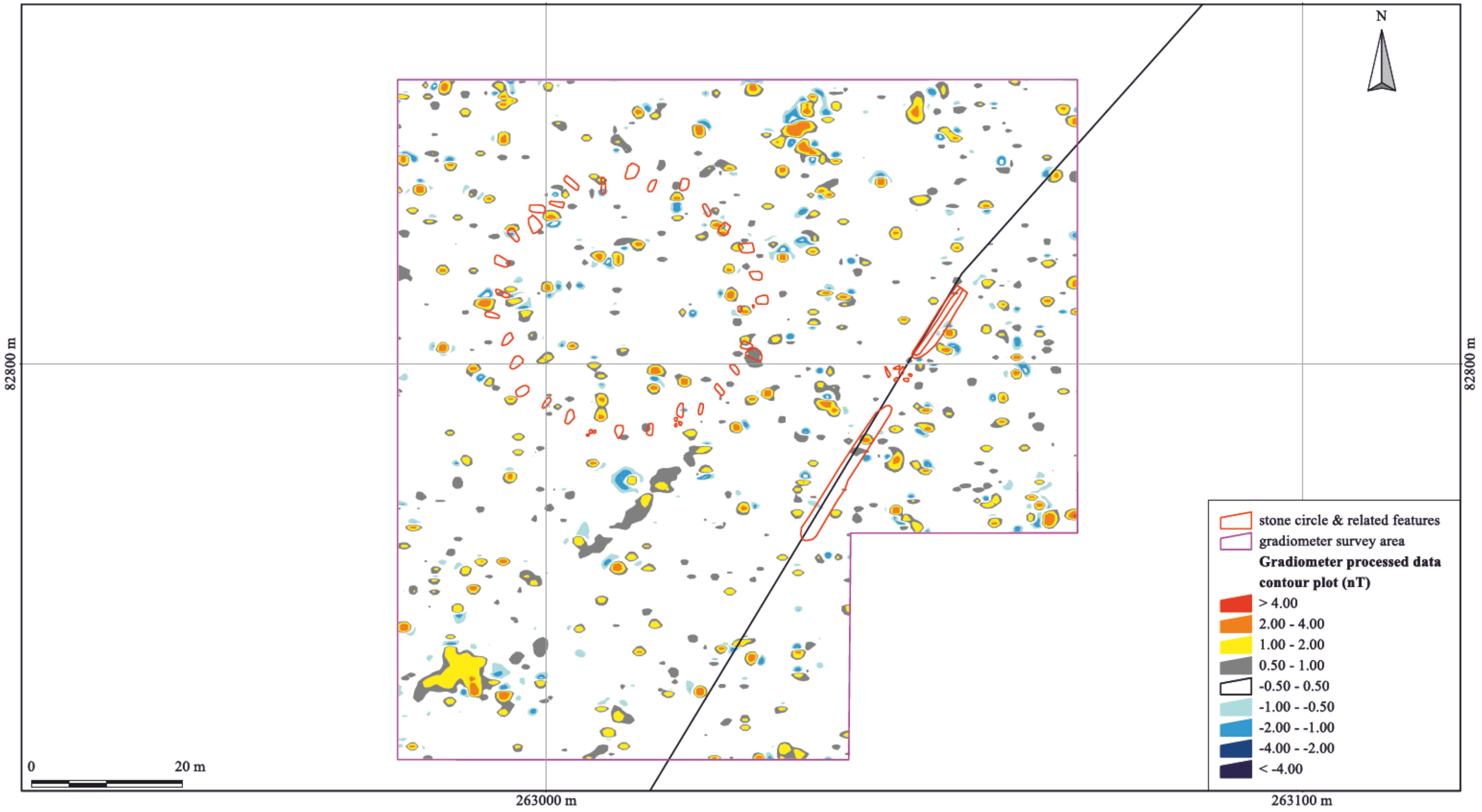

British Grid
centre X: 263025.74 m, centre Y: 82795.56 m

Scale: 1:500 @ A3. Spatial Units: Meter. Do not scale off this drawing

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Figure 6: contour plot of processed gradiometer data

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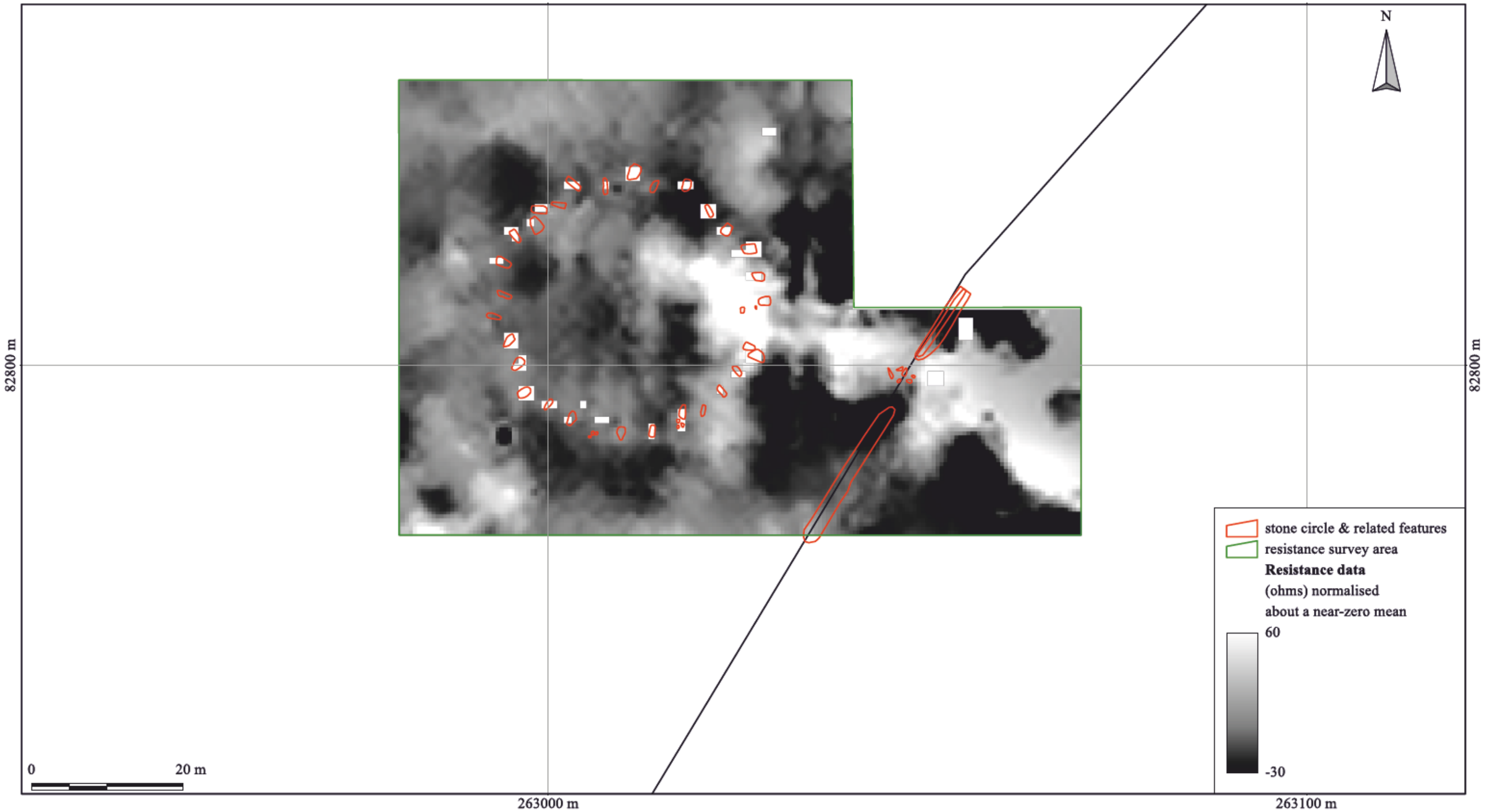
Web: substrata.co.uk



British Grid
centre X: 263025.74 m, centre Y: 82795.56 m

Scale: 1:500 @ A3. Spatial Units: Meter. Do not scale off this drawing

An archaeological gradiometer and earth resistance survey
Sittaford stone circle
Ordnance Survey (E/N): 263014,82808 (point)
Report: 150615-2

Figure 7: shade plot of processed resistance data

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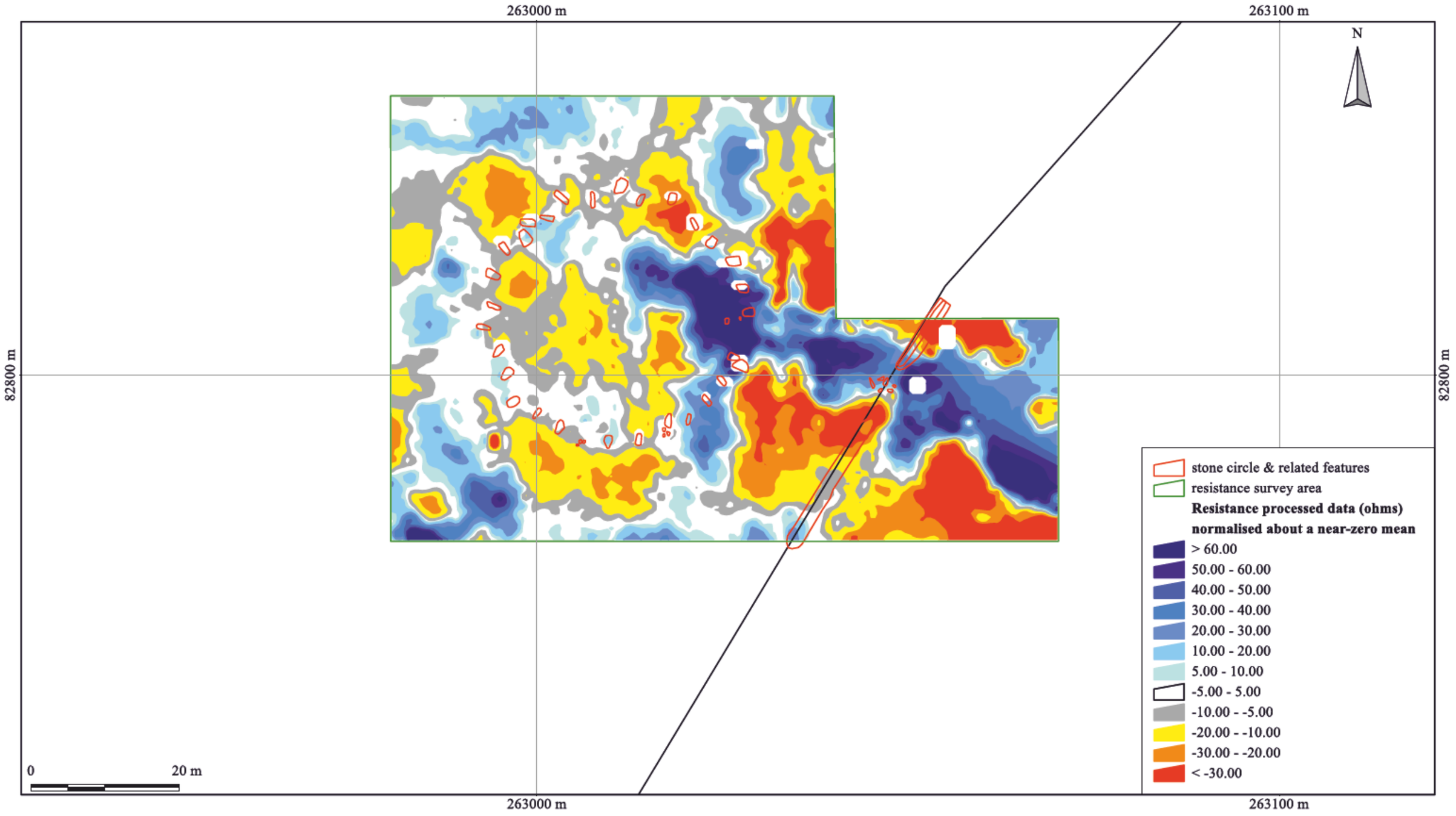

British Grid
centre X: 263025.74 m, centre Y: 82795.56 m

Scale: 1:500 @ A3. Spatial Units: Meter. Do not scale off this drawing

An archaeological gradiometer and earth resistance survey
Sittaford stone circle
Ordnance Survey (E/N): 263014,82808 (point)
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Figure 8: contour plot of processed resistance data

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Appendix 2 Methodology Summary

Table 2: methodology summary

Documents
Survey method statement: Dean (2014)

Methodology

1. The work was undertaken in accordance with the survey methodology statement. The geophysical (gradiometer) survey was undertaken with reference to standard guidance provided by the Chartered Institute for Archaeologists (2014) and Archaeology Data Service/ Digital Antiquity Guides (undated).
2. The survey grid location information and grid plan was recorded as part of the project in a suitable GIS system.
3. Data processing was undertaken using appropriate software, with all anomalies being digitised and geo-referenced. The final report included a graphical and textual account of the techniques undertaken, the data obtained and an archaeological interpretation of that data and conclusions about any likely archaeology.

Grid
Method of Fixing: DGPS set-out using pre-planned survey grids and Ordnance Survey coordinates.
Composition: 30m by 30m grids
Recording: Geo-referenced and recorded using digital map tiles.
DGPS used: Spectra Precision PM5V2 GPS with external antenna and survey pole and DigiTerra Explorer 7 as the survey control program.

Magnetometer Equipment *Instrument:* Bartington Instruments grad601-2 *Firmware:* version 6.1	**Magnetometer Data Capture** *Sample Interval:* 0.5-metres *Traverse Interval:* 1 metre *Data capture:* single short recording *Traverse Method:* zigzag *Traverse Orientation:* GN
Magnetometer Equipment *Instrument:* Geoscan Research RM15 multi-probe resistance meter *Configuration*: twin probe *Mobile probe spacing*: 1 metre	**Magnetometer Data Capture** *Sample Interval:* 0.5-metres *Traverse Interval:* 1 metre *Data capture:* automatic data logger *Traverse Method:* zigzag *Traverse Orientation:* GN

Data Processing, Analysis and Presentation Software
IntelliCAD Technology Consortium IntelliCAD 7.2
DW Consulting TerraSurveyor3
Manifold System 8 GIS
Microsoft Corp. Office Excel 2013
Microsoft Corp. Office Publisher 2013
Adobe Systems Inc Adobe Acrobat 9 Pro Extended

Appendix 3 Data processing

Table 3: gradiometer survey - processed data metadata	
SITE	
Instrument Type:	Bartington Grad 601
Units:	nT
Direction of 1st Traverse:	0 deg
Collection Method:	ZigZag
Sensors:	2 @ 1.00 m spacing.
Dummy Value:	32702
PROGRAM	
Name:	TerraSurveyor
Version:	3.0.25.0
Max:	4.52
Min:	-3.06
Std Dev:	0.47
Mean:	0.03
Median:	0.00
Surveyed Area:	0.72 ha

Processes: 4
1 Base Layer
2 Clip at 3.00 SD
3 DeStripe Median Traverse: Grids: All
4 Interpolate: Match X & Y Doubled.

Table 4: earth resistance survey - processed data metadata	
SITE	
Instrument Type:	Geoscan Research RM15
Units:	resistance data (ohms) normalised about a near-zero mean
Direction of 1st Traverse:	0 deg
Collection Method:	ZigZag
Sensors:	2 @ 1.00 m spacing.
Dummy Value:	32702
PROGRAM	
Name:	TerraSurveyor
Version:	3.0.25.0
Max:	107.48
Min:	-96.13
Std Dev:	25.22
Mean:	-0.16
Median:	-3.53
Surveyed Area:	0.4428 ha

Processes: 10
1 Base Layer
2 Add/Subtract -15 (Area: Top 24, Left 0, Bottom 29, Right 59)
3 Add/Subtract 15 (Area: Top 54, Left 0, Bottom 59, Right 29)
4 Add/Subtract -15 (Area: Top 54, Left 30, Bottom 59, Right 59)
5 Despike Threshold: 1 Window size: 3x3
6 Despike Threshold: 1 Window size: 3x3
7 Clip at 2.00 SD
8 High pass Uniform (mean) filter: Window: 21 x 21
9 Periphery Match ALL grids in the survey.
10 Interpolate: X & Y Doubled.