YCCCART 2011 /Y 14
North Somerset HER 2011 /170

Gradiometer Survey at Wraxall

YATTON, CONGRESBURY, CLAVERHAM AND CLEEVE ARCHAEOLOGICAL RESEARCH TEAM (YCCCART)

General Editor: Vince Russett

The Bartington 601 in action

`

Page	Contents
3	Abstract Acknowledgments Introduction
4	Site location Land use and geology
5	Historical & archaeological context
6	Survey objectives Methodology
7	Results
10	Recommendations References
11	Appendix – Site Record

`

Abstract

YCCCART has agreed with the Heritage Lottery Fund to undertake a project over two years commencing May 2009 to establish the extent of the Congresbury Roman kiln sites, investigate the archaeology of the environs around Cadbury Hill, Congresbury and enable the equipment to be used by Community Archaeology in North Somerset teams to identify new archaeological sites / additional features in North Somerset.
A resistivity survey had been carried out on the site in 2008 and a potential Roman building identified. The 2010 /2011 gradiometer survey appears to have relocated this building and revealed a Roman? industrial area.

Acknowledgements

A Heritage Lottery Grant enabled the purchase, by YCCCART, of a Bartington 601 gradiometer without which this survey could not have been undertaken.

This survey would also not have been carried out without the willing permission of the landowner. Mr Volwes.

The authors are grateful for the hard work by the members of YCCCART & NEAT (Nailsea Environmental & Archaeological Team) in performing the survey and Vince Russett for editing this report.

Introduction

Yatton, Congresbury, Claverham and Cleeve Archaeological Research Team (YCCCART) is one of a number of Community Archaeology teams across North Somerset, supported by the North Somerset Council Development Management Team.

The objective of the Community Archaeology in North Somerset (CANS) teams is to carry out archaeological fieldwork, for the purpose of recording, better understanding and management of the heritage of North Somerset.

`

Site Location

Removed at request of NEAT

Fig 1: Site location. Field indicated by red arrow

The field site lies in Wraxall some 6 miles south of Bristol. The centre of the field is at ST **(**Removed at request of NEAT**).**

Land use and geology

The field is currently in arable cultivation.

The bedrock geology is Mercia Mudstone Group – Mudstone and Halite Stone

Please note there is no public access to this site

`

Historical & archaeological context

The field was investigated by Paul Thorogood between 2005 and the present. He has found over 100 Roman coins from about 100AD to 350AD, a number of broken brooches, a couple of spoons, lead weights possibly from a yard scale, lead piping, iron slag, loom weights, rings and from the top of the field a piece of hypocaust tile. Paul has plotted the results and they fit in with what appear to be buildings on the resistivity survey by Vince Russett in 2008. Roman artefacts (quern, pottery and coins) have been found in several fields close to the surveyed field.

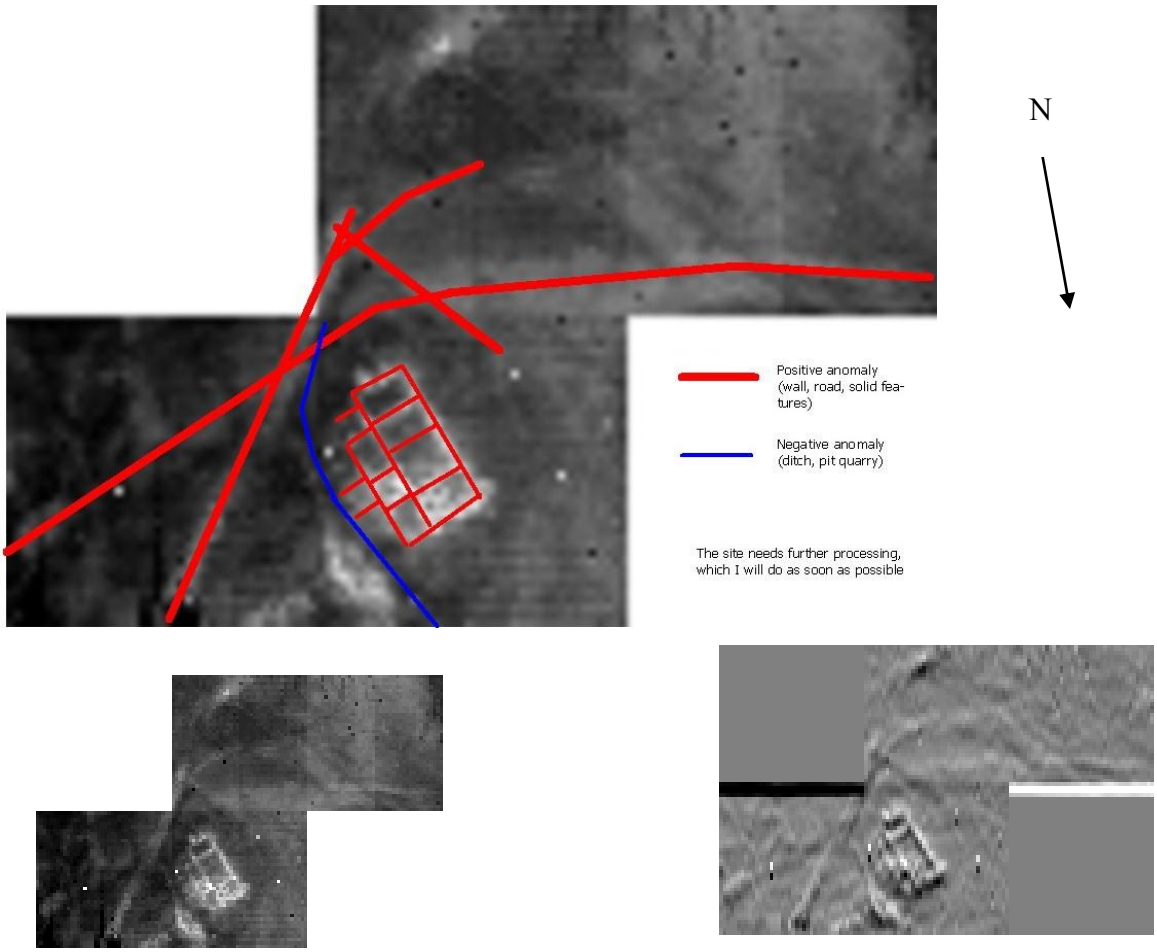


Fig 2: 2008 resistivity results from Vince Russett

The unprocessed results in fig 2 above very clearly show the outline of a possible Roman building in the north end of the field.

Two lines removed at request of NEAT

`

Survey objectives

The survey had the following objectives.

1) To identify any further archaeological features in the field.
2) To use the survey to further train YCCCART members and members of Community Archaeology in North Somerset (CANS) in the use of the Bartington 601 gradiometer.

Methodology

The survey was undertaken on 30 September, 8 October 2010 and 19 September 2011, by teams from YCCCART & NEAT, using a Bartington 601 Gradiometer, with settings as per the site record in the Appendix.

The completed survey was downloaded to an ArcheoSurveyor programme.

ArchaeoSurveyor composites were adjusted using the following filters

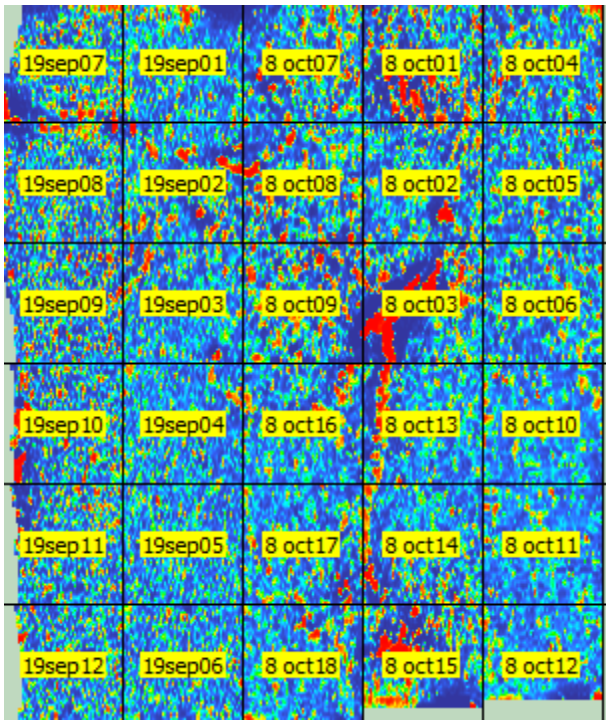
Grad shade
Band Weight Equaliser
Despiked
Destriped
Clip SD2
Colour –Red green blue 2

The report was written in Microsoft Word 2007.

Site photographs were taken by members of YCCCART, and remain the copyright of YCCCART.

`

Results



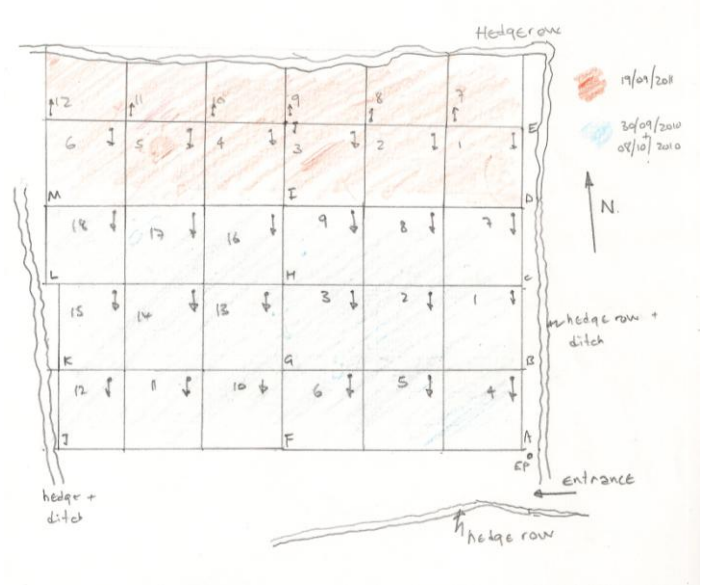


Fig 3: ArcheoSurveyor grid references (NB Machine data not cleared so download 30/9 & 8/10 is all shown 8 Oct) and (below) plan of grid layout

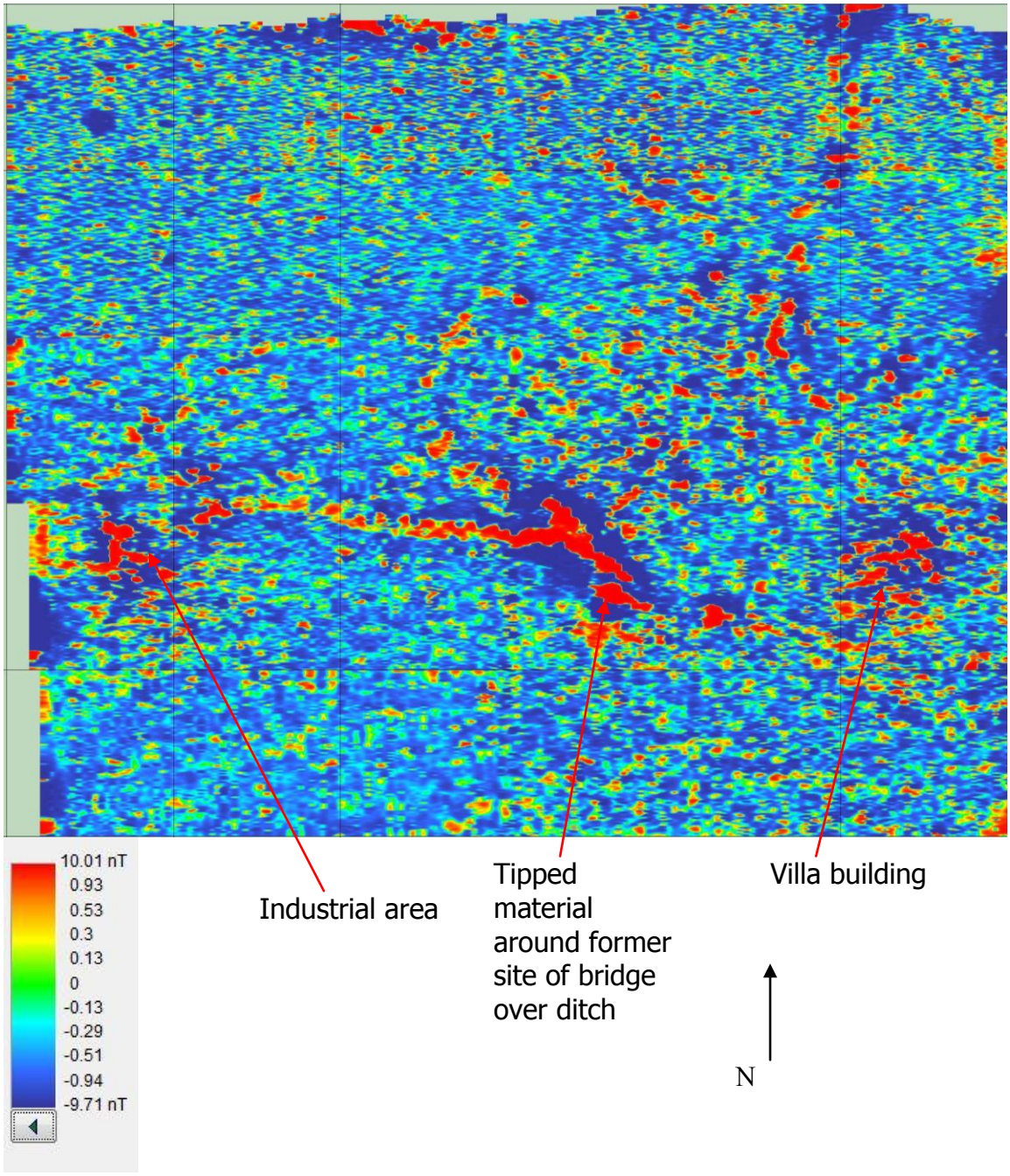


Fig 4: *Shade view (ArcheoSurveyor colour image). High readings are red.*

The very strong high readings shown in the centre of fig 4 above are believed to result from ferrous waste in tipping on the approaches to a former field bridge over a ditch.

The building (Roman Villa?) revealed by Vince Russett's 2008 resistivity survey is clearly indicated by the typical 'domestic activity' pattern to the right in fig 5 above.

High responses indicated in fig 5 by the red arrow on the left may indicate that the site was being used for industrial purposes in the Roman period. In particular, a rectangular

`

feature with a very high positive response appears to be a ditch or similar feature full of metal slag, quantities of which were found during field walking. Much of the rest of the pattern in this area is probably explained by industrial heating (furnaces; kilns) and spreads of metal working wastes such as iron slag. The high response 'trail' between the industrial area and the central feature may mark the use of slag or other magnetic material in a track between the two. Paul Thorogood has also found evidence of cutting up waste lead, which may have been resmelted on site. This was happening on Roman sites around Shepton Mallet in the post-Roman period (P. Leach, pers comm)

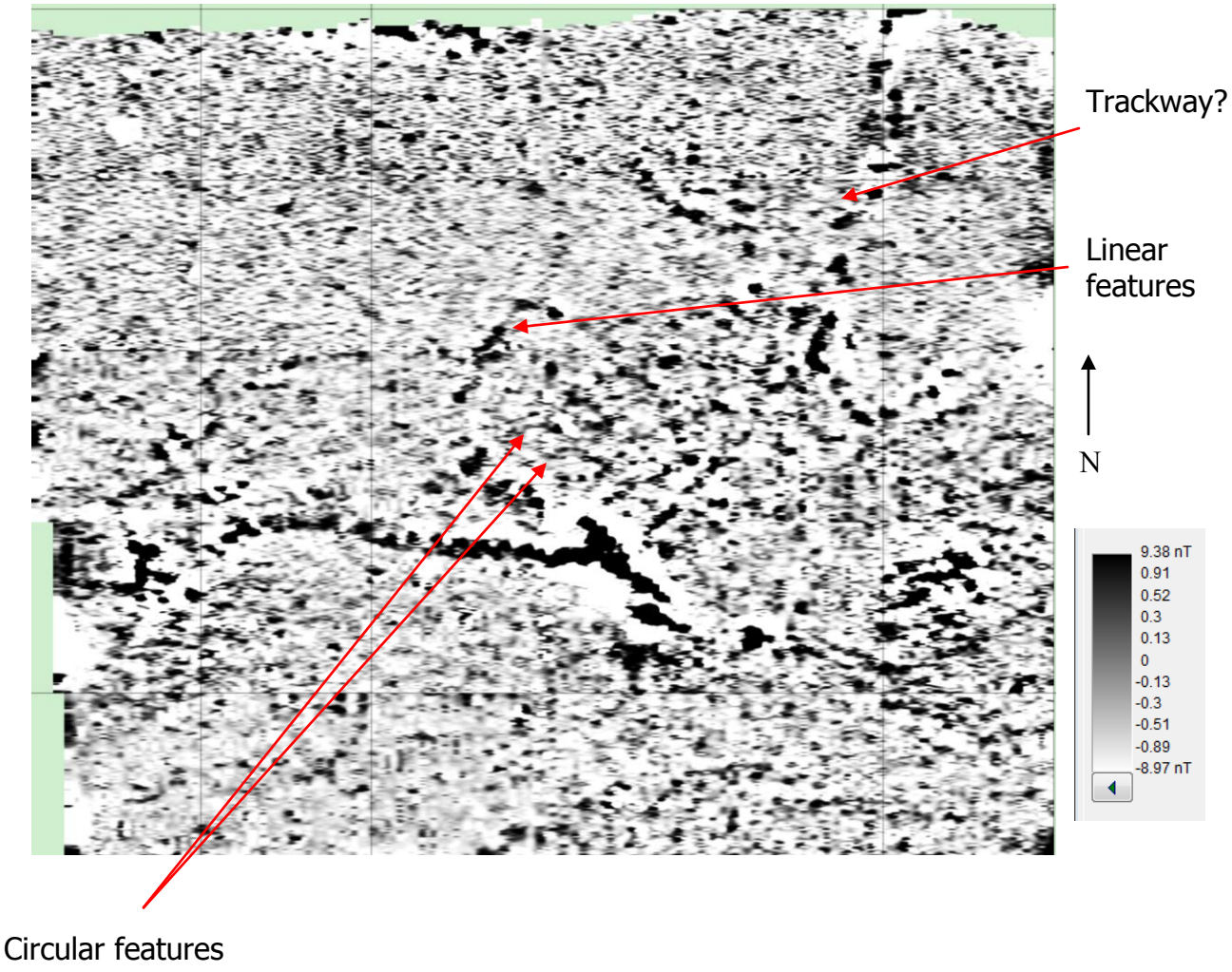


Fig 5: ArcheoSurveyor Shade View, black & white image. High readings are black.

The black & white image in Fig 5 above, in addition to the features previously described, shows apparent circular features as indicated by the red arrows. The origins of these are obscure. The result also shows a number of linear features (also indicated by red arrows), including two at right angles that might be part of an enclosure as well as a possible trackway.

`

Recommendations

The survey has confirmed the site of the potential Roman villa and indicated an industrial site. It is recommended that a resistivity survey is undertaken over the 'industrial' area and at the same time a new resistivity survey is carried out on the 'villa' area, and on an area on the far side of the hedge from the known site, to see if the structure extends into the next field.

References

All historical information, including Vince Russett's 2008 survey results, has been provided by NEAT.

Authors. YCCCART & NEAT

Date October 2011

`

Appendix

Gradiometer Site Record

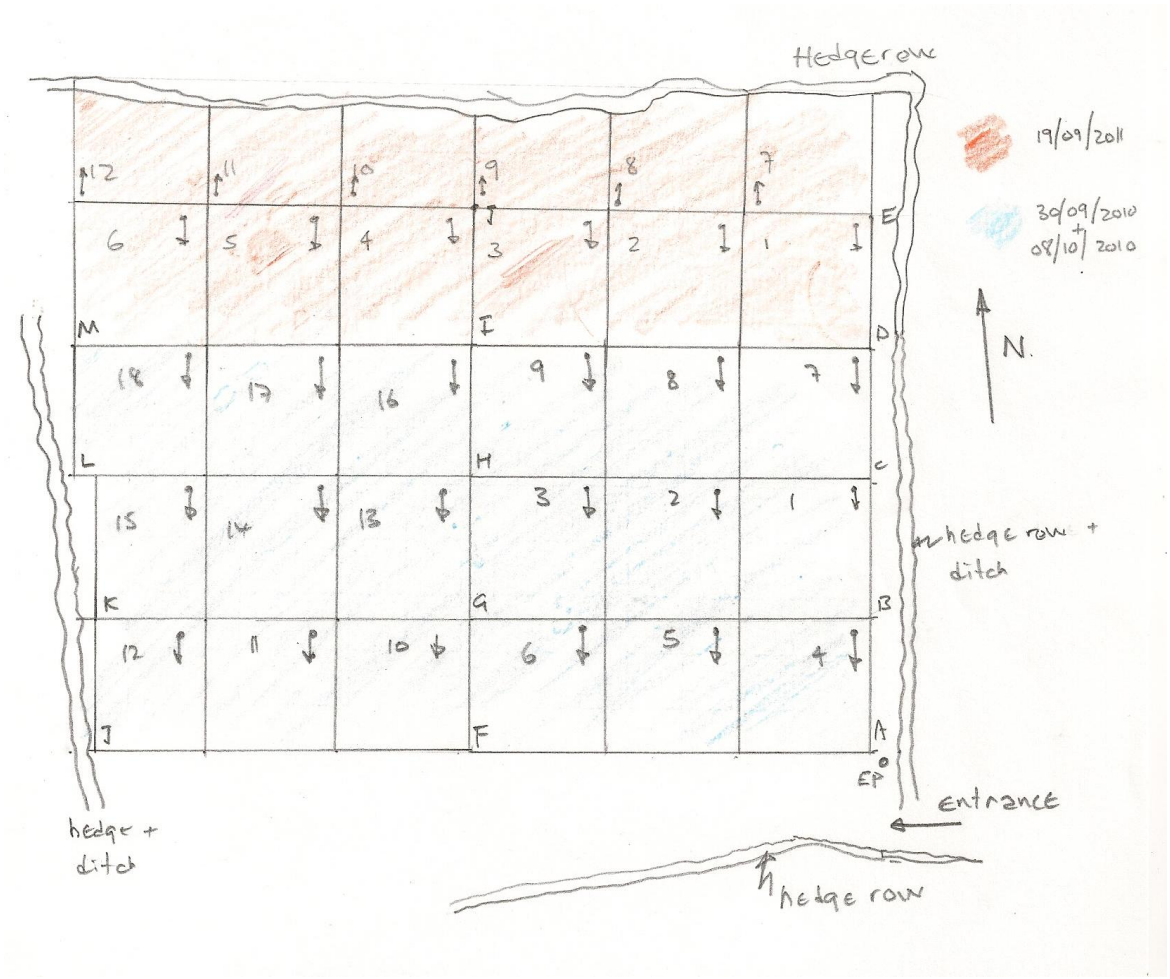
<table>
<tr><td colspan="3">YCCCART Site Survey
Project – NEAT Nine Acre field</td></tr>
<tr><td colspan="2">Survey date</td><td>19th September 2011</td></tr>
<tr><td colspan="2">Report date</td><td>19th September 2011</td></tr>
<tr><td colspan="2">Type /Instrument</td><td>Grad 601</td></tr>
<tr><td colspan="2"></td><td>Pace :1.5m/s
Lines/m : 1
Range:100nT
Volume: High
Sensors:2</td><td>Grid size: 30m x30m
Pattern : Zig Zag
Samples/m:4
Audio: On
Threshold:1nT
Reject:50 Hz</td></tr>
<tr><td colspan="2">Location</td><td>See appendix 1</td></tr>
<tr><td colspan="2">Ref</td><td>none</td></tr>
<tr><td colspan="2">Site name</td><td>(Removed at request of NEAT)</td></tr>
<tr><td colspan="2">Landowner</td><td>(Removed at request of NEAT)</td></tr>
<tr><td colspan="2">Tenant</td><td></td></tr>
<tr><td colspan="2">HER ref</td><td></td></tr>
<tr><td colspan="2">Site type</td><td>Open field</td></tr>
<tr><td colspan="2">Description</td><td>Gently sloping and even</td></tr>
<tr><td colspan="2">Period</td><td>Unknown</td></tr>
<tr><td colspan="2">Geology</td><td>Limestone</td></tr>
<tr><td colspan="2">Land use</td><td>Harvested grain crop</td></tr>
<tr><td rowspan="2">30th September and 8th October 2010</td><td>team</td><td>Peter Wright, Mike Fox, Unsal Hassan &Ian Morton plus members of NEAT</td></tr>
<tr><td>weather</td><td>Warm and dry</td></tr>
<tr><td rowspan="2">19th September 2011</td><td>team</td><td>Ann Dimmock, Susan Dugas, Janet Dickson, Ian Morton and Paul & Brian from NEAT</td></tr>
<tr><td>weather</td><td>Warm but overcast with occasional light drizzle.</td></tr>
</table>

`

Survey area			notes		readings		
			size	walk direction	max	min	mean
Grid ref #	30/09/2010	1	30 x 30 m	S	+24.7	-18.9	-1.2
		2	30 x 30 m	S	+8.5	-8.3	-0.9
		3	30 x 30 m	S	+99.9	-100.0	-0.5
		4	30 x 30 m	S	+10.2	-8.0	-1.0
		5	30 x 30 m	S	+2.8	-3.9	-1.1
		6	30 x 30 m	S	+6.2	+8.5	-1.3
		7	30 x 30 m	S	+4.4	-10.0	-1.7
		8	30 x 30 m	S	+23.9	-14.3	-1.5
		9	30 x 30 m	S	+30.9	15.4	-1.8
	08/10/10	10	30 x 30 m	S	+7.9	-2.4	+0.5
		11	30 x 30 m	S	+9.2	-2.0	+1.1
		12	30 x 30 m Incomplete grid	S	+6.4	-4.6	+1.8
		13	30 x 30 m	S	+8.6	-2.3	+1.8
		14	30 x 30 m	S	+57.8	-4.1	+1.5
		15	30 x 30 m Incomplete grid	S	+38.9	-14.5	+1.0
		16	30 x 30 m	S	+9.3	-2.9	+1.5
		17	30 x 30 m	S	+8.1	-3.3	+1.6
		18	30 x 30 m	S	+18.1	-3.7	+1.5
	19/09/2011	1	30 x 30 m	S	+6.9	-10.0	+0.4
		2	30 x 30 m	S	+39.6	-6.0	+0.3
		3	30 x 30 m	S	+36.2	-7.4	+0.2
		4	30 x 30 m	S	+10.7	-14.6	-0.1
		5	30 x 30 m	S	+24.2	-7.0	-0.2
		6	30 x 30 m	S	+22.5	-9.4	-0.5
		7	30 x 30 m Mirror and return	N	+56.9	-7.2	+2.9
		8	30 x 30 m Mirror and return	N	+61.2	-20.9	+3.0
		9	30 x 30 m Mirror and return	N	+29.8	-3.4	+3.2
		10	30 x 30 m Mirror and return	N	+38.0	-20.3	+2.9
		11	30 x 30 m Mirror and return	N	+16.7	-5.0	+2.6
		12	30 x 30 m Mirror and return	N	+54.7	-5.4	+2.8

`

Setting out details



`

Geo location

Removed at request of NEAT

`