YCCCART 2013/Y7
North Somerset HER 2013/104

Gradiometry Survey at Wemberham Roman Villa

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

General Editor: Vince Russett

The 601 in operation

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Abstract

YCCCART has a projecting to investigate Romano –British remains in the Yatton & Congresbury area. Gradiometery surveys at Wemberham may have revealed a possible canal and dock, a previously unknown large building, a domestic area and what may be a garden feature.

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, H M & K I Stowell & Son and English Heritage for issuing a licence to undertake the surveys.

The authors are grateful for the hard work by the members of YCCCART in performing the survey and Vince Russett for editing this report.

Introduction

YCCCART is one of a number of Community Archaeology teams across North Somerset, supported by the North Somerset Development Management Team.

The objective of the Community Archaeology in North Somerset (CANS) project is to undertake archaeological fieldwork to enable a better understanding and management of the heritage of the area while recording the activities and locations of the research carried out.

Site Location

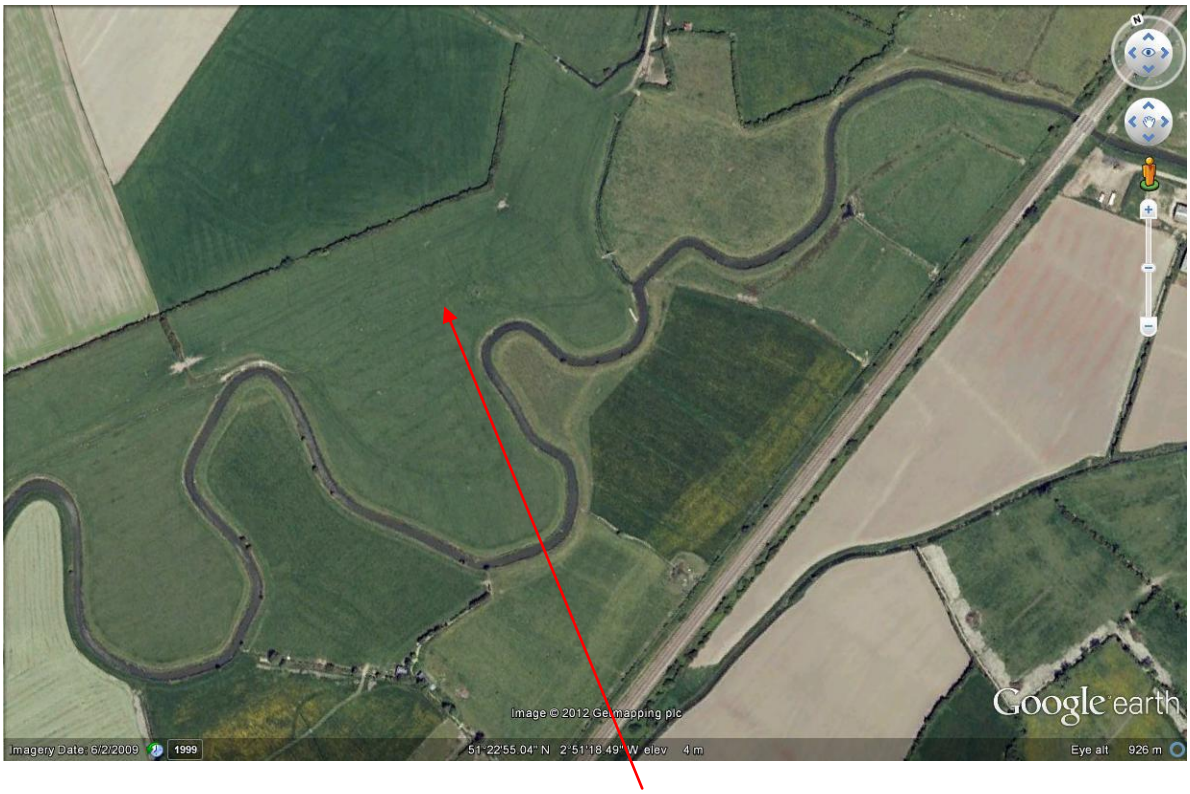


Fig 1: Site location. The red arrow indicates the field.

Land use and geology

The site lies some 2.2 miles by road from the centre of Yatton. See Appendix for relevant GPS position.

The field is privately owned.

Geology
Bedrock Geology: Mercia Mudstone group - Mudstone and Halite-stone.
Superficial deposits: Tidal Flat Deposits – Clay and Silt.

Historical & Archaeological Context

Domesday

In Yatton's entry in the Exchequer Domesday the Bishop tenant Hildebert is shown as holding "a pasture called Wemberham which before 1066 belonged to Congresbury". The Exeter copy of Domesday states "of these 4 hides which Hildebert holds (of the Bishop) a woman, Aethelrun had 1 Hide jointly in 1066. With this Hide which Aethelrun held lies a pasture called Wemberham. (Gardner KS, 2000)

Great Wemberham Coffin

In 1828 in the field of Great Wemberham in 1928, about a foot below the surface a freestone coffin with a lid, "shaped to the body," was discovered, "excavated from a solid block", It was very thick and contained fragments of a lead coffin and most of a human skeleton "of medium stature." The head of the coffin pointed to the north - west. (Rutter, 1825)

Villa Excavation

The Roman villa at Wemberham, was discovered in March 1884 in the course of draining the field. Drain pipes were being laid at a depth of 2 feet 6 inches (0.76 metres) and in the course of this work the men cut into a tessellated pavement. A subsequent excavation established that the villa was very close to the north bank of the river and without defence banks would surely have flooded at some high tides.

The report of the excavation (Somerset Archaeological & Natural History Society, 1886) indicates that the villa covered an area of 65 by 150 feet (19.81 by 45.72 metres).

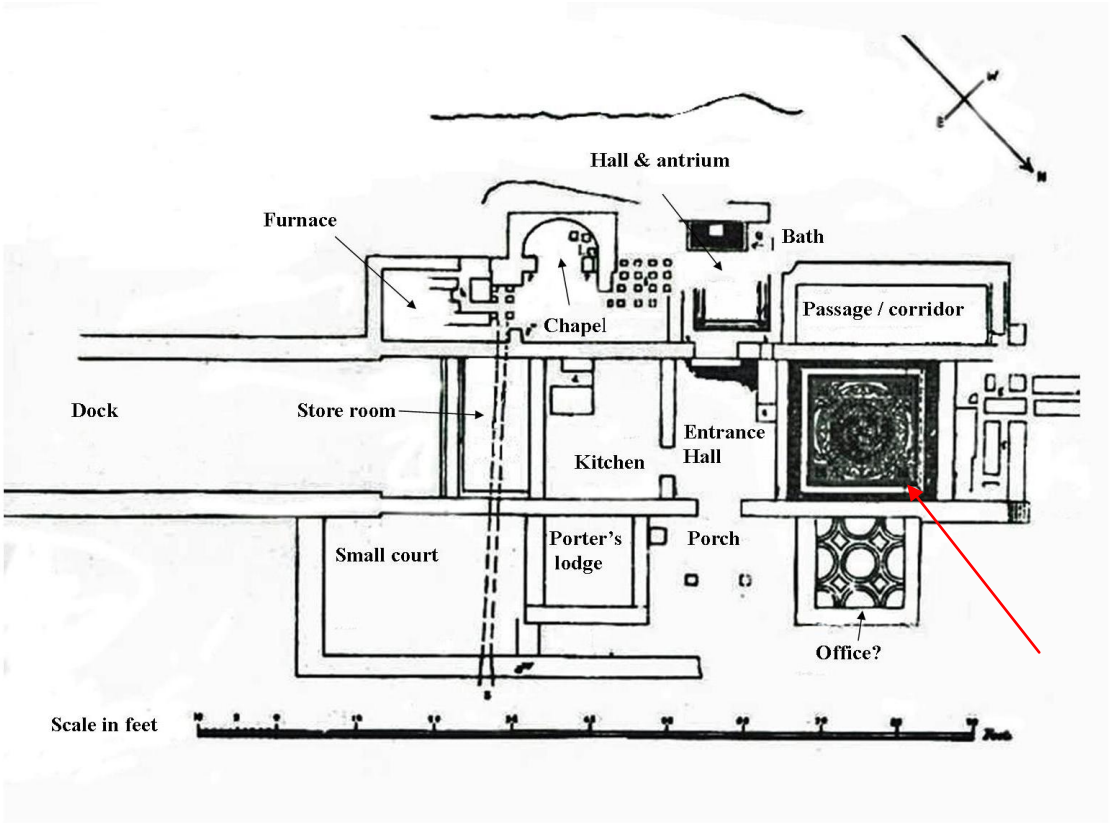


Fig 2: The plan of the villa by measured and drawn by R C Reade M.A Archt.

The plans produced in Fig 2 above are from the excavation report which includes the following supposed layout.

An entrance on the north side seems to lead to an inner and outer hall and bathing apartments at the back. There is also a possible trace of a staircase leading to lofts or an upper story.

On the right or west of the entrance are the best rooms of the villa. The room indicated by the red arrow (in Fig 2 above) contained an elaborate mosaic of foliated geometrical pattern in red, white and blue as per Fig below.

Below it a room described as an office contained a mosaic with a red, white and blue design.

Two thick walls on the left of the plan run towards the river and are thought to have formed a dock and landing stage.

Finds included 21 coins dating from AD. 250 to 305 (or 360).

Current research suggests that the reclamation of the site dates to the 3rd century but that sometime after the mid – 4th century nature reclaimed the North Somerset Levels (Rippon, 2006). This fits well with the coin sequence.

Fig 3: Mosaic from Somerset Archaeological & Natural History Society Proceedings for 1885.The location within the villa is indicated by the red arrow in Fig 2 above.

Congresbury Yeo

The Congresbury Yeo was tidal as far as Congresbury until the construction of the sluice at Tutshill Ear in the 20th century (Rippon, 2006, p89). An advertisement in the Sherborne and Yeovil Mercury, 24 February 1794: indicates this *"To be let at Lady-Day next [March 25] for a term of years a compact tan-yard large enough to take 40 hides per week: and a navigable river runs alongside it with the use of a barge to convey bark to the same.*(Oak bark was essential in the tanning process).

In addition the mill at Congresbury during the 18th century operated as a slitting mill manufacturing iron bars into rods from which nails were produced. On 17 November 1736 Graffin Prankard of Bristol sent to the miller William Donne " *352 barrs of Spear Eagle mark of Russian iron*" weighing just over 210cwts together with 21cwts of some more expensive iron all of which was "*Put on board of his own vessel for Congresbury"*.

Tithe

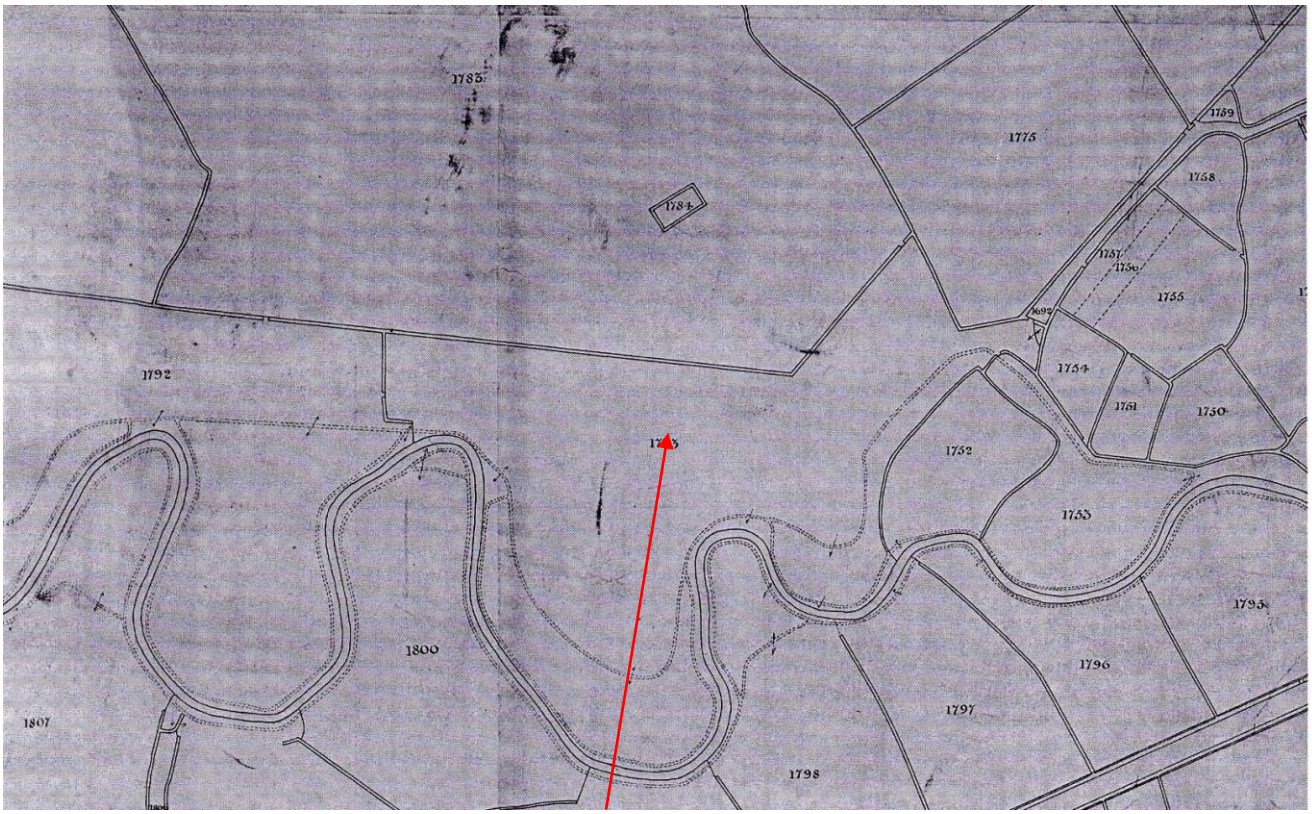


Fig 4: Tithe Map c1840. Courtesy of Somerset Heritage Centre. (Ref D/D/Rt/M/368).
The surveyed field is number 1793 on the map.

The surveyed field is shown on a 1768 map (in private hands) and called The Rambles.

The Tithe apportionment record, relating to the 1839 map (Fig 4 above) , shows fields as follows:
1782. High Wharf.
1783. Great Wimmerham
1785. Little Wimmerham
1786. Strip
1793. The Ramble
All fields are owned by John Hugh Smyth – Piggott and occupied by John Lyons.
The Strip is recorded as arable but the other fields are pasture.

Lidar Features

While this is not immediately obvious on the ground, lidar shows that the alluvium north of the villa is 20-25cm thinner than in its immediate area.

Lidar also shows that there are no large palaeochannels outside of the Yeo, indicating that its current course is almost certainly its historic one. In addition no palaeochannel crosses the river course, but many are / were tributaries.

This appears contrary to the possibility that the villa once stood on the south bank of the River Yeo (Rippon, 2006).

The Lidar also shows that Wemberham clearly has several 'layers' of landscape. At the moment, these are not dateable.

The 'excavated' area of the villa is revealed as a small blue rectangle close to the river, 2 hues (i.e. around 50cm) lower than the surrounding area. To its north, there is an enclosure, with two 'arms' to its west, which stands out from the rest of the grypes. This does not share the same orientation as the rest of the grypes in the field, although some of them clearly respect its line: it is thus earlier than they are.

Scheduled Area

Fig 5: Scheduled area. Courtesy of North Somerset Council.

The scheduled area for the villa site is within the red dotted lines on Fig 5 above

Survey objectives

The survey was undertaken in order to continue to investigate the extent of the settlement at Wemberham and determine
1) If there are any further buildings around the known villa.
2) The current state of the villa walls.
3) If there was there an access road to the villa.

Methodology

The survey of field was undertaken during the period 10th June 2013 to 5th September 2013 by teams from YCCCART using a Bartington 601 gradiometer, with settings as per the site record in the Appendix.

The completed survey was downloaded to a TerraSurveyor programme.

TerraSurveyor composites were adjusted using the following filters

Standard settings
1) Colour - Red Blue Green 2
2) Band weight equaliser
3) Grad shade
4) Despiked
5) Destriped
6) Clip SD2

The report was written in Microsoft Word 2007.

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

Results

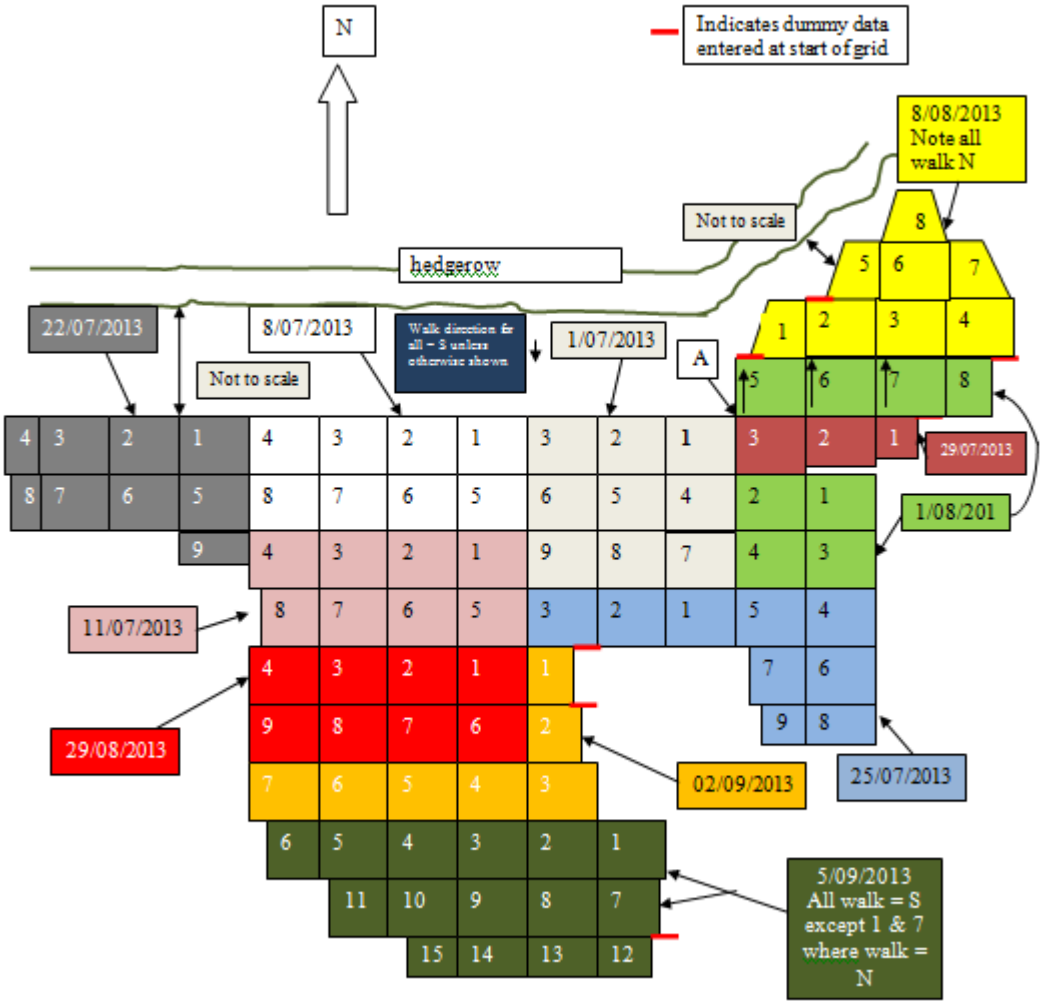


Fig 6: Grid layout

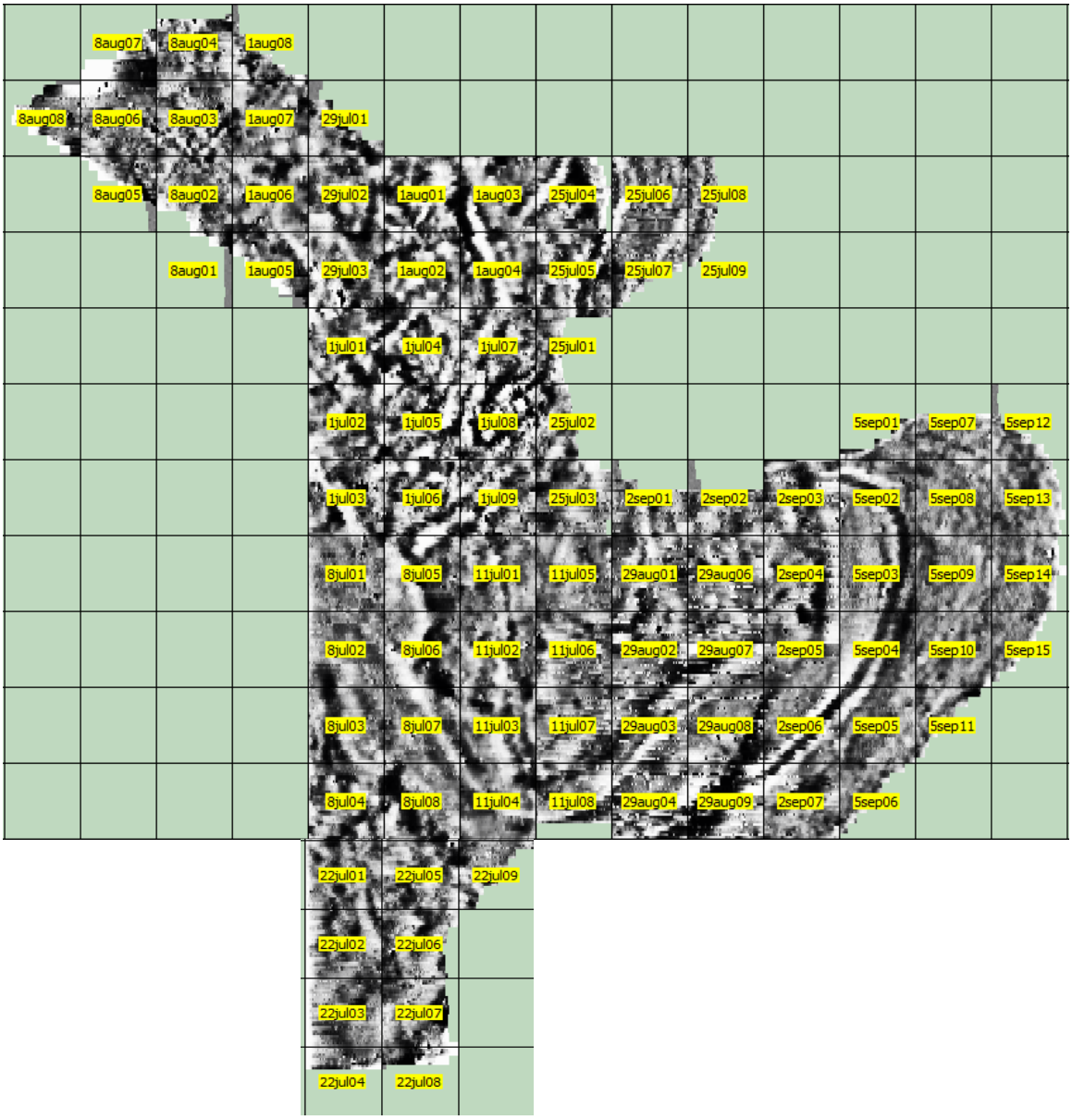


Fig 7: TerraSurveyor file names. Grids are 30m square.

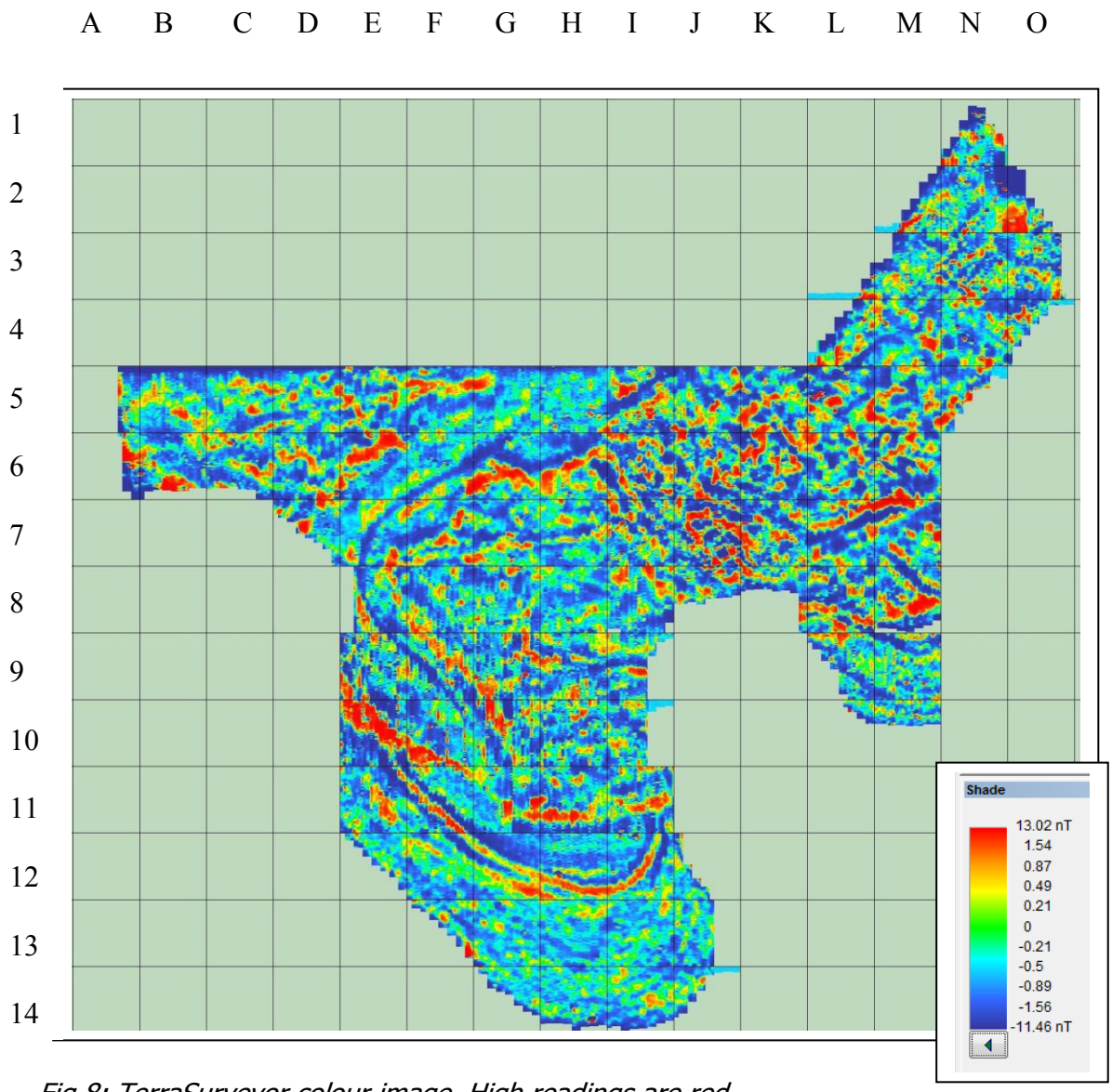


Fig 8: TerraSurveyor colour image. High readings are red.

Examination of the results shown in in Fig 8 above show:

1) The area contained within 5A to 5D & 6A to 5D (top left) is devoid of features and any results are natural.
2) The villa is clearly shown within the grids J7 & J8 - orientated north west to south east
3) A further possible large structure lies within 6Hto 6I & 7I. It is orientated the same as the villa.
4) The potential domestic activity lies to the east of the grids 5I to 8I.
5) Commencing in grid E7 and continuing north into G6 is a blue line, suggesting perhaps a boundary to what may be (on its left) a small canal which leads at grid G6 & H6 into a possible dock.

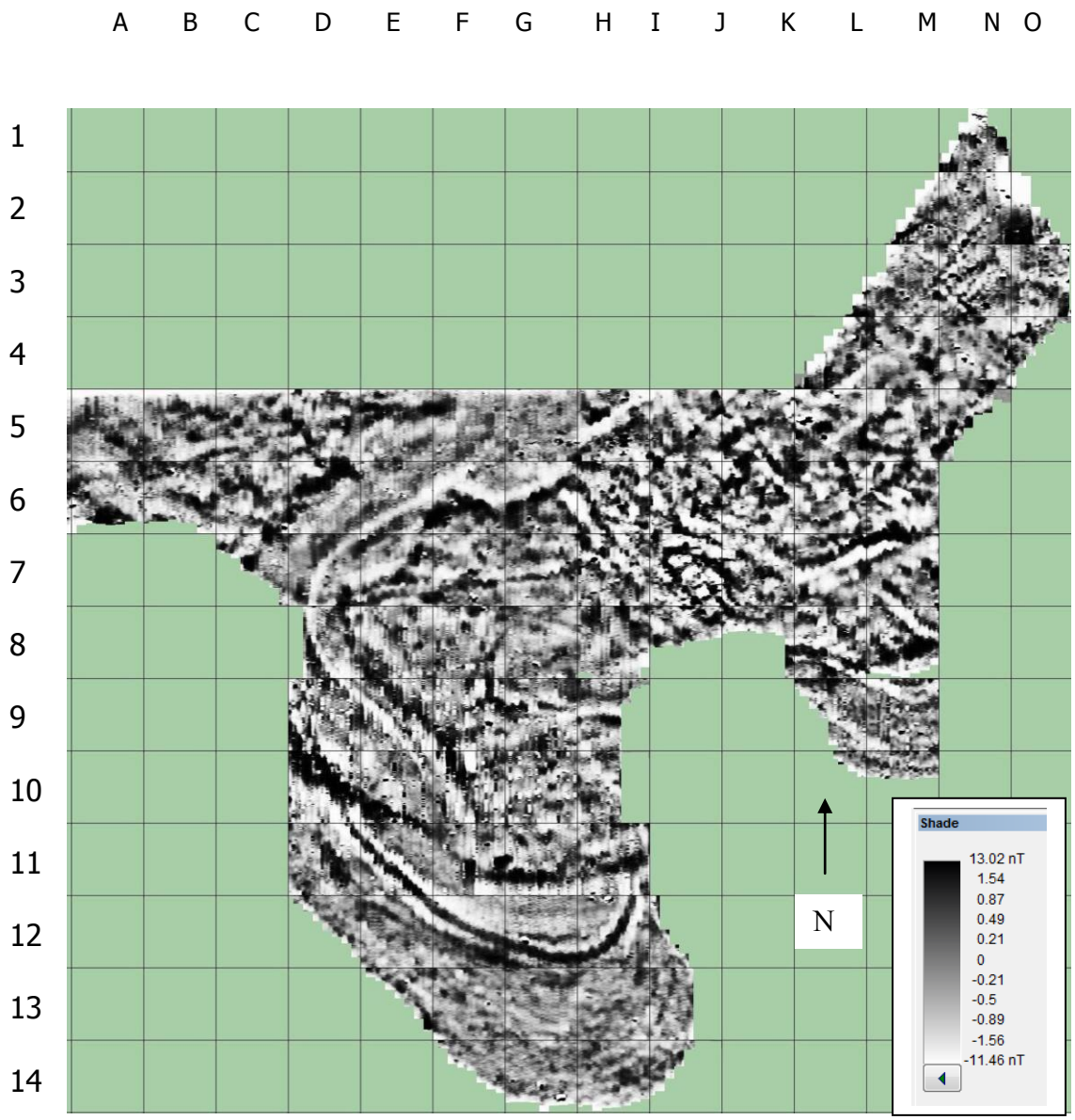


Fig 9: TerraSurveyor black and white image. High readings are black.

The black and white image reveals the possible canal and dock even clearer.
To the left of the potential building G6 / H7 in Fig 9 above is a star shaped area bounded by D8, E9, F10, G11 & H11 which is suggestive of a Roman formal garden.

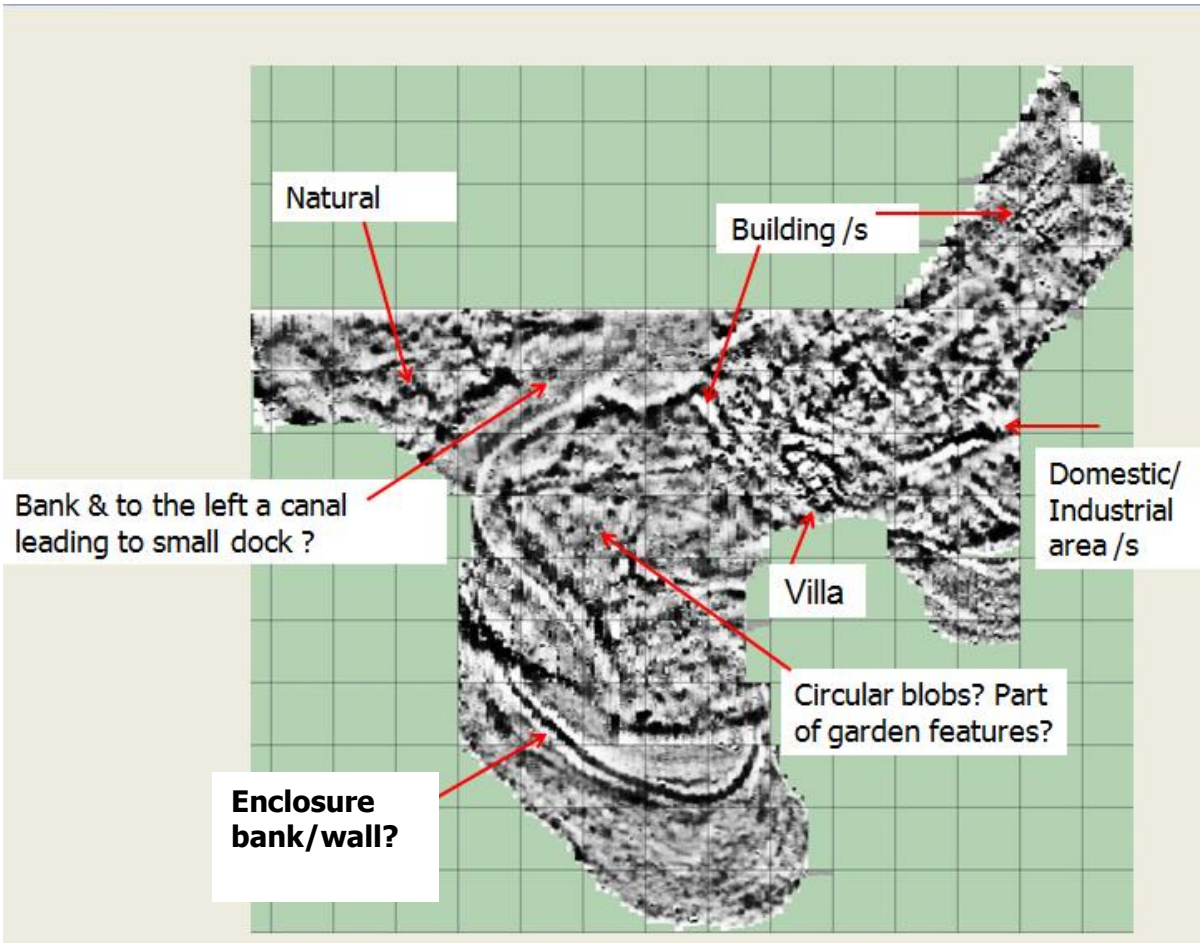


Fig 9: TerraSurveyor black and white image with potential results. High readings are black.

The image at Fig 9 above summarises the possible results.

Recommendations

A limited dig in the area of high anomaly is required to clarify the results of the geophysical investigations.

The whole field should be considered for addition to the Schedule of Monuments.

Further evaluation of the results should be undertaken.

References

Rutter. J. 1829	*Delineations of the north western division of the county of Somerset*
Gardner K.S. 2000	*Boggy Meares & Queashy Fennnes.* Nailsea & District Local History Society. ISBN 1353-3967
Somerset Archaeological & Natural History Society. 1886	*Proceedings during the year 1885*. NEW SERIES Vol X.1.
Rippon Stephen,2006	*Landscape Community and Colonisation –The North Somerset Levels during the 1st to 2nd millennia AD* CBA Research Report 152
Congresbury History Group, 2002	*Congresbury as 'twas* Congresbury History Group *ISBN 0-9544048-0-7*

Authors: Ian Morton & Chris Short

Date: December 2013

Appendix

Setting out details - Gradiometer

YCCCART Site Survey Project: Wemberham Roman Villa			
Survey date		5th September 2013	
Report date		5th September 2013	
Type /Instrument		Grad 601	
		Pace :1.5m/s Lines/m : 1 Range:100nT Volume: High Sensors:2	Grid size: 30m x30m Pattern : Zig Zag Samples/m:4 Audio: On Threshold:10nT Reject:50 Hz
Location		Wemberham	
		See annex 1	
Ref		none	
Site name		Wemberham Roman Villa	
Landowner		H M & K I Stowell & Son	
Tenant		None	
HER ref		TBC	
Site type		Open land	
Description		Grass for grazing	
Period		Unknown	
Geology			
Land use			
Survey team and conditions			
10/06/2013	Team	Peter Wright, Colin Campbell, Ferdi, Janet Dickson, Philippa Cormack	
	weather	bright	
08/07/2013	Team	Peter Wright, Peter English, Philippa Cormack, Ian Morton	
	weather	Hot and sunny	
11/07/2013	Team	Philippa Cormack, Chris Short, Susan Dickson, Colin Campbell, Ian Morton, Maggie Rosevink	
	weather	Hot and sunny	
22/07/2013	Team	Peter English, Peter Wright, Anne Dymmock, Janet Dickson	
	weather	Hot and sunny	
25/07/2013	Team	Peter English, Janet Dickson, Philippa, Ian morton, Ferdi	
	weather	Hot and sunny	
29/07/2013	Team	Peter English, Janet Dickson, Ian Morton,	
	weather	Sunny start but work stopped due to thunderstorm	
01/08/2013	Team	Peter English, Janet Dickson, Ian Morton, Ferdi	
	weather	Hot and sunny	
08/08/2013	Team	Peter English, Janet Dickson, Ian Morton	
	weather	Hot and sunny	
29/08/2013	Team	Peter English, Janet Dickson, Ferdi, Peter Wright	
	weather	Sunny with one shower	

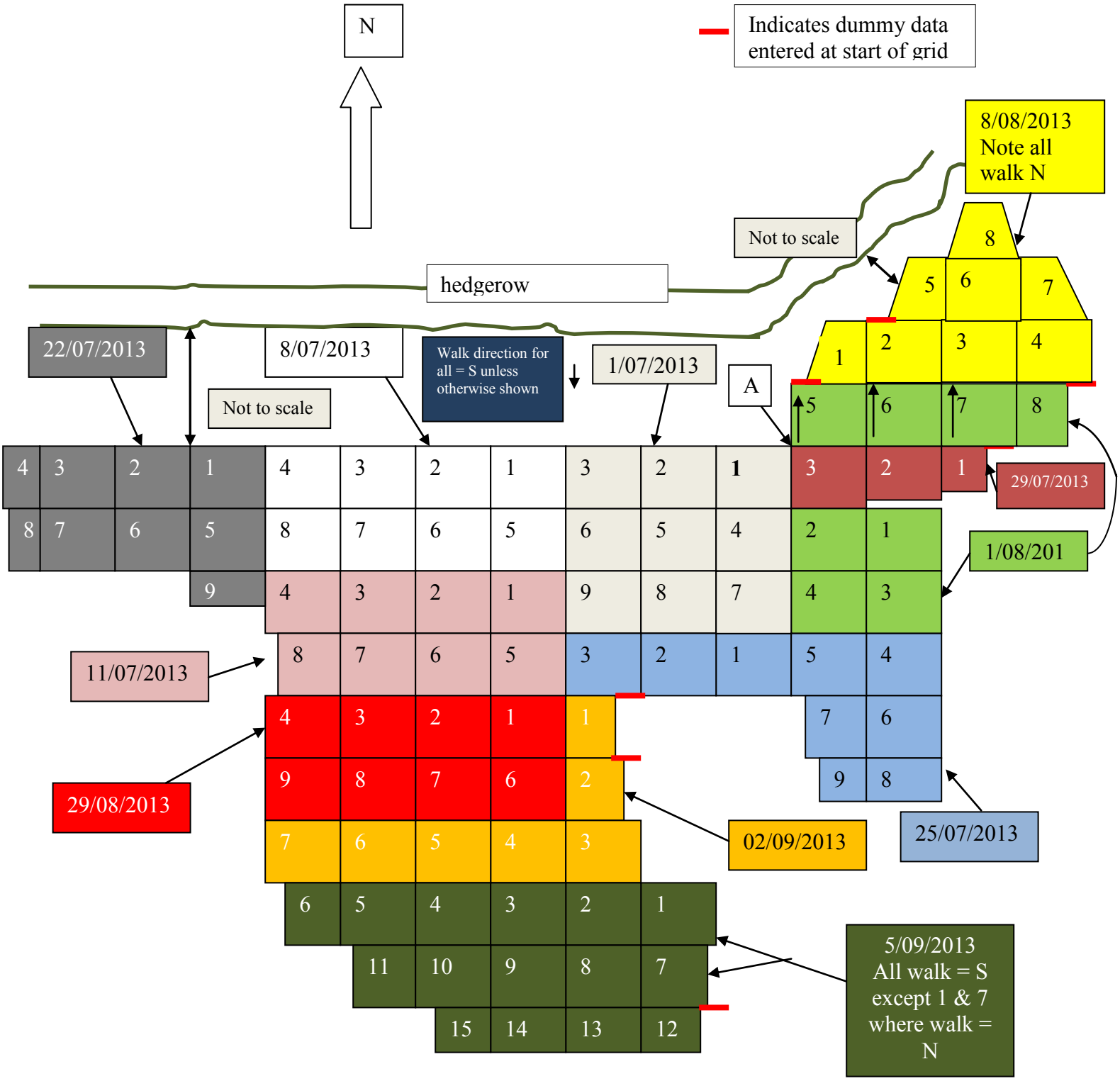
2/09/2013	Team	Peter English, Janet Dickson, Ian Morton
	weather	Hot and sunny
5/09/2013	Team	Peter English, Janet Dickson, Ian Morton
	weather	Hot and sunny

Survey area			notes		readings		
			size	walk direction	max	min	mean
Date							
10/06/2013			Laid out base lines only				
1/7/2013	Grid number	1	30 m x 30m	S	+6.3	-21.4	-2.0
		2	30 m x 30m	S	+5.4	-7.5	-2.4
		3	30 m x 30m	S	+28.0	-12.0	-2.0
		4	30 m x 30m	S	+5.6	-16.5	-2.6
		5	30 m x 30m	S	+3.6	-10.2	-3.3
		6	30 m x 30m	S	+21.5	-10.8	-2.8
		7	30 m x 30m	S	+11.7	-9.5	-3.0
		8	30 m x 30m	S	+42.6	-39.1	-3.0
		9	30 m x 30m	S	+17.3	-12.1	-3.4
8/07/2013	Grid number	1	30 m x 30m	S	+15.4	-7.9	-1.0
		2	30 m x 30m	S	+4.0	-7.2	-1.1
		3	30 m x 30m	S	+5.1	-8.7	-1.6
		4	30 m x 30m	S	+14.5	-8.0	-1.6
		5	30 m x 30m	S	+7.8	-7.5	+0.2
		6	30 m x 30m	S	+18.2	-7.2	-0.5
		7	30 m x 30m	S	+8.4	-7.5	-1.4
		8	30 m x 30m	S	+3.6	-7.1	-1.5
11/07/2013	Grid number	1	30 m x 30m	S	+13.5	-3.6	-0.4
		2	30 m x 30m	S	+50.0	-5.7	-1.4
		3	30 m x 30m	S	+3.4	-6.5	-2.2
		4	30 m x 30m	S	+2.9	-7.9	-2.6
		5	30 m x 30m	S	+1.3	-6.9	-2.1
		6	30 m x 30m	S	+0.6	-6.3	-3.0
		7	30 m x 30m	S	+3.1	-6.9	-3.3
		8	30 m x 30m Grid truncated	S	+2.1	-8.0	-3.1
22/07/2013	Grid number	1	30m x 30m	S	+2.1	-11.9	-1.4
		2	30m x 30m	S	+2.4	-37.2	-1.4
		3	30m x 30m	S	+2.0	-58.7	-2.2
		4	30m x 30m Grid truncated	S	+3.5	-53.5	-4.1
		5	30m x 30m	S	+9.2	-5.9	-0.2
		6	30m x 30m Mirror and return	S	+7.2	-4.3	-0.8
		7	30m x 30m Mirror and return	S	+22.4	-70.5	-0.8
		8	30m x 30m Grid truncated	S	+17.3	-100	-5.5
		9	30m x 30m Truncated M&R	S	+5.5	-4.8	-0.3

Survey area	notes		readings		
	size	walk direction	max	min	mean

Date							
25/07/2013	Grid number	1	30m x 30m	S	+3.5	-6.1	-1.0
		2	30m x 30m Mirror and return	S	+7.9	-6.3	-1.6
		3	30m x 30m Mirror and return	S	+2.8	-5.9	-2.2
		4	30m x 30m Mirror and return	S	+5.7	-8.8	-2.4
		5	30m x 30m	S	+12.9	-27.7	-2.1
		6	30m x 30m	S	+4.2	-7.9	-2.7
		7	30m x 30m Mirror and return	S	+0.6	-6.8	-2.5
		8	30m x 30m Mirror and return	S	+12.8	-9.9	-2.6
		9	30m x 30m Mirror and return Grid truncated	S	+12.8	-9.9	-2.6
29/07/2013	Grid number	1	30m x 30m Mirror and return Traverses 1,2,3,& 4 dummy data only	S	+6.6	-2.7	+0.7
		2	30m x 30m Mirror and return	S	+5.3	-8.1	+0.9
		3	30m x 30m	S	+80.6	-100.0	-0.5
1/08/2013	Grid number	1	30m x 30m	S	+5.6	-6.3	-0.8
		2	30m x 30m	S	+4.7	-6.0	-1.3
		3	30m x 30m	S	+6.1	-6.5	-1.4
		4	30m x 30m	S	+32.6	-9.3	-1.3
		5	30m x 30m Mirror and return	N	+9.3	-100.0	-6.1
		6	30m x 30m	N	+39.3	-9.1	-1.5
		7	30m x 30m	N	+7.2	-7.3	-1.4
		8	30m x 30m Mirror and return Traverses 1,2,3,& 4 dummy data only	S	+5.2	-10.1	-1.7
8/08/2013	Grid number	1	30m x 30m Mirror and return Traverses 1,2,3,& 4 dummy data only	N	+2.7	-73.7	-13.8
		2	30m x 30m Mirror and return	N	+6.1	-31.9	-1.6
		3	30m x 30m	N	+7.6	-7.8	-1.6
		4	30m x 30m	N	+93.0	-37.6	-1.3
		5	30m x 30m Mirror and return Traverses 1,2,3,& 4 dummy data only	N	+14.6	-100.0	-7.6
		6	30m x 30m	N	+100.0	-47.2	-2.2
		7	30m x 30m Mirror and return	N	+3.2	-10-0.0	-16.3
Survey area			notes		readings		
			size	walk direction	max	min	mean
Date							

8/08/2013	Grid number	8	30m x 30m Mirror and return	N	+7.3	-100.0	-7.5
29/08/2013	Grid number (note grid number 5 abandoned)	1	30m x 30m	S	+2.0	-8.2	-2.9
		2	30m x 30m	S	+99.6	-52.4	-3.3
		3	30m x 30m	S	+1.5	-9.3	-3.7
		4	30m x 30m	S	+18.5	-20.2	-3.7
		6	30m x 30m	S	+1.3	-11.4	-3.9
		7	30m x 30m	S	+1.0	-7.8	-3.4
		8	30m x 30m	S	+19.3	-8.9	-3.6
		9	30m x 30m	S	+5.4	-10.2	-3.3
2/09/2013	Grid number	1	30m x 30m Mirror and return Traverses 1,2,3,& 4 dummy data only	S	+3.2	-7.0	-2.4
		2	30m x 30m Mirror and return Traverses 1 & 2, dummy data only	S	+1.7	-6.2	-2.4
		3	30m x 30m	S	+1.7	-8.7	-3.3
		4	30m x 30m	S	+1.7	-7.2	-3.4
		5	30m x 30m	S	+4.5	-8.6	-3.8
		6	30m x 30m	S	+2.3	-9.3	-4.3
		7	30m x 30m	S	+36.4	-10.2	-4.3
5/09/2013	Grid number	1	30m x 30m Mirror and return	N	+3.0	-16.9	-1.6
		2	30m x 30m	S	+16.6	-17.9	-2.0
		3	30m x 30m	S	+1.6	-5.0	-2.2
		4	30m x 30m	S	+5.3	-5.4	-1.3
		5	30m x 30m	S	+2.2	-3.9	-0.6
		6	30m x 30m Mirror and return	S	+0.6	-5.8	-1.5
		7	30m x 30m Mirror and return	N	+3.6	-3.6	+0.2
		8	30m x 30m	S	+1.8	-2.7	-0.7
		9	30m x 30m	S	+1.8	-3.2	-0.9
		10	30m x 30m	S	+6.6	-4.9	-1.4
		11	30m x 30m Mirror and return	S	+55.5	-53.7	-1.3
		12	30m x 30m Mirror and return Traverses 1thro' 6 dummy data only	S	+1.0	-6.0	-1.9
		13	30m x 30m Mirror and return	S	+3.2	-8.0	-1.3
		14	30m x 30m Mirror and return	S	+41.1	-100.0	-1.4
		15	30m x 30m Mirror and return	S	+1.7	-7.1	-1.3


N
Indicates dummy data entered at start of grid
8/08/2013 Note all walk N
Not to scale
hedgerow
22/07/2013
8/07/2013
Walk direction for all = S unless otherwise shown
1/07/2013
A
Not to scale
29/07/2013
1/08/201
11/07/2013
29/08/2013
02/09/2013
25/07/2013
5/09/2013 All walk = S except 1 & 7 where walk = N