



Report of a geophysics survey carried out at Caversham Park in 2015

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Summary:

Caversham Park is an estate with a long history dating from medieval times to the present day. In 2015, Mike Read had written a history of the estate, had been metal detecting in the grounds and invited us to carry out a geophysics survey of the grounds to the south east of the main house. A resistivity survey revealed what may be the remains of the house and garden dating to 1718 and evidence of World War II activity in the form of an anti-aircraft gun emplacement and/or radio aerials used by the BBC.

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0.2 Change control

This document is controlled by the authors.

0.3 Change history

Issue 01 was the first draft of this paper.

0.4 Changes forecast

Changes will be made in response to comments received from the recipients.

Acknowledgements

The author thanks Mike Read for initiating this work, the BBC and their site manager Eddie Fallon for allowing us to carry out this survey, the Berkshire Archaeology Research Group committee for allowing us to use their resistivity meter and Margaret Boltwood, Ann Griffin, Anne Hutt, Martin Labram, Tim Lloyd, Richard Miller, Nigel Spencer, and David Wallace, members of BARG and the Berkshire Archaeological Society who worked on the site.

1. Site location

Caversham Park is the remains of former country estate in Caversham which in 2015 was BBC Caversham Park. The postal address is Peppard Road, Reading, Berkshire RG4 8TZ. The national grid reference for the front of Caversham Park House is: SU 7249 7626.

2. Background to this survey

In 2015, Mike Read had been studying the history of Caversham Park and was about to publish a book on his work. He had also been metal detecting in the grounds and had found artefacts such as coins from medieval times, Tudor metalwork, civil war period coins and metalwork and evidence of more recent occupation of the site.

It was known that this was the site of medieval buildings but no trace of them had been found and Mike wanted to carry out a geophysics survey to see if they were near at hand before he published his book; hence the invitation for us to work on the site.



Figure 1: Caversham Park House and the top two terraces

4. Topographical and geological background

4.1 The topology

The grounds in front of Caversham Park House are laid out as three terraces (Figure 2). The terrace nearest the house has been laid out with grass between the house and a broad gravel walkway on the south side of which is a narrow band of grass which gives way to a grassy bank leading to a second terrace. This in turn leads to another bank which leads to a third terrace which ends with a ha-ha overlooking farmland.

There is a spring line at the foot of the bank between the first and second terraces and this has led to several different attempts to handle the excess water. A plan of the grounds dating from 1739 (Figure 5) diverts the water into a long canal. The ground laid out by Capability Brown diverts water into a lake at the western end of the second terrace. In circa 2000, the BBC drained more of the area by constructing an ornamental pond on the eastern side of the second terrace.

The north western area of the site was at a height of circa 83m, while the land to the south east of the house rolled downhill via a series of terraces and paddocks. At the foot of the slope were houses and the Henley Road with a spot height of 37m.

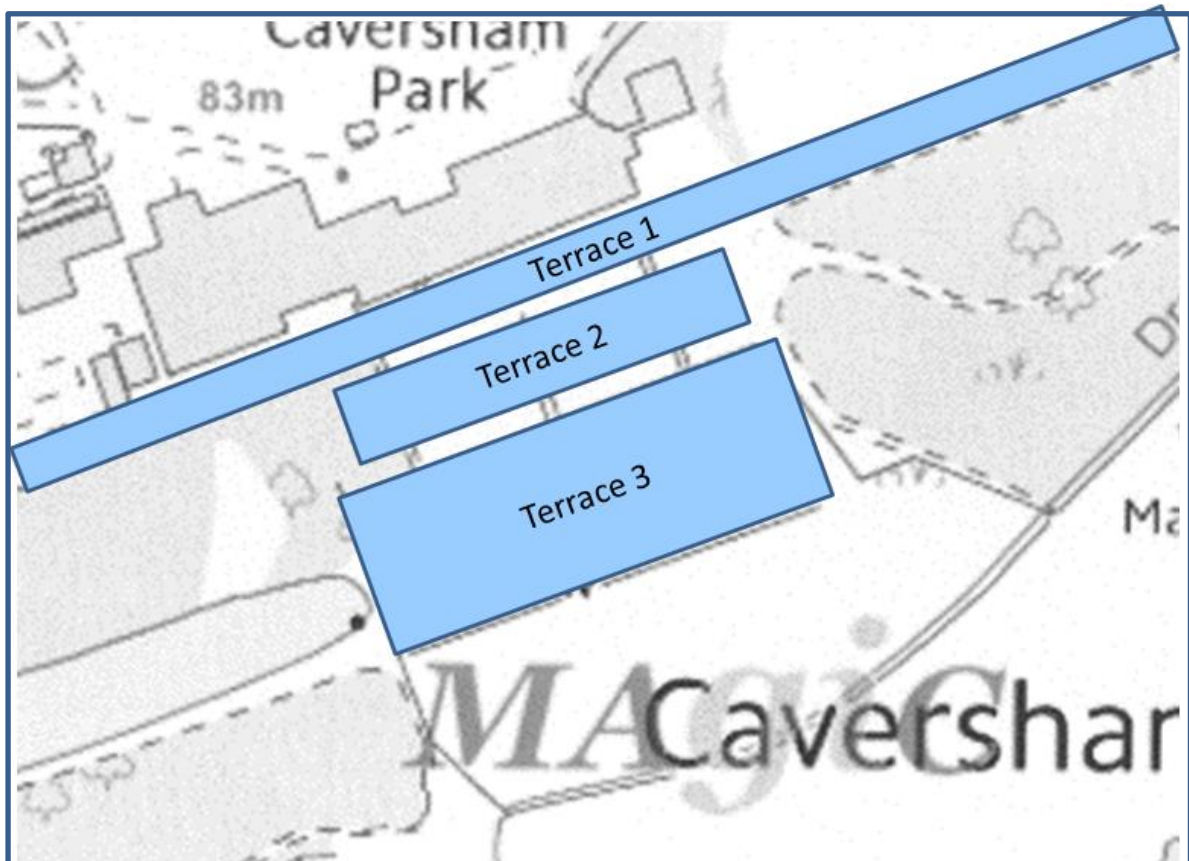


Figure 2: Caversham Park showing the 3 terraces in front of the house overlaid on a map taken from Magic map

4.2 The geology

The north western area of the site up to and including the house was situated on a bedrock of Lambeth Group - clay, silt and sand. In the area to the north west of the house this bedrock was overlaid with superficial deposits of Black Park Gravel Member - sand and gravel. The area to the south east of the house was situated on a bedrock of Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated) (<http://maps.bgs.ac.uk/>).

5. Historical background

Figure 4 gives a timeline for Caversham Park in terms of its owners and the major changes that they made to the house and grounds. It shows that the first house was built near the Thames as the manor of Caversham by Walter Gifford in circa 1066. In 1582, Sir Francis Knollys, the treasurer of Queen Elizabeth I, built a new house on the site. This house was demolished in 1718 by William Cadogan, 1st Earl Cadogan, who built a house near the current house. His house was burnt down in the late 18th century only to be replaced by the current house in the classical style (Figure 3). The central section of this house was burnt down in 19th century to be replaced by the iron framed structure we have today. The two wings of the 18th century house with the pillars were not damaged by the fire and are still part of the present building.



Figure 3. An image of Caversham Park . This seems to show the house built by Cadogan on the right (eastern side of the site) and the colonnades of then new and current house which suggest the image dates from the late 18th century

Figure 5 is a plan of the gardens dating to 1730 which suggests that it was produced for William Cadogan. It is not known whether this garden was ever realised because in the 1760s Capability Brown laid out the grounds as a parkland.

One of the challenges of working on this site is that around 2005, the BBC decided to scrap all the plans and documents relating to Caversham Park, As a result there is no documentary evidence of work done on the site before that date.

Date	Owner	Historical Date	Archaeological Information
1066	Walter Giffard	William the Conqueror	Walter was given land grant by William the Conqueror House believed to be nearer the River Thames than the current house
		Domesday book	Land ? hides worth £20
c. 1100	William Marshall, Earl of Pembroke and Protector of the Realm	Henry II and Henry III	Marshall died at Caversham Park 1219
???	Earls of Warwick		
1542	Sir Francis Knollys, the treasurer of Queen Elizabeth I.	Elizabeth I	Bought the house,
1582	Sir Francis Knollys, the treasurer to Queen Elizabeth I.	Elizabeth I	Completely rebuilt the house to the north of the original
	William Craven	Charles I	
	Commonwealth Government	Commonwealth	Confiscated from William Craven used to imprison Charles I
	William Craven 1st Earl of Craven (1608–1697)	Charles II	Restored to William Craven during the reformation and house demolished due to poor state of repair
1716	William Cadogan, 1st Earl Cadogan	George I	Cadogan purchased Caversham Park
1718	William Cadogan, 1st Earl Cadogan	George I	Rebuilt house in its present position with gardens (parterres etc.)
Mid 17C	William Cadogan, 1st Earl Cadogan		Grounds rearranged by Capability Brown
Late 18 th century			House burnt down
			House rebuilt in Classical style
19 th C		Victoria	Current house rebuilt on an iron frame

Figure 4. Time line for Caversham Park showing the owners and major developments on the site

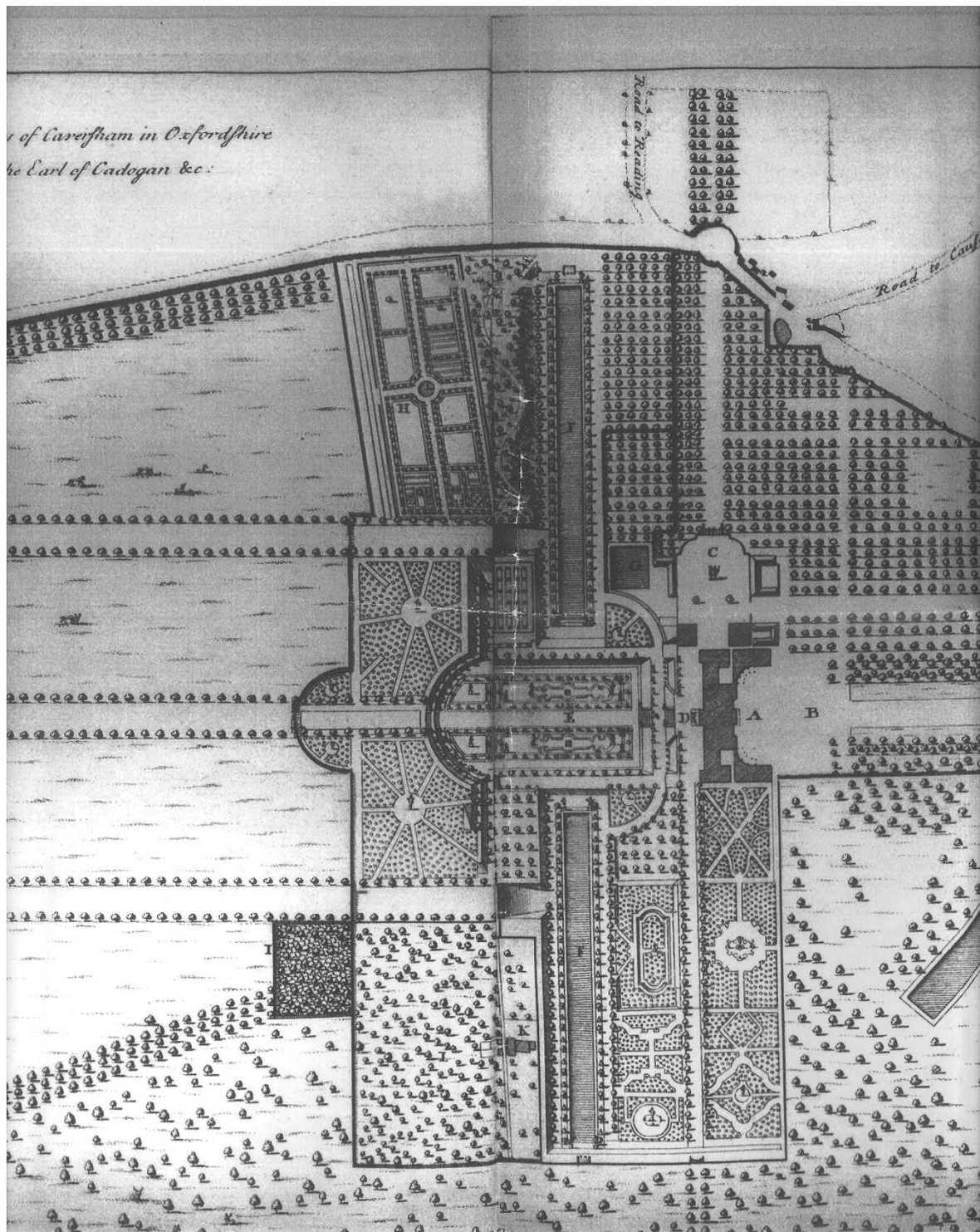


Figure 5. Plan of Caversham Park circa 1730 when it was owned by Lord Cadogan and before the grounds were rearranged by Capability Brown

6. The aims of the survey

The objective of this work was to carry out a resistivity survey of the grounds to the south east of the house.

7. The work

Work on site started on 13th July 2015 and lasted 5 days until 17th July 2015.

7.1 The survey grid

The Temporary Bench Mark for the survey grid was the west end of the central block of the house. From there a grid of 20m x 20m squares was laid out. As the surveys included the banks the grid sizes included banks between the terraces.

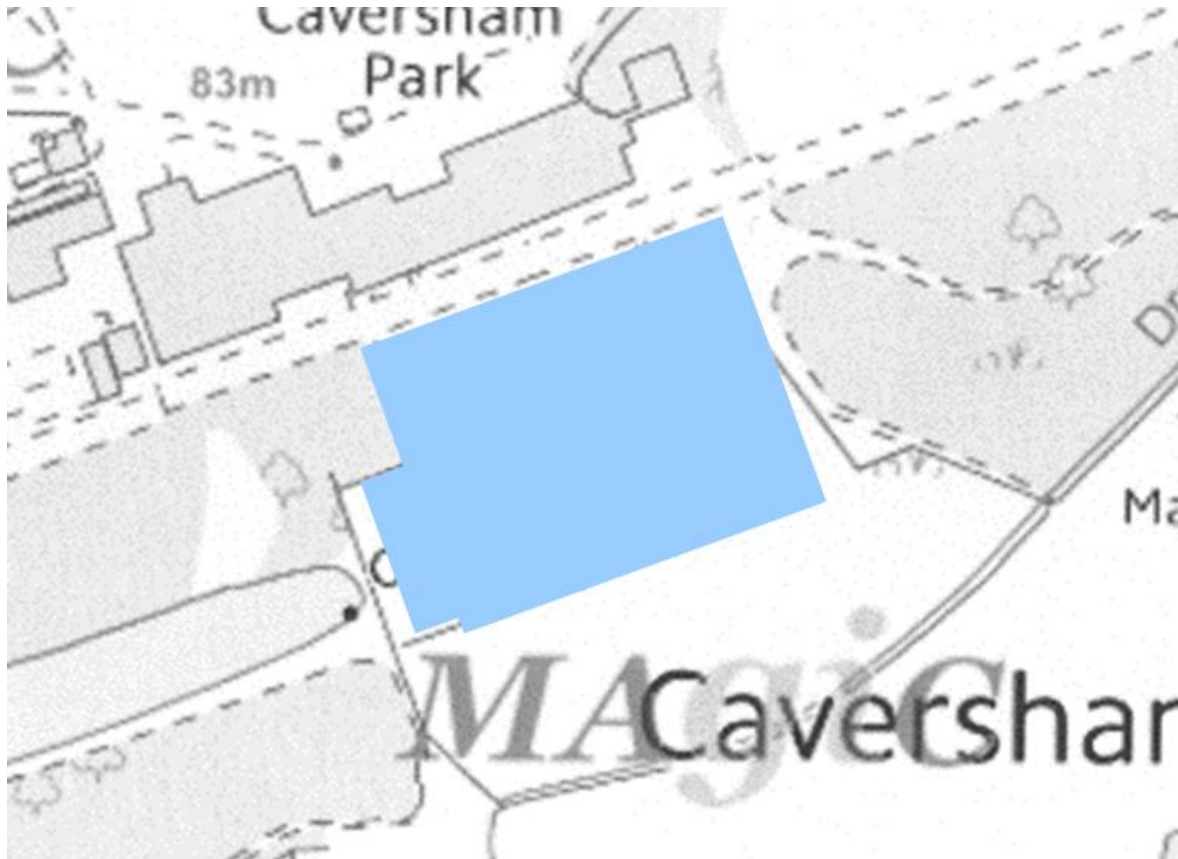


Figure 6. Caversham Park House showing the approximate position of the survey grid

7.3 The survey

The survey was conducted on 5 successive days when the ground was damp using an Geoscan RM15 resistivity meter. Figure 7 shows the instrument in use on the site.

At the end of each day, the results were downloaded and processed using Snuffler, a software application produced by David Staverley (Staverley 2007) and the results reviewed.



Figure 7. Mike Read using a resistivity meter assisted by Mark Wallace on the right and Andrew Hutt on the left

7.4 The survey results

Figure 8 shows the results of the survey. The dark areas are areas of high resistance. These are anomalies which may represent either archaeological remains or the underlying geology. The red rectangles represent areas which were not surveyed. From the top of the image they represent the steps between the first and second terraces, the area surrounding a garden feature and the steps between the second and third terraces.

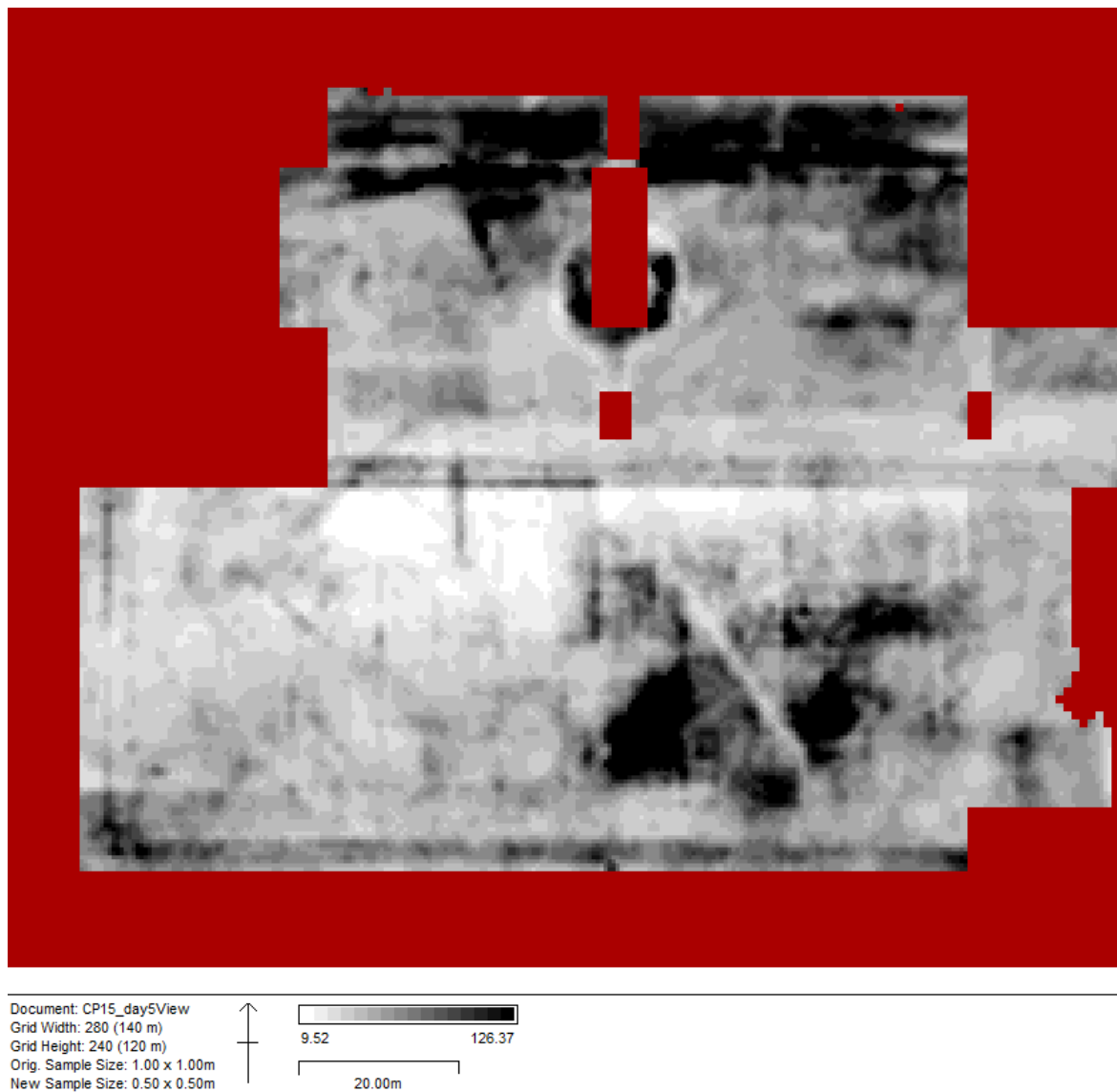


Figure 8. The survey results

7.5 Interpreting the survey results

Overview of the results

Figure 9 highlights and labels all the anomalies found in the survey results. The historic evidence suggests that these represent the remains of:

- the house built by William Cadogan, 1st Earl Cadogan in 1718 and /or construction debris arising from the construction of the bank between the first and second terraces and the associated garden
- World War II activities in terms of anti-aircraft gun emplacements and BBC radio aerials
- Modern garden features constructed by either the Oratory School or the BBC

The following sections discuss these findings in more detail.

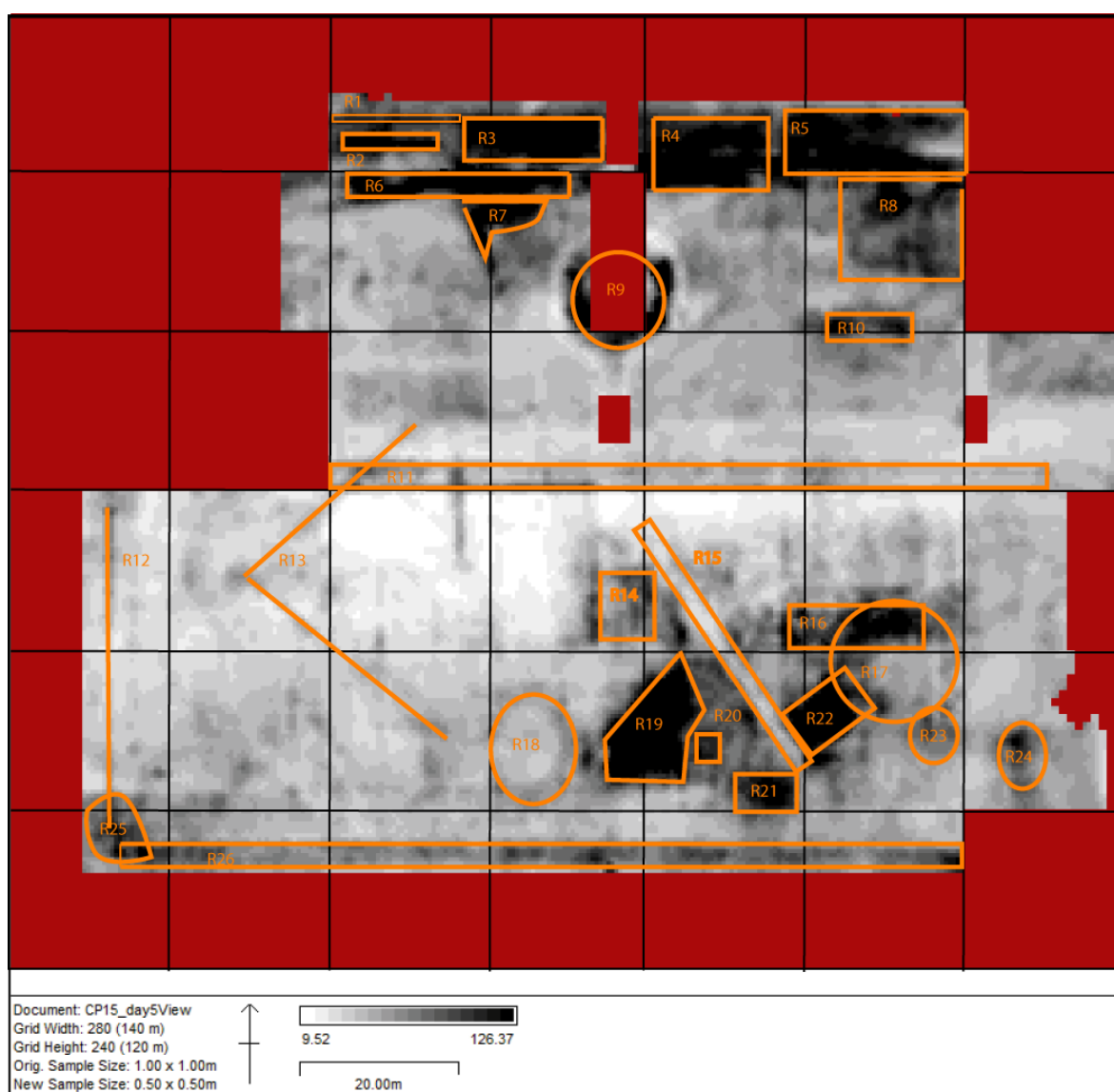


Figure 9: The anomalies

The remains of William Cadogan's house

Figure 9 labels the anomalies which may related to this house.

- R1 is a long thin anomaly which may represent a wall line but could easily represent a modern pipe
- R2, R3, R4 and R5 may represent the foundations of the Cadogan house or geology arising from the construction of the bank between the first and second terraces

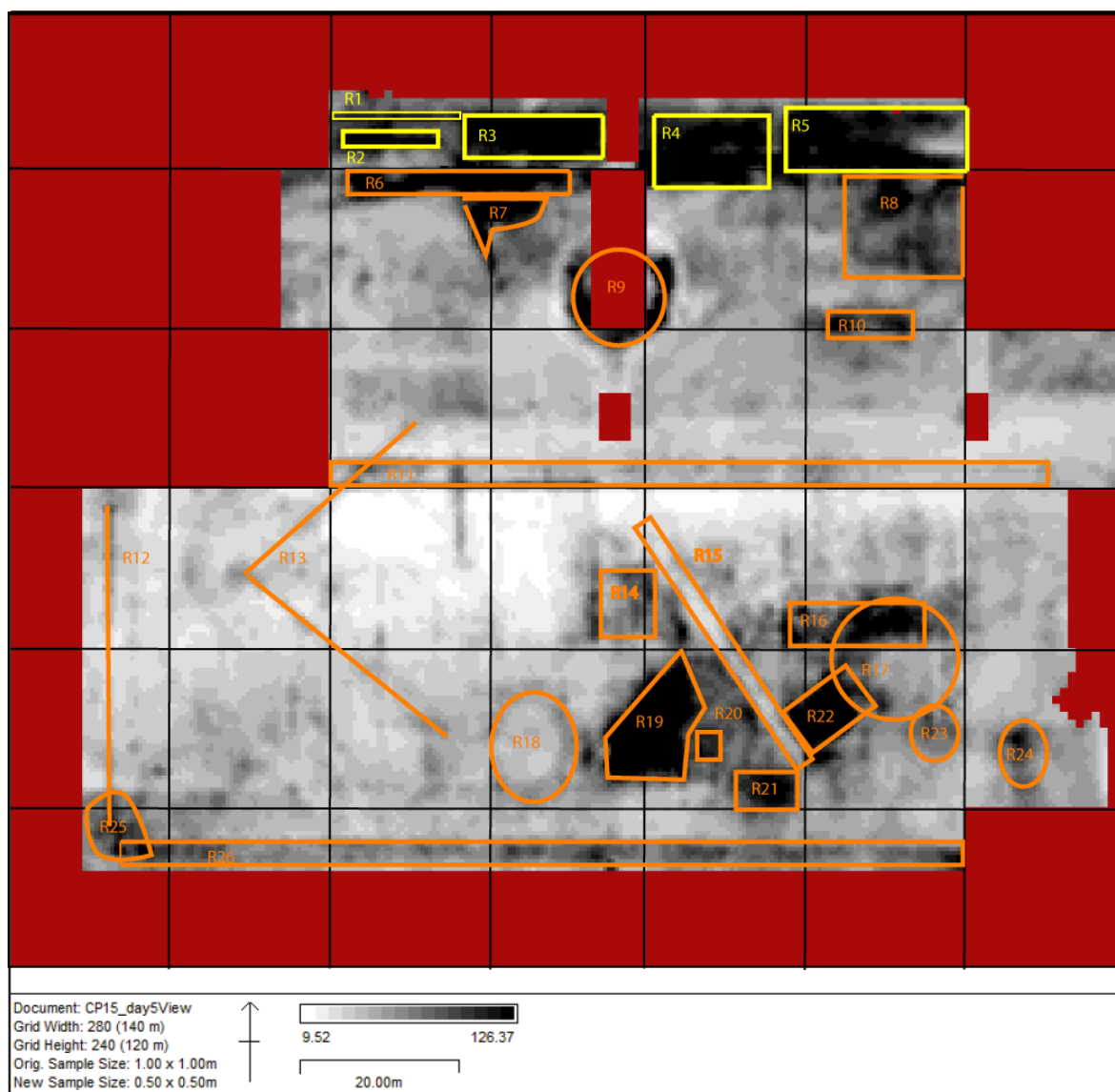


Figure 10. Anomalies arising from William Cadogan's house

Anomalies arising from the garden

Figure 11 highlights the anomalies relating to the garden:

- R6 is a linear anomaly which may represent either a garden bed at the edge of the bank between the first and second terraces or debris and/or geology arising from the construction of that bank
- R9 is an anomaly round the extant garden feature. This probably represents the foundations of an earlier feature on the same site
- R11 is certainly the remains of a canal probably put in place to manage the water from the line of springs at the foot of the bank between the second and third terraces. This interpretation is reinforced by area of grass which matches the anomaly. The fact that the canal does not match the 1730 design shown in Figure 5 and that none of the beds appear in the survey results suggests that that design was never fully implemented

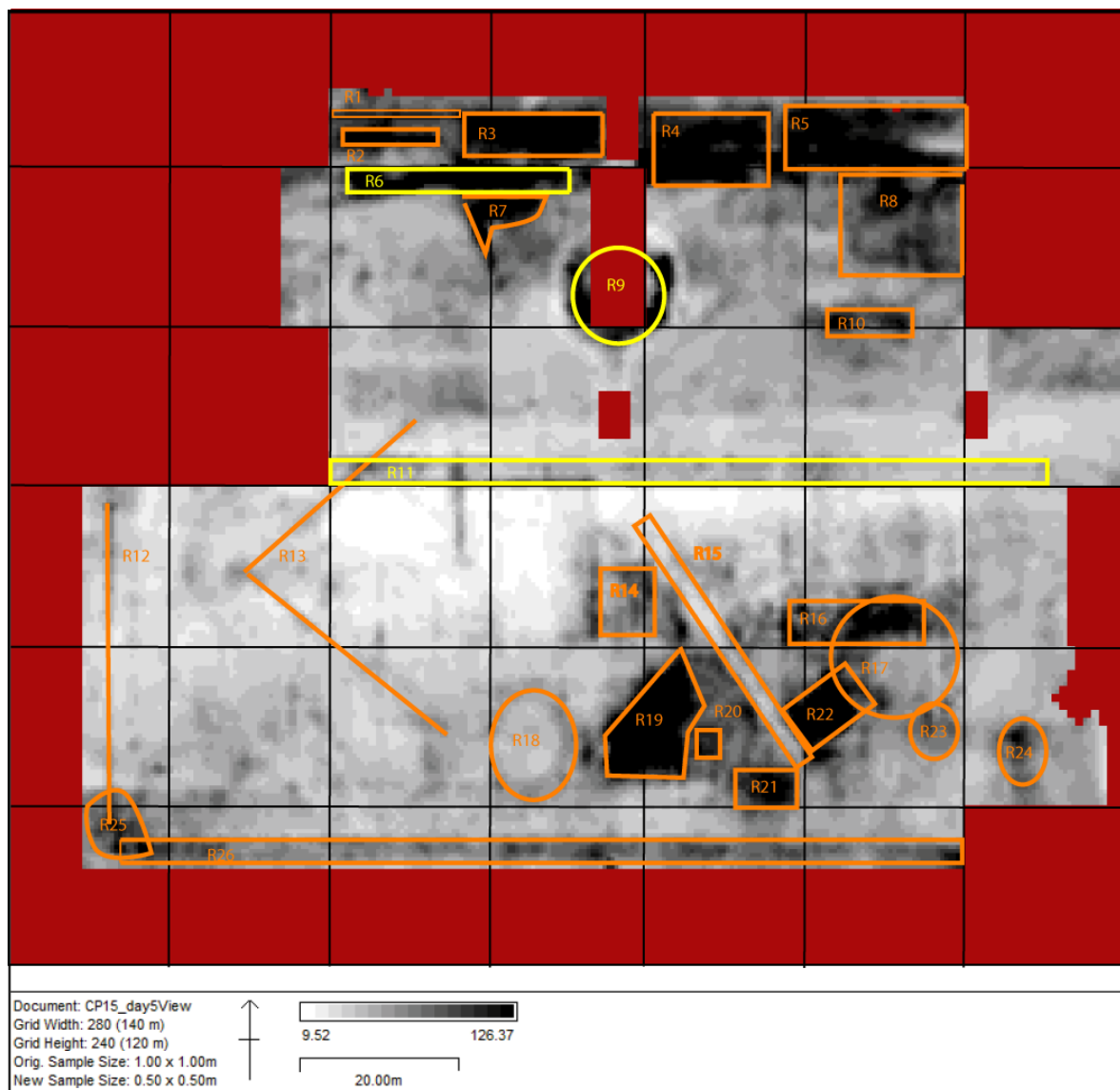


Figure 11. Anomalies relating the 1730 gardens

Anomalies arising from World War II

Figure 12 shows the variety of anomalies which probably relate to WWII activity on the site; they include:

- R7 which is an odd shaped anomaly which aligns with R15 which is a pronounced linear anomaly. They may represent some form of trench
- R8 which may represent the foundations of a building which could have been a garden feature but could well be related to WWII activities
- R10 which are two small rectangular anomalies which could be pits
- Anomalies R14, R16, R17, R18, R19, R20, R21, R22, R23 and R24 may represent the remains of the WWII anti-aircraft battery and/or a BBC radio system. The anti-aircraft battery evidence comes from the large circular anomalies R17 which is about 15m across and resembles a gun emplacement of the type shown in figure 13. Evidence for a battery being located at Caversham Park comes from Ann Griffin who was told by one of her school children's grandfathers that he manned an anti-aircraft battery in Lower Earley positioned to work with the one at Caversham Park

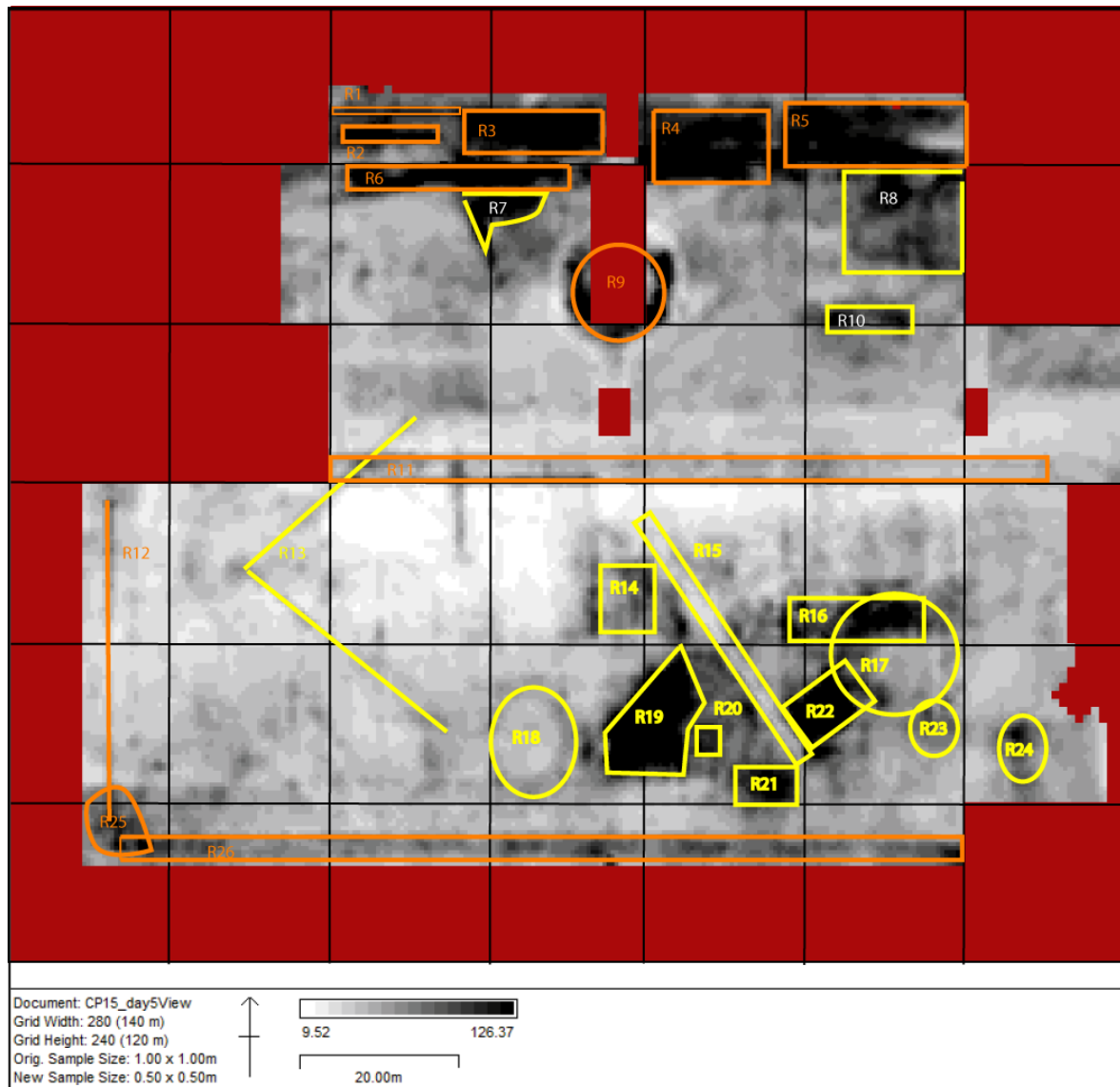


Figure 12. Anomalies arising from World War II

to attack German aircraft flying along the line of the River Thames. The fact that R16 and R17 occupy the same area suggests that one replaced the other at some time during the war. One of the criteria used to establish that these were likely to be WWII installations was that they were at a shallow enough depth to be touched by the probes of the resistance meter

- R13 is a pair of linear anomalies at right angles to each other which may represent the remains of a BBC radio station which was operating at Caversham Park



Figure 13. 3inch 20cwt anti-aircraft gun emplacement

Modern garden features

Figure 14 below shows two linear anomalies R12 and R25 linked by anomaly R24 which probably represents paths put into the garden either while it was owned by the Oratory School or the BBC. These anomalies are attributed to this period because it is unlikely that they would have been included in Capability Brown's grounds.

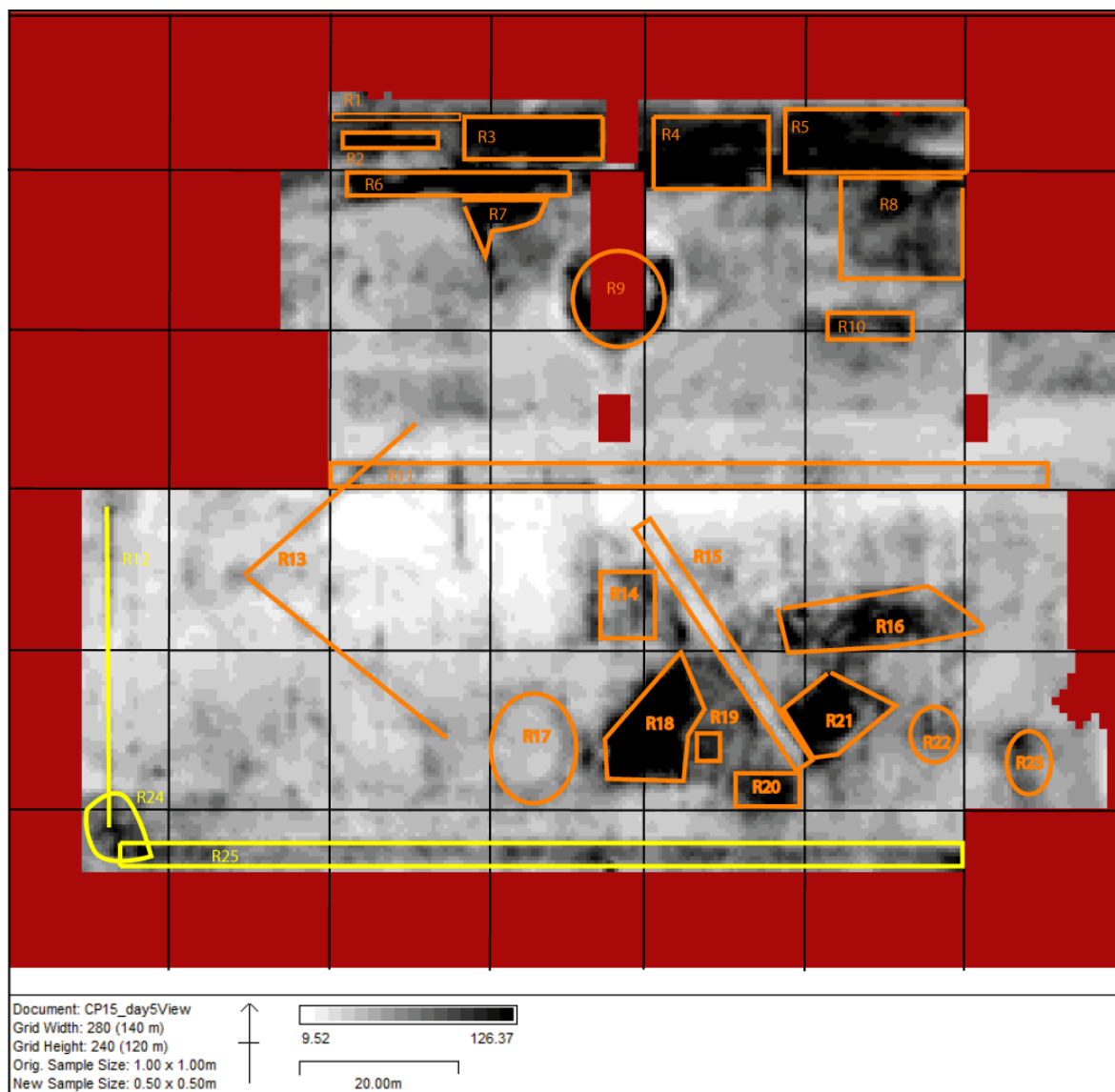


Figure 14. Modern garden features

8. Overall conclusions

This survey has identified a large number of anomalies covering a large area of ground. The interpretations are at best tentative and the only way of gaining more information would be to excavate some of them.

Bibliography

Staverley 2006. *Snuffler Freeware Geophysics software*,
<http://www.sussexarch.org.uk/geophys/snuffler.html>

Appendix A: Survey details

Figure 16 below shows the data files used to produce the results shown in figures 9, 10, 11, 12 and 14. The file names reflect the days on which the data was collected and the order in which grids were surveyed.

One of the challenges of this survey was that it was difficult to maintain the same level of recording over the whole site and time period, the A numbers identify grids where the recording levels were changed arithmetically as the data was processed. The project archive contains both the original data collected during the survey and the changed data files.

		CP15_R5A_4	CP15_R5A_5	CP15_R5A_6	CP15_R5A_7	
	CP15_R1_5	CP15_R1_4	CP15_R1_3	CP15_R1_2	CP15_R1_1	
		CP15_R2_1	CP15_R4_1	CP15_R4_3	CP15_R4_4	CP15_R4_5
CP15_R3_6	CP15_R3_5	CP15_R3_4	CP15_R3_3	CP15_R3_2	CP15_R3_1	CP15_R4_6
CP15_R3_12	CP15_R3_11	CP15_R3_10	CP15_R3_9	CP15_R3_8	CP15_R3_7	CP15_R4_7
CP15_R5_3	CP15_R5_2	CP15_R5_1	CP15_R4A_10	CP15_R4A_9	CP15_R4A_8	

Figure 15. The data file used to create the dataset used to produce the survey results