Berkshire Archæological Society

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Report of archaeological fieldwork carried out on the Sutton Estate near Wickham in 2022

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Summary

Recent geophysics fieldwork carried out by the Berkshire Archaeological Society (BAS) at the Wormstall Estate near Wickham in 2021 (Hutt, Harrison and Abbott 2021) failed to find any evidence of the Roman Road to Bath (Margary 53) along the road's projected route (Toller 2013) close to the supposed location of its intersection with Ermin Street. Furthermore, a topographical survey identified a swathe of permanently boggy ground along a steep escarpment to the north of the Wormstall Estate which would have presented a challenge to the construction of a roadway.

A second BAS fieldwork project at Radley Farm (Abbott and Cains 2022) revealed new evidence that the earthworks visible in Stibbs Wood and Three Gate Copse are most likely the remains of the Roman Road to Bath, and also demonstrated that the remains of the road between these two known points can be detected using geophysics survey equipment across the intervening agricultural landscape. This work located the previously lost transcript of an excavation of the Roman Road to Bath at Three Gate Copse in 1968 describing the construction of the road, and its excavation in section.

The aim of this latest BAS fieldwork project was to undertake a series of geophysics surveys east of Three Gate Copse along the projection of the visible earthworks to determine the route taken by the Roman Road to Bath across land owned by Sir Richard Sutton Limited (SRSL) as far as New Copse on Church Hill at Wickham. The area surveyed revealed a 160m long linear anomaly to the west of New Copse that was coincident with a linear anomaly of high earth resistance. Coincident with anomalies at the same location observed on LiDAR and satellite images, this suggests these anomalies relate to the surviving remains of the Roman Road to Bath. However, this evidence is not definitive, and further work is required to confirm this initial interpretation.

0 Document control

0.1 Contents

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0.2 Change control

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0.3 Change history

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0.4 Changes forecast

None

0.5 Acknowledgements

Thanks are due to the Directors of SRSL, for kindly inviting BAS to carry out this work on the Estate, and to Grant Baker for his unfailing support and advice. We are further indebted to Sarah Orr, for the archaeological advice given during the course of the project.

As ever we are very grateful to the BAS members (Tony Bakker, Phillip Rawstron, Tim Lloyd, Martin Labram, Tony Fenton, Geoff Anderson, Peter Clifford, Rod Sharpe, Jill Oseman, Jean Curran, James Allen, Margaret Boltwood, Harry Johnson, James Peddle and Nigel Spencer) who gave up their time to carry out the survey work.

Particular thanks are due to Andrew Hutt for technical guidance provided, the BAS study group who reviewed plans/results and offered valuable advice, and the BAS Council for sponsoring the project.

1 This project

Geophysics fieldwork carried out by BAS on the Wormstall Estate near Wickham in 2021 failed to find any evidence of the Roman Road to Bath (Margary 53) along its projected route. Furthermore, a topographical survey of the Wormstall Estate identified a swathe of permanently boggy ground along a steep escarpment to the north of the Wormstall Estate which would have presented a challenge to the construction of a roadway along this projection (Hutt, Harrison and Abbott 2021). A second BAS fieldwork project at Radley Farm revealed new evidence suggesting that the earthworks visible in Stibbs Wood and Three Gate Copse are highly likely to be the remains of the Roman Road to Bath, and also demonstrated that the remains of the road between these two known points can be detected using geophysics survey equipment across the intervening agricultural landscape.

Following on from these two earlier projects, this project centres on land owned by SRSL between Radley Farm and Wickham over which the Roman Road would have passed. The aim of this work package was to undertake a series of geophysics surveys to the east of Radley Farm's Three Gate Copse, far as New Copse on Church Hill near Wickham which took place during September 2022.

2 Geological and topographical background

The geology underlying this area of West Berkshire is Lambeth Group, that is, clay, silt and sand overlaying Newhaven Chalk Formation (British Geological Survey). The chalk forms a terrace of high ground with its corners at Hungerford, Lambourn, Bradfield and Basildon.

3 Historical and archaeological background

3.1 Toller's projected route of the Roman Road to Bath (Margary 53)

In his 2013 paper, Toller describes the route of the Roman Road to Bath eastwards to its estimated intersection with Ermin Street 1.6km southeast of Wickham in West Berkshire (Toller, 2013) as shown in figure 3.1, which shows well attested section from Bath to Fyfield; presents evidence for a route from Fyfield where the road crosses to the north bank of the River Kennet near Stitchcombe (east of Mildenhall) and continues eastwards via Ramsbury to Peaked Lot; and the third section covers Peaked Lot to its intersection with Ermin Street of which the last 2km is uncertain.

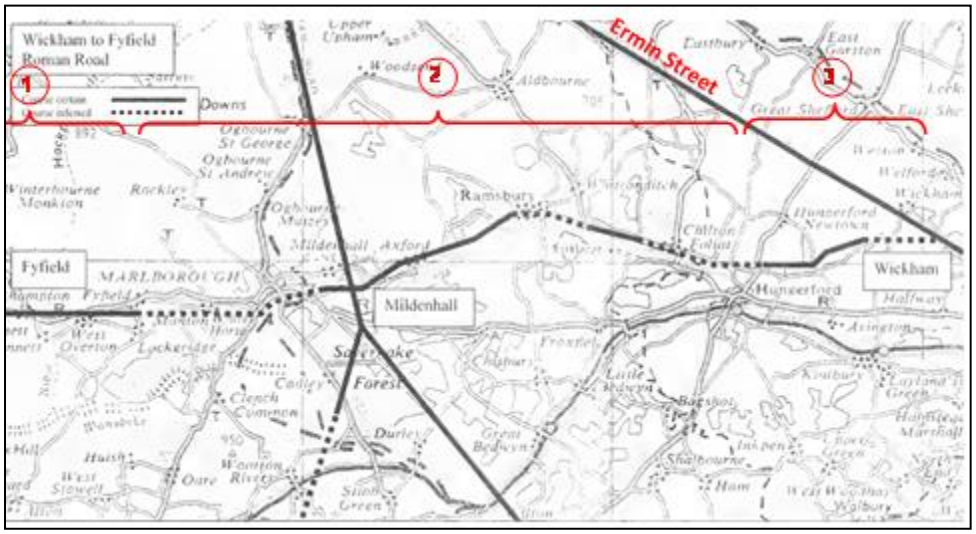


Figure 3.1 Toller's projected route of the Roman Road to Bath (Toller, 2013)

Toller's projected route of the Roman Road from Peaked Lot eastwards to its intersection with Ermin Street can be seen in more detail in figure 3.2 and figure 3.3. Figure 3.2 shows Radley Farm lying between the two most easterly surviving earthworks of the Roman Road, one in Stibbs Wood and one in Three Gate Copse, after which the route is projected further eastwards in an almost straight line passing close to Windingwood Farm.

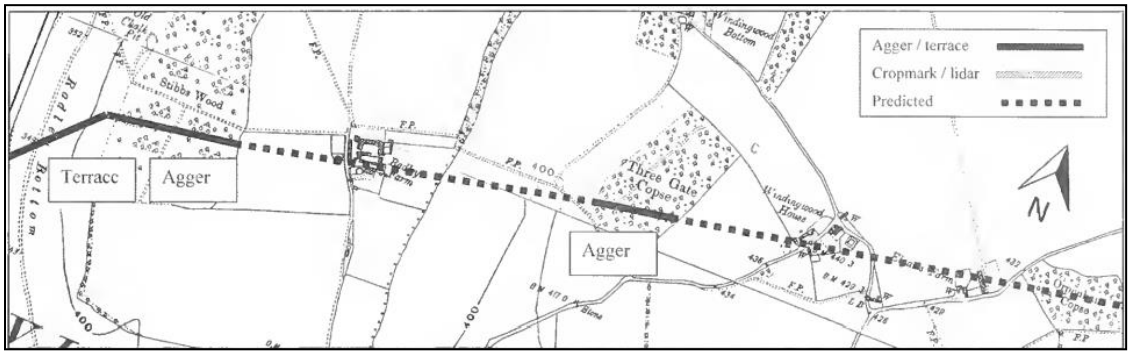


Figure 3.2 Toller's projected route of the Roman Road to Bath from Radley Bottom to Orpenham Farm (Toller, 2013)

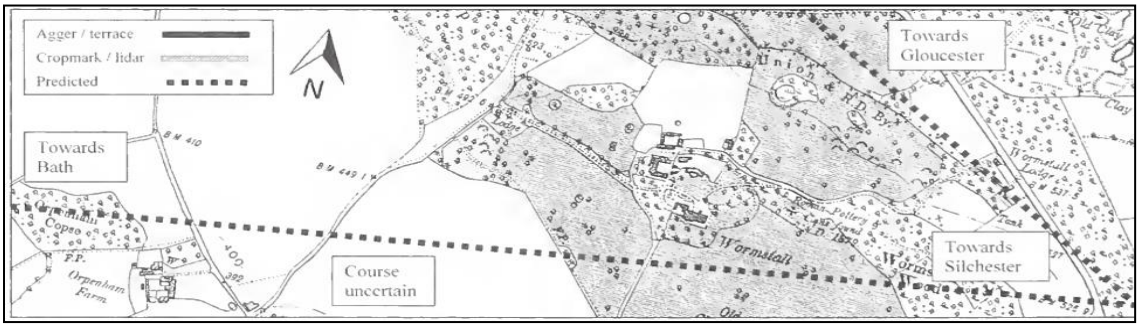


Figure 3.3 Toller's projected route of the Roman Road to Bath from Orpenham Farm to Ermin Street (Toller, 2013)

In Figure 3.3 the route of the Roman Road projected by Toller can be seen to continue on a nearly straight eastwards line projection passing to the south of Wormstall House, through Wormstall Wood, and intersecting with Ermin Street close to Benham Burslot southeast of Wickham.

3.2 The West Berkshire HER: The Roman Road to Bath (Margary 53)

The West Berkshire Historic Environment Record (HER) formally records the body evidence relating to the Roman Road and its projected route eastwards from Three Gate Copse towards Wickham (shown in full in Appendix 1) as summarised in figure 3.4. From Memorial Cross to the West, the agger is recorded in MWB1985 eastwards along the south fence of Great Hidden Farm, and then in MWB1983/1984 along the former field boundary to the northern fence of Oaken Copse.

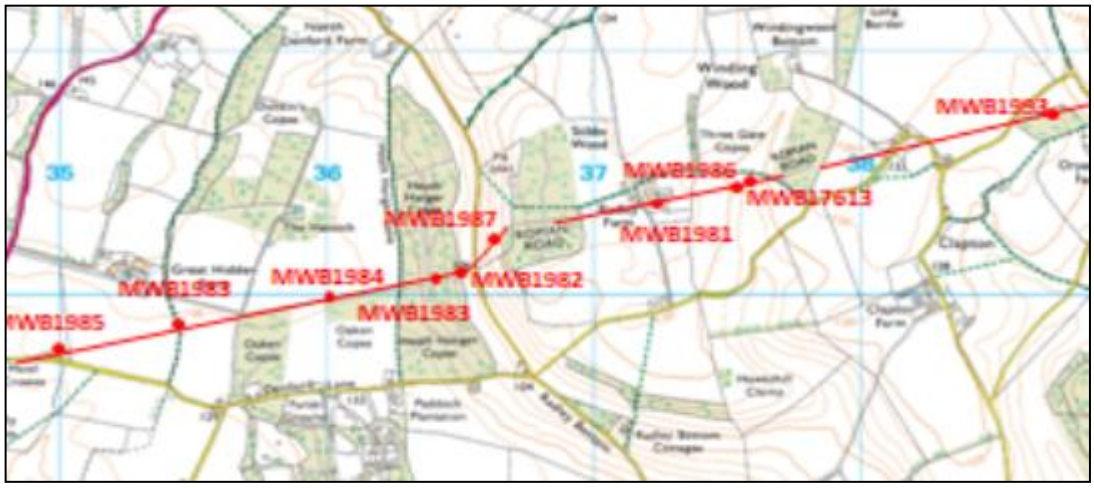


Figure 3.4 Locations of HERs relating to the Roman Road to Bath (Open Map 2022)

From Oaken Copse the alignment continues into Heath Hanger Copse described in MWB1982 and MWB1983. Where it exits by Radley Bottom, there is a hump in the modern road. The Roman Road then turns to the north via an oblique terrace described in MWB1987 up the steep escarpment east of Radley Bottom and into the Stibbs Wood where the road's earthworks survive for some 120m. Beyond Stibbs Wood and Radley Farm MWB1981, MWB1986 and MWB17613 record crop marks from the Road's agger/ditches in the field west of Three Gate Copse, to where earthworks of the Roman Road survive in Three Gate Copse for some 60m.

East of Three Gate Copse the only record of visible evidence relating to the Road in the HER were recorded in Orpenham Copse where HER1993 records a description of a possible agger ridge. Toller does not mention this in his paper, but his projection extends this alignment to Benham Burslot where HER1992 records the conjectural intersection of the Road to Bath intersects with Ermin Street, however other than MWB1993 no trace of the Road east of Three Gate Copse or its junction with Ermin Street have yet been found.

To the east of Three Gate Copse, a Watching Brief (EWB1479) was undertaken at The Reading Room, Winding Wood (Grid Reference: SU 3813 7067) in association with ground works for the construction of a new garage. Although the site lies almost directly on the projected line of the Roman Road, no artefactual or structural evidence for the Road was found.

3.3 Fieldwork on Wormstall Estate in April-July 2021

Geophysics surveys were carried out on the Wormstall Estate to the southeast of Wickham by BAS in 2021 (Hutt, Harrison & Abbott, 2021) as shown in figure 3.5.

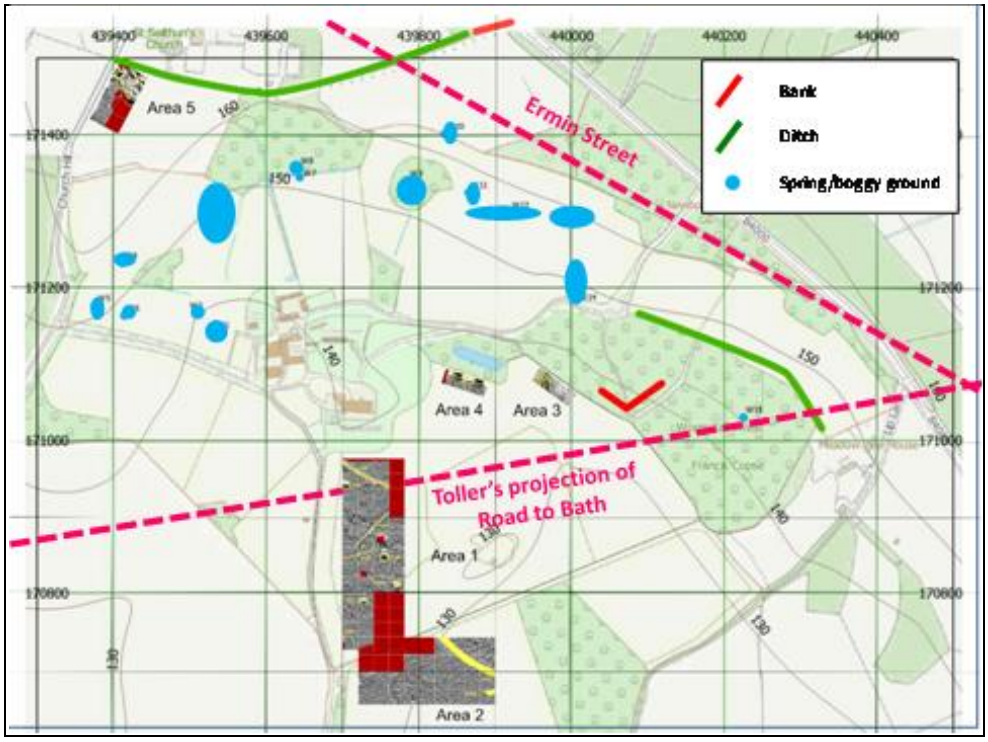


Figure 3.5 Location of geophysics surveys on the Wormstall Estate together with identified areas of permanently boggy ground (Hutt, Harrison & Abbott, 2021)

These surveys found no evidence of the Roman Road to Bath along the route projected by Toller to the south of Wormstall House. Topological surveys carried out at the same time revealed a line of natural springs and perpetually boggy ground to the north of the Wormstall Estate along the escarpment leading to the natural ridge used by the modern B4000 road. This terrain would have presented a considerable challenge for the Roman Road's construction to the north of Wormstall House and there is no visible evidence of a terrace/agger or other such engineering works having been constructed to traverse these obstacles.

Closer re-examination of the orientation of the surviving earthworks of the Roman Road to Bath in Stibbs Wood and Three Gate Copse highlighted that the earthworks in Three Gate Copse were aligned some 10° further to the north (at 68° N) compared to those at Stibbs Wood, suggesting that the road was enacting a gentle curve to the north between these points as shown in figure 3.6, which highlights that this revised projection take the route of the Road to Bath to the north of Wormstall House directly

across the area of perpetually boggy ground and the steep escarpment to intersect with Ermin Street. Figure 3.6 also highlights the alignment from where the Roman Road crosses Radley Bottom through Three Gate Copse, and suggests that the northerly deviation west of Three Gate Copse to Stibbs Wood was executed to enable to oblique terrace to cut to reduce the gradient down the steep slope from Radley Bottom to Stibbs Wood, the remains of which are still visible.

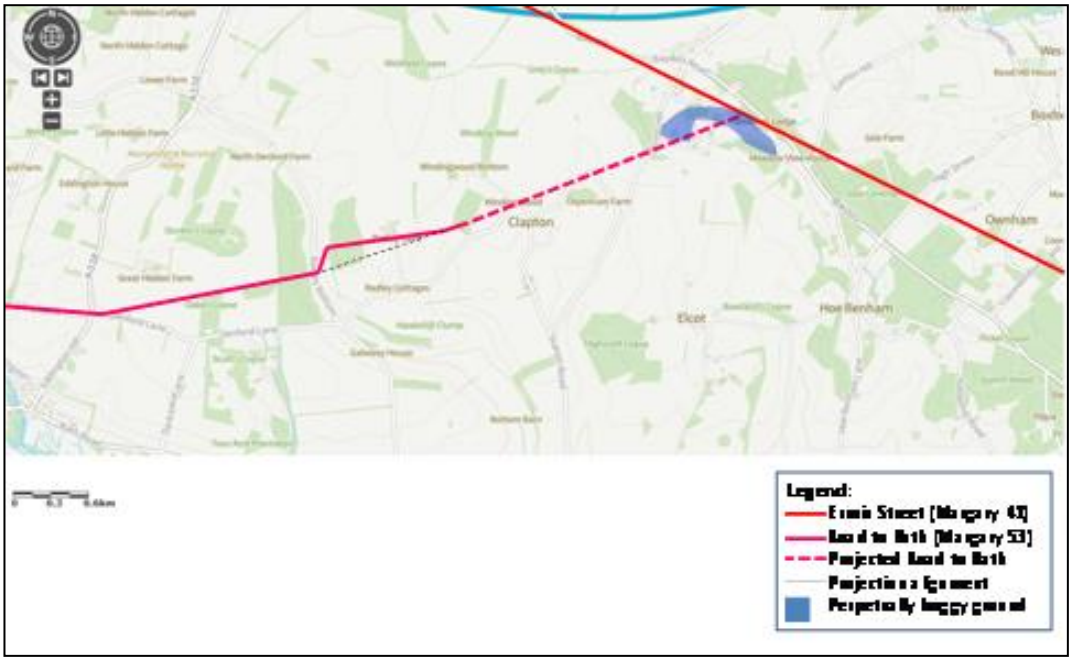


Figure 3.6 Modified projection of the Road to bath across the Wormstall Estate together with identified area of boggy ground (Open Streetmap 2022)

Given the natural obstacles to be overcome across the Wormstall Estate and the absence of any visible evidence of the Road to Bath having followed this route using an oblique terrace up the steep escarpment to reach Ermin Street (i.e. similar to that seen at Radley Bottom), it was concluded that it was more likely that the Roman Road to Bath took a more northerly course to avoid these obstacles - possibly along Church Hill to join Ermin Street in the vicinity of Wickham.

3.4 Fieldwork on Radley Farm in September 2021 – February 2022

Geophysics surveys on Radley Farm to the southwest of Wickham carried out by BAS provided further evidence that the earthworks within Three Gate Copse are indeed the surviving remains of the Roman Road to Bath as shown in figure 1.1. It was also demonstrated that remains of the Roman Road whilst having survived to a limited degree outside of ancient woodland such that they can be detected by geophysics surveys, may have survived for <10% of the Road's distance due to local geology, topology and historical land use as shown in figure 3.7 (Abbott and Cains 2022,38).

Also much experience was gained as to how the interaction of local geology, topology and agricultural practices over the years can impact the survival of remains of the Roman Road, and on the geophysics methods best used to detect them.

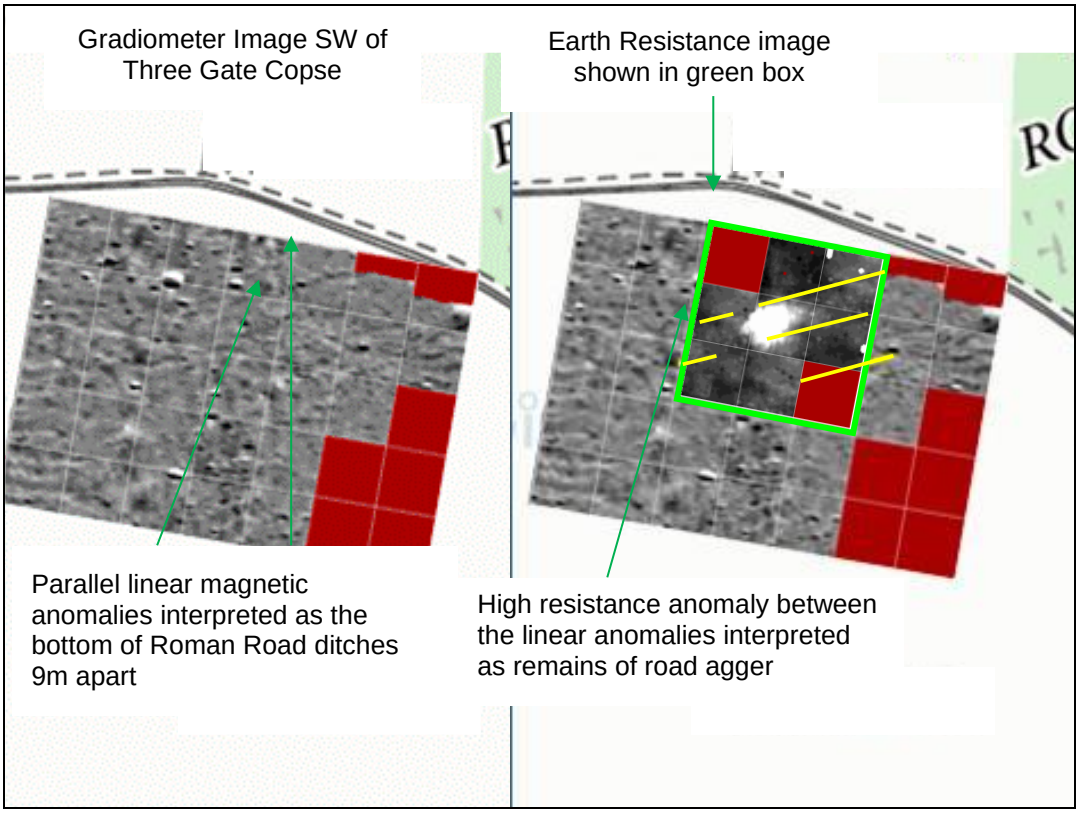


Figure 3.7 Compilation of gradiometer and earth resistance images SW of Three Gate Copse demonstrating the extent of surviving road features outside of ancient woodland (Abbott & Cains 2022, 38)

3.5 LiDAR images

The LiDAR data for the area to be surveyed shows a number of possible features identified for being associated with the route of the Roman Road that are shown in figure 3.8 as dashed lines. The earthworks of the Roman Road in Three Gate Copse are shown as solid line L1. Features L2 and L6 are aligned with each other and together with L5 lie within the sector within which the Roman Road might be expected to have run. However, L4 has a much more northerly alignment, and is thought to be less likely to be associated with the Roman Road. L3 is a berm running along the northern edge of Orpenham Copse recorded in the HER (MWB1993) and is described in more detail in section 7. None of these LiDAR features were considered to be sufficiently distinct to be considered as definitive evidence of remains of the Roman Road on their own merits.

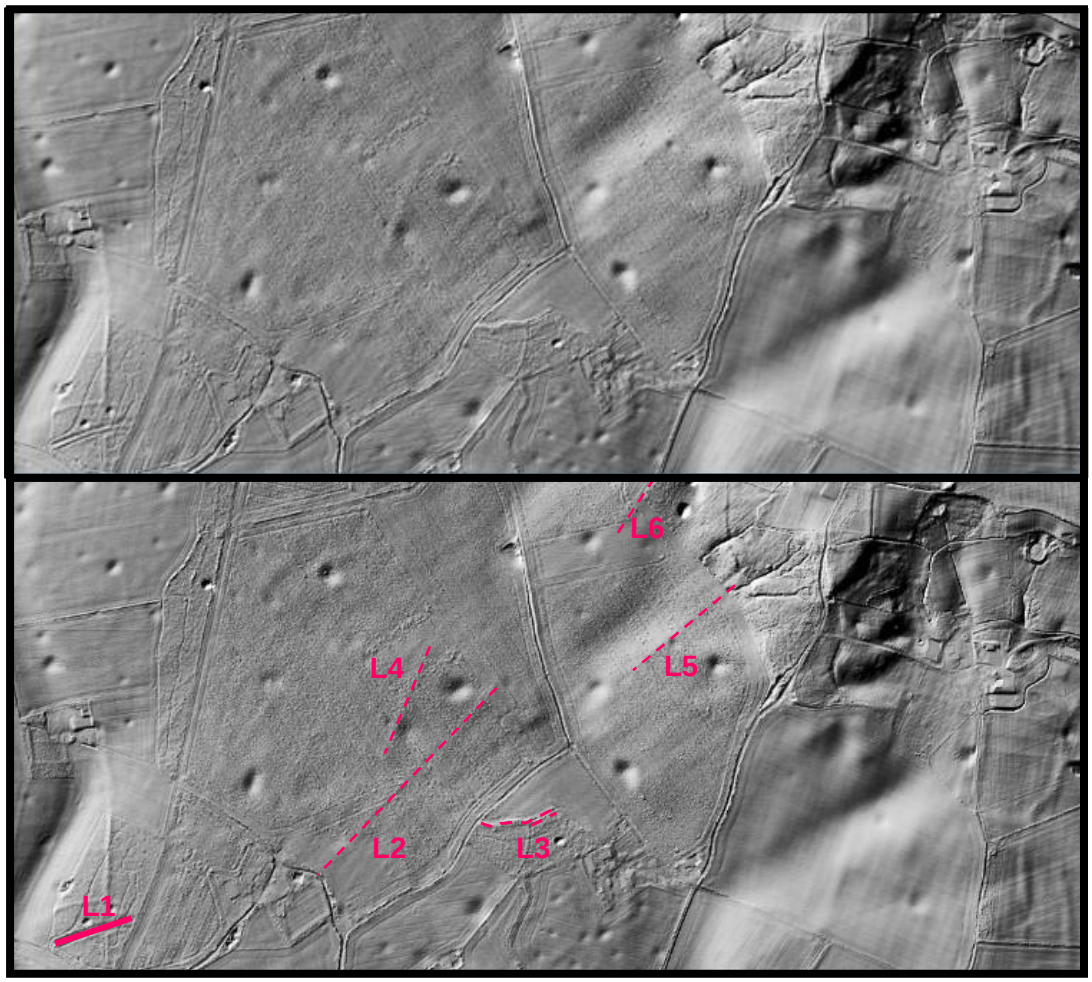


Figure 3.8 LiDAR of the survey area with and without features of interest highlighted (DEFRA 2022)

3.6 Satellite images

Satellite images of the same area are shown in figure 3.9, where there is only one linear feature (S1) that can be seen as a crop mark in the area where the Roman road might be expected to lie relative to the earthworks in Three Gate Copse. This feature was also not considered to be sufficiently distinct to be definitive evidence of remains of the Roman Road on its own merit, however it should be noted that feature S1 is coincident with the LiDAR feature L5 and probably represent the same landscape anomaly.

Figure 3.9 Satellite image of the survey area in 2022 with and without features of interest highlighted (GoogleEarth 2022)

3.7 Aerial photographs

Crop marks recorded from historic aerial photographs are shown in figure 3.10 using digitised data recorded on the Historical England (HE) Aerial Mapping database. To the southwest of Three Gate Copse crop marks photo HE Monument Number:1301266 records a crop mark of a 250m section of the Roman Road to Bath mapped from aerial photographs taken in 1946. This crop mark aligns with the findings from the geophysics surveys at Radley Farm (Abbott and Cains 2022).

In the survey area for this project HE Monument Number:1300803 (centred on grid reference SU 3828 7092) of the crop mark remains of three widely spaced parallel banks, interpreted as probably being associated with a field system of unknown date mapped from a photograph taken in 1975. The middle of these three features aligns with feature L2 seen on LiDAR and is in the same location.

Figure 3.10 Crop marks from historic aerial photographs of the survey area (Historic England, 2022)

4 Project objectives

The objectives of this project are to:

- Reassess the route taken by Roman Road to Bath (Margary 53) across the land owned by SRSL from its easterly most surviving earthworks at Three Gate Copse on Radley Farm, as far as New Copse on Church Hill near Wickham using series of geophysics surveys; and
- To estimate the location the likely intersection of Roman Road to Bath (Margary 53) with Ermin Street (Margary 41) based on this revised assessment together with LiDAR, digitised aerial photograph and satellite images;

5 The geophysics surveys

The total area of the Sutton Estate for which permission was given to survey amounted to >93ha, which given a typical survey rate of 1.5ha per day was unfeasible to survey in its entirety. The first stage of prioritisation assessed the results of the Radley Farm and Wormstall Estate projects, LiDAR/satellite/aerial images, HERs and local topology to define a sector as an “area of interest” within which it was thought that the Roman Road was most likely to lie. This area was itself broken in down into three smaller areas based on field boundaries as shown in figure 5.1. This reduced the survey area from 93ha to 63ha.

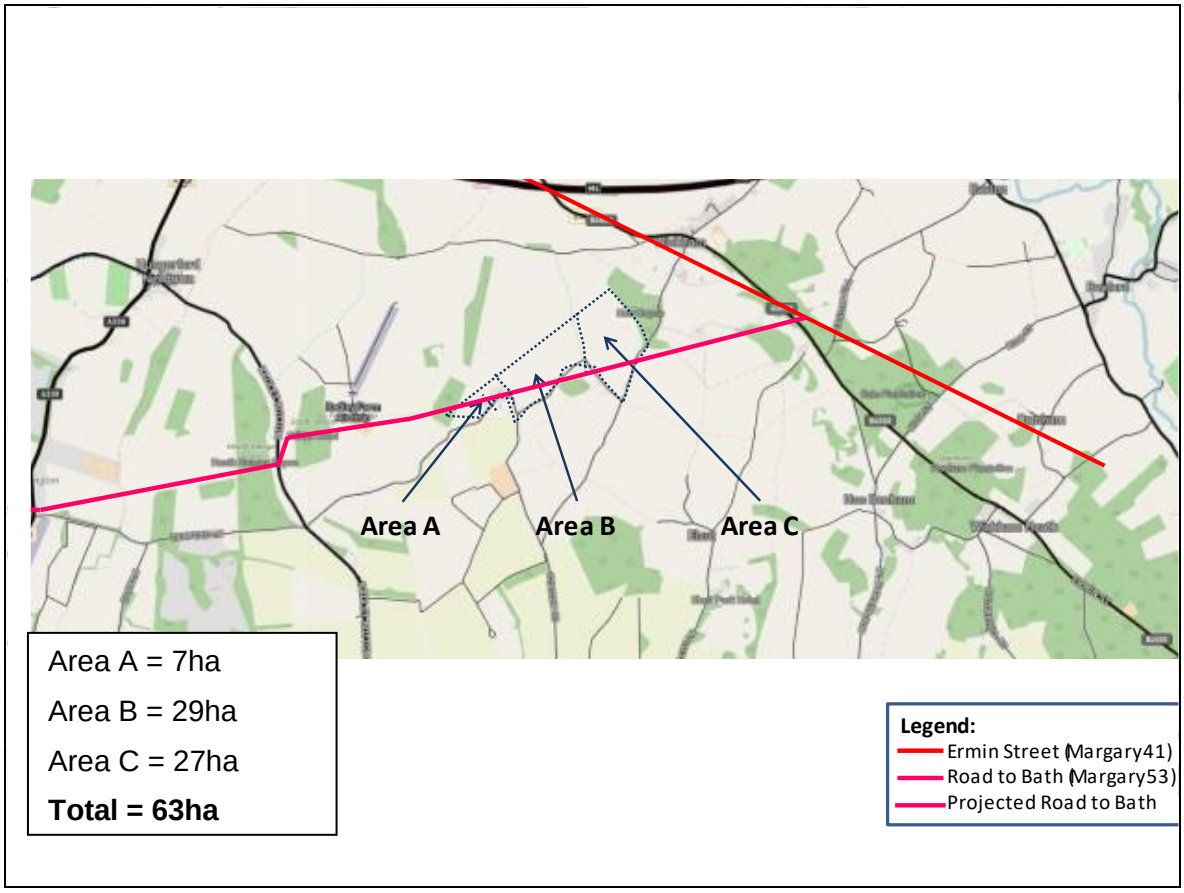


Figure 5.1 Area of interest and sub-areas prioritised for geophysics surveys (Open Streetmap 2022)

It can be seen in figure 3.1 that from Mildenhall to Radley Bottom the Road to Bath is far from being straight in its eastward navigation so it was assumed that this pragmatic pattern of navigation was similarly likely for the last 2km of the Road's route towards Ermin Street.

The "area of interest" to be surveyed consisted of open fields with no visible remains of the Roman Road to Bath. The LiDAR image in figure 3.8 also shows the number of solution holes present across this area which are thought to have also been present during the Roman period and would also have presented obstacles to the construction of the Roman Road. Given the similar underlying geology to that seen on Radley Farm where at best survival of detectable remains of the Roman Road were estimated to be <10%, it was assumed as a starting point that a similar level of survival was likely over most of the "area of interest".

5.1 Landscape assessment

Experience gained at Radley Farm offered insights into areas where Roman Road's features had survived better than in others, which concurred with the findings of other studies into damage to archaeology from agricultural usage (Oxford Archaeology 2002). Using geological records of the underlying bedrock and topsoil across the survey area and depth of topsoil, an estimated probability of survival was estimated as shown in figure 5.2, which shows that the area most favourable to the

survival/detection was the southeast corner of Area C close to New Copse and Church Hill. Area C also contained the coincident LiDAR linear anomaly (L5) and crop mark linear anomaly (S1). It was therefore determined that Area C offered the best probability of success despite requiring the longest north-south traverse across the sector of interest.

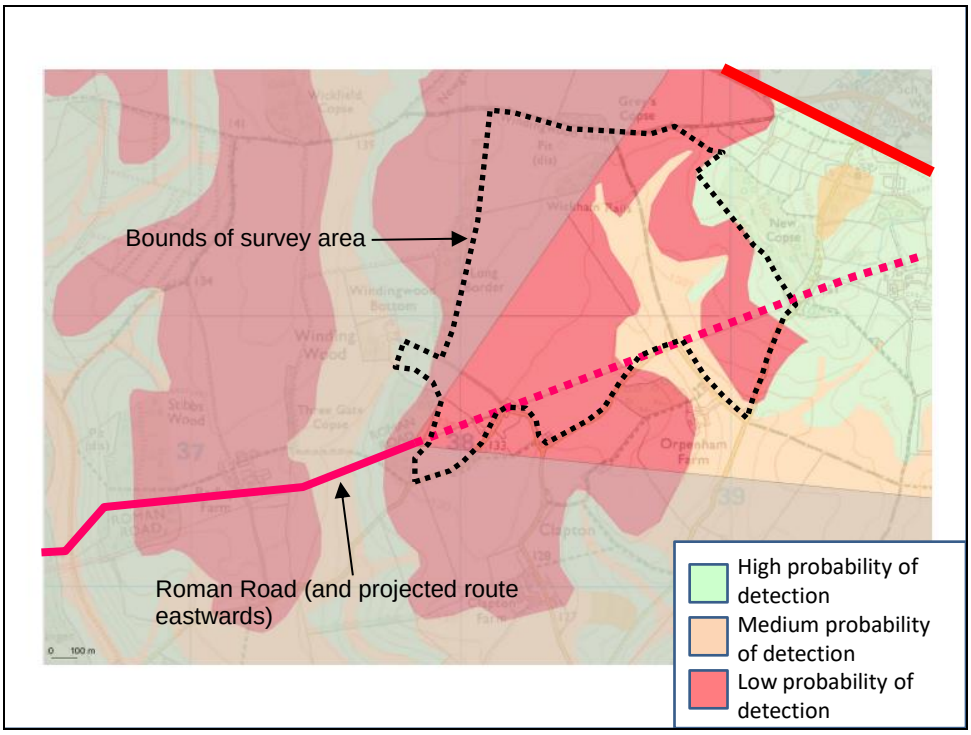


Figure 5.2. Estimated probability of remains of the Roman Road being detectable (ie should they be present) (Open Streetmap 2022)

5.2 Survey and triage strategy

A budget of 20% area was determined as appropriate for triage surveys, and three triage areas totalling 4.6ha (i.e. 17% of Area C) were selected:

- A 40m wide N-S traverse across the length Field A: This traverse was positioned roughly in the middle of Area C between the other two triage areas and with the largest north-south extent. The area of this sample is 2.8ha (i.e. 9% of Area C).
- Area C East: A shorter north-south traverse at the extreme east of Area C in the area predicted to have a highest probability of remains of a Roman Road surviving the plough based on its geology/topology. This area of this sample was 1.4ha (i.e. 5% of Area C).
- Area C West: this was an area where many of the conjectured lines of the Roman Road converged close to a cross-roads seen on the 1761 map (Rocque 1761) and had area of 0.7ha (i.e. 3% of Area C).

Depending on the success of the triage in Area C in locating the remains of the Roman Road, surveys in Areas A and B would be targeted accordingly. If no anomalies of interest were found in Area C, then triage surveys in Area B and Area A would use the same strategy of north-south traverses also with a 20% triage budget applied.

5.3 Geophysics survey method

In each area, the survey was carried out in compliance to CIfA guidelines (CIfA 2014). This involved establishing a survey grid typically a rectangular array of control points positioning 20m x 20m data collection grid squares. All of the grid squares were surveyed with a Bartington 601 gradiometer dual sensor gradiometer. The results were processed using Snuffler (Snuffler 2006) and the resulting geophysics plots reviewed for anomalies.

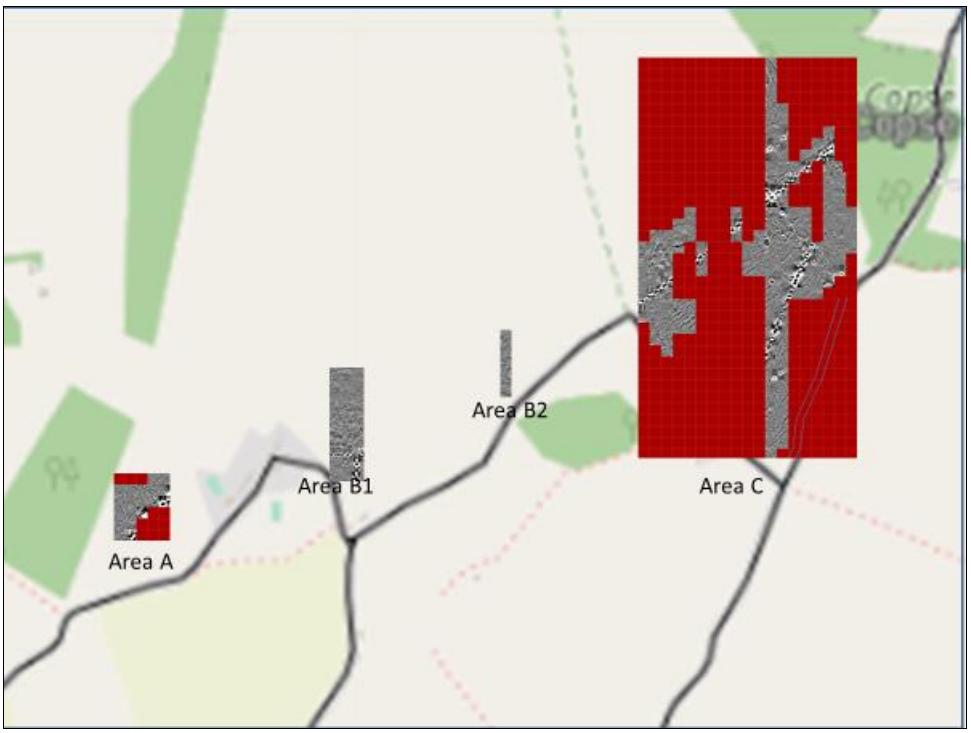


Figure 5.3. All areas surveyed with gradiometer on the Sutton Estate (Open Streetmap 2022)

Some of the anomalies which exhibited evidence of human activity were surveyed also using a Frobisher TAR-3 earth resistance meter. These results were also processed using Snuffler, geophysics plots produced and anomalies identified. Details of the location of the survey grids, the files of geophysics data collected from the grid, the resulting geophysics plots and the anomalies which may be evidence of human activity. The details of the geophysics survey may be found in Appendix 2.

5.4 Area A surveys

This area was surveyed as it is a flat open arable field located adjacent to the surviving earthworks of the Roman road to Bath in Three Gate Copse across which the Roman road would have had to pass.

5.4.1 The gradiometer survey

A survey grid of 20m x 20m squares was laid out across Area A. The length of the sides was confirmed using tapes and geometry. The survey area was extended using tapes to create an area 120m south to north and 100m west to east. Figure 5.4 shows the anomalies identified in the results.

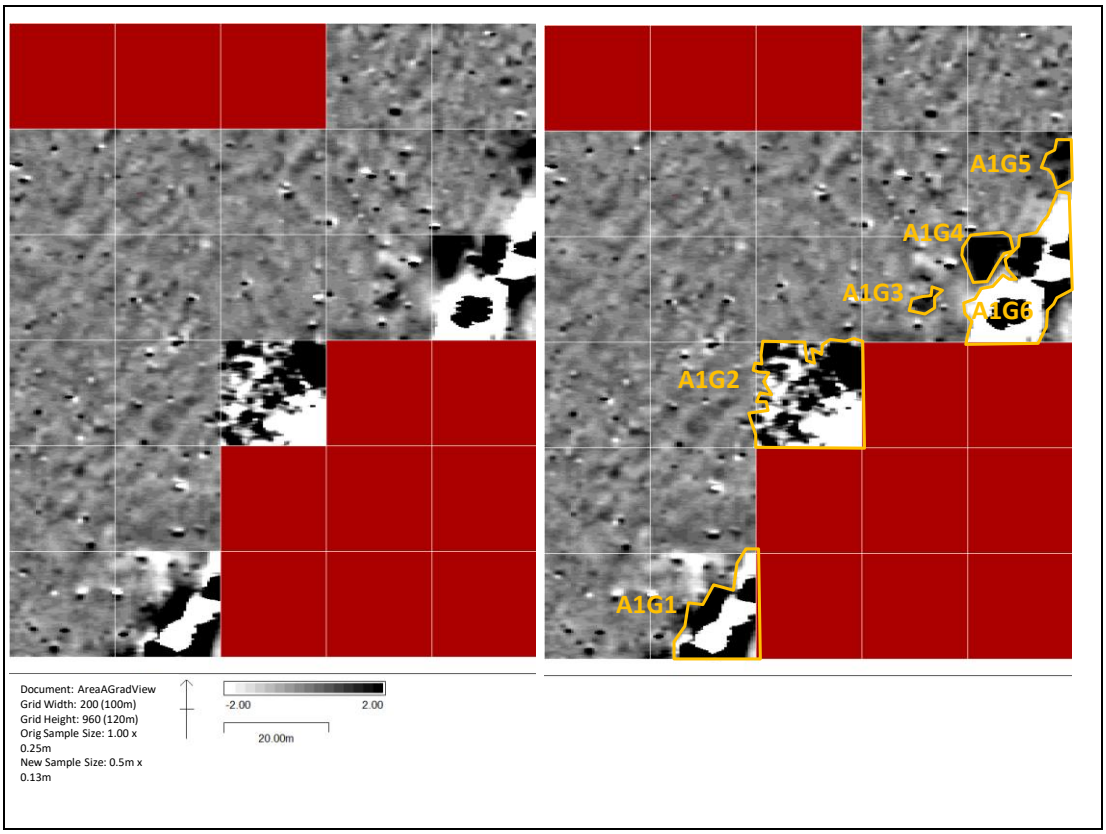


Figure 5.4 Area A gradiometer plot and the anomalies

Six anomalies A1G1 to A1G6 were surveyed within Snuffler view *AreaAGradView.* A1G1, A1G2 and A1G5 are a near linear anomaly exhibiting a high level of dipolar electromagnetic response running SW-NE for some 120m. This is interpreted as being an underground utility service distribution line such as an iron water pipe or electricity cable. Anomalies A1G3, A1G4 and A1G6 are areas of positive magnetic response measuring 2m x 3m, 10m x 7m and 10m x 5m respectively that could be further areas of electromagnetic response or ground disturbance associated with the construction of the utility service trench.

All the gradiometer survey data from survey area A was collected into a Snuffler project *SuttonEstateAreaA v1 101222* dated 10 December 2022. Table 1 in Appendix 2 shows the position of the grids surveyed, while figure 5.4 shows the gradiometer plot and the anomalies observed.

5.5 Area B surveys

This area was surveyed as it is a flat open arable field located adjacent to Area A and aligned with the surviving earthworks of the Roman road to Bath within Three Gate Copse across which it was estimated that the Roman road would have passed.

5.5.1 The Area B1 gradiometer survey

A survey grid of 20m x 20m squares was laid out across Area B1. The length of the sides was confirmed using tapes and geometry. The survey area was extended using tapes to create an area 200m south to north and 60m west to east. Figure 5.5. shows the anomalies identified in the results.

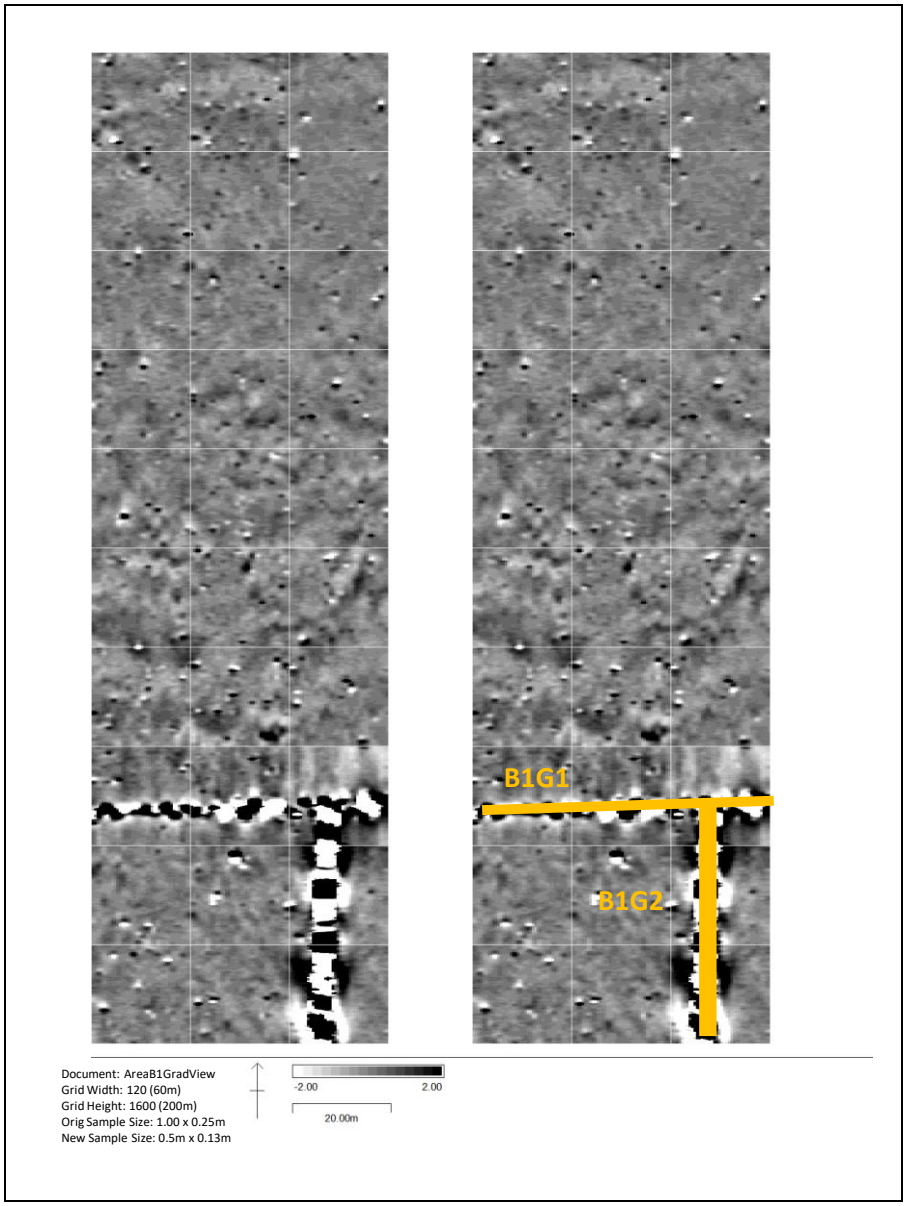


Figure 5.5 Area B1 gradiometer plot and the anomalies

Two anomalies B1G1 and B1G2 were surveyed within Snuffler view *AreaB1GradView.* B1G1 and B1G2 are intersecting linear anomalies exhibiting a high level of dipolar electromagnetic response running east-west for 60m and north-south for 48m respectively. Both these anomalies are interpreted as being an underground utility service distribution lines such as iron water pipes or electricity cables.

All the gradiometer survey data from survey Area B1 was collected into a Snuffler project *SuttonEstateAreaB1 v1 101222* dated 10 December 2022. Table 2 in Appendix 2 shows the position of the grids which were surveyed, while figure 5.5 shows the gradiometer plot and the anomalies observed.

5.5.2 The Area B2 gradiometer survey

A survey grid of 20m x 20m squares was laid out across Area B2. The length of the sides was confirmed using tapes and geometry. The survey area was extended using tapes to create an area 120m south to north and 20m west to east. Figure 5.6. shows the anomalies identified in the results.

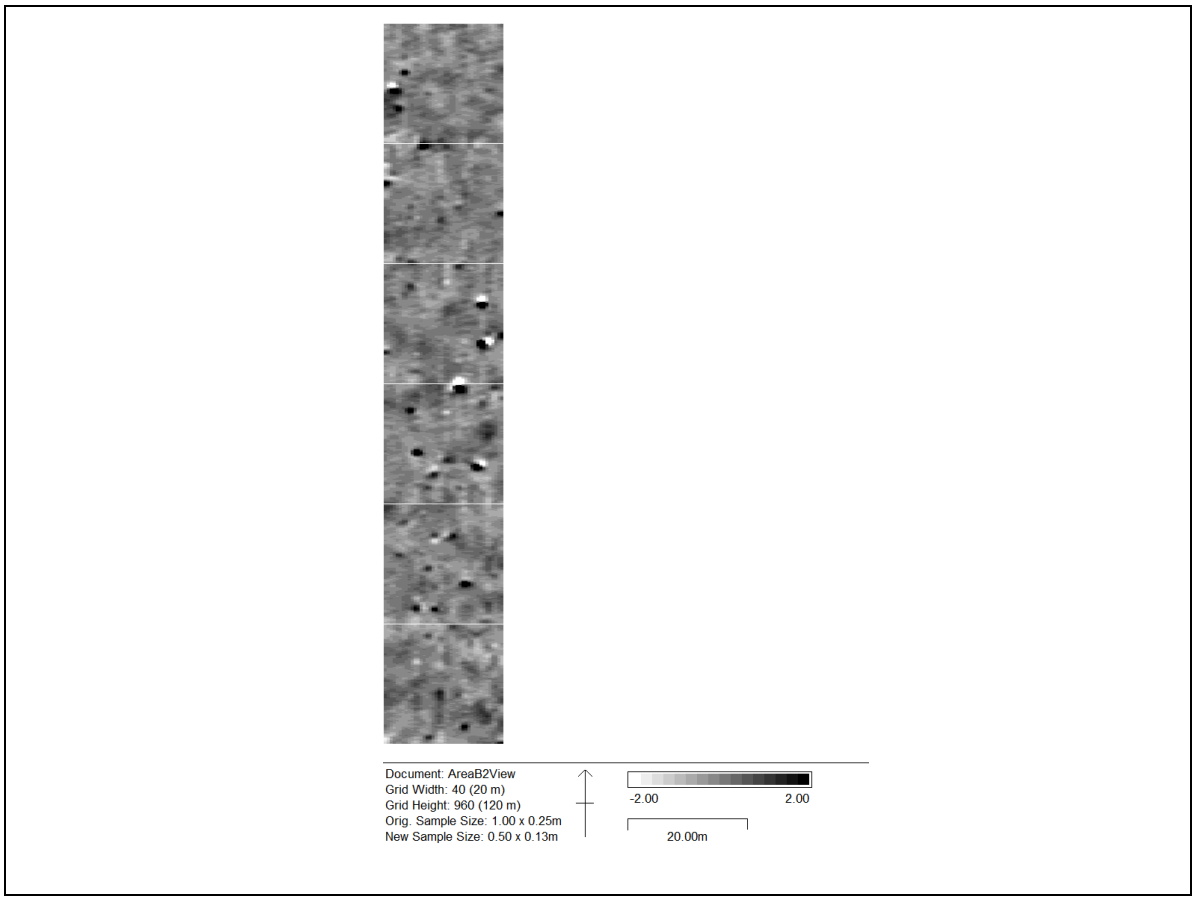


Figure 5.6 Area B2 gradiometer plot

Other than a broad scatter of small metallic responses interpreted as iron debris from farm machinery, no anomalies were observed within Snuffler view *AreaB2GradView.*

All the gradiometer survey data from survey Area B2 was collected into a Snuffler project *SuttonEstateAreaB2 v1 101222* dated 10 December 2022. Table 3 in Appendix

2 shows the position of the grids which were surveyed, while figure 5.6 shows the gradiometer plot.

5.6 Area C surveys

This area was surveyed as it is a flat open arable field located adjacent to Area B across which it was estimated that the Roman Road would have passed. LiDAR and satellite images showed linear anomalies in this area also.

5.6.1 The Area C gradiometer survey

A survey grid of 20m x 20m squares was laid out across Area C. The length of the sides was confirmed using tapes and geometry. The survey area was extended using tapes to create an area 700m south to north and 380m west to east. Figure 5.7 shows the gradiometer plot and figure 5.8 highlights the anomalies identified in the results.

Sixteen anomalies (or related groups of anomalies) were identified across the area surveyed within Snuffler view *AreaCGradView.* A positive (black) magnetic response from a gradiometer survey is generally typical of cut features (such as ditches and pit) which has been infilled with soil, and fired features such as brick foundations, hearths etc. Weak negative (white) values can be indicative of 'hard features' such as stone foundations and paths. A combined dipolar strong positive and negative response is typical of ferrous or electromagnetic features such as utility service lines (e.g. gas/water pipes or electricity cables).

Anomaly C1G5 is a group of four linear features (C1G5a, C1G5b, C1G5c and C1G5d) shown in more detail in figure 5.9, that together form 160m linear feature aligned southwest to northeast at the eastern side of Area C below New Copse. C1G5b is a 160m long continuous linear anomaly of negative magnetic response which at its south-western end is flanked on either side by parallel linear anomalies C1G5a (48m long and 2.5m to the northwest of C1G5b) and C1G5c (89m long and 1.0-2.5m to the southeast of C1G5b). Given its weak negative magnetic response, it is possible that C1G5b could represent a 'hard feature' such as stone a path/track way. At the north-eastern end of C1G5b it is flanked on one side by C1G5d which is a 51m long near parallel anomaly with a positive magnetic response located 3.8m-6.0m to the southeast of C1G5b. Anomaly C1G7 with a strong dipolar response, which is interpreted as a utility supply line, lies approximately parallel and 15.5m to the southeast of anomalies C1G5a/b/c/d. Considering only the gradiometer results, anomaly C1G5a/b/c/d is suggestive of being a track way with a ditch on either side, but as the gap between the ditches at the southeast end of C1G5b is only 5.0m, which is less than the distance between the parallel ditches of the Roman Road of 7.5-8.0m measured in Three Gate Copse. An earth resistance survey across these features was taken to provide more information to be used for interpretation as described in section 5.6.3.

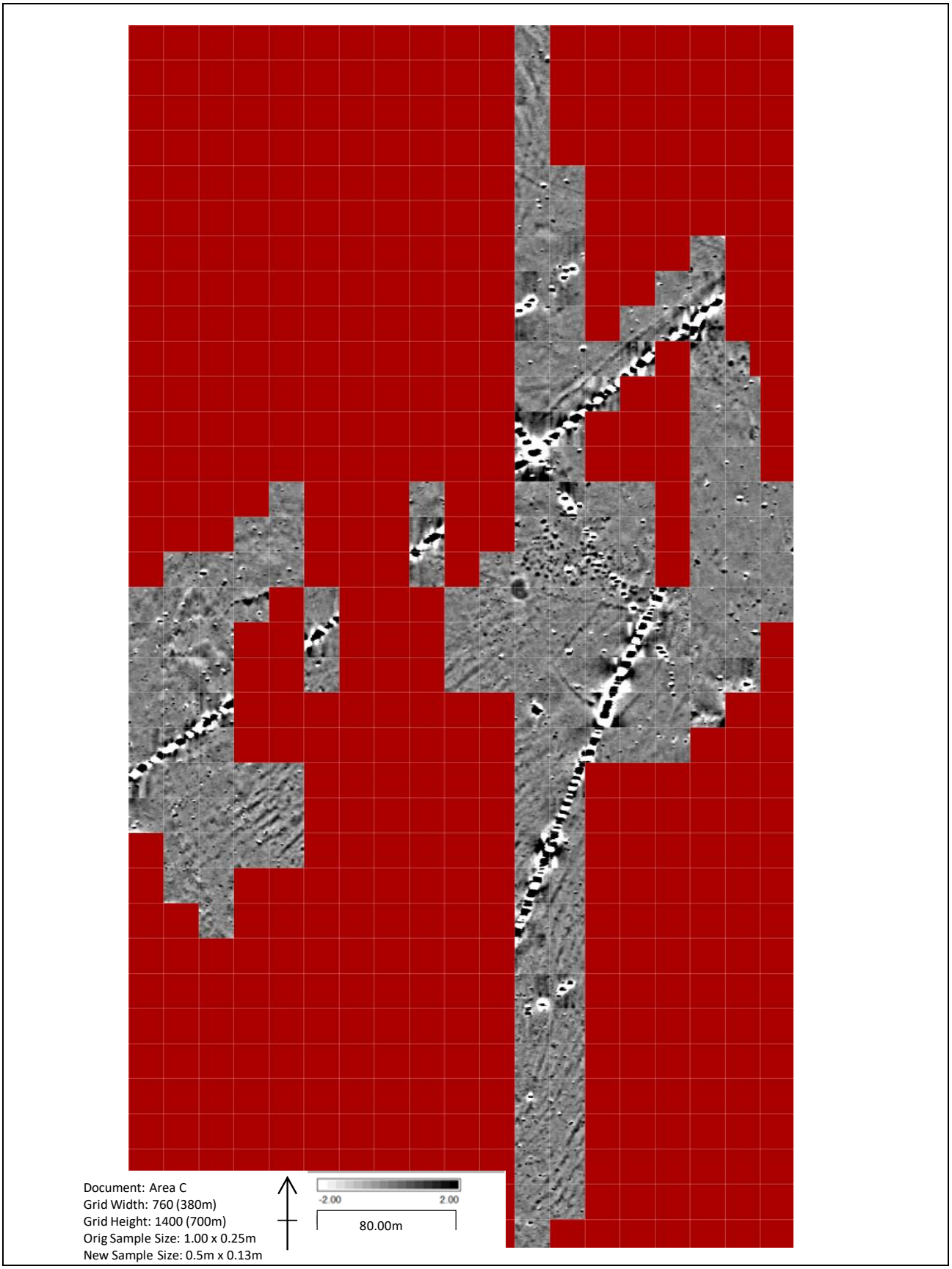


Figure 5.7 Area C gradiometer plot

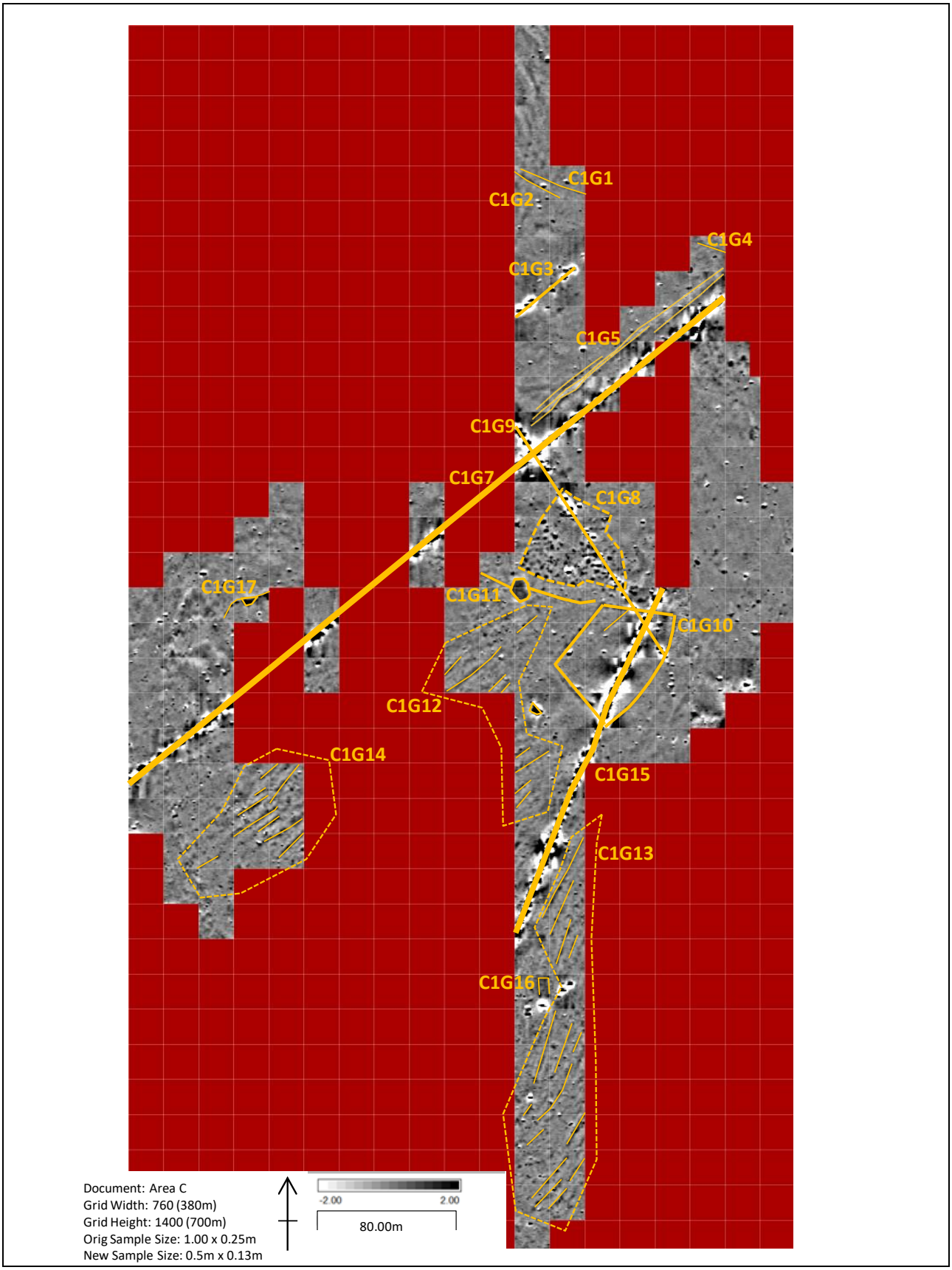


Figure 5.8 Area C gradiometer plot and the anomalies

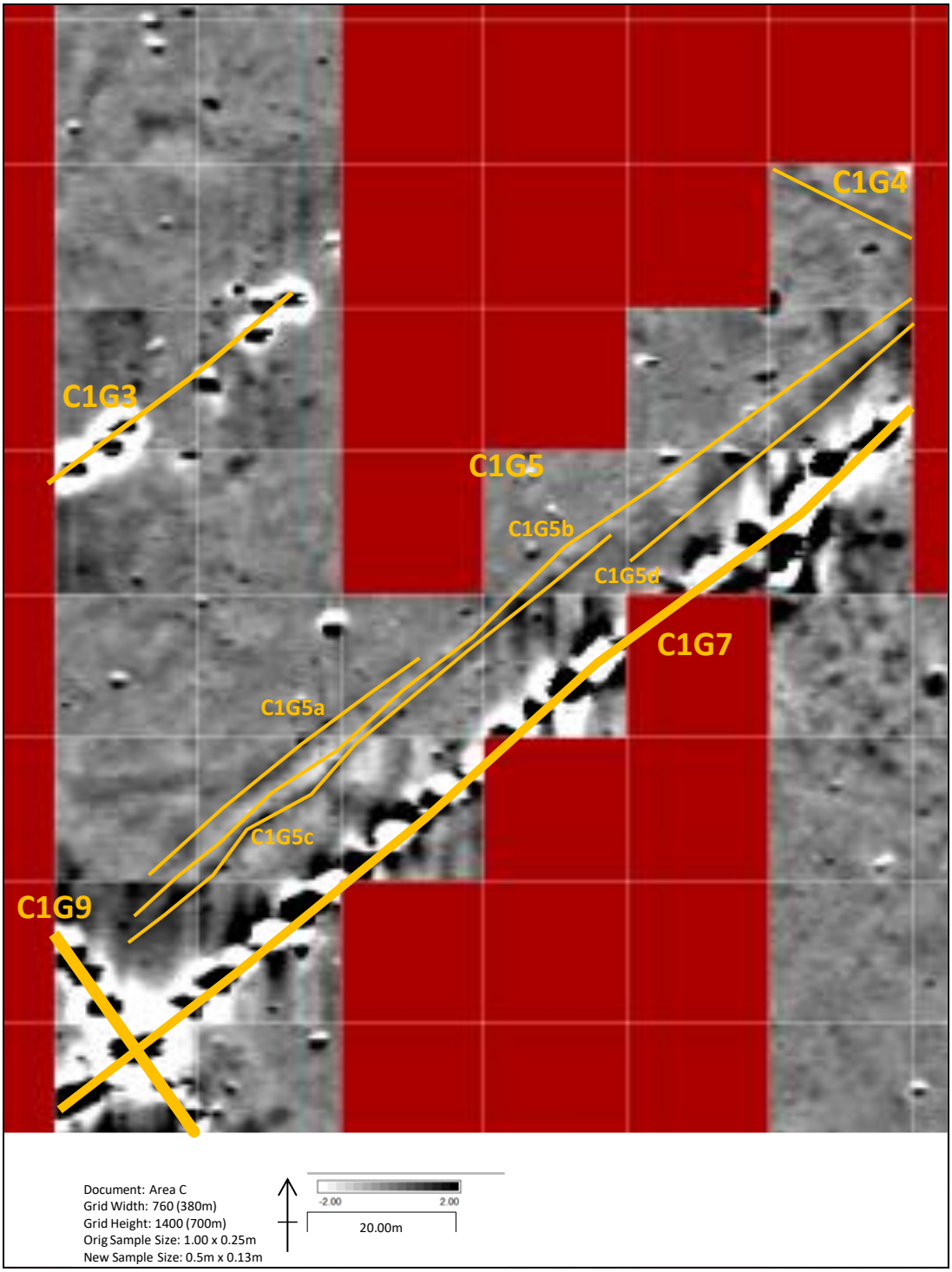


Figure 5.9 Area C to show detail of anomaly C1G5

C1G10 is a rectilinear anomaly with a positive magnetic response measuring approximately 60m x 70m. The two northwest to southeast sides of G1G10 both appear to radiate from the 7m x 10m area of positive magnetic response of anomaly C1G11 as “spokes”. This interpretation is enhanced by the southeast side of C1G10 being curved about the 7m x 10m area of positive magnetic response of anomaly C1G11. Anomaly D1G11 has two “spokes” emanating from the 7m x 10m area of

positive magnetic response, that on the southeast aligning with the north-easterly side of C1G10. Together C1G10 and C1G11 are interpreted as being the remains of a 180m diameter circular pig rearing enclosure that was likely to have been divided into appoximatly10 separate enclosed sectors around the 7m x 10m central hub that probably served as a feeding/watering area. The Estate Office have no recollection of pig rearing taking place in this area and there is no suggestion on either historic maps or satellite images, so further research of Estate Office records would be needed to prove this theory. An earth resistance survey of this area was to provide more information to be used for interpretation as described in section 5.6.2.

C1G8 is a 65m x 50m area featuring a concentration of small positive magnetic responses not seen elsewhere in Area C. These responses were interpreted as being metallic objects and were investigated further in the metallic object survey described in section 6.

C1G12, C1G13 and C1G14 are groups of anomalies in the south and southwest of Area C containing 9 near linear striations exhibiting positive magnetic responses varying in length between 5m and 30m and generally oriented southwest to northeast. C1G12 contains 9 such striations measuring between 5m and 40m in length, C1G13 contains 15 such striations measuring between 5m and 50m in length and C1G14 contains 9 such striations measuring between 5m and 25m in length. Whilst it is possible that some of these anomalies could represent manmade ditches, given the number of these similar anomalies in the south and southwest of Area C the anomalies within C1G12, C1G13 and C1G14 are interpreted as being associated with the underlying geology caused by the drainage water down this gentle southwest facing slope.

C1G1, C1G2 and C1G4 are near linear anomalies exhibiting positive magnetic responses similar to this seen within C1G12, C1G13 and C1G14. C1G1 is 42m long, C1G2 is 28m long and C1G4 is 15m long varying and all are oriented northwest to southeast. Whilst it is possible that these anomalies may represent manmade ditches, given the number of these similar anomalies in the south and southwest of Area C, the anomalies C1G1, C1G2 and C1G4 are interpreted as being associated with the underlying geology caused by the drainage water.

C1G7 is a 517m long linear anomaly exhibiting a high level of dipolar electromagnetic response running southwest to northeast across Area C. C1G15 is a 240m long linear anomaly exhibiting a high level of dipolar electromagnetic response running south-southwest to north-northeast across Area C. Both these anomalies are interpreted as being an underground utility service distribution lines such as iron water pipes or electricity cables, but the high level of dipolar electromagnetic response obscures any possible archaeological interpretation.

C1G9 is a 180m long linear alignment of intermittent anomalies exhibited high levels of electromagnetic response running northwest to southeast across Area C. At the northeast end of this anomaly the feature is almost continuous and could be a branch of the underground utility service distribution lines such as iron water pipes or electricity cables, but in the southeast the feature is intermittent. Overall anomaly C1G9 is interpreted as being the remains of an iron fence.

C2G3 is a 45m linear alignment of intermittent anomalies exhibiting strong dipolar magnetic responses response running southwest to northeast across the northeast of Area C. C2G3 is parallel to C1G7 and at right-angles to C1G9 suggesting a possible relationship. Anomaly C1G3 is interpreted as being the remains of an iron fence.

C1G16 is a 6m x 8m rectilinear anomaly with a feint positive magnetic response aligned north-south with an open-end facing south. It is possible that this anomaly may be further examples of the natural striations seen nearby within C1G13, or it could be the remains of a manmade enclosure. However in the absence of other features to suggest possible usage, the interpretation of this anomaly is uncertain.

C1G17 is a 30m long non-linear anomaly with a positive magnetic response roughly aligned southwest to northeast with a 5m x 3m area of high magnetic response part way along. The interpretation of this anomaly is uncertain.

The gradiometer survey data from survey Area C was collected into a Snuffler project *SuttonEstateAreaC v1 101222* dated 10 December 2022. Table 4 in Appendix 2 shows the position of the grids which were surveyed, while figure 5.7 and figure 5.8 show the gradiometer plot and anomalies identified.

5.6.2 The Area C1 earth resistance survey

The survey grid of 20m x 20m squares across the rectilinear anomaly C1G10 were utilised to further investigate this anomaly as shown in Table 5 in Appendix 2 and figure 5.10. Six anomalies C1R1 to C1R6 were identified across the area surveyed within Snuffler view *AreaC1ResView.*

C1R1 is a rectilinear anomaly of low earth resistance measuring 40m x 20m aligned north-northwest to south-southeast. The interior of this feature is 30m x 18m in the same orientation. C1R1 is interpreted as being ditched enclosure or the robbed foundations of a walled enclosure or building. C1R1 is aligned with anomaly C1G9 which was interpreted as a past iron fence line suggesting the two features might be contemporary or otherwise related. C1R1 is not aligned with C1G10.

C1R6 is an intermittent linear high resistance anomaly 21m in length that lies along anomaly G1G9 seen on the gradiometer. Anomaly C1R6 is interpreted as being the utility service pipe/cable.

C1R2, C1R3 and C1R4 are narrow parallel linear anomalies of high earth resistance each 7m apart and oriented northwest to southeast at an offset by 20° to C1R1. Given the high earth resistance of C1R2, C1R3 and C1R4 these anomalies are interpreted as being possible footings or remains of walls/stalls of the pig rearing enclosure thought likely to have been located in this part of Area C. C1R5 is a part of an anomaly of high earth resistance interpreted as a spread of possible rubble or building material possibly associated with anomalies C1R2, C1R3 and C1R4.

The earth resistance survey data from both the surveys within Area C was collated into a single Snuffler project *SuttonEstateAreaCRes v1 101222* dated 10 December 2022.

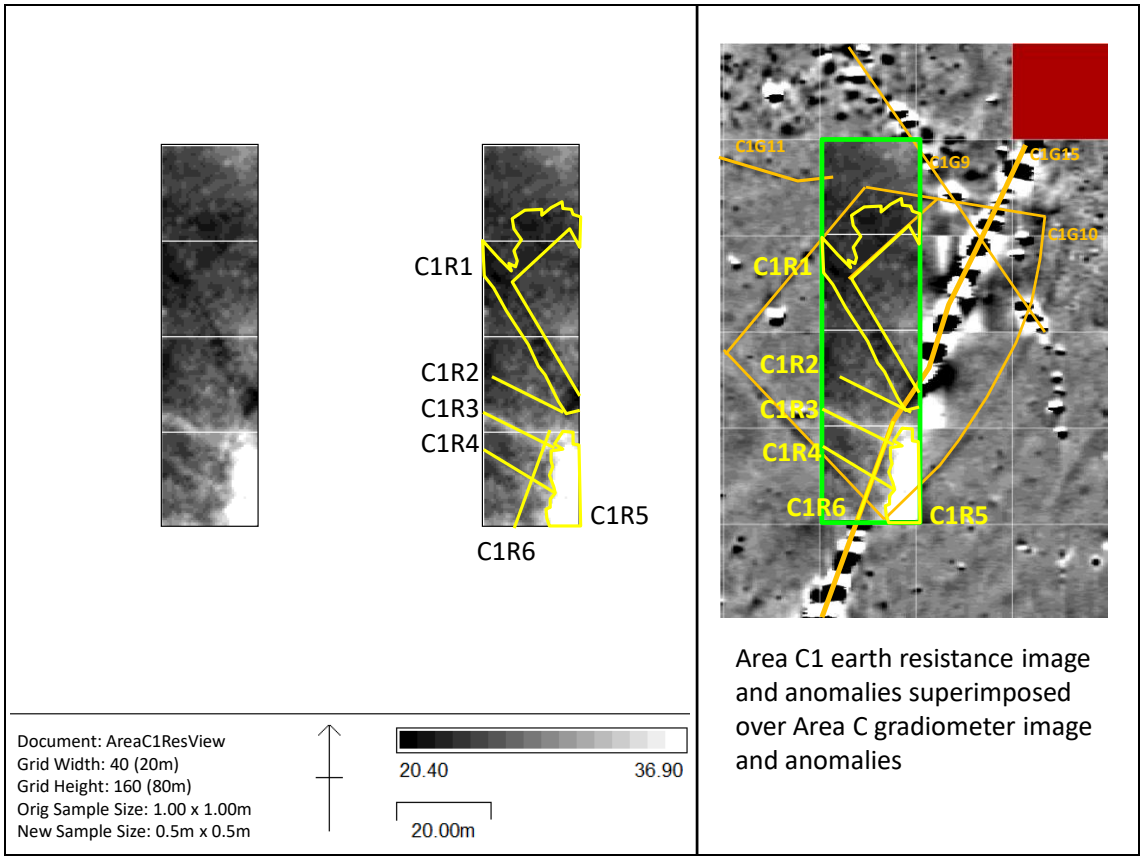


Figure 5.10 Area C1 earth resistance plot and the anomalies

5.6.3 The Area C2 earth resistance survey

The 20m x 20m grid squares across the C1G5 group of linear anomalies (i.e. C1G5a/c/b/d) seen on the gradiometer survey were utilised to carry out an earth resistance survey to further investigate these anomalies as shown in Table 6 in Appendix 2 and shown in figure 5.11.

Anomalies C2R2, C2R3, C2R4 and C2R6 all have high earth resistance and their linear alignment southwest to north east is suggestive of then being a compacted stone surface of a road or track way with a breadth of 10.5-14.0m. This compares to the width of the agger of the Roman Road in Three Gate Copse which is 7.5-8.0m as shown in figure 1.2. It is likely that the top part of the agger of the Roman Road was spread north-south by the action of ploughing to create this wider spread of high resistance response.

Anomaly C2R7 exhibiting low earth resistance possibly represents a 17.5m long and 1.5-3.0m wide ditch along the north-western edge of the probable road or track way. Anomaly C2R1 also represents an area of low earth resistance, the southern end of which may also represent the remains of a 12.0m ditch also along the north-western edge of the probable road or track way.

Anomaly C2R8 also represents an area of low earth resistance, but is separated from the road or track way by some 2-3m, so may not be related to the other features.

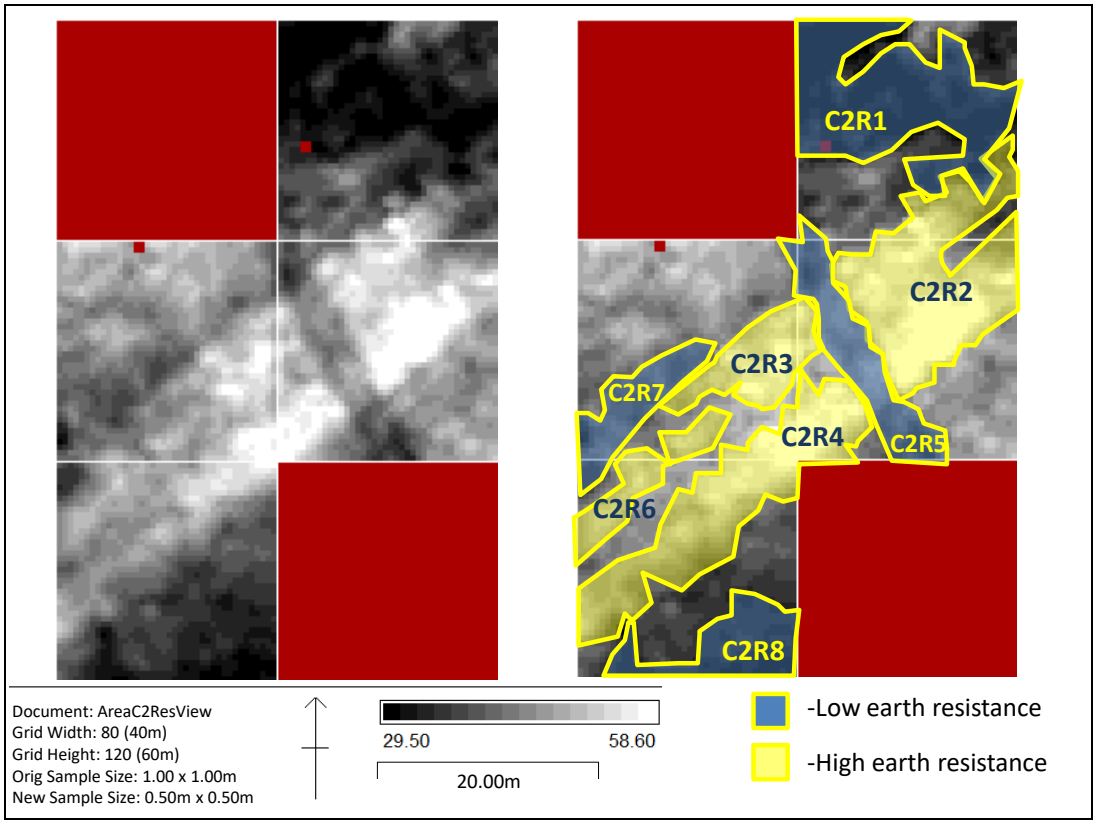


Figure 5.11 Area C2 earth resistance plot and the anomalies

Anomaly C2R5 is a rectilinear feature with low earth resistance interpreted as being a 4.5m wide ditch cut at right angles across the probable road or track way and extending for at least 27m northwest to southeast.

In figure 5.12 the earth resistance anomalies observed in Area C2 are overlaid onto the anomalies observed using the gradiometer in the same location. From this it can be seen that:

- The linear anomaly C1G7 exhibiting strong dipolar electromagnetic response runs immediately along the south-eastern side of the high earth resistance anomalies C2R2 and C2R4 interpreted as being the remains of a probable road or track way constructed using compacted stone. It is likely that the trench cut for the C1G7 utility service line clipped this area of high resistance resulting in the coincident edge.
- The 160m long negative magnetic linear anomaly C1G5b aligns with the north-western edge of the high earth resistance anomalies C2R2, C2R3 and C2R6 interpreted as being a probable road or track way constructed using compacted stone. It is possible that C1G5b is the northwest facing “edge” of the linear high resistance anomaly seen Area C2 that is being highlighted by the gradiometer.
- The 17.5m long low earth resistance anomaly C2R7 aligns with the 48m long positive magnetic anomaly C1G5a suggesting that both relate to a possible linear ditch aligned with the north-westerly edge of the road/track way.

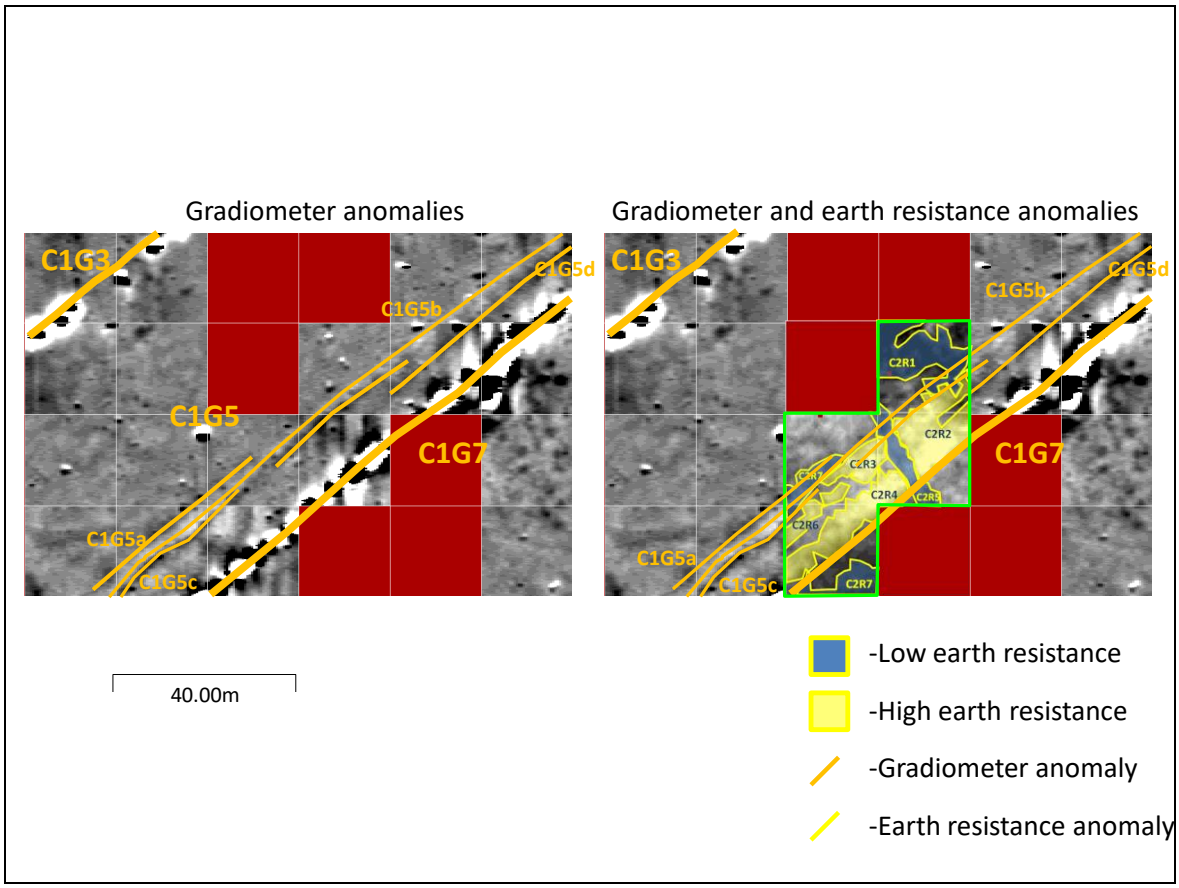


Figure 5.12 Area C2 earth resistance plot and the anomalies

- The positive magnetic response anomaly C1G5d aligns with the moderate earth resistance area between high resistance features C2R3/C2R6 and C2R4 suggesting that C1Gd5 could be the remains of a ditch extending for some 100m aligned with the possible road/track way and the more northerly possible ditch. It is estimated that these two near parallel features interpreted as possible ditches would lie 7.0-8.5m apart which is consistent with the separation of the Roman Road ditches at Three Gate Copse.

Figure 5.13 Likely route of Roman Road to Bath across Area C

6 Metal detecting survey in Area C

In the gradiometer survey of Area C the anomaly C1G8 was identified as a 65m x 50m area featuring a concentration of small positive magnetic responses not seen elsewhere in Area C. These responses were interpreted as being a spread of metallic objects, which was highlighted as requiring further investigated further given its proximity to the rectilinear anomaly C1G10.

Permission for this metallic objects survey was sought from the Estate Office who kindly gave their approval. The survey was carried across the 20m x 20m grids squares (Day6Sutton25, Day1Sutton20, Day6Sutton24 and Day8Sutton6) comprising anomaly C1G8 as shown in figure 6.1 using a Garrett ACE300e metal detector and Garrett pointer.

The ACE300e metal detector features both Digital Target ID and a segment-based discrimination system to identify targets. The Digital Target ID is a proprietary numeric scale from 0-99 which indicates the conductivity of a target. A higher number indicates the higher conductivity of the target, and different metals will produce different target ID numbers depending on the target's metallic composition, size, structure, placement, and conductivity. Results were categorised as "1-40" (small ferrous items), "41-70" (medium or small non-ferrous) and "71-99" (large ferrous or medium non-ferrous items).

The higher ferrous/non-ferrous signals and a sample of the lower ferrous signals were uncovered to identify the targets. These were recorded and then replaced in the ground in situ leaving the area of field as found. No items were removed from site, and the Estate Office were informed of the findings verbally. The results of the survey are summarised in figure 6.1and show that the wide scatter of metallic responses recorded by the gradiometer were mostly due to small ferrous objects of a modern agricultural nature. The high target ID

responses were found mostly to be portions of angle-iron fence posts, and their linear alignment is consistent with the interpretation of anomaly C1G9 as being the remains of past fence line.

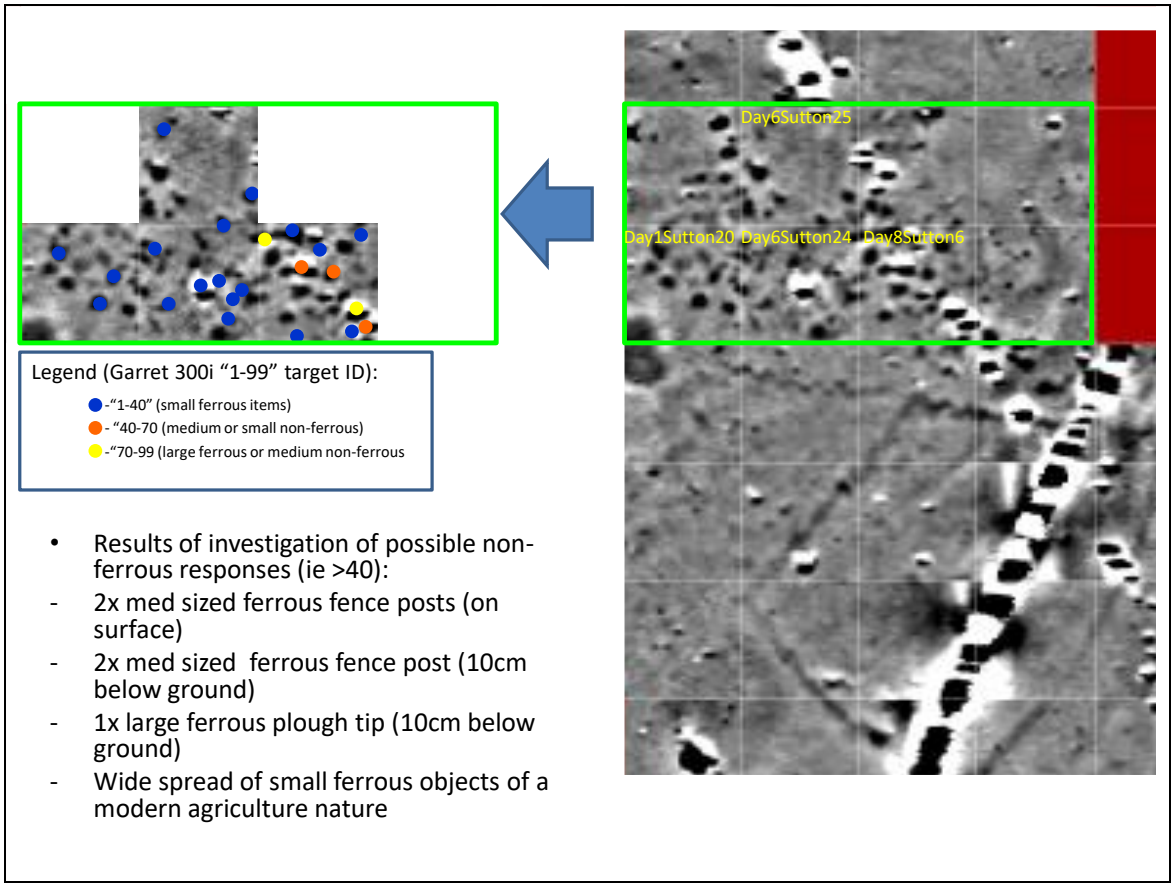


Figure 6.1 Results of the metal detecting survey in Area C

7 Reconnoitre of Orpenham Copse

The SRSL Estate Office kindly extended permission to BAS to reconnoitre Orpenham Copse to investigate in more detail the features seen on LiDAR along the north facing edge of the copse referred to in the HER MWB1993 which interprets these features as being the possible remains of the Roman Road.

The LiDAR image of these features is shown in figure 3.8 as feature L3. In MWB1993 it is stated that the 'Ridge' (i.e. agger) was been observed in Orpenham Copse (Williams, 1924), which whilst reference by Toller is not mentioned in the text other than suggesting that the Roman Road ran from Three Gate Copse, through Orpenham Copse to Intersect with Ermin Street near to Newbury Lodge (Toller, 2013) which as already discussed was based on a possibly flawed projection from Three Gate Copse.

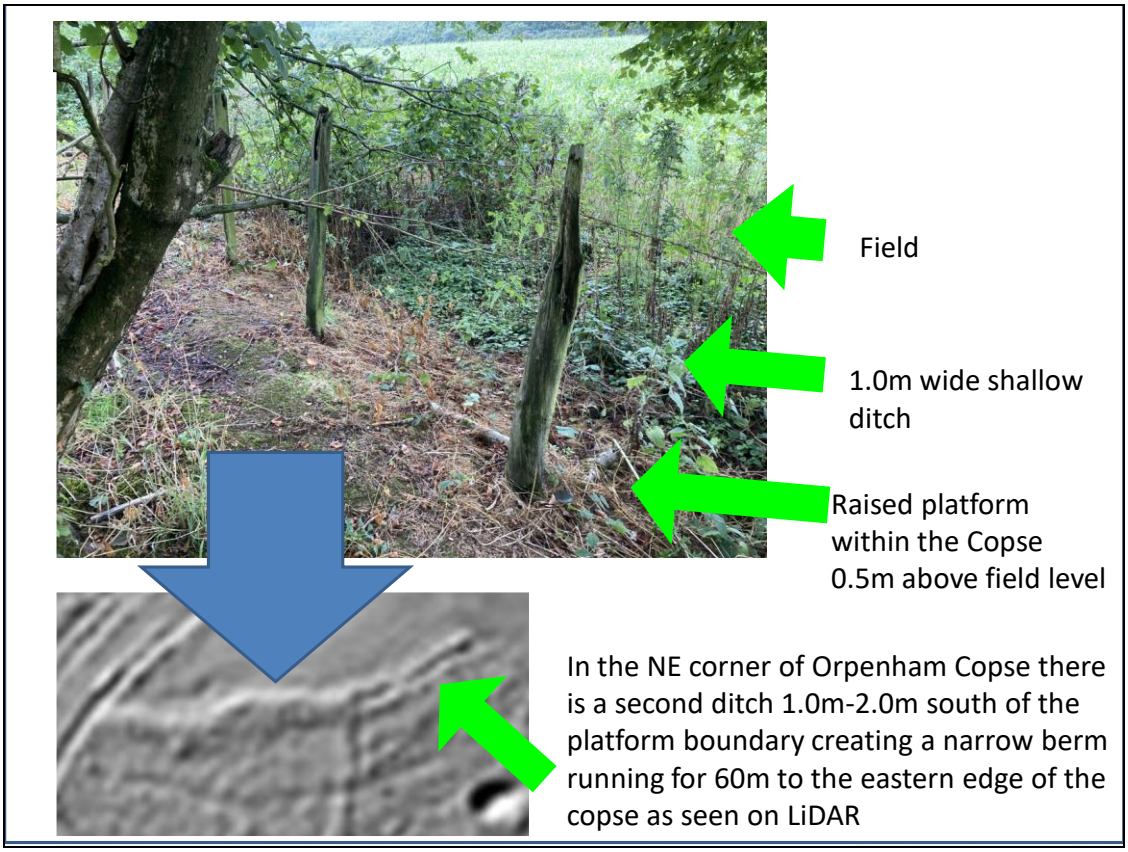


Figure 7.1 Comparison of a photograph and LiDAR images of the north facing boundary of Orpenham Copse (DEFRA 2022)

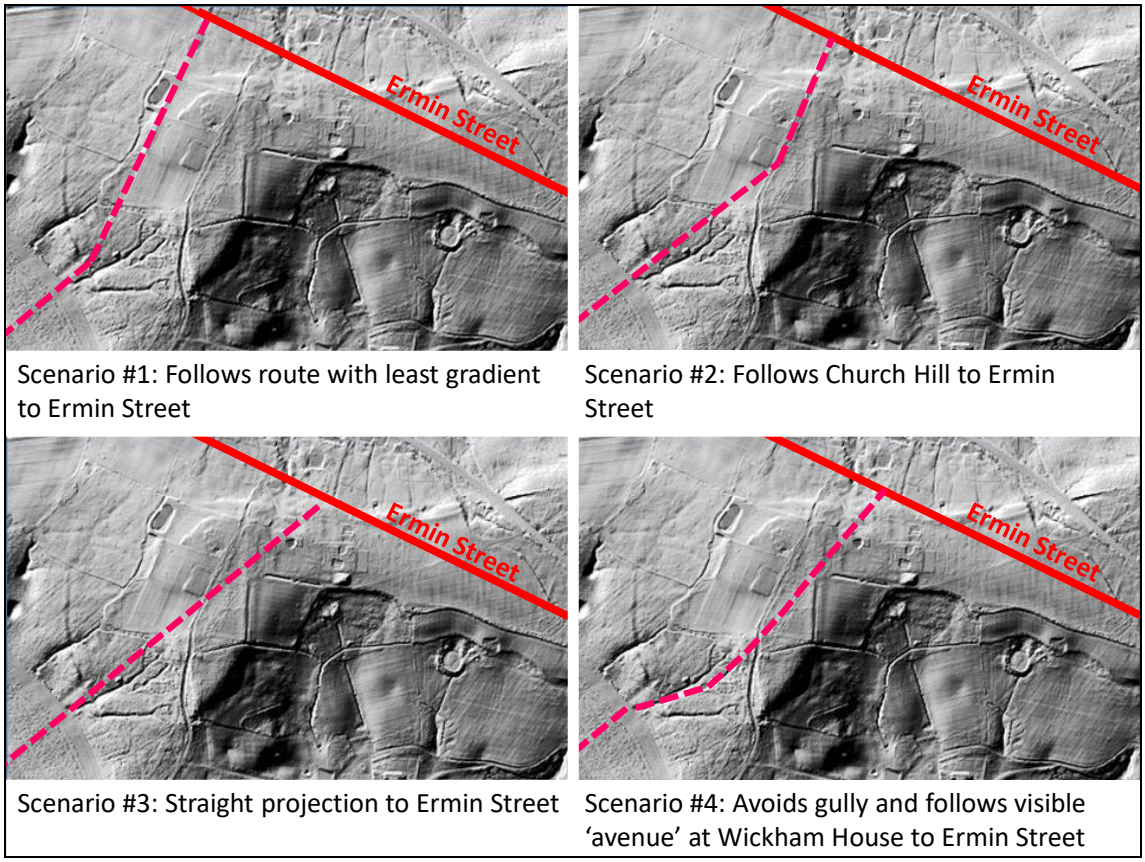
Other than the large solution hole at SU 388 671 the interior of Orpenham Copse is a flat platform raised some 0.5m above the height of the surrounding fields and covered in brambles other than the path running east to west. Along the north facing edge of the copse there is a shallow 1.0m wide ditch between the edge of the wooded platform for the entire northern end as seen in the photograph in figure 3.10. For the easterly 60m of the northern end there is also second shallow ditch 1.0-2.0m to the south of the edge of the platform creating a narrow berm which can best be seen in the LiDAR image in figure 7.1. This berm in Orpenham copse is only 1.0m-2.0m wide compared to the agger of the Roman Road in Three Gate Copse which is some 8.0m wide. Whilst the archaeology of this feature in Orpenham Copse is not known, it is thought likely to be the feature described by Williams in MWB1993 – but due to the significant difference in width compared to the remains of the Roman Road within Three Gate Copse, this feature is thought to be unrelated to the Roman Road.

8 Possible routes from New Copse to Ermin Street

Whilst it was outside of the area to be surveyed the revised route now thought likely for the Roman Road to Bath from the southwest facing tree line of New Copse toward Ermin Street was evaluated using LiDAR and a desktop review of the topography of the landscape. Four options are shown in figure 8.1 that were considered to be the most likely:

- For scenario #1 the Roman Road takes the route with the least gradient to Ermin Street which avoids stream gullies in New Copse and follows what is now a field boundary dividing Peters Meadow toward Ermin Street. This ground whilst having a shallower gradient is also boggy in place within Peters Meadow.
- For scenario #2 the Roman Road continues straight up the hill through New Copse until it reaches the present day Church Hill which it follows toward Ermin Street.
- For scenario #3 the Roman Road maintains its straight projection crossing one of two gullies and straight up the hill through New Copse and onward until Ermin street is reached near modern day Wickham House.
- For scenario #4 the Roman Road deviates to the east to pass between two gullies and up a slightly steeper incline through New Copse to follow the route of a disused tree lined driveway through the grounds of Wickham House that are thought to have gravel/flint metalling beneath the present day pasture.

It is thought that scenario #2 the route most likely to be taken, but it is hoped that further geophysics surveys in the grounds of Wickham House and Peters Meadow will resolve this question.



Scenario #1: Follows route with least gradient to Ermin Street

Scenario #2: Follows Church Hill to Ermin Street

Scenario #3: Straight projection to Ermin Street

Scenario #4: Avoids gully and follows visible 'avenue' at Wickham House to Ermin Street

Figure 8.1 Four possible routes that Roman Road may have taken from New Copse to Ermin Street (DEFRA 2022)

9 Discussion

No anomalies thought to be associated with the Roman Road were observed in Area A or Area B suggesting that the remains of the Roman Road to Bath across these areas have been lost to the plough through past agricultural activity.

In Area C/C2 there are a number of extensive linear anomalies, some of which are >100m in length visible on both the gradiometer survey and the earth resistance survey New Copse. Most compelling are the high earth resistance anomalies C2R2/C2R3/C2R4/C2R6 which together suggests a linear metalled surface some 10.5-14.0m wide that aligns with the other linear anomalies observed nearby. These anomalies also align with the LiDAR anomaly L5 and the crop mark anomaly S1 visible on historic satellite images. It is certainly possible that the top of the compacted flint agger of the Roman Road (as seen in Three Gate Copse) may have been spread north-south by ploughing from its original 7.5-8.0m width to its present day extent.

However, this evidence is detracted by the unclear relationship of this linear metalled high resistance feature with the linear positive and negative magnetic anomalies (C1G5a/b/c/d) observed nearby on the same alignment. Whilst in section 5.6.3 a number of these anomalies can be interpreted as the remains of parallel 1.5m ditches some 8m apart, it would be expected that the remains of the parallel ditches would lie in the middle of the 15m wide high resistance feature interpreted as agger spread rather than offsite to the northwest as seen in figure 5.12.

This is complicated by the linear service utility line some 10-15m to the southeast of the likely line of the Roman Road which obscures a 10m wide swathe along its >500m path across Area C due to its strong dipolar electromagnetic response and its construction may have resulted in destruction of archaeology to the southeast of the features thought to be the remains of the Roman Road. It is possible that the route chosen for the service utility line was determined using the same logic as the route chosen for the Roman Road as being the best linear route between gullies within New Copse and avoiding solution holes present in Area C.

It is recommended that a section is excavated across the probable metalled surface observed in area C2 to compare with the section excavated across the Roman Road in Three Gate Copse in 1968 (Abbott and Cains 2022) as a definitive means of confirming the archaeology associated with the Area C2 anomalies.

It is also recommended that further geophysics surveys and possible excavation be used to investigate in more detail anomaly C2R5 which appears to show a 4m wide ditch cut through the likely Roman Road at right angles. The purpose, extent and dating of this feature will give useful context to how the road might have been used during the Early Medieval period and later.

Evidence of a possible pig rearing enclosure (i.e. anomalies C1G10 and C1G11) containing buildings and/or other structures (i.e. anomalies C1R1/C1R2/C1R3/C1R4/C1R5) were also found in Area C. The remains of some of these structures (i.e. C1R1) align with the remains of a nearby iron fence line (i.e. C1G9) so are presumed to be post medieval. However, no evidence of pig rearing could be found on historic maps, aerial photographs or satellite

images, so will need to be researched within the Estate records to confirm if this interpretation is valid.

Figure 8.1 Revised likely route of the Roman Road to Bath based on findings of this project (Open Streetmap 2022)

10 Conclusion

Anomalies revealed in Area C and C2 are thought likely to be the remains of the Roman Road to Bath (Margary 53) between Three Gate Copse and Wickham, however further work is required to prove this interpretation definitively.

Further work is also required to determine the route of the Roman Road to Bath through New Copse and onward for the last 500m towards Ermin Street. However, when taken together, the balance of evidence gathered by this project and the results of the earlier geophysics surveys suggest that it is likely that the Roman Road to Bath (Margary 53) followed the route to Wickham indicated in figure 8.1.

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Appendix 1: HER Details – Detailed Records of the West Berkshire HER Covering the Roman Road to Bath

- **MWB17613 Speen to Bath Roman Road - between Radley Farm and Three Gate Copse** (Map Ref: SU375704) - The Lambourn Downs National Mapping Programme (NMP) recorded crop marks of a short section of Roman road mapped from aerial photographs, showing the bank with ditch to its north within a field to the west of a wood where earthworks remains of an agger have been reported; the features are on the same alignment although the crop marks are slightly curved rather than straight. In 2013, Toller described the earthworks in Three Gate Copse (MWB1986) as a large agger with side ditches running for 140 m through the wood, lost past Radley Farm and appearing again in Stibbs Wood (MWB1986) as a large 9m wide agger, but makes no mention of these crop marks.

- **MWB1986 Speen to Bath Roman Road - southwest of Three Gate Copse to Stibbs Wood** (Map Ref: SU372703) - The Museum Archaeology map shows a line marking the course of the road with note, 'Roman Road. Continuing northwest to XXXII SE (i.e. Berkshire map reference). Then west to crossroads west of Peaked Lot', and a second annotation 'Hump in road' marked at SU36567014. Both of these comments are attributed to P Williams whose article in the Berks, Bucks and Oxon journal describes the road as 'unmistakeable through Three Gate Copse, and in the next dip, across tillage, it is plain'. A limited excavation in the 1950s revealed the road surface and two ditches (most likely carried out in Three Gate Copse according to the landowner, who remembers archaeological excavation taking place here at this time). Margary wrote that the road was clearly visible as an agger in Three Gate Copse and Stibbs Wood. The GIS representation of this record is two disconnected lines, within Stibbs Wood and also Three Gate Copse 1km to the east. Both stretches of road are represented by earthworks depicted on the Ordnance Survey 5th Epoch and modern Master Map, as well as the 2013 paper by Toller summarised above.

- **MWB19573 Features on east side of Radley Bottom** (Map Ref: SU366704) - The Lambourn Downs NMP records the earthwork remains of a number of fragments of banks and three conjoined enclosures, visible in aerial photographs, centred at SU36637036. Their date was considered to be unknown, although they may possibly be late prehistoric or Roman. A Roman road crosses the dry valley at this point (MWB1987). The fragments of banked rectilinear enclosures at SU36707056 may be the remains of a field system. The banks are visible as earthworks in a 2003 air photograph.

- **HER: MWB1987. Linears - Radley Bottom** (Map Ref: SU366702) - Antiquarian investigations noted the Roman road on the side of a steep west facing slope at Radley Bottom. Margary wrote that the road was clearly visible as an agger in Stibbs Wood, and that where it crosses the coombe it was present as a wide agger. The Lambourn Downs NMP records a section of Roman road seen as an earthwork centred at SU36617020 and mapped from aerial photographs. It appeared as an incised track way with banked sides. An earthwork is visible in a 2003 air photograph. The GIS line follows the NMP transcription of ditch within two banks.

- **MWB1982 Speen to Bath Roman Road - either side of Radley Bottom** (Map Ref: SU372703) - Records the course of road as traceable over approximately 3km by crop marks and earthworks. The Rev Summers, writing to H Peake in 1905, said he had been told of traces of a very straight road, which he had come across when ploughing the

fields near Radley Bottom. P Williams notes 'there is a steep drop on to the lane in Radley Bottom… the Ridge (ie agger) here is very clear, sloping diagonally downwards on untouched grass, and where it crosses the valley there is a plain hump in the road surface'. In his 2013 paper, Toller described the earthworks in Stibbs Wood (MWB1986) as a large 9m wide agger that turns south down the east slope of Radley Bottom as a large terrace (MWB1987), then runs west across the valley bottom as a low, wide agger that runs into Heath Hangar Copse (MWB1988). A watching brief in 2015 at Winding Wood on the conjectural route of the road did not reveal any evidence of it (Lang Hall Archaeology, 2015).

- **MWB1993 Speen to Bath Roman Road - Orpenham Copse and Elgar's Farm** (Map Ref: SU 387 706) - Williams noted that the 'ridge' (agger) has been found in Orpenham Copse and at Elgar's Farm. This latter farmstead does not exist in the 21st century; its approximate location was at SU38487064. In 2013, Toller references Williams' work, but does not mention this agger, and suggested the route of Margary's Roman road 53 ran from somewhere near Newbury Lodge (formerly Wormstall Lodge, MWB21354) through Orpenham Copse to Three Gate Copse (MWB1986).

- **MWB1992 Benham Burslot - Junction of Margary's Roman Roads 53 and 41b** (Map Ref: SU 404 710) – The point where Margary's Road 53 joins 41b is not known. No trace can be seen where extrapolation of the known line would put it. However, Peake suggests that after crossing Wormstall Park, it negotiates a steep slope obliquely as at Radley Bottom. This can be traced and brings the line further east. Williams notes that the branch to Bath must have diverged from the Cirencester road at an angle of about 45 degrees, but its beginnings have not been discovered. In 2013, Toller suggested the route of Margary's Roman road 53 ran from somewhere near Newbury Lodge (formerly Wormstall Lodge, MWB21354) through Orpenham Copse to Three Gate Copse (MWB1986).

- **MWB12102 East of the (old) Rectory, Wickham** (Map Ref: SU 398 715) - An article titled 'A Visit to Wickham Rectory' notes, " In 1889 a remarkable find of Roman coins was made near the Rectory, including a very find gold solidus of the Emperor Constantius II, AD 337-61, and many others of silver and first and second brass". The position of the find spot is printed on the Ordnance Survey 2nd Edition mapping at c SU 3985 7157. The Victoria County History of 1924 makes reference to a mound at the entrance to the garden of Wickham House (sic) where it was stated that "some gold coins were found in it about sixty years ago", but the mound shown on historic and modern OS mapping is oval with a rectangle in the centre, and at a different location closer to the house at c SU 3960 7146 (MWB4308).

- **MWB12099 Wormstall House Hoard** (Map Ref: SU 398 711) – A pot of Roman coins was found during the digging of a pond NE of Wormstall House in 1870. The pot was destroyed and the coins dispersed only one being recorded at Newbury Museum (that being in the possession of the local school teacher). Peake has the hoard within Kintbury parish. The Newbury Museum Accession Register has a single coin recorded from Wormstall against the reference number NEBYM:1912.116, although this is described as a silver didrachm ('Roman Republic BC 222-205. Formerly identified as Greek, Companian Coin No. GK 5. Wormstall, Wickham'). It was donated by Mr Gilkes.

- **MWB4307 Garden of (old) Rectory - now Wickham House** (Map Ref: SU 395 715) – Paving of building foundation found just below the surface north of the Rectory garden, but has never been excavated. Possibly Roman as a certain amount of pottery has been found in the area, including some from the Rectory garden itself. From article titled 'A

Visit to Wickham Rectory', these extracts are taken: In making a pond in front of the Rectory, in 1860, a large quantity of British sun-dried pottery was found". " In 1889 a remarkable find of Roman coins was made near the Rectory, including a very find gold solidus of the Emperor Constantius II, AD 337-61, and many others of silver and first and second brass" - position of coins is printed on the OS map.- recorded as MWB12102. Pottery also seems to have been found in the garden in the 20th century - grey ware rims of large vessels, deposited in Newbury Museum were noted by H H Coghlan. (GIS point is approximate - it is not currently known where the pond was in the garden). NB The Rectory in the 19th century was what is now (2003) Wickham House. The current Rectory on the west side of the road was probably built in the second half of the 20th century.

- **MWB15521 At the (new) Rectory, Wickham** (Map Ref: SU 393 715) - A cobbled surface was found 18 inches below the current ground surface during the excavation of three fence post holes. Roman tile and pottery was recovered from the post holes. The cobbles were bedded into a layer of sand over a rough mixed layer of stones and earth.

- **MWB14457 Wickham - general area** (Map Ref: SU 38 71) - 13 Roman coins found at Wickham. Peake also mentions Roman coins said to have been found within a rectangular area near Wickham Church, although he does not give details.

- **MWB16089 Garden of Rose Cottage, Wickham** (Map Ref: SU 394 717) - Numerous finds including Roman pottery from 1st to 4th century AD as well as wasters have come from the garden of Rose Cottage. They remain with the occupier.

- **MWB15958 Wormstall Estate** (Map Ref: SU 397 710) - Series of finds from various locations on the Wormstall Estate including a number of Roman Coins.

- **MWB12115 New Copse, Wickham** (Map Ref: SU 391 712) - When trees were felled in New Copse in 1980, Roman coins were found.

- **MWB12128 Wickham - general area** (Map Ref: SU 389 710) – Coin of Victarinus, now in Newbury museum.

- **MWB16093 Fields to west of Wickham** (Map Ref: SU 392 717) - Many large flints, possibly from a building, have been seen in a 100 acre field colloquially known as Nicnocks (although the location of this field is unclear from the source). Copious quantities of Roman pottery including large storage jars, Samian (both plain and decorated), New Forest ware, flagon bases and coarse ware, as well as tile and Roman coins were seen in fields to the west and southwest of Rose Cottage, Wickham. This was 'some years ago' when the fields were machine ploughed for the first time, having only been ploughed using horses previously. The field names (seen on the Tithe map of 1837) are Black Close (Copse?), Peter's Meadow (Field?), Ten Acres & Patches and the Meadow.

- **MWB16095 Peters Meadow, Wickham** (Map Ref: SU 394 716) - Roman coins found in 1996.

- **MWB14462 Wickham - general area** (Map Ref: SU 38 71) - Possible Roman buckle found.

- **MWB14960 Church Hill, Wickham** (Map Ref: SU 395 714) - Four Roman coins ranging in date from circa AD161-AD335 found in the area of Church Hill, Wickham.

- **MWB16293 Between Ermin Street and Norbin's Wood** (Map Ref: SU 373 724) - Roman brooch of late 1st century AD found (and retained by finder). Location of find estimated from OS Explorer map.

- **MWB16708 North of M4 and B4000 bridge, Welford** (Map Ref: SU 385 722) - A group of six or seven Roman coins were found in one field north of the M4 motorway.

- **MWB16716 Near Wormstall** (Map Ref: SU 395 713) - Roman pottery found on north scarp of land north of Wormstall House.

Appendix 2: Geophysics Results

This appendix contains the details of the geophysics surveys.

Area A:

Area:	Area A				
Date of Survey:	20 Sep 2022	**Survey Team Leader:**	Keith Abbott	**Survey Team Members:**	Tony Fenton, Margaret Boltwood, Jill Oseman, Tony Bakker
Snuffler Grid Datum Point:	**Day10Sutt5** (top left corner)	**Information Defining the location of the Fixed Reference Point datum on Ground/Map:**		**Fixed Reference Point NGR:**	**Fixed Reference Point Description:**
				SU 3793 7070	Tree trunk at the far northeast end of the tree line of Three Gate Copse
Snuffler Map Name:	AreaAGradView	**Location of Snuffler Map Grid Datum Point relative to Fixed Reference Point:**		**Relative Position#1:**	The top left corner of **Day10Sutt5** is located 109.1m southwest along the tree line of Three Gate Copse from the Fixed Reference Point
Type of Survey:	Bartlington 601 Gradiometer			**Relative Position #2:**	The top right corner of Day10Sutt19 is 43.8m due west of the fence post marking the westerly point of the angular garden enclosure.
				N-S (ie vertical) Grid Orientation Relative to Magnetic North	Vertical axis of Snuffler map grid aligns with Magnetic North
Neighbouring Snuffler Maps:		Area B1 in the adjacent field to the east			
Notes:	Tilled stubble. Soil clay with chalk/flint. Weather sunny and dry.				

Snuffler Data Files (show Ref Grid **underlined/bold)** [Ref Ohms for earth resistance]**:**				
Empty	Empty	Empty	Day10Sutt16	Day10Sutt19
Day10Sutt5	Day10Sutt10	Day10Sutt13	Day10Sutt15	Day10Sutt18
Day10Sutt4	Day10Sutt9	Day10Sutt12	Day10Sutt14	Day10Sutt17
Day10Sutt3	Day10Sutt8	Day10Sutt11	Empty	Empty
Day10Sutt2	Day10Sutt7	Empty	Empty	Empty
Day10Sutt1	Day10Sutt6	Empty	Empty	Empty

Diagram of survey area:

Table 1 – Area A gradiometer survey (Open Streetmap 2022)

Area B:

Area:	Area B1				
Date of Survey:	21 Sep 2022	**Survey Team Leader:**	Tony Bakker	**Survey Team Members:**	Tony Fenton, Jill Oseman, Tim Lloyd, Phillip Rawstron
Snuffler Grid Datum Point:	**Day11Sutt20** (bottom left corner)	**Information Defining the location of the Fixed Reference Point datum on Ground/Map:**		**Fixed Reference Point NGR:**	**Fixed Reference Point Description:**
				SU 3830 7055	Post at southwest intersection of two garden fences
Snuffler Map Name:	AreaB1GradView	**Location of Snuffler Map Grid Datum Point relative to Fixed Reference Point:**		**Relative Position#1:**	The bottom left corner of **Day11Sutt20** is located 83.0m northwest along garden fence line from the Fixed Reference Point
Type of Survey:	Bartlington 601 Gradiometer			**Relative Position #2:**	
				N-S (ie vertical) Grid Orientation Relative to Magnetic North	Vertical axis of Snuffler map grid aligns with Magnetic North
Neighbouring Snuffler Maps:	Area A in the adjacent field to the west and Area B2 in same field to the east.				
Notes:	Tilled stubble planted with small turnips (<5cm diameter). Soil clay with chalk/flint. Weather sunny and dry.				

Snuffler Data Files (show Ref Grid **underlined/bold)** [Ref Ohms for earth resistance]**:**

Day11Sutt29	Day11Sutt39	Day11Sutt49
Day11Sutt28	Day11Sutt38	Day11Sutt48
Day11Sutt27	Day11Sutt37	Day11Sutt47
Day11Sutt26	Day11Sutt36	Day11Sutt46
Day11Sutt25	Day11Sutt35	Day11Sutt45
Day11Sutt24	Day11Sutt34	Day11Sutt44
Day11Sutt23	Day11Sutt33	Day11Sutt43
Day11Sutt22	Day11Sutt32	Day11Sutt42
Day11Sutt21	Day11Sutt31	Day11Sutt41
Day11Sutt20	Day11Sutt30	Day11Sutt40

Diagram of survey area:

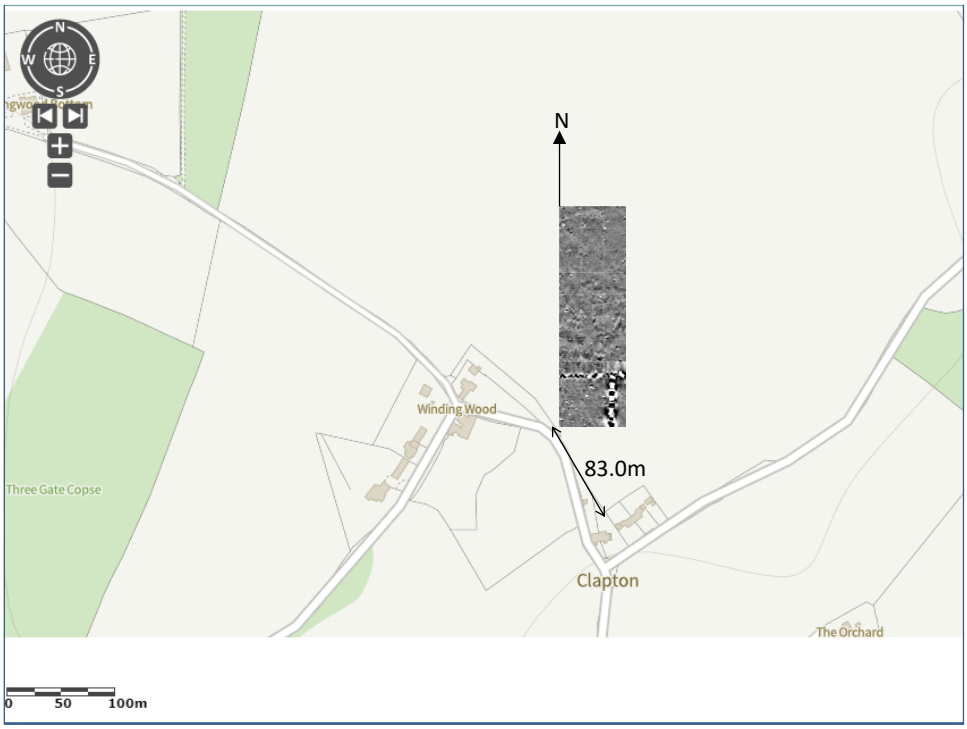

Table 2 – Area B1 gradiometer survey (Open Streetmap 2022)

Area:	Area B2

Date of Survey:	19 Sep 2022	**Survey Team Leader:**	Keith Abbott	**Survey Team Members:**	Martin Labram, Tim Lloyd
Snuffler Grid Datum Point:	**Day9Sutt40** (bottom right corner)	**Information Defining the location of the Fixed Reference Point datum on Ground/Map:**		**Fixed Reference Point NGR:**	**Fixed Reference Point Description:**
				SU 3859 7075	Post at southeast intersection of north-south fence with east-west hedge along road. Opposite side of road from northwest corner of Orpenham Copse
Snuffler Map Name:	Day9AreaB2GradView	**Location of Snuffler Map Grid Datum Point relative to Fixed Reference Point:**		**Relative Position#1:**	The bottom right corner of **Day9Sutt40** is located 170.0m southwest along the southerly hedge line from the Fixed Reference Point
Type of Survey:	Bartlington 601 Gradiometer			**Relative Position #2:**	
				N-S (ie vertical) Grid Orientation Relative to Magnetic North	Vertical axis of Snuffler map grid aligns with Magnetic North
Neighbouring Snuffler Maps:	Area B1 in the same field to the west and Area C in the adjacent field to the east.				
Notes:	Tilled stubble planted with small turnips (<5cm diameter). Soil clay with chalk/flint. Weather sunny and dry.				

Snuffler Data Files (show Ref Grid **underlined/bold)** [Ref Ohms for earth resistance]**:**

Day9Sutt45
Day9Sutt44
Day9Sutt43
Day9Sutt42
Day9Sutt41
Day9Sutt40

Diagram of survey area:

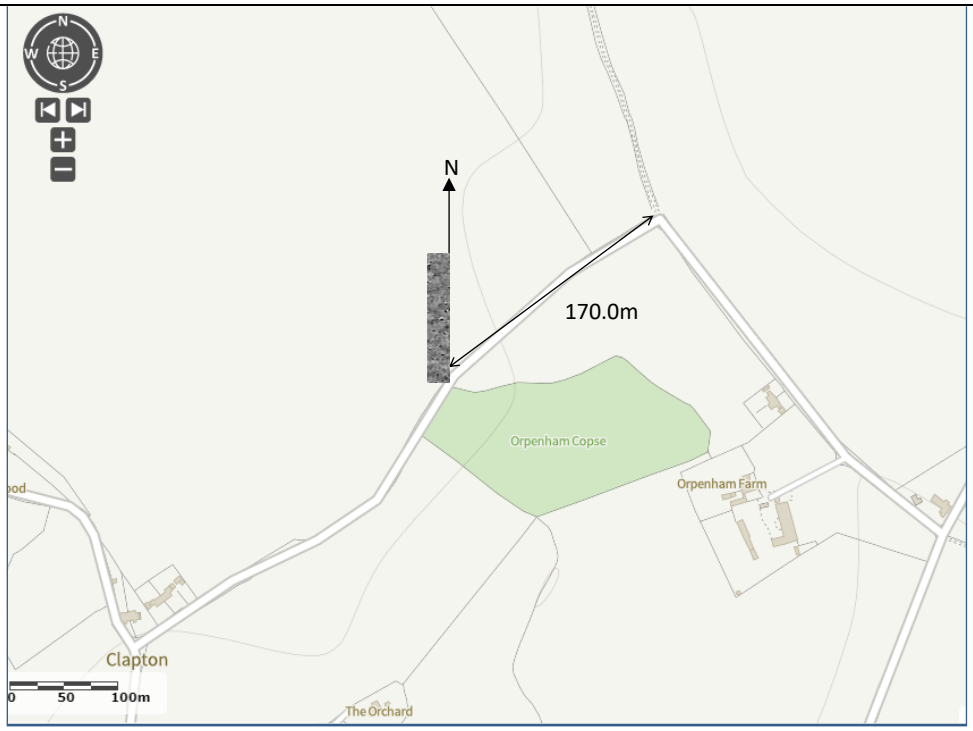

Table 3 – Area B2 gradiometer survey (Open Streetmap 2022)

Area C:

Area:	Area C

Date of Survey:	3 Sep – 19 Sep 2022	**Survey Team Leader:**	Keith Abbott	**Survey Team Members:**	Tony Fenton, Jill Oseman, Tim Lloyd, Phillip Rawstron, Martin Labram, Geoff Anderson, James Peddle, Peter Clifford, Jean Curran, Nigel Spencer, Harry Johnson
Snuffler Grid Datum Point:	**Day4Sutton46** (bottom left corner and bottom right corner)	**Information Defining the location of the Fixed Reference Point datum on Ground/Map:**		**Fixed Reference Point NGR:**	**Fixed Reference Point Description:**
				SU 3917 7093	Westerly Gate post to field C on Church Hill
Snuffler Map Name:	AreaCGradView	**Location of Snuffler Map Grid Datum Point relative to Fixed Reference Point:**		**Relative Position#1:**	The bottom left corner of **Day4Sutt46** is located 25.3m from the Fixed Reference Point and the bottom right corner of **Day4Sutt46** is located 11.0m from the Fixed Reference Point
Type of Survey:	Bartlington 601 Gradiometer			**Relative Position #2:**	
				N-S (ie vertical) Grid Orientation Relative to Magnetic North	Vertical axis of Snuffler map grid aligns with Magnetic North
Neighbouring Snuffler Maps:		Area B2 in field to the west.			
Notes:	Tilled stubble. Soil sand clay with chalk/flint. Weather sunny and dry.				
Snuffler Data Files (show Ref Grid **underlined/bold)** [Ref Ohms for earth resistance]**:**					

											Day2Sutton38							
											Day2Sutton37							
											Day2Sutton36							
											Day2Sutton35							
											Day2Sutton34	Day6Sutton35						
											Day2Sutton33	Day6Sutton34						
											Day2Sutton32	Day6Sutton33				Day8Sutton29		
											Day2Sutton31	Day6Sutton32			Day8Sutton27	Day8Sutton28		
											Day2Sutton30	Day6Sutton31		Day8Sutton25	Day8Sutton26	Day 4Sutton57		
											Day2Sutton29	Day6Sutton30	Day8Sutton23	Day8Sutton24		Day 4Sutton56	Day 4Sutton37	
											Day2Sutton28	Day6Sutton29	Day8Sutton22			Day 4Sutton55	Day 4Sutton36	
											Day2Sutton27	Day6Sutton28				Day 4Sutton54	Day 4Sutton35	
											Day2Sutton26	Day6Sutton27				Day 4Sutton53	Day 4Sutton34	
					Day6Sutton14				Day9Sutton35		Day1Sutton22	Day6Sutton26	Day8Sutton8	Day8Sutton16		Day 4Sutton52	Day 4Sutton33	Day 4Sutton45
				Day6Sutton11	Day6Sutton13				Day9Sutton34		Day1Sutton21	Day6Sutton25	Day8Sutton7	Day8Sutton15		Day 4Sutton51	Day 4Sutton32	Day 4Sutton44
	Day3Sutton20	Day6Sutton8	Day6Sutton10	Day6Sutton12					Day9Sutton33		Day1Sutton20	Day6Sutton24	Day8Sutton6	Day8Sutton14		Day 4Sutton50	Day 4Sutton31	Day 4Sutton43
Day3Sutton27	Day3Sutton19	Day6Sutton7	Day6Sutton9		Day9Sutton38					Day6Sutton17	Day6Sutton20	Day1Sutton19	Day6Sutton23	Day8Sutton5	Day8Sutton13	Day8Sutton21	Day 4Sutton49	Day 4Sutton30	Day 4Sutton42
Day3Sutton26	Day3Sutton18	Day3Sutton9			Day9Sutton37					Day6Sutton16	Day6Sutton19	Day1Sutton18	Day6Sutton22	Day8Sutton4	Day8Sutton12	Day8Sutton20	Day 4Sutton48	Day 4Sutton29	
Day3Sutton25	Day3Sutton17	Day3Sutton8			Day9Sutton36					Day6Sutton15	Day6Sutton18	Day1Sutton17	Day6Sutton21	Day8Sutton3	Day8Sutton11	Day8Sutton19	Day 4Sutton47	Day 4Sutton28	
Day3Sutton24	Day3Sutton16	Day3Sutton7										Day1Sutton16	Day2Sutton56	Day8Sutton2	Day8Sutton10	Day8Sutton18	~~Day 4Sutton46~~		
Day3Sutton23	Day3Sutton15	Day3Sutton6										Day1Sutton15	Day2Sutton55	Day8Sutton1	Day8Sutton9	Day8Sutton17			
Day3Sutton22	Day3Sutton14	Day3Sutton5	Day6Sutton3	Day6Sutton6								Day1Sutton14	Day2Sutton54						
Day3Sutton21	Day3Sutton13	Day3Sutton4	Day6Sutton2	Day6Sutton5								Day1Sutton13	Day2Sutton53						
	Day3Sutton12	Day3Sutton3	Day6Sutton1	Day6Sutton4								Day1Sutton12	Day2Sutton52						
	Day3Sutton11	Day3Sutton2										Day1Sutton11	Day2Sutton51						
		Day3Sutton1										Day1Sutton10	Day2Sutton50						
												Day1Sutton9	Day2Sutton49						
												Day1Sutton8	Day2Sutton48						
												Day1Sutton7	Day2Sutton47						
												Day1Sutton6	Day2Sutton46						
												Day1Sutton5	Day2Sutton45						
												Day1Sutton4	Day2Sutton44						
												Day1Sutton3	Day2Sutton43						
												Day1Sutton2	Day2Sutton42						
												Day1Sutton1							

Diagram of survey area:

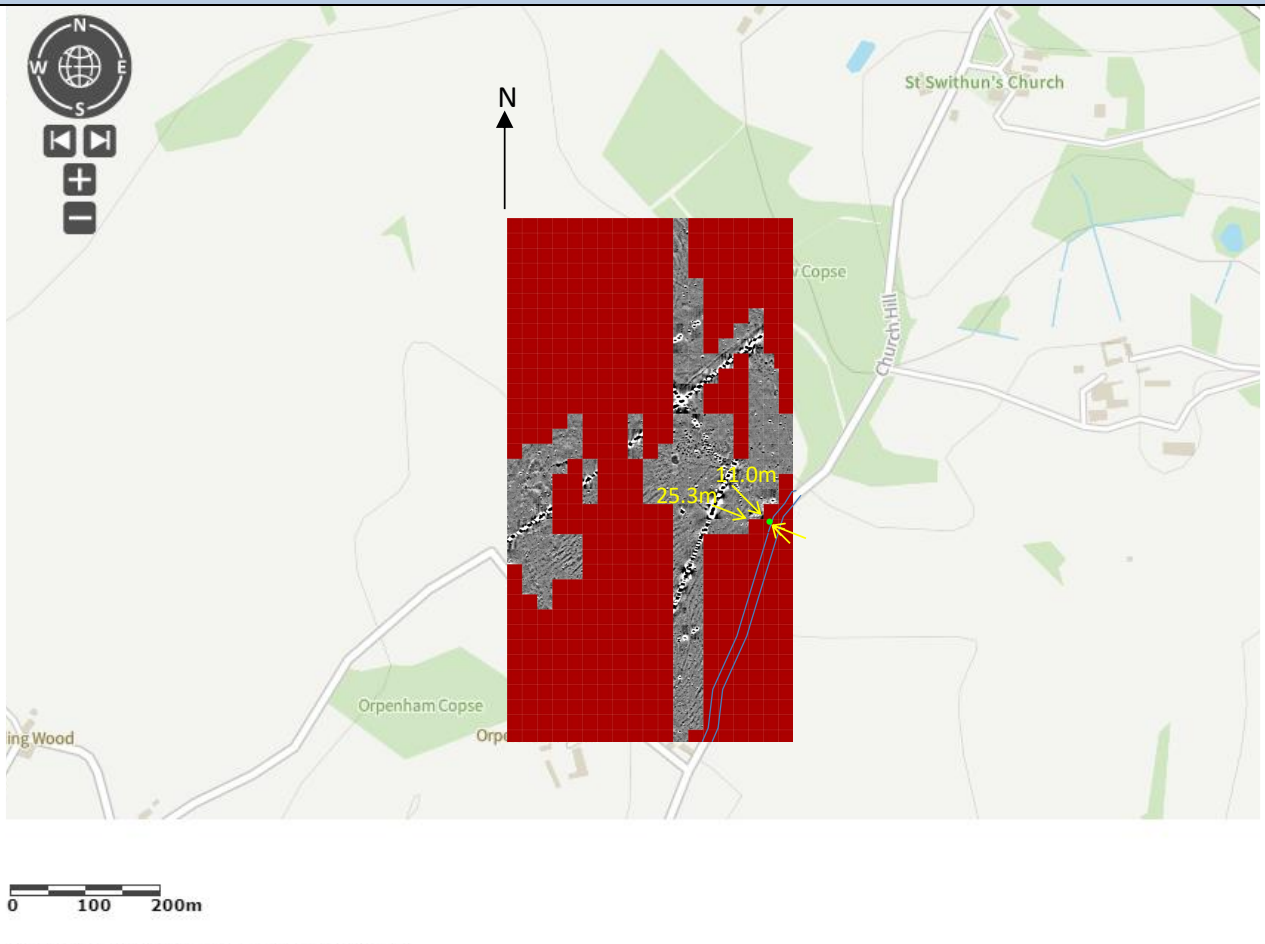

Table 4 – Area C gradiometer survey (Open Streetmap 2022)

Area:	Area C1

Date of Survey:	20 Sep 2022	**Survey Team Leader:**	James Peddle	**Survey Team Members:**	Tony Fenton, James Allen, Jill Oseman, Tim Lloyd
Snuffler Grid Datum Point:	Overlaid on Gradiometer grid as shown	**Information Defining the location of the Fixed Reference Point datum on Ground/Map:**		**Fixed Reference Point NGR:**	**Fixed Reference Point Description:**
				n/a	As per the gradiometer survey grid for Area C
Snuffler Map Name:	AreaC1ResView	**Location of Snuffler Map Grid Datum Point relative to Fixed Reference Point:**		**Relative Position#1:**	The bottom left corner of **Day4Sutt46** is located 25.3m from the Fixed Reference Point and the bottom right corner of **Day4Sutt46** is located 11.0m from the Fixed Reference Point
Type of Survey:	TAR3 Earth Resistance Meter			**Relative Position #2:**	
				N-S (ie vertical) Grid Orientation Relative to Magnetic North	Vertical axis of Snuffler map grid aligns with Magnetic North
Neighbouring Snuffler Maps:		Area C1 part of the Area C gradiometer survey area as shown below.			
Notes:	Tilled stubble. Soil clay with chalk/flint. Weather sunny and dry.				

Snuffler Data Files (show Ref Grid **underlined/bold)** [Ref Ohms for earth resistance]**:**

Day10Res4 →	Day8Sutton5
Day10Res3 →	Day8Sutton4
Day10Res2 →	Day8Sutton3
Day10Res1 →	Day8Sutton2

Diagram of survey area:

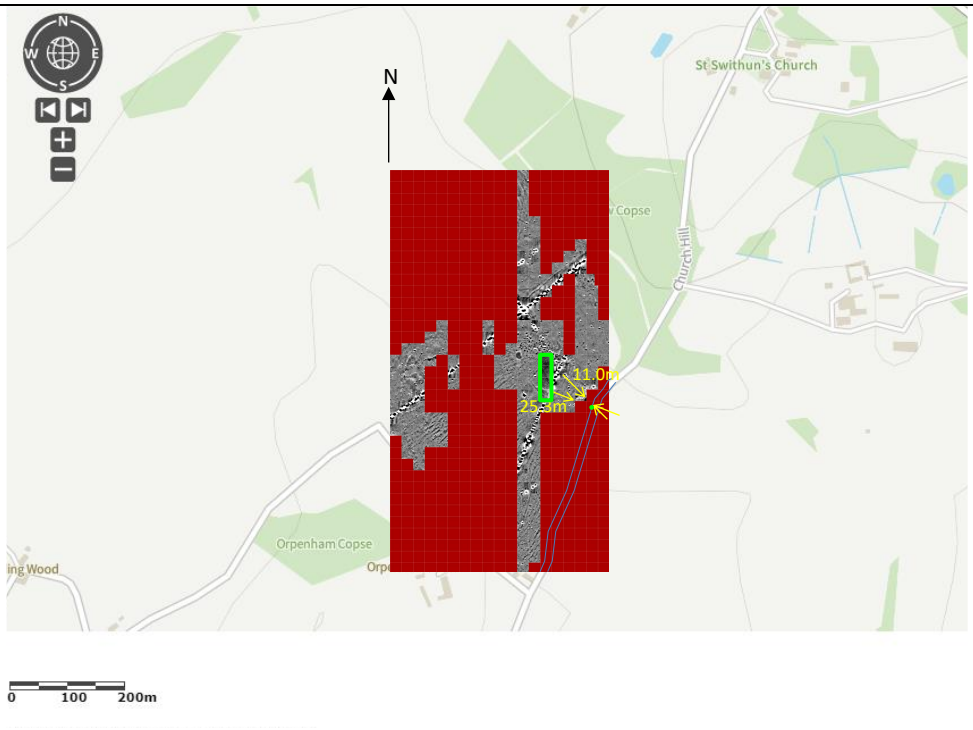

Table 5 – Area C1 earth resistance survey (Open Streetmap 2022)

Area:	Area C2

Date of Survey:	20 Sep 2022	**Survey Team Leader:**	James Peddle	**Survey Team Members:**	Tony Fenton, James Allen, Jill Oseman, Tim Lloyd
Snuffler Grid Datum Point:	Overlaid on Gradiometer grid as shown	**Information Defining the location of the Fixed Reference Point datum on Ground/Map:**		**Fixed Reference Point NGR:**	**Fixed Reference Point Description:**
				n/a	As per the gradiometer survey grid for Area C
Snuffler Map Name:	AreaC2ResView	**Location of Snuffler Map Grid Datum Point relative to Fixed Reference Point:**		**Relative Position#1:**	The bottom left corner of **Day4Sutt46** is located 25.3m from the Fixed Reference Point and the bottom right corner of **Day4Sutt46** is located 11.0m from the Fixed Reference Point
Type of Survey:	TAR3 Earth Resistance Meter			**Relative Position #2:**	
				N-S (ie vertical) Grid Orientation Relative to Magnetic North	Vertical axis of Snuffler map grid aligns with Magnetic North
Neighbouring Snuffler Maps:		Area C2 part of the Area C gradiometer survey area as shown below.			
Notes:	Tilled stubble. Soil clay with chalk/flint. Weather sunny and dry.				

Snuffler Data Files (show Ref Grid **underlined/bold)** [Ref Ohms for earth resistance]**:**

	empty	**Day10Res8**	→	Day8Sutton25
Day8Sutton23 ←	**Day10Res6**	**Day10Res7**	→	Day8Sutton 24
Day8Sutton22 ←	**Day10Res5**	empty		

Diagram of survey area:

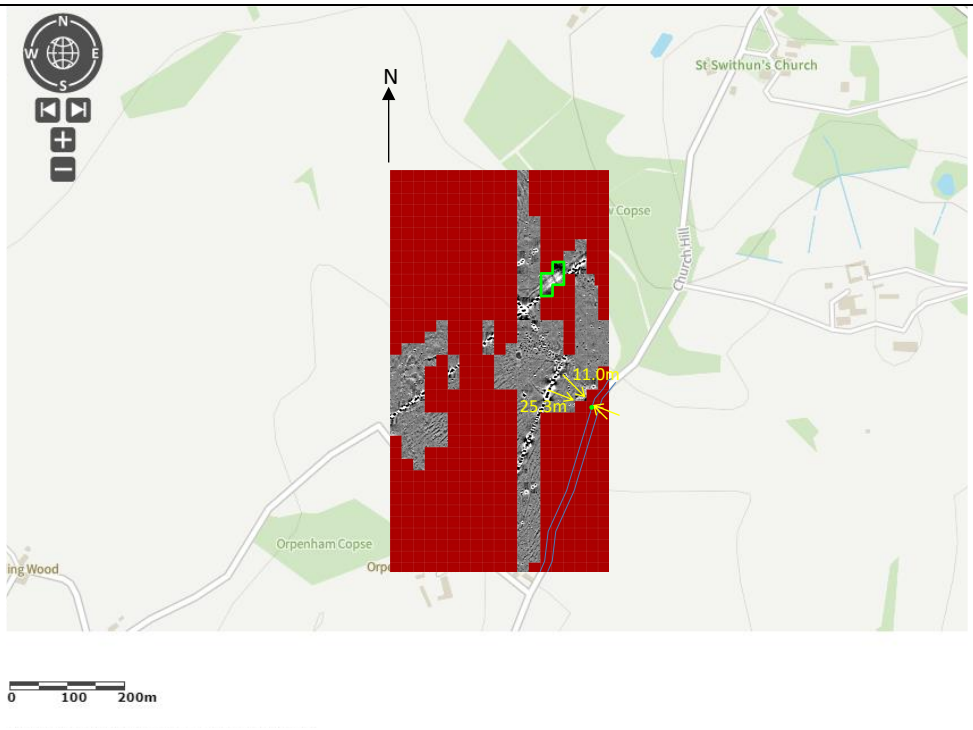

Table 6 – Area C2 earth resistance survey (Open Streetmap 2022)