

OXFORD FLOOD ALLEVIATION SCHEME
Report on Archaeological Geophysical Surveys
2016

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Oxford Flood Alleviation Scheme: Magnetometer and EM Surveys

Geophysical Survey 2016

Summary

This report describes geophysical surveys which have been undertaken as part of a programme of archaeological investigations on the route of the proposed Oxford Flood Alleviation Scheme, which is to involve the construction of a new watercourse across open fields to the west of the city. Additional areas were surveyed to the east of the main channel route near Weirs Lane, and in fields adjacent to Chilswell Valley to the west of the route. The Chilswell fields may be used for storage of sediment from the channel excavations.

The geophysical investigations included a magnetometer survey intended to test for evidence of any buried archaeological remains which may be present within the area under consideration for the proposed new drainage channel, and an electromagnetic (EM) conductivity survey carried out in support of a geoarchaeological investigation. The findings from the two surveys are to some extent mutually supportive or explanatory, and the results from both investigations are therefore presented here in a single report.

The magnetometer survey has identified numerous subsurface features and disturbances, but has produced only limited findings of potential archaeological relevance along the main channel route (as is perhaps to be expected on a flood plain). The EM survey has located various palaeochannels, and has also identified areas of wetland or alluvial deposition.

A ditch and enclosure of probable archaeological origin were identified in the Chilswell Valley survey, and there was a strong response to ridge and furrow in the Weirs Lane survey area.

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1. Introduction

The magnetometer and EM surveys were commissioned from Bartlett Clark Consultancy, Specialists in Archaeogeophysics of Oxford, on behalf of J T Mackley & Co Ltd (the principal contractor for the project) by Oxford Archaeology (OA). Fieldwork for the survey was done in phases (as determined by land access arrangements and revisions to the scope of the survey coverage) between August and October 2016. Much of the work on the main channel route was done in August to early September, but some overgrown fields required clearance, and were surveyed with the Chilswell Valley and Weirs Lane areas in October. Plots of the EM results from the main route were supplied during the course of the fieldwork, and these are now included alongside the magnetic results as part of a full presentation of the findings in this report.

2. The Site

Background information on the location, condition and archaeological potential of the evaluation areas is included in the Written Schemes of Investigation previously prepared by Oxford Archaeology for the magnetometer survey [1], and for the geoarchaeological investigation (including the EM survey) [2]. A set of plans showing previously identified archaeological findings and areas of archaeological concern is included in each WSI. Extracts from these plans are reproduced (for comparison with the survey findings) as figures 8-9 in the present report.

The following notes on site conditions and the archaeological background to the project are reproduced or summarised in part from the WSIs.

Location and extent of survey

It is proposed to locate the new flood relief channel within a strip of ground of varying width, as shaded on the location plan (figure 1). This figure is based (with additions) on an initial site plan showing the proposed survey coverage, as supplied by OA.

The route starts to the north of the A420 Botley Road (approximately at NGR SP 491066), and continues to the east of North and South Hinksey for a distance of 3.8km to SP 515037 near the Old Abingdon Road in the south. Fields along the route are mainly pasture. The intention for the magnetometer survey was to cover the shaded channel route together with any accessible ground within a surrounding 50m buffer zone, as indicated by a red outline in figure 1. Substantial areas of the buffer zone are either unsurveyable (roads, railway or woodland), or lie beyond the feasible boundaries for the scheme, and so were not surveyed. An additional detached area to the east of the A4144 Abingdon Road and north of Weirs Lane was also included in the initially proposed survey coverage, and the Chilswell Valley fields (blue in figure 1) were subsequently added. These additional areas were surveyed in full, and the magnetometer survey in total covered fields (as hatched in figure 2) amounting to c. 125 ha. (This excludes the unsurveyed areas shown in grey in figure 2.)

The areas as initially proposed for the EM survey are indicated by black hatching in figure 1. These extend beyond the 50m buffer zone in places, and approximate to it in others.

An additional field (to the south of the Devil's Backbone at South Hinksey) was later added to the scheme, giving final coverage (as indicated in green in figure 4) of c. 73 ha.

Geology and topography

The geological context of the FAS route is described in [1] as follows:

'The route predominantly traverses areas of low-lying Thames floodplain meadow, crossed by streams, drainage ditches and hedgerows. BGS mapping of the area records predominantly Holocene alluvium, overlying Pleistocene river gravel of the Northmoor Floodplain Terrace, deposited towards the end of the last (Devensian) glaciation. Localised or discrete areas of made ground or disturbance are known to be present from a limited number of historic boreholes in the vicinity of the route, frequently adjacent to roads and trackways.

Potential non-aggregate sediment storage areas are located on arable fields either side of Chilswell Valley immediately south-west of the A34. The topography here comprises the steep north-east facing slopes of Hinksey Hill and Boar's Hill, dissected by valleys with streams. The bedrock geology is Oxford Clay on the lower slopes overlain by reddish brown silty colluvium. The bedrock on the upper slopes is sandstone (Kingston Formation) and limestone (Stanford Formation) with no superficial drift deposits.'

Soils on gravel terraces along the Thames Valley usually respond well to magnetometer surveys, but the quality of the response is likely to be more variable in the presence of alluvial deposits, and will depend on specific local conditions. Previous magnetometer surveys have in some cases produced positive archaeological findings in comparable locations, particularly if the main period of alluvial deposition predates the archaeological features. The response may be weakened or obscured if features are buried at depth beneath subsequent alluvial layers.

A further more extensive discussion of the geoarchaeological background and landscape development of the area is included (in Section 2.1) in the WSIs. The history is complex, and only a few points are noted here: It is probable that channels cut by high volumes of melt water at the end of the last glaciation were subsequently silted up, or became cut off from the main channel flow. Abandoned former channels may contain organic or peat deposits of environmental or archaeological interest. It is probable that water levels were low during much of the early prehistoric period, but a subsequent rise could permit organic preservation in ditch fills of Bronze Age or later date. There was a further medieval phase of alluviation, which may permit organic preservation in later archaeological features within the floodplain. One purpose of the EM survey was to identify features or areas of the site where conditions might be suitable for further investigation of these topics.

Geotechnical investigations in 2015 indicated silt or alluvial deposits of 0.5m to 0.7m depth above the gravel between the Hinksey villages, with no extensive peat deposits ([1] paragraph 2.2.3). The presence of late deposits of this depth should not wholly exclude the possibility of that the magnetic detection of underlying archaeological features might be possible in the affected areas, but it is likely that ditches or enclosures which are not directly associated with concentrations of settlement features might not be easily identifiable. It is usually the case that soil conditions which are conducive to cropmark formation are also responsive to magnetic surveying.

Archaeological background

A gazetteer of archaeological findings both from the study area around the FAS route and Chilswell Valley is included in the magnetometer survey WSI [1]. Extracts from the relevant maps (figures 2-5 in the WSI) are reproduced here in a combined form (with the addition of survey outlines) as figures 8-9. Only some of the more directly relevant archaeological features are noted here.

Findings within or near to the channel route include an area of cropmarks which in part intersects the route between North and South Hinksey (OA 644 on figure 9). These are described as possible Roman or prehistoric enclosure ditches or pits. There are additional similar cropmarks slightly to the north at OA 642. A Bronze Age settlement was excavated within the Osney Mead industrial estate at OA 122 immediately to the east of the survey area.

Various Roman deposits and artefacts have been found within the WSI study area, including a burial and pottery at South Hinksey (but there does not appear to be evidence of major Roman activity, other than the cropmarks mentioned above).

A medieval route into Oxford (the extant Monks Causeway) intersects the scheme to the south of Willow Walk at North Hinksey (green line at OA 119 in figure 8). Scheduled fragments of Norman culverts which form part of another causeway into the city also survive at the south end of the channel route in the Old Abingdon Road.

There is evidence of ridge and furrow in an area to the east of South Hinksey village (OA 646 and 647 in figure 9), and medieval pottery was found between these areas in a test pit within the survey area in 2015 (TP 284).

Previously recorded archaeological findings at the Chilswell Valley survey area include Neolithic or Bronze Age lithic scatters within the survey boundary (OA 432, 434), and others nearby. An Iron Age to Roman settlement (OA 428) is located 300-400m west of the survey near Hinksey Hill Farm, and there is additional evidence of Roman settlement activity in the surrounding area.

3. Objectives of the Survey

The usual purpose in undertaking an archaeological geophysical survey is to test for evidence of archaeological sites or remains, and to provide information which may inform further stages of the archaeological evaluation.

A geophysical survey is able to identify the extent and character of any archaeological remains capable of producing a magnetic response. The magnetometer will detect cut features such as ditches and pits when they are silted with an increased depth of topsoil, which usually responds more strongly than the underlying natural subsoil. Fired materials, including baked clay structures such as kilns or hearths are also likely to produce a localised enhancement of the magnetic field strength, and the survey therefore responds preferentially to the presence of ancient settlement or industrial remains. The survey is also strongly affected by ferrous and other debris of recent origin.

The inclusion of an EM survey in the present evaluation permits additional objectives to be addressed. A magnetometer survey will often detect superficial variations in soil depth

relating to the presence of alluvial deposits above an uneven subsoil (as is noted in the discussion below), but it will not usually respond to naturally infilled channels of greater depth. (The depth of penetration with a magnetic gradiometer is limited to c. 1m.) The EM survey detects to greater depth (in this case to c. 4m), and responds to variations in water retention (which does not strongly affect a magnetic survey). The EM survey should therefore allow palaeochannels and areas of deep alluvial deposition to be identified.

4. Survey Procedure

Magnetometer survey

The areas as specified were investigated by means of a recorded magnetometer survey. Readings were collected along transects 1m apart using Bartington 1m fluxgate gradiometers, and are plotted at 25cm intervals along each transect. The survey data is shown at 1:2000 scale in sections as a grey scale plot (figures 27-37), and as a graphical (x-y trace) plot at 1:1500 (figures 38-53). Comparison of these alternative presentations allows the detected magnetic anomalies to be examined in plan and profile respectively. (Inclusion of the graphical plots also means that the report contains all the information required for further interpretation or re-assessment of the survey results.) An interpretation of the findings is shown superimposed on figures 38-53. This permits the interpreted outlines to be compared with the underlying data. A further interpreted plan of the findings is presented at 1:2500 scale in figures 10-18. Overall summary plans showing the same interpretation as in figures 10-18 at a reduced scale are also included (figures 6-7), together with key plans showing the locations of the remaining figures (figures 2-4). The background maps which are available to us do not reproduce well at a large scale, and so are used only in some of the overall location plans (figures 1, 8, 9). A limited selection of field boundaries has been traced from these maps, and is used to indicate subdivisions of the survey areas in the remaining figures.

The graphical plots in figures 13-20 show the magnetometer readings after minimal pre-processing as mentioned in the English Heritage (2008) geophysical guidelines. [*Geophysical Survey in Archaeological Field Evaluation*; Section 4.8]. This includes adjustment for irregularities in line spacing caused by variations in the instrument zero setting, and truncation of extreme values. Additional weak 2D low pass filtering has been applied to the grey scale plot to adjust background noise levels.

Colour coding has been used in the interpretation to distinguish different effects. The interpretation is intended to categorize most of the identifiable magnetic anomalies, but cannot reproduce the detail of the grey scale plots.

Magnetic anomalies which may show characteristics to be expected from features of potential archaeological interest are outlined in red. Other less distinct potential features are in a lighter (pink) colour. Small background magnetic anomalies which may be of non-archaeological origin are indicated selectively in light brown, and natural features (as seen particularly in alluvial areas) are shown in a light green. A different category of natural magnetic anomalies appears to be present on the higher ground in the Chilswell Valley survey, and these are outlined in brown. Other strong (and perhaps recent) disturbances are shown in grey. Some of the more conspicuous ferrous objects (identifiable as narrow spikes in the graphical plots) are marked in light blue, and cultivation effects are indicated schematically in green. Magnetic anomalies probably representing former field boundaries

and land drains are also marked.

EM survey

The CMD Explorer contains a transmitter and multiple receiver coils capable of measuring ground conductivity (and in-phase susceptibility) at nominal depths (for the vertical dipole mode) of up to 2.3m, 4.2m and 6.7m. The conductivity values (reciprocal of resistivity), which should be greatest in areas of high water content, were used for this investigation. Readings were recorded at c. 1m intervals along approximately east-west transects walked at c. 5m separation, and located by GPS tracking (with SBAS correction).

Readings were exported from the initial CMD binary files using the CMD Data Transfer software (which creates an output file with coordinates and multiple data values at each location). The GPS locations were converted to OS coordinates using GridInQuest software, and re-combined with the data. The CMD software allows the output to be calculated for specified depth ranges (within the detection limits), and the results as shown in figures 19-26 are based on values representing three depth levels to approximately 4m. This corresponds to the expected probable depth of any palaeochannels which might be present.

Readings for each of the three depth ranges were gridded in Surfer (using the Kriging interpolation option) to 0.5m x 0.5m separation for display. The readings do not appear to be subject to any conspicuous drift, and so no further detailed processing was required beyond the selection of contour levels.

The data range as displayed corresponds approximately to the mean of each data set \pm 1.5 standard deviations. The conductivity increases with depth, and so the actual display range increases between the data sets. There is a general similarity between the three data sets, but the 2m version appears to offer the clearest representation of the palaeochannels. This data set is therefore shown at 1:4000 scale in figures 21-24 (and is also presented as an overall summary of the survey at 1:12500 in figure 5). The other plots (near-surface and 4m depth) are included for completeness at 1:6250 scale (figures 19-20 and 21-24).

An approximate representation of regions which show a high conductivity response has been indicated (by blue cross hatching) for comparison with the magnetic findings in the interpreted plans (figures 6-7 and 10-18). (Conductivity anomalies which clearly relate to pipes are excluded from this representation).

Survey location

The magnetometer survey grid was set out and tied to the OS grid using a Trimble ProXRT GPS system (with VRS correction to give accuracy of c. 0.1m). The plans are therefore geo-referenced, and OS co-ordinates of map locations can be read from the AutoCAD version of the plans, which can be supplied with this report. (The EM system records GPS locations during data collection, and the plots are therefore located on OS coordinates.)

5. Results

The comments on the survey findings from the main FAS route are grouped below in four main sections (as in section 4.1 of the WSI [1]), and are followed by notes on the results from Weirs Lane and Chilswell Valley. We describe both the magnetic and EM findings in each section. Fields throughout the survey have been numbered in an arbitrary sequence (1-40) for reference in this report. These numbers are indicated also on the survey plans and data plots.

Area 1: North of Botley Road (fields 1-6)

An area extending north from the survey is marked as of archaeological interest on the OA plan (figure 8), but the survey has produced few relevant findings.

Numerous broad amorphous magnetic anomalies which are visible to each side of the stream in fields 1 and 2 are indicated (by light green outlines) in the interpretation (figures 6 or 10). Anomalies of this kind are commonly seen in areas of alluvial deposition. They appear to relate to natural irregularities in the depth or distribution of silt deposits, and are widespread across much of the survey. The disturbances terminate abruptly to the west in field 1, which is probably an indication of a slight rise in ground level.

Such disturbances are less clearly defined in field 4 to the east of the stream, where the high EM values suggest an area of deep and uniform alluviation. There are strong magnetic anomalies (grey), which may relate to recent disturbances or activity at the site. Other nearby findings include an irregularly twisting pipe at the south of field 1.

Scatters of small background magnetic anomalies (as outlined in light brown in field 3) may be natural, and often indicate an increase in the gravel content of the soil. (Gravels usually contain naturally magnetic stones capable of creating small magnetic anomalies: various other clusters of similar disturbances are indicated elsewhere in the survey. These clusters can only be arbitrarily delimited, but are likely to relate to variations in soil properties.)

Fields 5 and 6 to the east could only be surveyed in part because much of the specified area is woodland. Strong disturbances in field 6 could relate to a 19th C rubbish dump, which we were told is located nearby.

The EM results from these fields show areas of high conductivity (as expected) near to the stream, but with no identifiable channels. The extent of the high conductivity shading (blue) in field 1 appears to relate to the distribution of alluvial magnetic anomalies (although this correspondence does not apply everywhere in the survey). There may be additional localised alluvial deposits in fields 5-6.

Area 2: Botley Road to Willow Walk (fields 7-11)

Much of the area immediately south of the Botley Road is wooded or overgrown, and could not be surveyed. (We are told by OA that probing in this area has found rubble possibly relating to factory buildings demolished in the 1950s. This could also be the site of the medieval Botley Mill demolished earlier in the 20th C.

Boreholes from the adjacent office site on the west bank of Hinksey Stream show alluvium

and clay to a depth of c. 2m, and the EM results (blue shading labelled A in figures 6 and 11) suggest similar ground conditions prevail along much of the west side of the survey in fields 9-11. Numerous (natural) magnetic anomalies similar to those noted in field 1 additionally indicate the presence of alluvial soil in this area. Stronger (grey) magnetic anomalies may indicate recent disturbances near to the western field boundary.

An area of low conductivity readings (green on the EM plots) suggests an area of higher or drier ground in the eastern half of field 11, but with higher readings again near the eastern boundary.

Area 3: Willow Walk to South Hinksey (Devil's Causeway): fields 12-25

The response from both surveys in fields 12-13 south of Willow Walk continues the pattern seen in field 11 to the north. The magnetic response indicates alluvial soil cover, and the EM data suggests this deepens near watercourses, and particularly near Bulstake Stream to the east.

Fields 14-21 were excluded from the EM survey, but the magnetic results again suggest alluvial deposition across much of the area. This is less clearly the case in field 15 at the east of the route, where strong magnetic anomalies suggest localised recent disturbances. There is no identifiable evidence in fields 15-16 for archaeological features which could relate to the nearby Bronze Age site in Osney Mead (OA 122).

The nature of the magnetic response changes to the south in field 17, where there are concentrations of small background magnetic anomalies (labelled B, and perhaps indicating a gravel soil, as noted in field 1). This effect extends across part of the OA 642 cropmark area, but no enclosure-like features are visible. There is a linearity in the distribution of the magnetic anomalies which may be caused by cultivation (as indicated by broken green lines in the interpretation).

Fields 17 and 18 are intersected by iron pipes. (These are marked by blue broken lines, and the associated magnetic disturbance is outlined in blue in the interpretation.) A more erratic sequence of disturbances suggests an infilled ditch or former boundary (C) in field 21. This field also shows a raised background noise level (and few alluvial anomalies) as noted above in field 17. These conditions might favour the detectability of archaeological features, but again none are visible.

The following fields (22-25) are covered by the main central section of the EM survey. The plots (e.g. figure 22) show curving and branching linear conductivity anomalies suggesting the presence of convergent palaeochannels (as at D in fields 22-23, and less distinctly at E in fields 23-25). [We are told that one of these apparent channels has been confirmed by a test pit.]

A large pipe runs along the east side of the survey in fields 22-24, and is visible in both the magnetometer and EM data.

Fields 22 and 23 lie within the OA 644 cropmark area, but there is only limited evidence for archaeological findings. Some weak linear alignments visible in the grey scale plot could perhaps represent traces of enclosures. Examples are marked (in pink, indicating features of possible archaeological concern) at F and G in field 22, but there may be a more convincing example at H in field 23, where a rectilinear feature which could perhaps

indicate a corner of a ditched enclosure is marked in red.

A further extended ditch-like feature is marked to the south of field 25 at I. It aligns with the adjoining ditch, and so could perhaps represent a slight earthwork or an accumulation of dredged silt rather than a subsurface feature.

Area 4: Fields at South Hinksey (south of Devil's Causeway): fields 26-32

The high conductivity response seen in the EM plots (e.g. figure 23) suggests deep alluvial deposition around the substation in field 26 at the east of the survey area, and extending beyond the substation into field 31. We are told by OA that the soil here is soft alluvial clay to c. 1.5m depth.

The underground cable duct from the north to the substation lies outside the magnetometer survey, but is visible as a low conductivity anomaly in the EM plots. There is also a response from both surveys to a path across field 26 (J).

There is a complex and disturbed magnetic response in field 27, which is close to South Hinksey village, and is the location of TP 284 (where medieval pottery was found). The magnetometer plots here show strong recent disturbances and distinct ridge and furrow, as well as a pipe (visible in both surveys). A possible short ditch-like feature is marked as of potential archaeological relevance at K.

Fields 29 and 32 intersect the cropmark site OA 647, part of which may contain ring ditches, but the magnetic response is substantially blank except for a pipe detected in field 29. This blank response terminates at a linear feature L which runs along the centre of field 32. There is a slightly noisier response (suggesting increased gravel content) to the east of L. This linear feature is marked by a clearly defined magnetic anomaly, and corresponds in part to a high-conductivity EM anomaly (although the EM effect is weaker than for the channels detected in fields 22-23). The magnetic anomaly at L departs from the alignment of the overhead power lines, and so it is unlikely the magnetic or EM effect is caused by electrical interference. The magnetic anomaly may relate to an extant path or former boundary across the field.

There are magnetic anomalies suggesting shallow alluvial deposits in the southern part of field 31, although the (low) EM response suggest the underlying soil is relatively dry. Any ridge and furrow which is present here is less clearly detectable than in field 27.

No extended linear channel which might link to the Norman culverts in Old Abingdon Road is identifiable. We are told that augering at the south of field 31 also failed to locate a watercourse.

Area 5: Fields north of Weirs Lane (fields 33-35)

The survey here lies within archaeological area OA 646, but detailed interpretation is hindered by the strong magnetic and EM response from a large north-south pipe which intersects the site. The magnetic findings include various natural and recent disturbances, together with clearly defined north-south ridge and furrow, which is visible also in the EM response.

Area 6: Chilswell Valley (fields 36-40)

The fields here are on higher ground rising to the west, and so archaeological features should be detectable in the magnetometer survey without the possibility that the response might be weakened by alluvial cover, as could be the case in parts of the flood plain.

Findings include extensive linear markings which may represent traces of ridge and furrow, and a number of land drains in fields 36-37. There is also a ditch-like linear feature across field 36 (marked in red) together with a group of anomalies which might represent a ditched enclosure and related findings at N. The plan of these features is a little unclear because they are intersected also by recent disturbances, but they could perhaps represent Iron Age or Roman settlement remains, as have been recorded in the general vicinity (OA 428).

There are no specific findings to relate to the flint scatters recorded elsewhere within the Chilswell Valley fields (OA 432, 434), but numerous distinct short linear features are visible (outlined in brown, as at O, P). The irregular disposition of these (unusual) features suggests they are of natural rather than archaeological origin, and could represent naturally silted erosion channels on the sloping ground. The strong magnetic response to these features suggests the soil conditions here are highly favourable for magnetic investigation, and that archaeological features, if present, should also be clearly detectable.

6. Conclusions

The detection of cultivation effects suggest soil conditions are particularly favourable for magnetic investigation in the Weirs Land and Chilswell Valley survey areas, but the magnetic response from the main channel route may be more complex and variable than elsewhere.

Positive archaeological findings have been obtained on various occasions in previous surveys at locations with comparable alluvial soils, but a possibility always remains that earlier archaeological features may be buried at depth beneath medieval or later silt deposits. The variable EM response suggest this is unlikely to be the case throughout the present survey area, and in parts of the site there is either a low conductivity response, or an increase in background magnetic activity suggesting a high gravel content in the topsoil. Conditions in such areas should be suitable for productive magnetic investigation, particularly if there are cropmarks nearby, but only a few specific findings are identifiable. These may include the linear markings at F, G, H in fields 22-23. The most archaeologically promising of these could be the enclosure-like feature at H. The absence of any more conspicuous findings suggests that any settlement remains which may be present within the survey area may be isolated and dispersed, rather than densely concentrated. Other distinct ditch-like magnetic anomalies (I, L in fields 25, 32) may relate to earthworks or boundaries rather than archaeological features. There is dense magnetic activity in the vicinity of the medieval findings at South Hinksey in field 27.

Findings from the Chilswell Valley survey include a possible ditch and enclosure with associated features in field 36, together with numerous naturally silted channels in fields 38 and 40.

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References

- [1] *Oxford Flood Alleviation Scheme: Written Scheme of Investigation for a Magnetometer Survey*. Document prepared by Oxford Archaeology for J T Mackley & Co Ltd; Issue no. 4; September 2016.
- [2] *Oxford Flood Alleviation Scheme: Written Scheme of Investigation for a Geoarchaeological Investigation*. Document prepared by Oxford Archaeology for J T Mackley & Co Ltd; Issue no. 3; August 2016.

Oxford Flood Alleviation Scheme: Geophysical Survey

Appendix: Inventory of Selected Findings

This list notes the more significant findings from the magnetometer and EM surveys of this site. The grading (1-4) given alongside each entry refers primarily to the reliability of the geophysical evidence, but the potential archaeological relevance of detected features is also taken into account in the definitions of grades 3 and 4.

- Grade 1: Distinct anomalies of probable archaeological origin.
- Grade 2: Weaker or more isolated features which could in part be archaeologically significant.
- Grade 3: Distinct anomalies, but probably recent or natural, or of other non-archaeological origin.
- Grade 4: Weaker or more isolated disturbances of probably non-archaeological origin.
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This summary list includes only selected magnetic findings, particularly those which may be of potential archaeological interest. Magnetic disturbances which may be mentioned in the text or indicated on plans are not necessarily included if they appear to be of lesser importance, or of natural or non-archaeological origin.

Field	Feature		Grade
11	A	Extended area of high conductivity response perhaps indicating former stream course to east of Hinksey Stream.	3
17	B	Area of increased background magnetic activity (suggesting gravel-rich soil) intersects with OA 642 cropmark site. No specific findings other than weak cultivation effects.	4
21	C	Magnetic disturbances on line of former boundary.	1
22-25	D	Linear high-conductivity anomalies indicated probable course of palaeochannel.	1
22-25	E	Similar to D.	1
22	F	Weak linear markings in grey scale magnetometer plot perhaps relate to nearby cropmark enclosures.	2-3
22	G	Possible linear features in area also containing irregular magnetic anomalies caused by alluvial deposition.	3
23	H	Magnetic anomaly may be part of possible rectilinear ditched enclosure.	1-2

25	I	Linear magnetic anomaly alongside ditch: probably a bank or earthwork of non-archaeological origin ?	3
26	J	Magnetic and EM anomalies on line of extant path.	4
27	K	Ditch-like feature near medieval findings (TP 284); also distinct magnetic response to ridge and furrow.	1-2
32	L	Linear magnetic anomaly could be path or former boundary.	2
33-34	M	Ridge and furrow visible in magnetic and EM surveys of Weirs Lane fields.	1
36	N	Possible ditch and enclosure in northern field of Chilswell Valley survey.	1
38-40	O, P	Distinct but irregular and fragmentary magnetic anomalies: probably naturally silted erosion channels on sloping ground.	4