

# LAND ADJACENT TO FILLEIGH VILLAGE HALL

FILLEIGH

NORTH DEVON

DEVON

Results of a Geophysical Survey



South West Archaeology Ltd. report no. 190410



[www.swarch.net](http://www.swarch.net)

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# Land adjacent to Filleigh Village Hall, Filleigh, Devon

## Results of a Geophysical Survey

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By P. Webb & P. Bonvoisin  
Report Version: v1  
10<sup>th</sup> April 2019

Work undertaken by SWARCH for Mazzard Investments

### *SUMMARY*

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*South West Archaeology Ltd. (SWARCH) was commissioned by Mazzard Investments (the Clients) to undertake a geophysical survey for land adjacent to Filleigh Village Hall, as part of the pre-development works required for the proposed development.*

*The geophysical survey identifies multiple features within the site, including some known historic field boundaries and other possible boundaries. Anomaly group 2 appears to match up with an 18<sup>th</sup> century field boundary. Anomaly group 8 is of particular interest due to its size and clear form; this appears to correspond with the earthwork of a holloway and may represent a road or lane pre-dating the turnpike. It is of interest that the magnetic response to the north and south of this line is so markedly different, and while this could be geological it is possible it presents a different history of land use relevant to the understanding of the development of the park. The implications of the geophysical survey would suggest further investigation is warranted.*

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## ACKNOWLEDGEMENTS

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MAZZARD INVESTMENTS (THE CLIENT)  
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THE CASTLE HILL ESTATE FOR UNRESTRICTED ACCESS

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## 1.0 INTRODUCTION

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<b>LOCATION:</b>	LAND ADJACENT TO FILLEIGH VILLAGE HALL
<b>PARISH:</b>	FILLEIGH
<b>DISTRICT:</b>	NORTH DEVON
<b>COUNTY:</b>	DEVON
<b>NGR:</b>	SS 6653 2793
<b>SWARCH REF.</b>	FBC19

### 1.1 PROJECT BACKGROUND

South West Archaeology Ltd. (SWARCH) was commissioned by Mazzard Investments (the Client) to undertake a geophysical survey on land adjacent to Filleigh Village Hall, in support of a planning application for a proposed housing development. This follows on from a historic visual impact assessment (HVIA) for the site produced in 2018. A Project Design (PD) for the geophysical survey was produced in consultation with the Devon County Council Historic Environment Team, and was undertaken in accordance with best practice and ClfA guidelines.

### 1.2 TOPOGRAPHICAL AND GEOLOGICAL BACKGROUND

The site forms part of a pasture field to the south of Barton Close and Paynes Cottages in Filleigh, adjacent to Filleigh Primary School and Filleigh Village Hall, and close to the former turnpike road. The site lies on the northern side of a shallow combe that drops down to the River Bray to the east, at an altitude of c.110m AOD. This gentle combe is located on the south-western side of a broad green vale at the confluence of the River Bray and the Filleigh Brook, which forms the core of the Castle Hill Grade I Registered Park and Garden (RPG).

The soils of this area are variable but include the permeable loamy and acid reddish soils of the Larkbarrow Association, the clayey fine loamy and fine silty soils of the Hallsworth 2 Association, and the well-drained fine loamy and fine silty soils of the Neath Association (SSEW 1983). These overlie mudstones of the Pilton Mudstone Formation (BGS 2019).

### 1.3 HISTORICAL BACKGROUND

The site is located south of a minor road, formerly turnpike and later the A361, which runs from South Molton to Barnstaple; its replacement (the North Devon Link Road) follows the line of the mid 19<sup>th</sup> century railway c.1km to the north. It lies on the south-western edge of the Castle Hill Estate, which comprises 20ha of gardens and pleasure grounds, 225ha of parkland, and c.1300ha of agricultural land and ornamental plantations, generally enclosed by traditional hedges and banks. The River Bray flows c.0.5km to the east. The early 18<sup>th</sup> century formal layout of the park, from which the current landscape evolved, is evident in a complex series of interrelated vistas, particularly to the south, east and west of the house; extensive views in all directions, including views across the proposed site, are possible from the Sham Castle. The history of the site is set out in more detail in the 2018 SWARCH report.

### 1.4 METHODOLOGY

This work was undertaken in accordance with best practice. The gradiometer survey follows the general guidance as outlined in: *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008) and *Standard and Guidance for Archaeological Geophysical Survey* (ClfA 2014b).

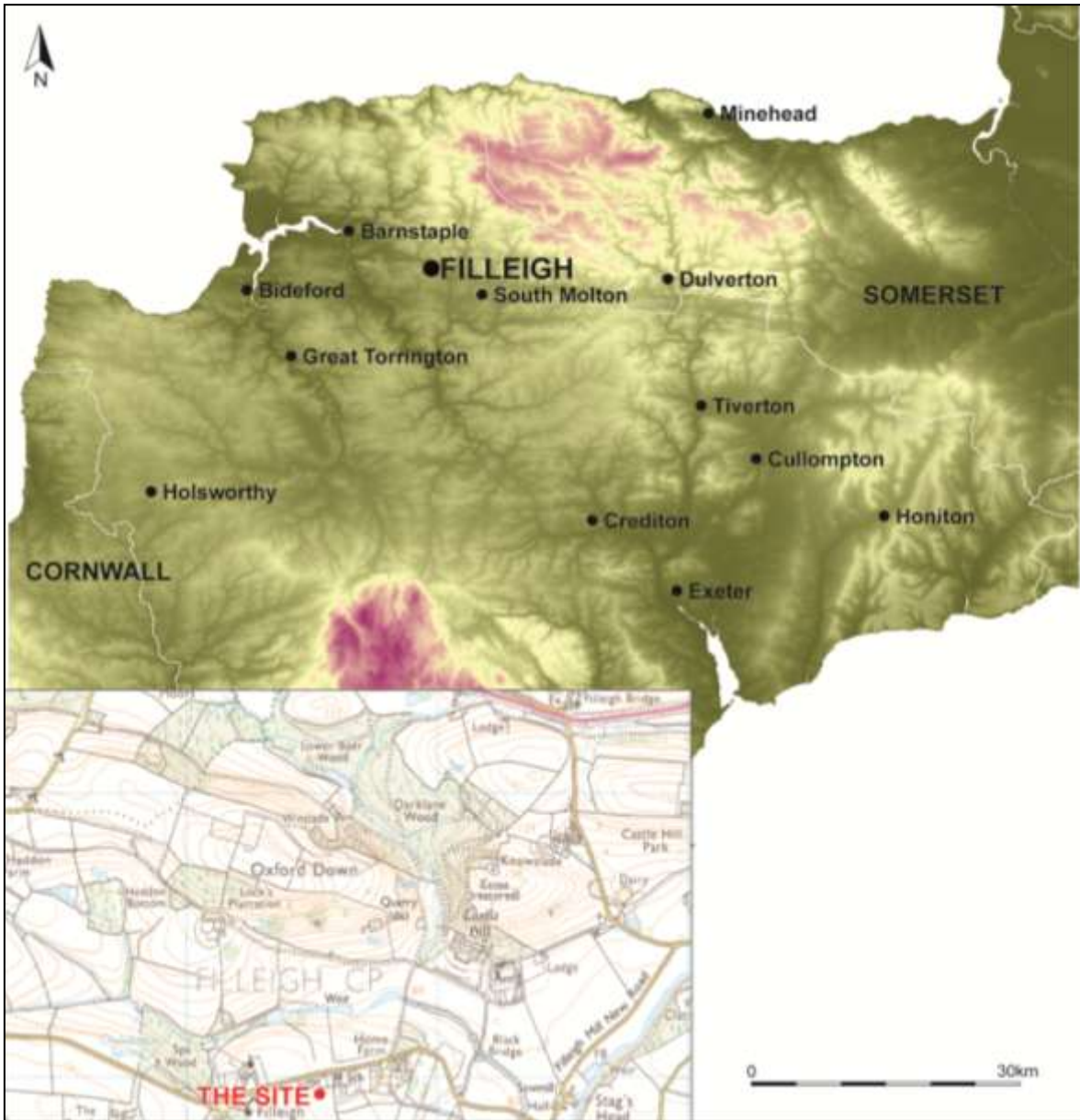


FIGURE 1: SITE LOCATION.

## 2.0 CARTOGRAPHIC DEVELOPMENT

The later 18<sup>th</sup> century estate map (Figure 2) shows the layout of the site (DHC 1262M/E22/5). This shows the layout of the area prior to reorganisation in the later 18<sup>th</sup> and early 19<sup>th</sup> century.



FIGURE 2: EXTRACT FROM AN 18<sup>TH</sup> CENTURY CASTLE HILL ESTATE MAP; THE APPROXIMATE LOCATION OF THE SITE IS INDICATED.



FIGURE 3: EXTRACT FROM THE 1838 FILLEIGH TITHE MAP, THE APPROXIMATE LOCATION OF THE SITE IS INDICATED (PRO).

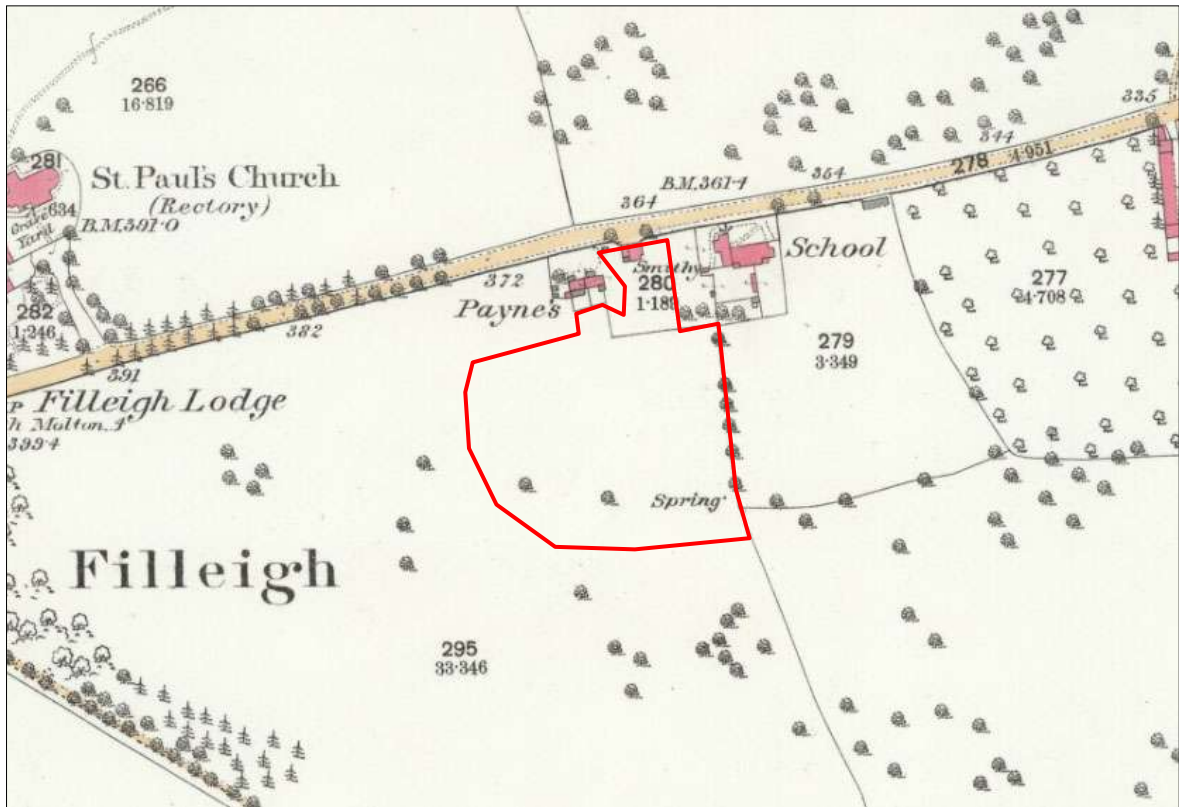


FIGURE 4: EXTRACT FROM THE OS 25" MAP, PUBLISHED 1889 (SURVEYED 1888) (DEVON SHEET XXI.2); THE LOCATION OF THE SITE IS INDICATED.

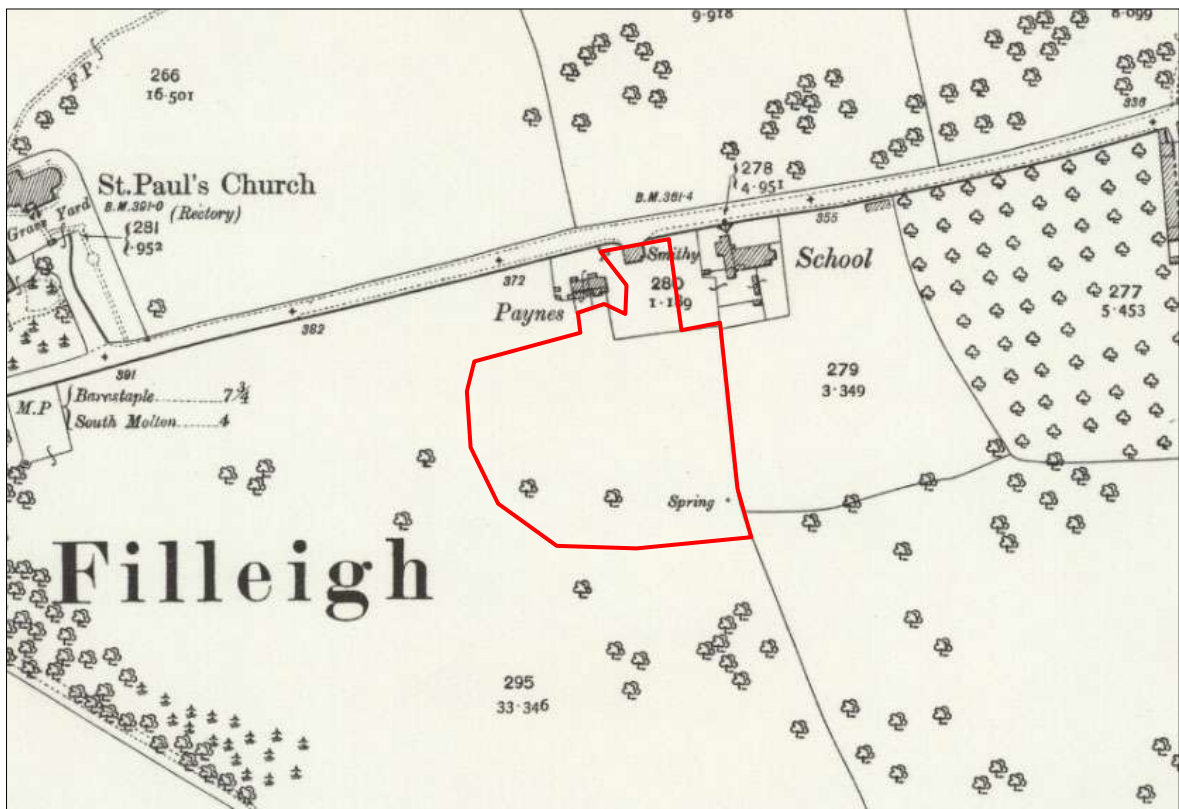


FIGURE 5: EXTRACT FROM THE OS 25 INCH MAP, PUBLISHED 1904 (SURVEYED 1903) (DEVON SHEET XXI.2); THE LOCATION OF THE SITE IS INDICATED.



The subsequent maps (Figures 3-5) show the progressive removal of the boundaries shown on the 18<sup>th</sup> century maps. The Ordnance Survey maps indicate individual trees were retained, and some of these survive in the modern park. Later significant changes (not illustrated) include the construction of Barton Close immediately west of Paynes Cottages before 1963 and the village Hall to the south of the school in the 1990s.

## 2.1 LIDAR IMAGERY

LIDAR imagery (Figure 6) shows two distinct features within the proposed development area, both of which appear on the geophysical survey (below). The more regular line probably corresponds with the boundary shown on the 18<sup>th</sup> century estate maps.



FIGURE 6: IMAGE DERIVED FROM ENVIRONMENT AGENCY LIDAR DSM DATA FOR THE SITE (ENVIRONMENT AGENCY COPYRIGHT AND DATABASE RIGHT 2019, ALL RIGHTS RESERVED) (PROCESSED USING QGIS v.2.18.4 TERRAIN ANALYSIS>SLOPE). THE SITE IS INDICATED.

## 3.0 GEOPHYSICAL SURVEY

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### 3.1 INTRODUCTION

An area of c.1.3ha was the subject of a magnetometry (gradiometer) survey. The purpose of this survey was to identify and record magnetic anomalies within the proposed site. While identified anomalies may relate to archaeological deposits and structures the dimensions of recorded anomalies may not correspond directly with any associated features. The following discussion attempts to clarify and characterise the identified anomalies. The survey was undertaken on the 26<sup>th</sup> March 2019 by P. Webb; the survey data was processed by P. Webb.

### 3.2 METHODOLOGY

The gradiometer survey follows the general guidance as outlined in: *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008) and *Standard and Guidance for Archaeological Geophysical Survey* (ClfA 2014b).

The survey was carried out using a twin-sensor fluxgate gradiometer (Bartington Grad601). These machines are sensitive to depths of up to 1.50m. The survey parameters were: sample intervals of 0.25m, traverse intervals of 1m, a zigzag traverse pattern, traverse orientation was circumstantial, grid squares of 30×30m. The gradiometer was adjusted ('zeroed') every 0.5-1ha. The survey grid was tied into the Ordnance Survey National Grid. The data was downloaded onto *Grad601 Version 3.16* and processed using *TerraSurveyor Version 3.0.25.0*. The primary data plots and analytical tools used in this analysis were *Shade* and *Metadata*. The details of the data processing are as follows:

Processes: Clip +/- 3SD; DeStripe all traverses, median. DeStagger of particular grids.

Area Details: 1.2697ha surveyed; Max. 108.63nT, Min. -107.63nT; Standard Deviation 11.27, mean -0.49nT, median 0.00nT.



FIGURE 7: VIEW ACROSS THE SITE; VIEWED FROM THE EAST (NO SCALE).

### 3.3 SITE INSPECTION

The survey area covered a small section within a larger field, with the proposed development taking place immediately to the south of Barton Close and Paynes Cottages and west of the Village Hall. The site consisted of a gently sloping part of a much larger field which rises to the south. The site is under established pasture. Overhead cables were present within the proposed development area. A full complement of site photographs can be found in Appendix 2.



FIGURE 8: VIEW TOWARDS THE SITE; VIEWED FROM THE SOUTH (NO SCALE).

### 3.4 RESULTS

Table 1, with the accompanying Figures 9 and 10, shows the analysis and interpretation of the geophysical survey data. Additional graphic images of the survey data can be found in Appendix 1.

TABLE 1: INTERPRETATION OF GRADIOMETER SURVEY DATA.

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
1	Moderate positive, probable	Linear	Post holes or fence	Indicative of a series of cut features. Appears as a row of circular cut features. Responses of c.+2.38nT to c.+9.22nT.
2	Moderate positive to weak negative, probable	Parallel linears	Previous historic field boundary	Indicative of a cut feature, such as a ditch and bank or previous boundary. Possible related to anomaly group 6. Responses of c.-4.62nT to c.+9.49nT.
3	Very strong positive, to strong negative, probable	Ovoids	Possible utility	Indicative of metallic debris or disturbance. Responses of c.+100nT to c.+50nT.
4	Moderate positive, probable	Amorphous area	Cut feature	Indicative of a cut feature, such as a possible pit. Responses of c.+4.20nT to c.+9.02nT.
5	Strong positive, probable	Small amorphous area	Possible cut feature	Indicative of a possible cut feature, though the strong response may indicate a more modern origin. Responses of

Anomaly Group	Class and Certainty	Form	Archaeological Characterisation	Comments
				c.+7.09nT to c.+36.04nT.
6	Weak positive, possible	Parallel bent linears	Possible field boundary	Indicative of a cut feature, such as a ditch and bank or previous boundary. Possible related to anomaly group 2, but gives a much weaker response. Responses of c.+0.96nT to c.+1.89nT.
7	Weak positive, possible	Linear	Short ditch	Indicative of a cut feature, such as a short ditch. Responses of c.+0.69nT to c.+1.08nT.
8	Strong positive to moderate negative, probable	Irregular parallel linears	Ditch and bank	Indicative of a cut and raised feature, such as a ditch and bank. Bent form may suggest an earlier field boundary. Irregular form may indicate that this anomaly group could be related to a geological response. Responses of c.-9.93nT to c.+22.62nT.
9	Moderate negative, probable	Forked linears	Possible drain	Indicative of a raised feature, such as a drain. Could be related to or displaying field drains. Responses of c.-12.10nT to c.-3.53nT.
10	Strong negative, probable	Irregular linear	Utility or service feature	Indicative of a buried service, due to form and strong response. Responses of c.-26.44nT to c.-7.78nT.

### 3.5 DISCUSSION

The survey identified ten groups of anomalies showing clear features within the survey area; some probably relate to the relict historic field boundaries, others are of unknown provenance. The background response in the northern half of the site, and the south-east corner of the site may indicate a change in background geology or possible differing historic land use.

Group 1 (c.+2.38nT to c.+9.22nT) is a moderate positive linear, the linear appears to be comprised of multiple ovoids in a rough north-south line. These likely represent postholes from a previous fence.

Group 2 (c.-4.62nT to c.+9.49nT) are moderate positive to weak negative parallel linears. They appear to correspond with a boundary visible on the 18<sup>th</sup> century estate maps and the LiDAR imagery. Anomaly group 6 displays a similar form but a much weaker response.

Group 4 (c.+4.20nT to c.+9.02nT) is a moderate positive ovoid, indicative of a pit or similar cut feature, the borders of this anomaly group are less clear, which implies a gentler shaped cut.

Group 5 (c.+7.09nT to c.+36.04nT) is a strong positive amorphous area, with an unclear form, possibly a cut feature though may represent a larger piece of metallic debris.

Group 6 (c.+0.96nT to c.+1.89nT) is a group of weak positive parallel bent linears, indicative of cut features, such as ditches. The similarity of form to anomaly group 2 suggests that this anomaly group also represents a previous field boundary.

Group 7 (c.+0.69nT to c.+1.08nT) is a weak positive linear cut feature, possibly representative of a ditch.

Group 8 (c.-9.93nT to c.+22.62nT) is a strong positive to moderate negative group of parallel linears. The strength and form of the response suggests that this anomaly group may represent a previous boundary, but is not present on any of the available mapping, suggesting that might be

an earlier feature. Like anomaly group 2 this feature is visible on the LiDAR imagery of the survey area.

Group 9 (c.-12.10nT to c.-3.53nT) are moderate negative forked linears, indicative of a raised feature such as a field drain. The location of this anomaly group may indicate that this possible drainage may be related to the earlier buildings to the north of the site like Paynes Cottage rather than an agricultural feature.

Anomaly group 3, is indicative of modern disturbance or modern metallic debris, whilst anomaly group 10 is indicative of a modern service or utility feature. Both of these features display a high response and are less likely to be archaeologically relevant. Di-Polar anomalies and magnetic disturbance are present across the site, with the Di-Polar anomalies spread in an amorphous pattern and seemingly not related to any single feature. The magnetic disturbance is all related to the metallic field boundaries running along the north and east of the site.



FIGURE 9: SHADE PLOT OF GRADIOMETER SURVEY DATA; GREYSCALE.

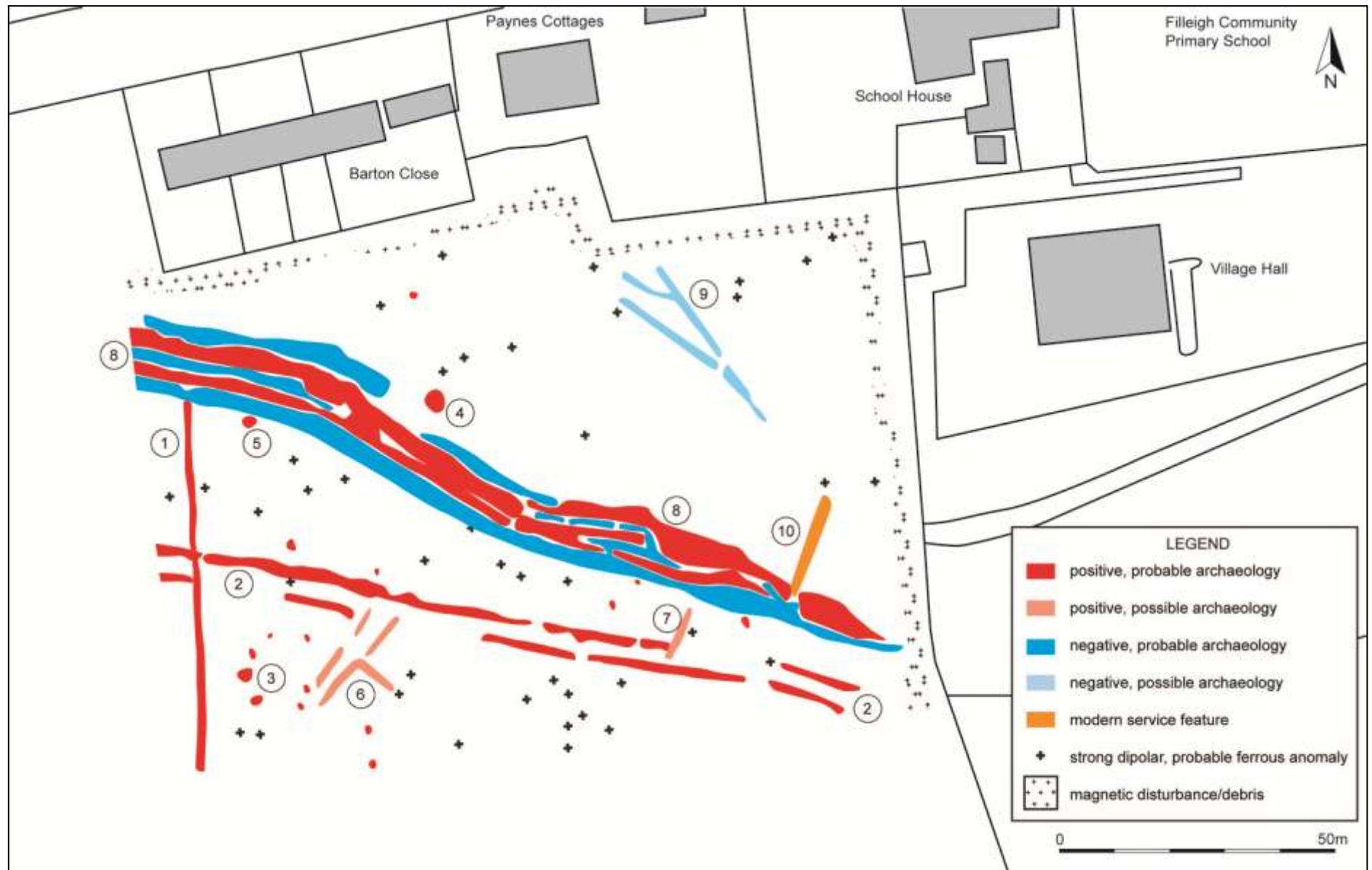


FIGURE 10: INTERPRETATION OF GRADIOMETER SURVEY DATA.

## 4.0 CONCLUSION

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The proposed site is located immediately east of Filleigh Village Hall and south of the current residential properties south of the road.

The geophysical survey identifies multiple features within the site, including some known historic field boundaries and other possible boundaries. Anomaly group 2 appears to match up with an 18<sup>th</sup> century field boundary. Anomaly group 8 is of particular interest due to its size and clear form; this appears to correspond with the earthwork of a holloway and may represent a road or lane pre-dating the turnpike. It is of interest that the magnetic response to the north and south of this line is so markedly different, and while this could be geological it is possible it presents a different history of land use relevant to the understanding of the development of the park. The implications of the geophysical survey would suggest further investigation is warranted.

## 5.0 BIBLIOGRAPHY & REFERENCES

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[www.bgs.ac.uk](http://www.bgs.ac.uk)

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<http://environment.data.gov.uk/ds/survey#>

### *Unpublished Sources:*

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**SWARCH** 2019: *Project Design, Land adjacent to Filleigh Village Hall*

DHC

Filleigh estate map 1262M/E22/5

PRO

Filleigh tithe map

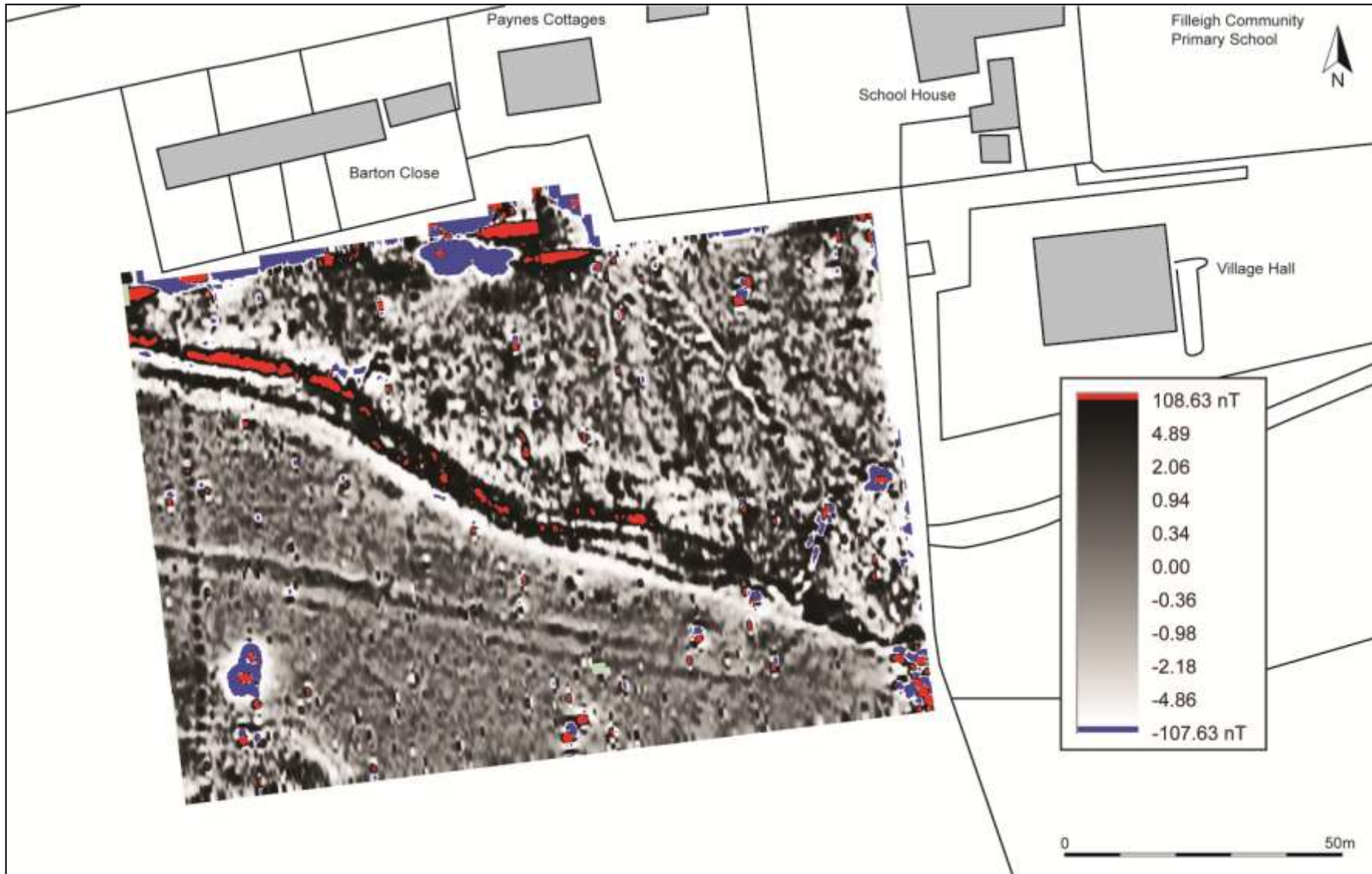
NLS

1888 OS 25" map (surveyed 1887)

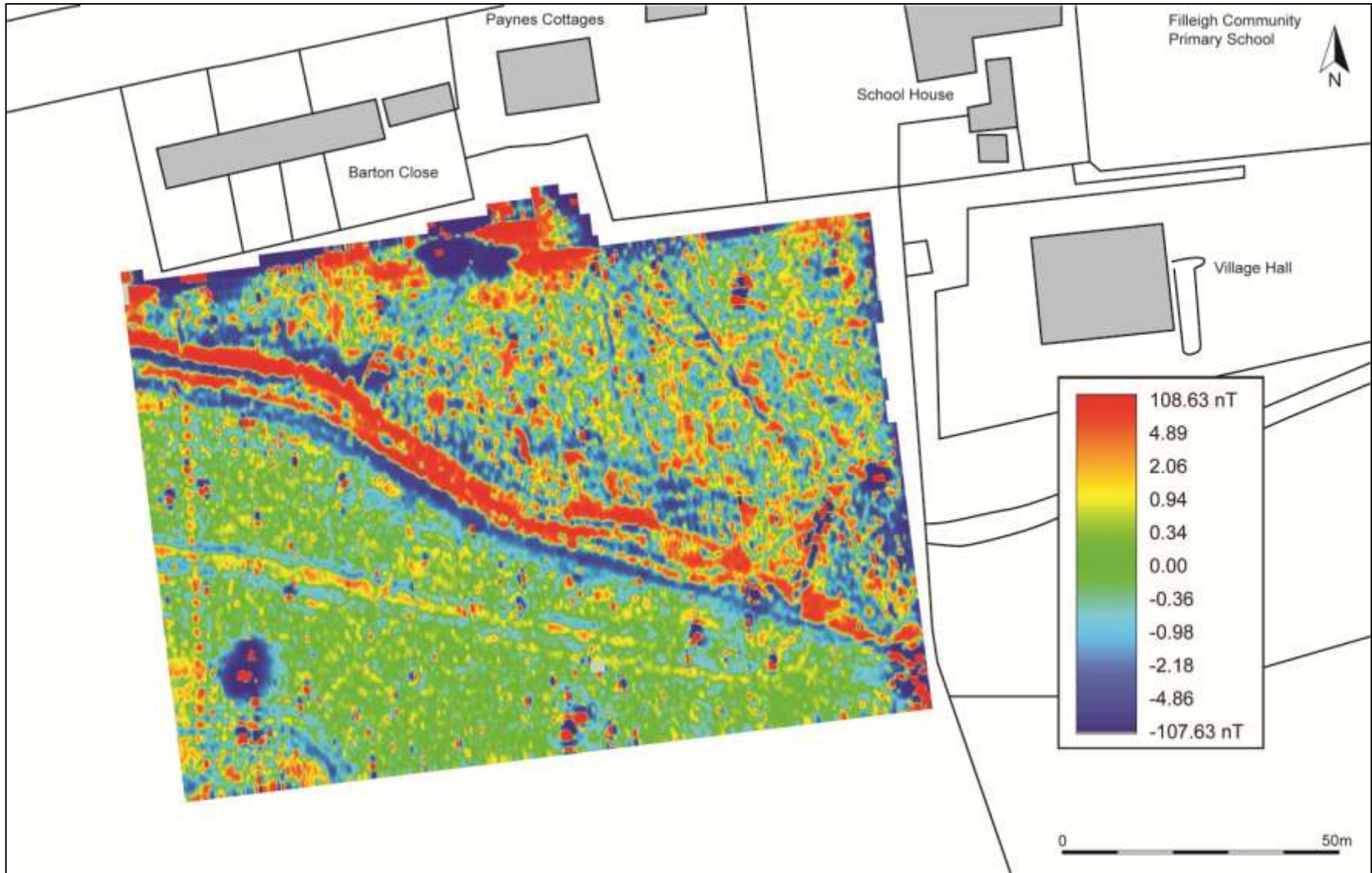
1904 OS 25" map (surveyed 1903)



APPENDIX 1: ADDITIONAL GRAPHICAL IMAGES OF THE GRADIOMETER SURVEY



RED GREYSCALE BLUE SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING.



RED-BLUE-GREEN (2) SHADE PLOT OF GRADIOMETER SURVEY DATA; BAND WEIGHT EQUALISED; GRADIATED SHADING.

APPENDIX 2: SUPPORTING PHOTOGRAPHS



1. OVERHEAD CABLES RUNNING ACROSS SITE; VIEWED FROM THE WEST (NO SCALE).



2. MANHOLE COVER SOUTH OF PAYNES COTTAGES; VIEWED FROM THE WEST (NO SCALE).



3. CLOSE-UP OF NORTH-SOUTH FENCE BELOW PAYNES COTTAGES; VIEWED FROM THE WEST (1M SCALE).



4. CLOSE-UP OF NORTH-SOUTH FENCE BELOW PAYNES COTTAGES; VIEWED FROM THE WEST (1M SCALE).



5. CLOSE-UP OF NORTH-SOUTH WALL BELOW PAYNES COTTAGES; VIEWED FROM THE SOUTH-EAST (NO SCALE).



6. VIEW ALONG THE NORTHERN EDGE OF THE SURVEY AREA; VIEWED FROM THE EAST (NO SCALE).



7. VIEW ACROSS THE SURVEY AREA; VIEWED FROM THE NORTH-EAST (NO SCALE).



8. VIEW ALONG THE EASTERN BOUNDARY OF THE SITE; VIEWED FROM THE NORTH (NO SCALE).



9. NORTH-EASTERN CORNER OF THE SITE, CLOSE-UP OF EASTERN BOUNDARY TO THE SITE; VIEWED FROM THE WEST (1M SCALE).



10. VIEW ALONG THE SOUTHERN BOUNDARY OF THE SITE; VIEWED FROM THE EAST (NO SCALE).



11. VIEW OF DRAIN TO THE SOUTH-EAST OF THE SITE RUNNING EAST; VIEWED FROM THE WEST (1M SCALE).



12. VIEW OF THE EASTERN BOUNDARY OF THE SITE; VIEWED FROM THE SOUTH (NO SCALE).





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