

Electrical Resistance Survey at  
the Sir John J Hunt Memorial Cottage Homes  
July 13<sup>th</sup> – 17<sup>th</sup> 2015



*Figure 1. Aerial photograph of the Sir John J Hunt Memorial Cottage Homes.  
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## SUMMARY

Over July 13<sup>th</sup> to 17<sup>th</sup> 2015, Fishergate Fulford and Heslington Local History Society carried out an electrical resistance survey at the Sir John J Hunt Memorial Cottage Homes in Fulford, York. The project was undertaken as part of the Council for British Archaeology's Festival of Archaeology 2015 and was entirely volunteer based.

While the results are somewhat broken up by the large number of buildings, pathways and garden elements, there are a number of geophysical anomalies across the site that probably relate to underlying archaeological features. There is clear evidence of agricultural use of the land in the form of ploughing, as well as suggestions of ridge and furrow. Other clear anomalies include a probable bank and ditch near the western end of the site and several modern services, as well as a number of high and low resistance anomalies that may be of archaeological interest.

There are no plans for further archaeological investigation at the site. However, the results of this survey may help to call further attention to Fulford's archaeological significance and potential.

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## INTRODUCTION

As part of the Council for British Archaeology's (CBA) Festival of Archaeology 2015, the Fishergate Fulford and Heslington Local History Society (FFH) undertook an electrical resistance survey at the Sir John J Hunt Memorial Cottage Homes in Fulford, York (hereafter referred to as 'the Memorial Homes'). The site was selected in part because of the open, accessible nature of its gardens, but also due to the close proximity to known Roman and medieval archaeological deposits. Likewise, there were no recorded structures on the site prior to the construction of the Homes, raising the likelihood of detecting archaeological features.

The survey took place over five days, from July 13<sup>th</sup> to 17<sup>th</sup>, under the technical direction of Paul Durdin, a student at the University of York. Some thirty volunteers, both FFH members and other members of the community, took part over the course of the survey.

The project was a resounding success, both as a community project and as an archaeological investigation.

## THE SITE

The Memorial Homes are located approximately 1 mile south of the York city walls, bounded on the east side by the A19, Fulford Road, a probable former Roman Road (YCC 2008, 5; 2010, 5) leading

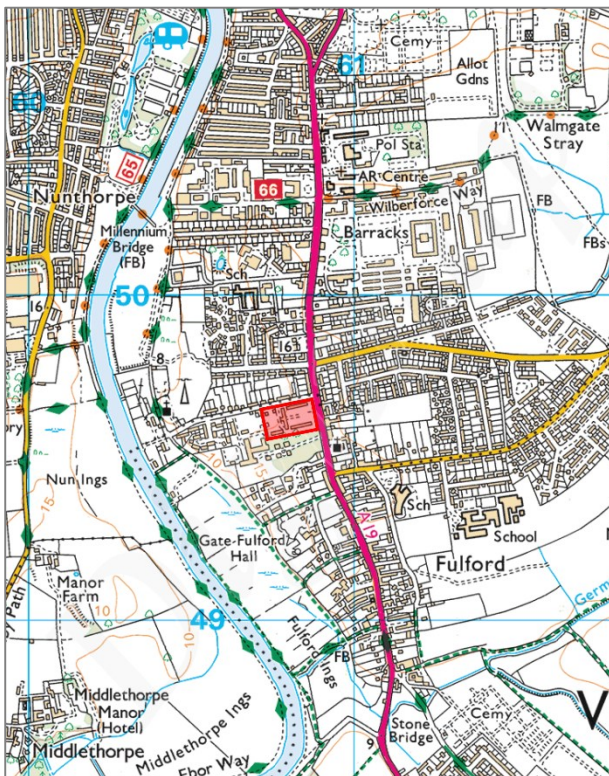


Figure 2. Fulford, with the Memorial Homes highlighted. Map © Crown copyright 2015 Ordnance Survey.

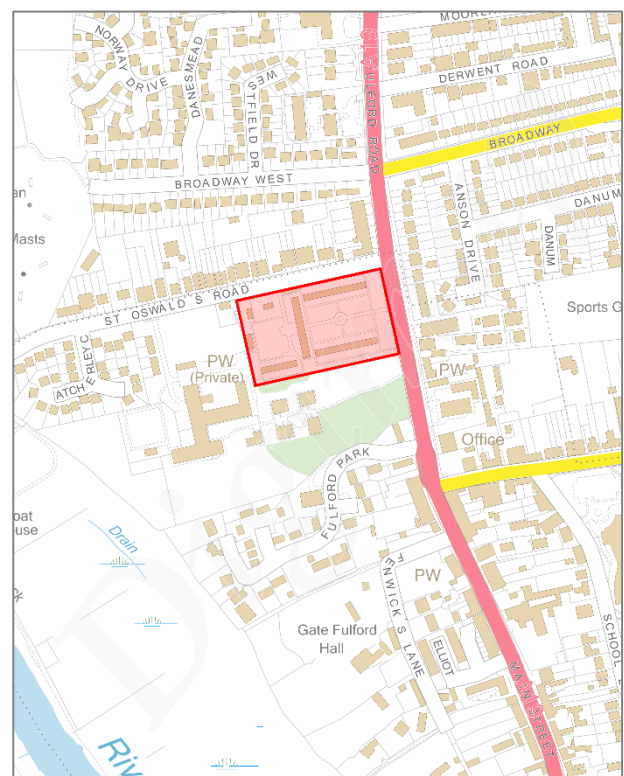


Figure 3. The Memorial Homes highlighted in their immediate surroundings. Map © Crown copyright 2015 Ordnance Survey.

### *Electrical Resistance Survey at Sir John J Hunt Memorial Cottage Homes, July 13<sup>th</sup> – 17<sup>th</sup> 2015*

to Selby and Doncaster (see Figure 2). The north side is bounded by St Oswald's Road. On the west and south the site is adjoined by Connaught Court, an almshouse complex operated by the Royal Masonic Benevolent Institution. While part of Connaught Court, the area to the south of the Memorial Homes has been retained as open parkland with only a limited number of buildings. Most of the land now occupied by Connaught Court and the Memorial Homes was originally part of the Fulford Park House estate (Baggs *et al.* 1976).

St Oswald's Road (see Figure 3), previously named Church Lane, leads west from the main road towards the river Ouse, ending near the 11<sup>th</sup> century church of St Oswald, now a private residence. The church stands remote from the village, and it has been suggested that it marks an older site of the village before being moved to the main road (Baggs *et al.* 1976). It is also possible that it was built as a chapel associated with a river crossing to Dringhouses, as paths on both sides of the river appear to converge on the site (Christopher Rainger unpublished research).

The memorial homes consist of three long ranges of bungalows forming a U shape, with the open side facing Fulford Road and associated buildings on the west side, all surrounded by large areas of lawns criss-crossed by paved paths and flower beds. The border with Fulford Road is lined with large mature trees, and these, along with certain other large trees across the site, may have been planted when the site was a part of the Fulford Park House estate. Fulford Park house is situated some 150m to the south.

The Memorial Homes are situated on gravelly sands overlying sandstones of the Sherwood sandstone group (BGS 2008). However, as the site is in an urban area and was previously used for agricultural purposes, it is to be expected that considerable depth of topsoil has been deposited across the landscape, and it is likely that the geophysical results have not been significantly affected by the underlying geology.

## HISTORICAL BACKGROUND

### *Fulford*

While there are suggestions that the history of Fulford village can be traced back to the Roman period, the primary historical sources date from the 11<sup>th</sup> century onwards (Baggs *et al.* 1976).

Fulford Road (the A19) likely follows the line of a Roman road that connected York and Doncaster, constructed on a gravel ridge that runs parallel to the River Ouse. At the south end of the present day village, this ridge is broken by a tributary to the river Ouse, now known as Germany Beck, resulting in a ford of strategic importance and giving the medieval village its name: Fulford is referred to in the Domesday book of 1086 as "*Foleford*" or "*Fuletorp*", referring to a muddy ford. Historically it is referred to at times as Gate Fulford, differentiating it from Water Fulford to the

south (YCC 2008, 5), and lay along both sides of the road. Fulford village is still of a similar layout today, with the long narrow tofts and crofts still recognisably leading to back lanes on both sides of Main Street.

In 1055 the control of York passed from Earl Siward to Tostig, brother of Harold Godwinson (Dickens 1961). However, Tostig's rule became increasingly unpopular with the Northumbrian Thegns, and in 1065 he was ousted and replaced by Earl Morcar (Dickens 1961). In 1066 Tostig joined forces with the King of Norway, Harald Hardrada, and their combined army defeated Morcar and his Northumbrians at the 'Battle of Fulford' (Dickens 1961; Baggs *et al.* 1976). This battle has long been presumed to have been fought around Germany Beck (YCC 2008, 5).

In 1377 there were 112 poll-tax payers registered in Fulford (Baggs *et al.* 1976). Medieval Fulford was an agricultural settlement, surrounded by open fields which were farmed collectively and evolved the distinctive 'ridge and furrow' landscape. Beyond the fields to the east, and to the south of Germany Beck, the ground was wetter and used for summer grazing. Parallel with the village, along the banks of the River Ouse, is a long strip of meadow land, or 'ings', which flood regularly to this day. Stone boundary markers still survive that allocate areas of valuable hay for villagers to cut for winter fodder (Baggs *et al.* 1976).

### *The site*

The site of the Memorial Homes was, prior to enclosure in 1759 (Baggs *et al.* 1976), an open field called 'Line Lands' (Jennifer Kaner unpublished research). This name suggests use of the land for growing flax to make linen (Louise Wheatley pers. comm.). On the 1759 Enclosure Award map, the land adjoining St Oswald's Road on the south was divided into four smaller fields; the Memorial Homes site is roughly equivalent to the two easternmost of these fields (see Figure 4). There are no buildings depicted in this area on the enclosure map, but this does not by any means preclude their existence.



Figure 4. 1759 Enclosure Award map (after YCC 2008, 5). Copyright © York Archives and Local History Service.

The exact date of construction of Fulford Park House is unknown, but it is thought to date from the early 19<sup>th</sup> century (YCC 2008, 20). It is likely that the estate was expanded around the same time, and certainly by the time of the first edition OS (Ordnance Survey) map in the early 1850s it extended all the way to St Oswald's Road, encompassing the site of the Memorial Homes.

The 1850s OS map (see Figures 5 and 6) shows significant changes to the landscape depicted on the enclosure map. The two smaller eastern plots where the Memorial Homes are now located have been subsumed into the parkland. Trees are shown scattered across the area and along the boundaries

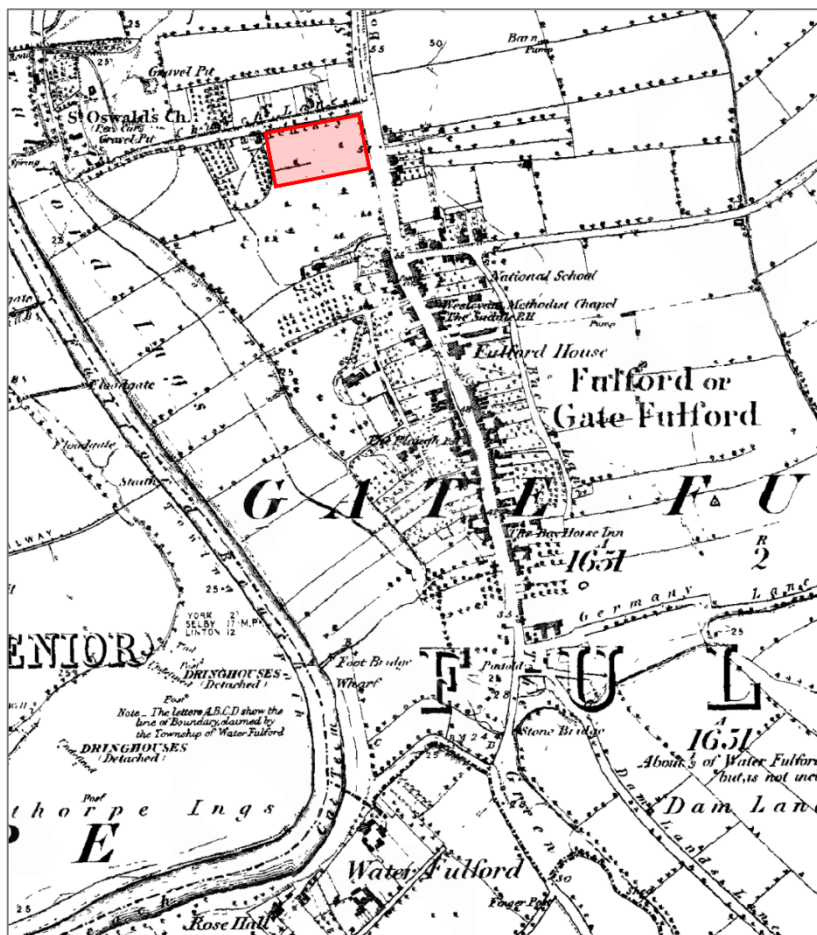


Figure 5. 1850s Shire series OS map showing Gate Fulford and Water Fulford. The Memorial Homes site is highlighted. Map © Landmark Information Group Ltd and Crown copyright 2015.

of both Fulford Road and St Oswald's Road. The western plots are retained, with the central-west plot now shown as an orchard: this orchard continues to be present on OS maps until 1971 when Connaught Court was developed. Significantly, the Grade II listed 'Gothick' cottage that adjoins the Memorial Homes is also shown on the earliest OS maps.

The 1892 OS map shows a similar parkland to the 1850s edition, with trees scattered widely across it and alongside the roads (see Figure 7). The positioning and configuration of these trees suggests that these represent actual trees and are not merely a cartographer's device. This is in contrast to the editions produced in the 1930s, where the parkland is depicted devoid of trees (see Figure 8). Presumably they were too sparse to warrant inclusion, as other, more thickly wooded areas—and the orchard—are still populated with symbols to signify woodland. This latter trend continues throughout later editions right up to the 1980s. On the 1960s and 1970s editions the orchard and parkland are shown with a systematic pattern of trees, but there are still specimen trees included



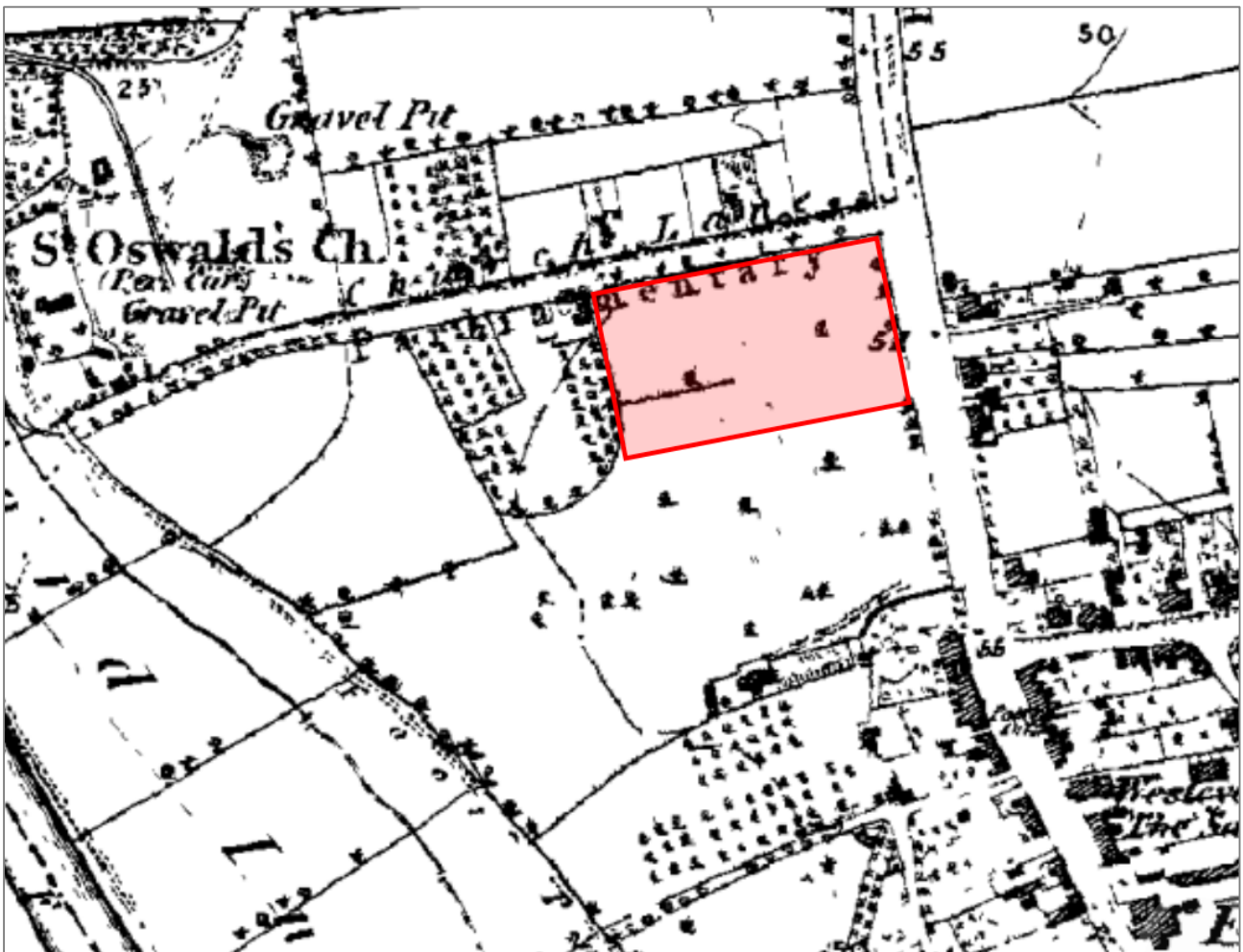


Figure 6. Detail of 1850s Shire Series OS map, showing the site now occupied by the Memorial Homes. Map © Landmark Information Group Ltd and Crown copyright 2015.

along the Memorial Homes' eastern border (see Figures 9 and 10). By the time of the 1970s edition, much of the parkland has been developed into the Connaught Court almshouses.

The Fulford Village Conservation Area Appraisal states that the Memorial Homes themselves “are of attractive and eye-catching design, spaciouly planned and well landscaped so that their impact on the former parkland is minimised” (YCC 2008, 10).

#### *The Sir John J Hunt Memorial Cottage Homes*

According to Kitchin (1988), Sir John J Hunt was a wealthy York brewer and land owner who lived at Grimston Court, Dunnington, and owned a large area of farmland on the Elvington side of the Hull Road. As well as Hunt's Brewery, he also owned the Scarborough and Whitby Brewery Company. Sir John died in April 1933, and his will made provision for the founding of almshouses should his son Reginald die without a son (Kitchin 1988).

After Reginald died childless in 1941, and his sister Violet in 1950, the Trustees sold the Grimston Court estate and breweries, and purchased part of the Fulford Park Estate from Miss Audrey Master, whose family had lived in Fulford Park House since the late 19<sup>th</sup> century (Kitchin 1988).



Figure 7. 1892 Town Plan series OS map. Map © Crown copyright 2015 Ordnance Survey.

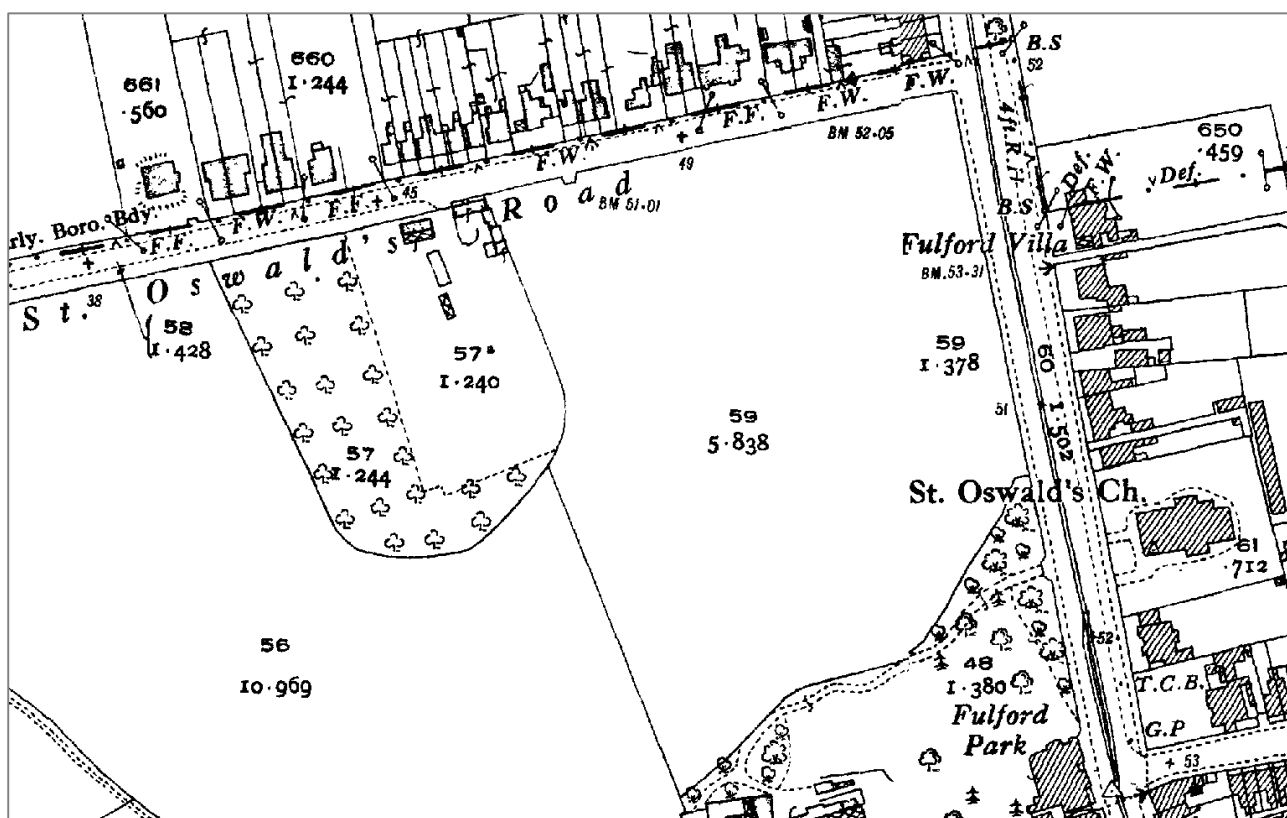


Figure 8. 1931 OS map showing 'blank' parkland. Map © Crown copyright 2015 Ordnance Survey.

Reginald Hunt's will defined that the almshouses would provide accommodation for 10 married couples and 14 widows or spinsters: "to be members of the Church of England and who through lack of means, ill health, accident or infirmity are wholly or in part unable to maintain themselves

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by their own exertions, and having no children under 18 years of age” (Kitchin 1988). It also provided that the almshouses would include both a trained nurse and a resident porter.

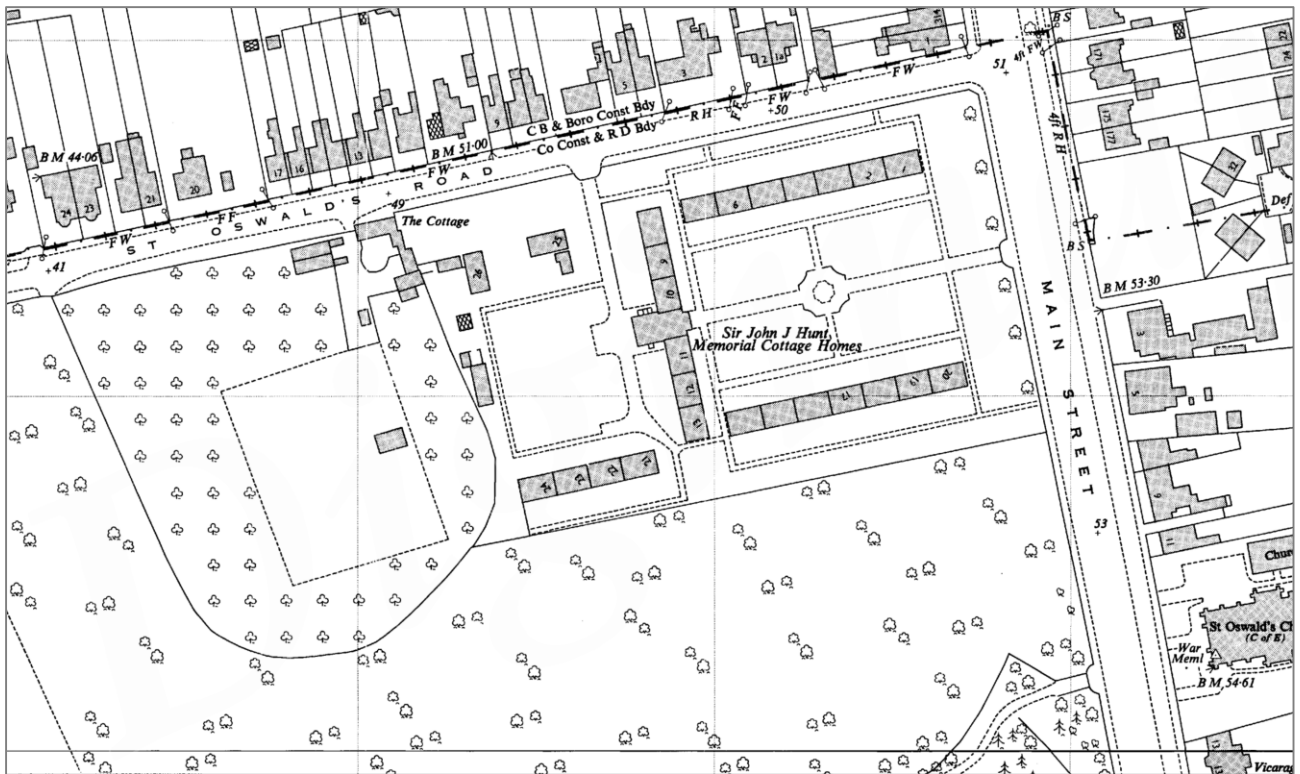


Figure 10. 1960s OS map. Map © Crown copyright 2015 Ordnance Survey.



Figure 9. 1970s OS map. Map © Crown copyright 2015 Ordnance Survey.

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Sale of the breweries was intended to provide funds for building the almshouses and the endowment of a charity, giving the widows and spinsters 7 shillings and 6 pence per week, and 12 shillings per week to the married couples (Kitchin 1988).

Reginald Hunt also required that the portrait of Sir John Hunt, by George Fall, and a portrait of himself by Richard Jack RA, shall always hang in the main hall of the almshouses (Kitchin 1988). These are still in place in the hall, alongside an ornamental faux-parchment history of the establishment.

## PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

In 2004, as part of a planning application, the adjacent Connaught Court site was subject to an archaeological evaluation by On Site Archaeology (OSA 2009). The archaeological evaluation comprised nine trenches excavated in the grounds of the Court, three of which were situated in the area adjoining St Oswald's Road and immediately adjacent to the Memorial Homes, designated area A. This area proved to be the most productive, revealing a number of ditches, post holes and pits dating to the 1<sup>st</sup> and 2<sup>nd</sup> century AD. Further features of later Roman date were also present, although the nature of the activity on the site was unclear. Fragments of Iron Age pottery were recovered from the buried plough-soils, suggesting earlier occupation or activity on the site or nearby. The archaeological deposits were situated 0.6-0.8m beneath the present day ground level (OSA 2009). Other areas evaluated in 2004 revealed medieval plough-soils lying atop the underlying natural subsoil: this may relate to the ridge and furrow that can be seen in the geophysical survey results (see below).

In 2014, further excavation was undertaken at Connaught Court by Mike Griffiths Associates in advance of proposed development. While the results have yet to be published, further Roman features and deposits were uncovered including construction material remains indicative of a nearby building, along with prehistoric finds and further confirmation of medieval ridge and furrow (Steve Timms pers. comm.). Finds of particular interest included a coin of Augustus and Mesolithic flint arrow heads.

Archaeological deposits of Roman date are not uncommon around York, although there are few specifics known about the Fulford area during this period (YCC 2008, 5). A possible Roman coffin lid is recorded near the earlier St Oswald's church, approximately 400m to the west of the Memorial Homes (City of York HER, monument no MY0580), and although there is no direct evidence in this area it is suspected that a Roman road followed the same course as the present day Fulford Road.

The remains of medieval ridge and furrow is still visible in many fields around York. It has been recorded over the whole of the Fulford Park House parkland, including the areas now occupied by the Memorial Homes and Connaught Court developments (City of York HER, monument no

MYO2567), most likely identified from 20<sup>th</sup> century aerial photographs prior to the construction of the two sites.

## AIMS AND OBJECTIVES

There were two primary objectives resolved on when preparing the survey: to add to the understanding of Fulford's historical and archaeological background, and to create an opportunity for FFH volunteers and other members of the community to take part in the CBA's Festival of Archaeology 2015. A secondary objective was to search for any continuation of known Roman archaeological features in Connaught Court, neighbouring the site on the west.

## METHODOLOGY

The survey was undertaken primarily using two Geoscan RM15D electrical resistance meters, although on three of the five days a Geoscan RM85 resistance meter was also used. Readings were taken every 0.5m along a 1m wide transect, within a grid of 20m x 20m. The mobile probes used had a 0.5m spacing between the probes, possibly significant given the known depth of archaeological deposits in nearby Connaught Court (OSA 2009). A total of 38 grids were surveyed over the course of the week, although a large proportion of these were only partial grids. Fixed value 'dummy' readings were inserted where obstacles such as buildings, pathways, trees or garden features obstructed the survey. Data from the RM15Ds was downloaded directly into and processed using Snuffler. Data from the RM85 was initially downloaded into Geoplot, but afterwards imported into Snuffler to allow incorporation with the RM15D data. To produce the final results, data was first despiked with a threshold value of 5.0, following which visual variation between grids was reduced using a combination of Snuffler's "Edge Correction" and "Add/sub Average" tools to modify the data. The "Remove Geology" (a high pass filter) was used with a sample size of 8 to reduce geological background variation across the results, and finally the full dataset was interpolated horizontally in order to graphically 'smooth' the output. A copy of the "raw" output is included for comparison (see Figure 11).

Early in the project a small number of grids were experimentally surveyed using the "fast" survey setting on the RM15Ds, but the data suffered in quality as a result. Two nearly-complete grids in the centre east of the site were re-surveyed after the poor data quality had been observed, but a number of the poorer quality grids, most noticeable in the southeast corner and along the north edge of the site, remain in the final results (see Figure 12).

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A small area under the western lawn was re-surveyed at higher resolution (0.5m readings along 0.5m wide transects), but the results are no clearer than the original survey (see Figure 13).

All geophysical output images were produced using Snuffler, with interpretive elements and map overlays accomplished using ESRI ArcGIS 10.2.1.

## RESULTS

The geophysical anomalies discovered (see Figure 14) are most readily appreciated when separated into three groups: modern services, agricultural features and other archaeological anomalies. All graphical output is included at the end of this paper.

### *Modern Services and Related Features (see Figure 15)*

The majority of the anomalies included in this group have been identified by their association with manhole covers on site. In other cases they are in areas known by the site manager to contain services (Paul Lund 2015, pers. comm.) such as with the low resistance linear feature running east-west across the western lawn and the u-shaped series of linear anomalies within the front courtyard leading to the main road. These features are interpreted as gas mains, water pipes, drains or electric cable trenches.

However, one other likely modern feature is the high resistance linear anomaly running parallel to the buildings along the southern side of the site (identified as 'Earlier Boundary' in Figure x). This lies directly under a line of small trees until it reaches the bend towards its southwestern end. At this point it diverges around a large cypress of some age. This may be the line of an old boundary or hedgerow.

### *Agricultural Features (see Figure 16)*

There are two varieties of anomaly which can be interpreted as evidence of agricultural use of the land prior to the construction of the Memorial Homes. The first, and more recent, of these is represented by a large number of narrow linear anomalies running northeast-southwest, visible in many areas of the site and which are best interpreted as marks left by post-medieval ploughing (identified as 'Other ploughing').

The other type is a series of wide, regular bands running east-west—up to 3m wide in places. These appear to be the remains of ridge and furrow cultivation. They are most clearly visible towards the western end of the site, under the western lawn. This almost certainly relates to the medieval ridge and furrow previously recorded over the Fulford Park House estate (City of York HER, monument no MYO2567).

### *Other Archaeological Features (see Figure 17)*

There are geophysical anomalies, mostly linear in nature, apparent in a number of areas across the survey results. These include both high and low resistance anomalies, although the majority are low resistance, and are difficult to interpret due to the narrow area surveyed and the considerable disturbance from both agriculture and the modern buildings. The results suggest, however, that some of these features pre-date the ridge and furrow mentioned above; others may just as likely be the remains of modern garden features or post-medieval parkland features associated with the Fulford Park House estate.

Most significantly, there is evidence of a large bank and ditch running roughly north-south across the western lawn, indicated by a wide band of low resistance readings immediately adjacent to a band of high resistance readings. Although, again, dating this must necessarily be speculative, it appears to be disturbed by the ridge and furrow and thus must pre-date it. The close proximity to known Roman deposits and features at Connaught Court would suggest that this feature may relate to those deposits.

## CONCLUSION

The resistance survey at the Memorial Homes has provided an interesting glimpse at the history of this part of Fulford. While the geophysical results are somewhat difficult to understand clearly due to the gaps caused by extant buildings and paths, they do reveal a variety of intriguing features. Of most significance, perhaps, is the large bank and ditch apparent in the western end of the surveyed area.

No further work is planned for the site. However, the site would be well suited to ground penetrating radar (GPR) survey, which would enable coverage of the whole site including paths and carparks and may assist in further interpretation of the geophysical anomalies. Key areas to target would include the western lawn, where the ditch and bank appears, and the northeast corner of the site where a series of low resistance features are visible. An important piece of missing information is the true date of the many features, but this is only likely to be adequately determined through excavation.

## ACKNOWLEDGEMENTS

The authors would like to extend thanks to all the FFH members and other volunteers who took part and without whom this project would have been impossible. Special mention must go to Maryanne Creasey for her hard work and enthusiasm every day of the survey, and to Alan Powell for his technical assistance and the use of his survey equipment. Thanks also to Louise Wheatley who very kindly helped transport equipment to and from site.

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We are very grateful to the trustees and tenants of the Sir John J Hunt Memorial Cottage Homes for giving us access to the site, and to site manager Paul Lund for his considerable assistance and helpfulness throughout.

Lastly, thanks must be extended to the Department of Archaeology at the University of York for the use of their geophysical survey equipment.

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*Figure 11. 'Raw' unprocessed resistance output. Copyright © 2015 Fishergate Fulford and Heslington Local History Society.*

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Figure 12. Processed resistance output. Copyright © 2015 Fishergate Fulford and Heslington Local History Society.

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Figure 13. Higher-resolution results from the west lawn. Copyright © 2015 Fishergate Fulford and Heslington Local History Society.

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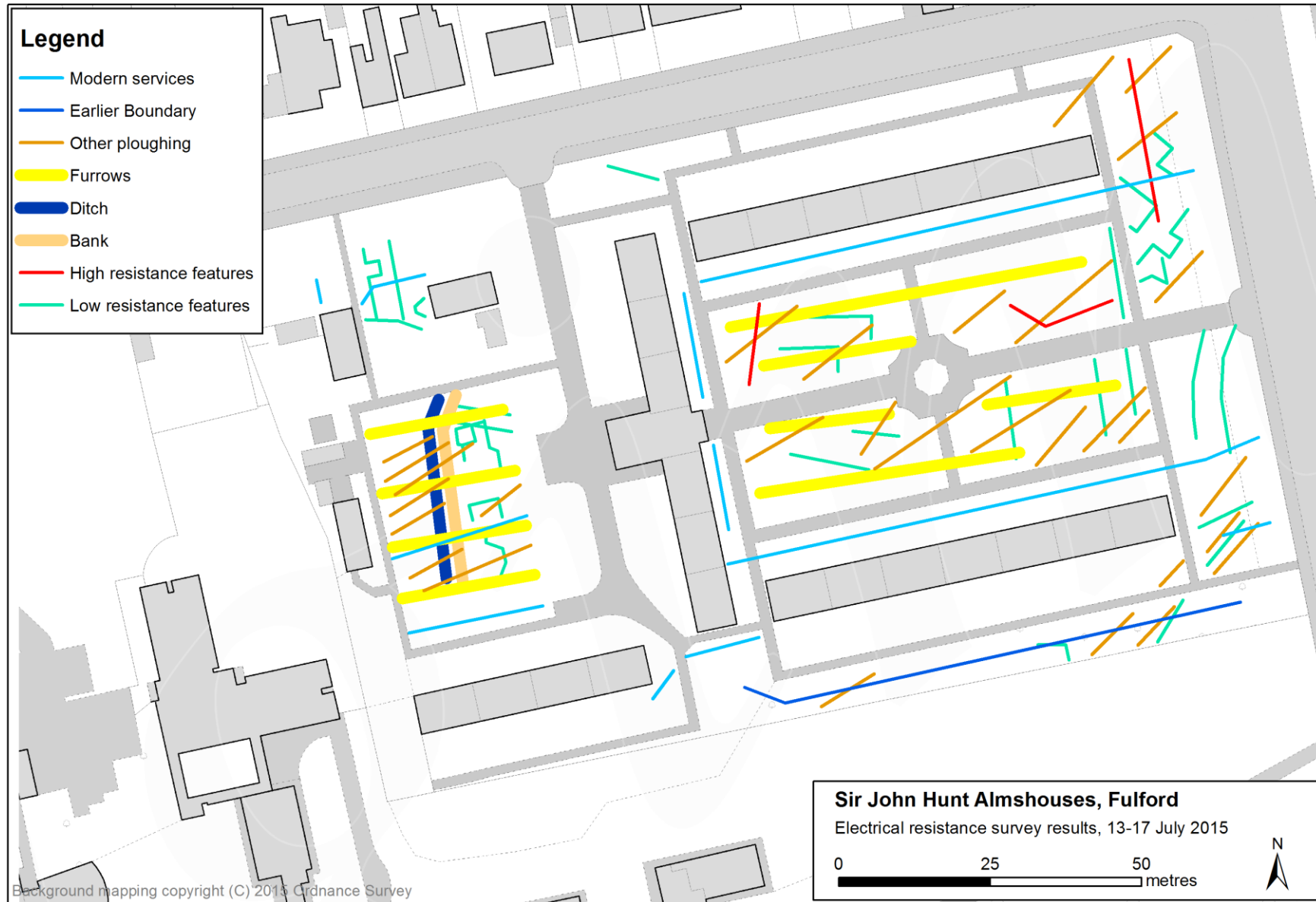


Figure 14. Interpretation of anomalies. Copyright © 2015 Fishergate Fulford and Heslington Local History Society.

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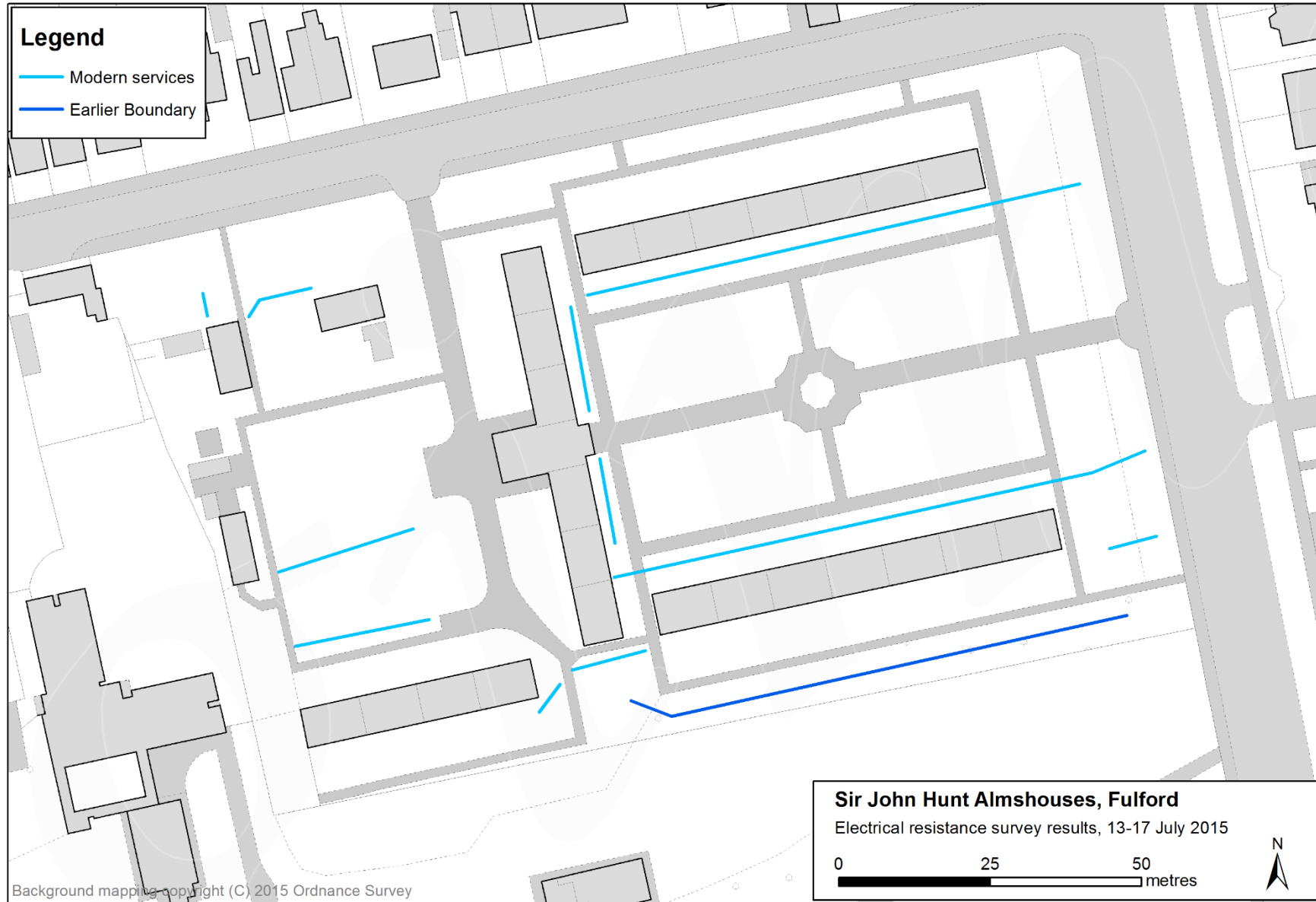


Figure 15. Interpretation of modern features. Copyright © 2015 Fishergate Fulford and Heslington Local History Society.

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Figure 16. Interpretation of agricultural features. Copyright © 2015 Fishergate Fulford and Heslington Local History Society.

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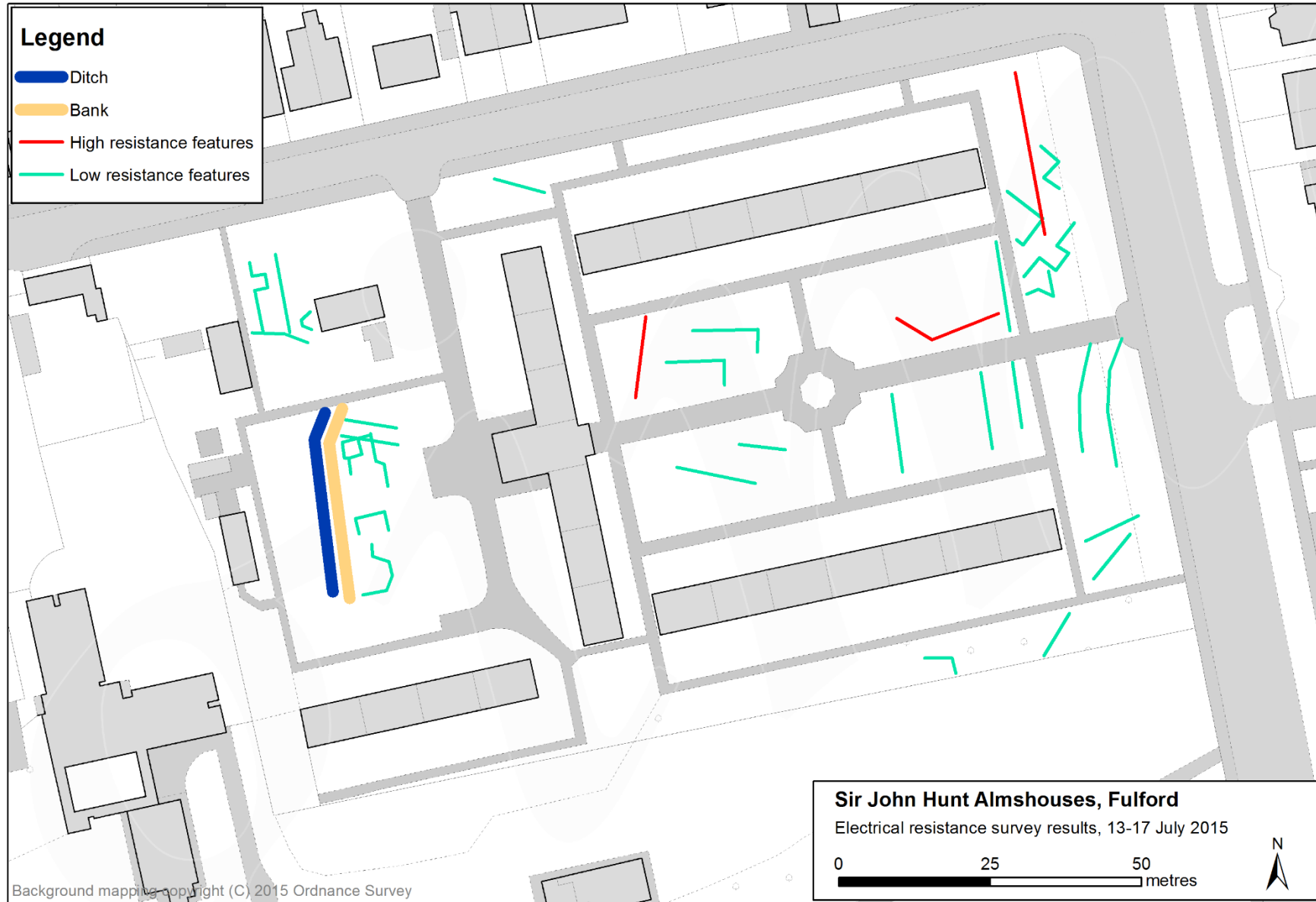


Figure 17. Interpretation of archaeological features. Copyright © 2015 Fishergate Fulford and Heslington Local History Society.