

Excavations at Thorn Park Farm, Hackness, Scarborough 2022

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Scarborough Archaeological and Historical Society

Report 59: 2022



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SAHS Site Code TPF22



Front cover: April excavation.

Above: View east down the Sea Cut valley during the October excavation (Image S. Temlett).

Summary

This report describes the results of the excavation of two sites recorded by Historic England at Thorn Park Farm in 2022 as part of a long-running project to understand the landscape development of the farm and the adjacent Raincliffe wood. A 560m long double-ditch cropmark towards the SE edge of the farm is recorded by Historic England as a possible track but after excavation an alternative interpretation is put forward in this report that it might be a late prehistoric boundary comparable to other known examples in the local area. The second excavation investigated a small, square-shaped earthwork on the NW of the farm. The enclosing ditch was interpreted as a palisade trench however no definite evidence was recovered to establish the date or purpose of the site. The report concludes with suggestions for further work at the farm.

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1. Introduction

In April and October 2022 the Scarborough Archaeological and Historical Society (SAHS) undertook exploratory excavations several miles inland from Scarborough at Thorn Park Farm within the North York Moors National Park [Figure 1]. The work was intended to further the Society's research project into the landscape history of the area which began with a survey of Raincliffe, Row Brow and Forge Valley woods to the south of the farm in 2016-18 (SAHS Reports 47, 49 and 51). This was followed in 2021 by the excavation of a mound in Raincliffe wood just beyond the east boundary of the farm (SAHS report 55) which revealed Bronze Age features.

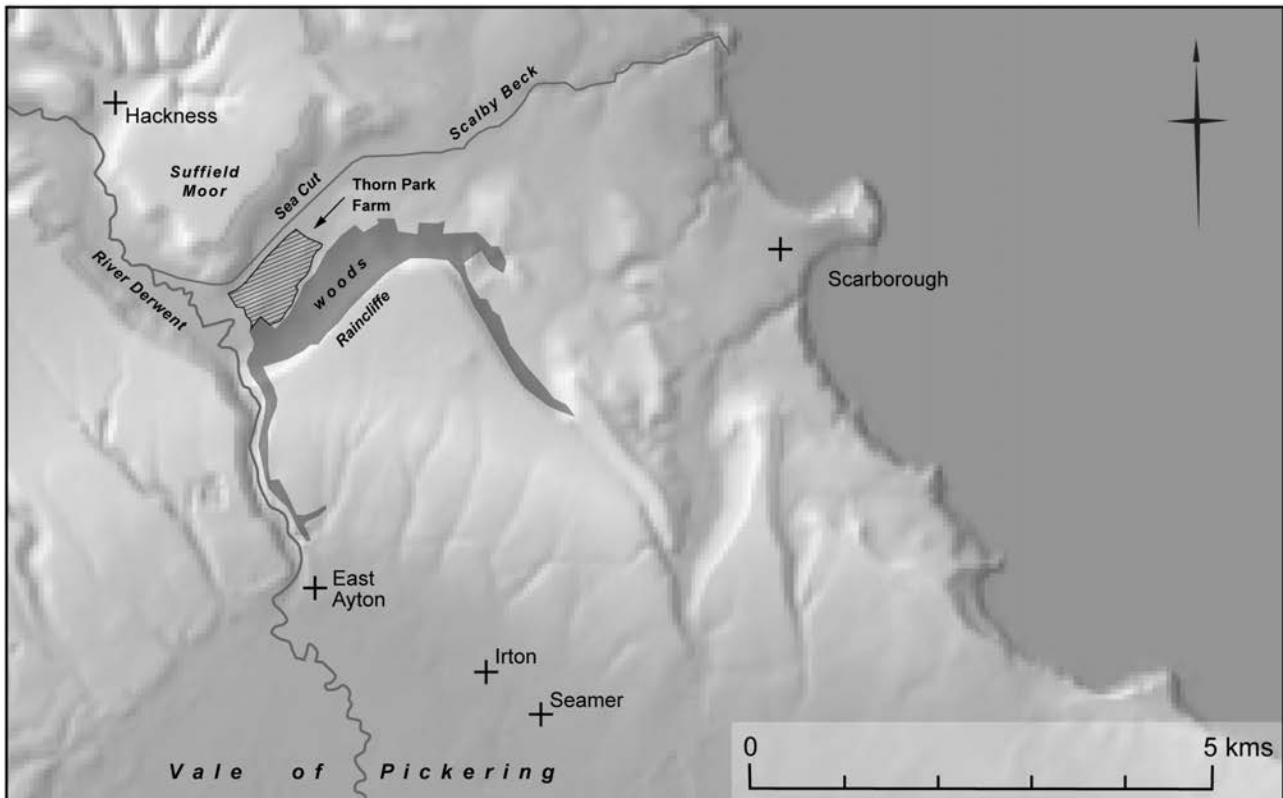


Figure 1. Location of Thorn Park Farm.

Between 22nd and 24th April 2022 the SAHS excavated near the SE boundary of the farm with the opening of two trenches across a section of a 560m long cropmark interpreted as two parallel ditches. This was followed between October 14th and 16th 2022 with an excavation close to the NW boundary of the farm on the site of a rectilinear enclosure. As outlined below, Historic England record both sites on their web-based Aerial Archaeology Mapping Explorer (respectively Monument Nos. 1171971 and 1532408).

A walk-over survey in April 2022 established that there are no other significant archaeological sites visible as earthworks within the boundary of the farm although several hollow ways and ploughed-down field boundaries were noted. In April 2022 a geophysical survey by the SAHS recorded several sections of the double-ditch feature locating its position with greater accuracy than was possible from aerial photographs (see Appendix 1). The geophysical survey located several other anomalies adjacent to the double-ditch feature that might have an archaeological origin. Metal detector surveys took place adjacent to the April and October excavations however no items of archaeological interest were recovered.

2. Background

2.1 Topographic setting

The farm is situated in the 0.6km (0.4 mile) wide valley between the steep wooded slope of Raincliffe to the SE and the equally steep side of Suffield Moor to the NW. The valley extends for 2.4km (1.5 miles) from the valley of the river Derwent in the SW to the coastal plain in the NE. The floor of the valley is alluvium comprising clay, silt, sand and gravel with overlying deposits of sand and gravel of fluvial and glacial origin. The sand and gravel form a prominent interrupted ridge along the middle of the valley [Figure 2]. The valley is drained by two streams fed by water running off the valley sides. A watershed mid-way along the length of the valley separates the Tilla Beck which flows SW in to the river Derwent from Scalby Beck which flows NE along the valley to the sea. In the early 1800s the natural drainage pattern was altered by the construction of an embanked drainage channel called the Sea Cut along the length of the valley. The Sea Cut is a flood alleviation measure taking excess water from the Derwent to the coast via Scalby Beck. Bog iron used in early iron smelting is present in several watercourses towards the south-east part of the farm. In this same area the Chalybeate Spring denotes a location where the water contains salts of iron.

The farm is mainly pasture and covers approximately 70ha (173 acres) of the valley floor bounded by the Sea Cut on the north and the edge of Raincliffe wood on the south. The main house and ancillary agricultural buildings are elevated above the valley floor on the SW end of the glacial ridge.



Figure 2.
Terrain model
showing the
topography of the
farm and the two
sites investigated in
2022. Contours at
1m interval.

1-double-ditch
cropmark
2-enclosure.

Map contains public
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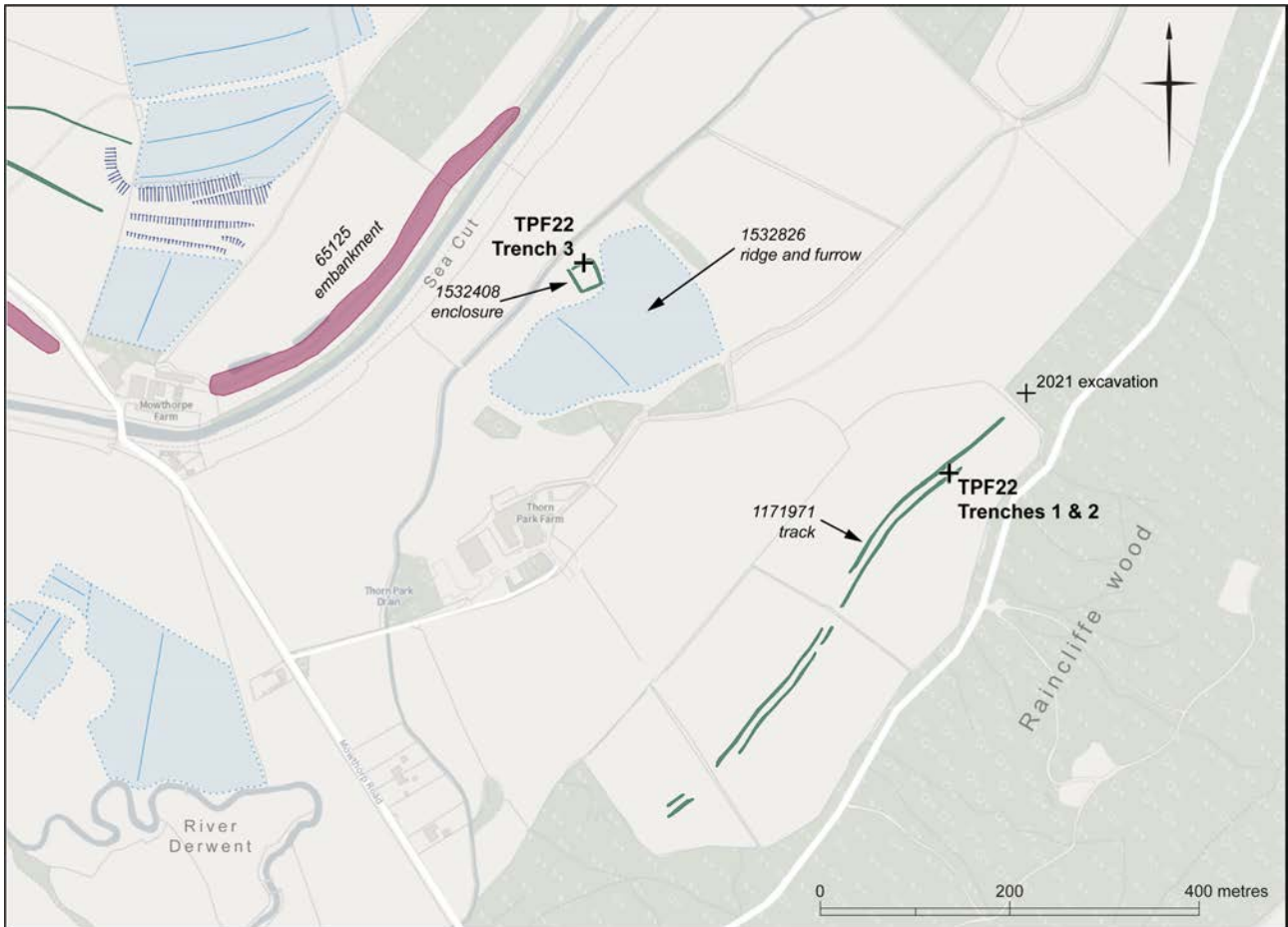


Figure 3. Location of the 2021 & 2022 SAHS excavations and sites recorded by Historic England.

2.2 Archaeology

The Historic England Aerial Archaeology Mapping Explorer records four monuments within or near the farm [Figure 3]. These are:

- Monument Number 1171971 - the linear cropmark investigated in April 2022 consists of a parallel pair of ditches about 6.8m apart aligned north-east to south-west along the valley for a distance of 560m near to the south-east boundary of the farm. A short length of this same feature possibly exists as an earthwork to the south-west in Raincliffe wood (SAHS Raincliffe Gazetteer feature no. 71). The north ditch was located by the SAHS using an auger in November 2020 at a point approx. 240m from the south-west end of the cropmark. Historic England interpret the feature as a trackway of possible Iron Age or Roman date.
- Monument Number 1532408 - the earthwork of the square enclosure investigated in October 2022 was recorded from aerial photography as measuring 23m x 25m with a possible entrance at the north-west corner. Historic England interpret the site as a stock enclosure of possible medieval or post-medieval date.
- Monument Number 1532826 - Historic England recorded an area of medieval ridge and furrow ploughing from aerial photography within the north boundary of the farm.
- Monument Number 65125 - a substantial 1760m long bank that fringes the foot of the north-west side of the valley 150m to the north of Thorn Park. Reduced in length since it was first depicted on the Ordnance Survey 1:10560 scale map of 1854 with the label 'Old Embankment.'

Historic England note aerial photographic evidence that it is overlain by medieval ridge and furrow ploughing at its NW end though previously it had been interpreted as contemporary with the construction of the Sea Cut.

The farmer retains three metal axe heads of Bronze Age date discovered at different locations on his land while other chance finds of Bronze Age metalwork have come from further along the valley to the NE of the farm as follows:

- a palstave was found at Southbeck House (Formerly Greenways) in the late 1940s 1.15 miles from the farm (Rutter 1973, 42).
- the Portable Antiquities Scheme holds records for two axes found by a detectorist to the north of the Sea Cut in 2008
- Scarborough Museum has an undecorated flanged axe described as 'from Scalby Beck' (Rutter 1956, 12-3).

Other finds made by the landowner at the farm include several sherds of Roman pottery, a stone axe head and a quern stone.

2.3 History

In the middle ages the side of the valley north of the Tilla Beck was held by Whitby Abbey while the land to the south including the site of Thorn Park Farm was part of the manor of Seamer held by the Percy family for much of the middle ages (McGeown 2015). The earliest description of the boundary of the lands of Whitby Abbey dates to the late 11th or early 12th century and describes it crossing a 'mosam' (meaning swampy or boggy ground) where it passed along the Sea Cut valley (Atkinson 1879, 34) suggesting the valley floor had yet to be improved for agriculture. 'Mosam' is probably the origin of the name 'Moises Closes' shown on the 1854 1:10560 scale Ordnance Survey map towards the east end of the Sea Cut valley.

The Percy family had a park in the vicinity of Thorn Park Farm in the middle ages. The evidence is contained in an undated land grant which refers to land lying outside the ditch of the park of Richard de Percy adjacent to the Tilla Beck and near to the Derwent - so towards the west end of the Sea Cut valley and therefore in the area of Thorn Park Farm (Martin 1911, 116). Richard de Percy held Seamer manor in the first half of the 13th century which must therefore be the period of the land grant. In 1735 a list of the fields forming Thorn Park Farm includes the names Low Lawn, Middle Lawn and Upper Lawn. Totalling just over 15 acres it is possible that the 'Lawn' element in these three field names derives from the medieval 'laund' indicating an area of woodland pasture, or more specifically pasture where deer were hunted - the latter providing a credible link between the documented medieval park and the post-medieval farm.

A 13th century document refers to a route called the 'Cuntesti' leading from Seamer in the south via Raincliffe to Hackness in the north (Martin 1911, 141-2). The precise direction of the route is not known but it must have passed close to, if not across, the area of the farm en-route north to Hackness. The name of the Cuntesti survived to appear on the 1854 1:10560 Ordnance survey map as 'Cunsey Gate' and is one of a number of different routes descending the south side of the valley which were recorded as part of the SAHS archaeological survey of Raincliffe wood. The name 'Cuntesti' may mean 'steep cow path' and collectively these routes demonstrate that the valley floor was closely integrated into the wider landscape in the medieval period presumably as pasture for Seamer and adjacent villages to the south of Raincliffe.

The existing farm appears to date to the late 18th or early 19th century with the following buildings recorded by Historic England:

HE no. 529984	late 18th century public house
HE no. 529985	early 19th century cart shed
HE no. 529986	early 19th century granary
HE no. 529987	early 19th century stable
HE no. 529988	early 19th century barn
HE no. 529989	early 19th century cow house
HE no. 529990	early 19th century cow shed

3. The 2022 Excavation

The principal aim of the excavations at Thorn Park Farm in 2022 was to establish the form and date of the two sites recorded by Historic England from aerial photography.

3.1 The double-ditch cropmark

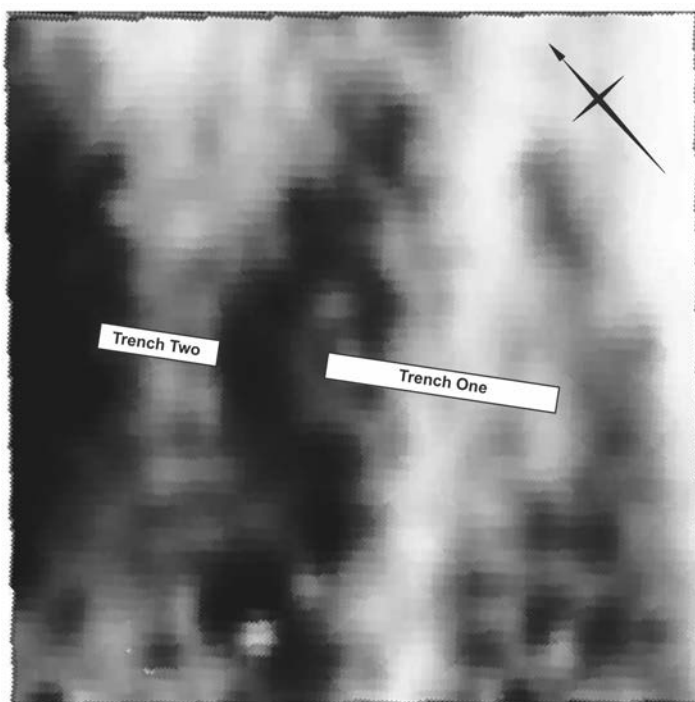
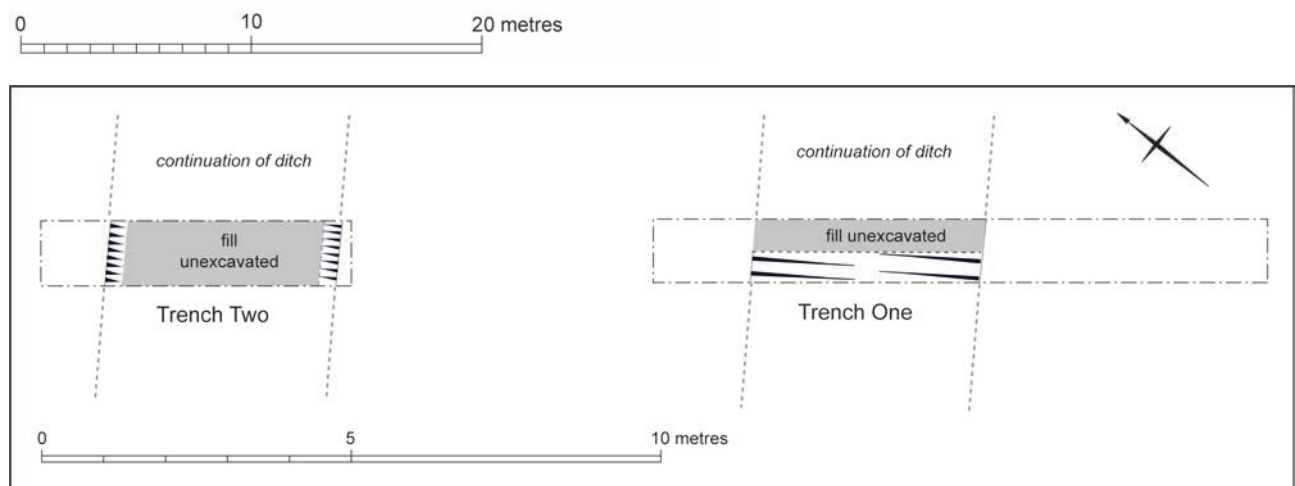


Figure 4. (left)
Plot of a 30m geophysics grid square showing the location of the two trenches in relation to the linear anomalies indicating the double-ditch feature.

Figure 5. (below)
Plan of the two trenches across the double-ditch feature.



The excavation

One trench was positioned across each of the two linear features defining the cropmark at a point where a geo-referenced geophysical survey by the SAHS in April 2022 clearly showed both features [Figure 4].

Both trenches were orientated SE-NW in order to intersect the cropmark at right angles. Trench One across the south cropmark measured 10m x 1m while Trench Two measuring 5m x1m intersected the north cropmark [Figure 5]. The results of the excavation confirmed that both cropmarks were formed by a ditch neither of which was visible on the surface as an earthwork. The south ditch was excavated to its full depth along half the width of the trench but due to lack of time the excavation in Trench Two ceased once the sides of the north ditch had been defined in plan.

The south ditch in Trench One (F101) was 3.4m wide and 1.2m deep overlain by a 0.2m thick topsoil (layer 100). The ditch was cut into a bright orange/brown sandy subsoil changing to a more clayey consistency towards the base [Figures 6 and 7]. The ditch sides were clearer in section than in plan consequently the top half of the ditch was deliberately over-dug in order to define the profile in the side of the excavation trench. The information this provided enabled the bottom half of the ditch to be emptied of fill up to, but not beyond, the true edge.

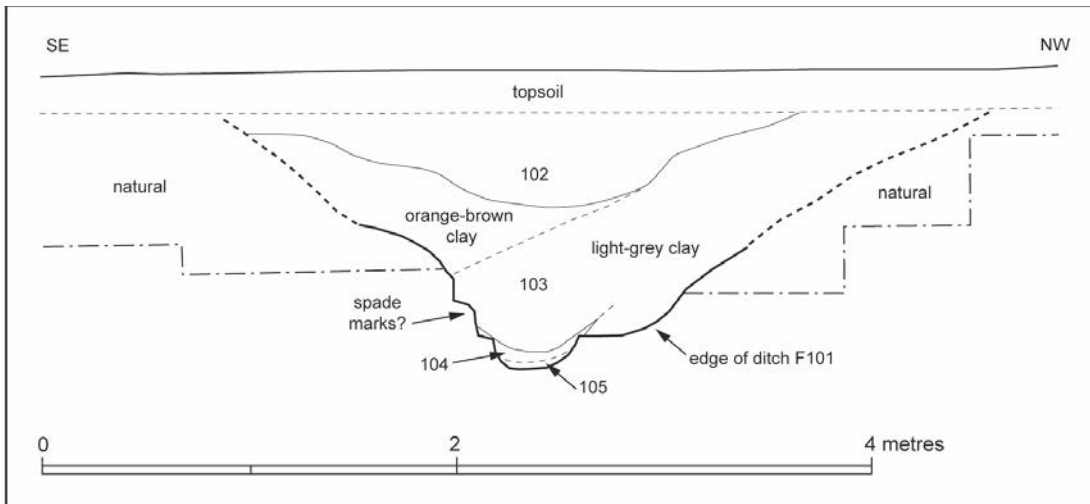


Figure 6. (above)
SW section across the south ditch (F101) in Trench One.

Figure 7. (below)
Rectified image of the SW section across the south ditch in Trench One (Imagery G. Davies).



Figure 8.
Possible spade marks in the side of ditch F101.

The ditch was notably steeper on the SE side compared to the NW and was quite clearly marked by slight steps or scoops towards the base which were interpreted as possible spade marks preserved by the clayey subsoil at this depth [Figure 8].

The bottom of the ditch was filled by a thin deposit of stone-free grey clay (layer 105) merging into a more silty grey-coloured deposit above (layer 104) which together were no more than 0.08m thick. This was overlain by a thick compacted deposit of light-grey silty clay (layer 103) which sloped from the NW side of the ditch suggesting it had accumulated from that direction. This changed to become a more mottled orange/brown colour towards the SE side of the ditch. A much less compact grey-brown loam (layer 302) formed the upper fill of the ditch.

The partial excavation of the north ditch (F201) in Trench Two indicated it was around 3.8m wide and 6.8m from the south ditch. The north ditch contained the same upper deposits as the south ditch though the excavation was suspended after the removal of layer 202 (the equivalent of layer 102) leaving a deposit of light-grey silty clay (the equivalent of layer 103) *in-situ*.

Finds

No finds of any note came from the ditches excavated in Trenches One and Two. A sample from the bottom of the ditch in Trench One (layer 105) was processed to recover organic matter using both flotation and sieving. The sample gave no flot fraction while the sieved fraction revealed wood fragments and a few possible sedge seeds.

Interpretation

The interpretation offered by Historic England that the two ditches defined a trackway remains a strong possibility although the depth and width of the features appear excessive if their only purpose was to define the edges of a track. In the area of the excavation the feature follows the top of a slight rise with naturally wetter, low-lying ground to the south - an alignment which is consistent with that of a track avoiding a marshy area.

An alternative interpretation is that the feature is the remains of a double-ditch linear boundary. As will be discussed below (Section 4) several linear boundaries start at the crest of the slope defining the south-east side of the Sea Cut valley and continue southwards towards the flat lands of the Vale of Pickering. They are considered to be prehistoric land divisions dating to the Late Bronze Age.

3.2 The enclosure

The Excavation

The enclosure is at the foot of the north side of a glacial ridge at a height of around 40m OD. The ground drops away to the north of the enclosure to the field boundary and a deep drain which here carries the Tilla Beck [Figure 9]. The slight earthwork was mapped during the excavation using a survey grade GNSS satellite receiver. The survey established that the enclosure is roughly square measuring 28m NE-SW and 26m across, confirming the shape and dimensions previously recorded from aerial photography by Historic England. However no evidence was noted on the ground for the entrance at the NW corner mentioned in the Historic England description and as depicted on their plot.

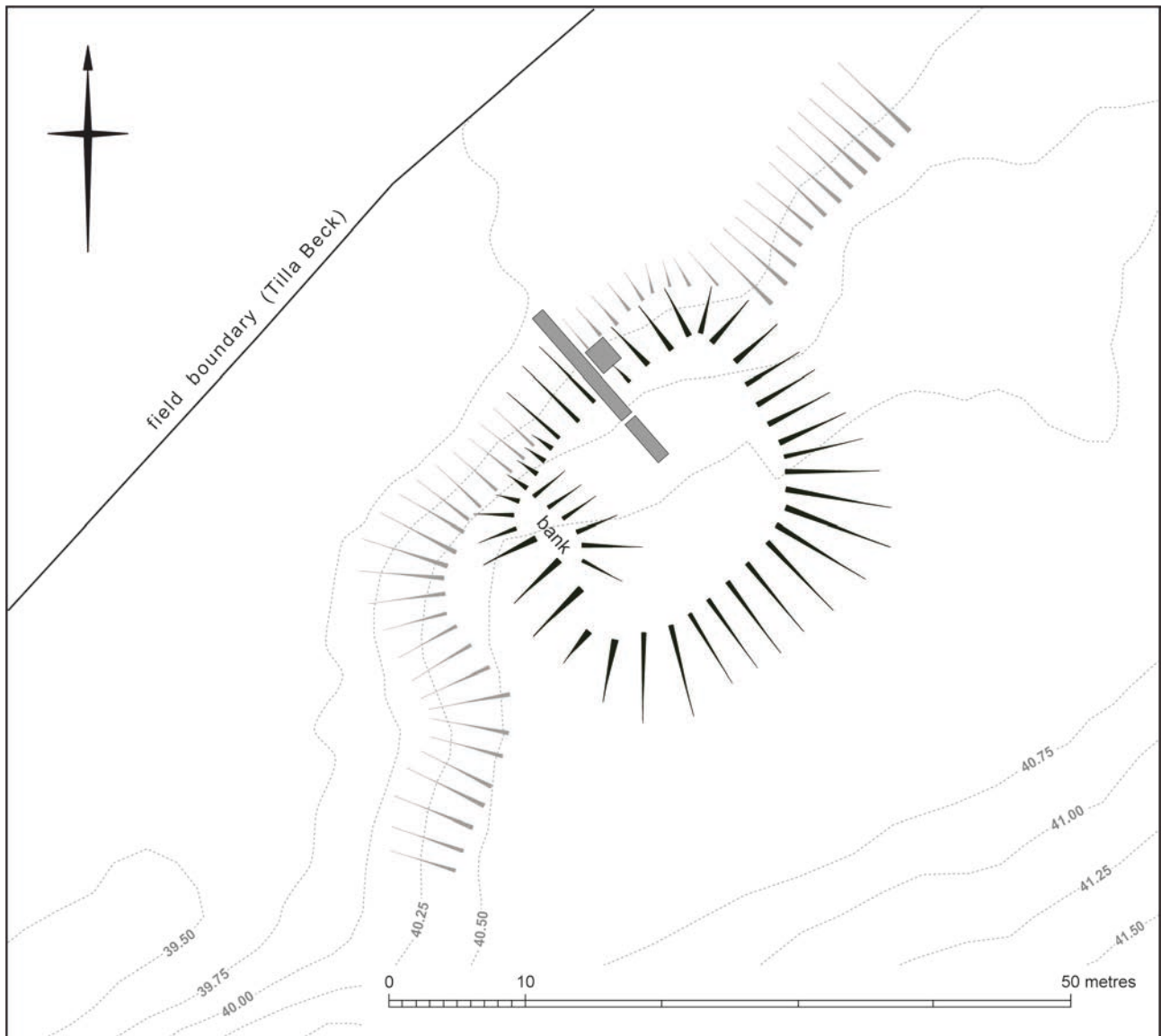


Figure 9.

Earthwork plan of the enclosure showing the location of Trench Three. Grey hachures represent the natural slope and black hachures indicate the enclosure earthwork. Contours at 0.25m interval.

A single trench measuring 14m x 1m was excavated across the NW side of the enclosure revealing a section of the perimeter ditch [Figure 10]. An extension measuring 2m x 1.7m was added to the NE side of the trench to increase the length of excavated ditch to a total of 3m. The main trench and the extension are collectively referred to in this report as Trench Three. The ditch (F304) was 1.1m wide and cut into natural clay to a depth of 0.8-0.9m. The ditch was steep-sided with a 'U'-

shaped profile [Figure 11]. The SE side of the ditch was quite faceted suggesting it had been more hastily dug compared to the opposite side which was quite uniform. Several small circular depressions at the bottom of the ditch may indicate where upright timber posts were seated. A thin layer of grey clay and patches of charcoal occupied the base of the ditch (layer 305) along with one large stone which may have been packing at the base of a post [Figure 12]. Overlying layer 305 and filling the ditch was a compacted clayey soil (layer 302). The ditch was covered by a 0.2m thick subsoil and 0.1m thick topsoil.

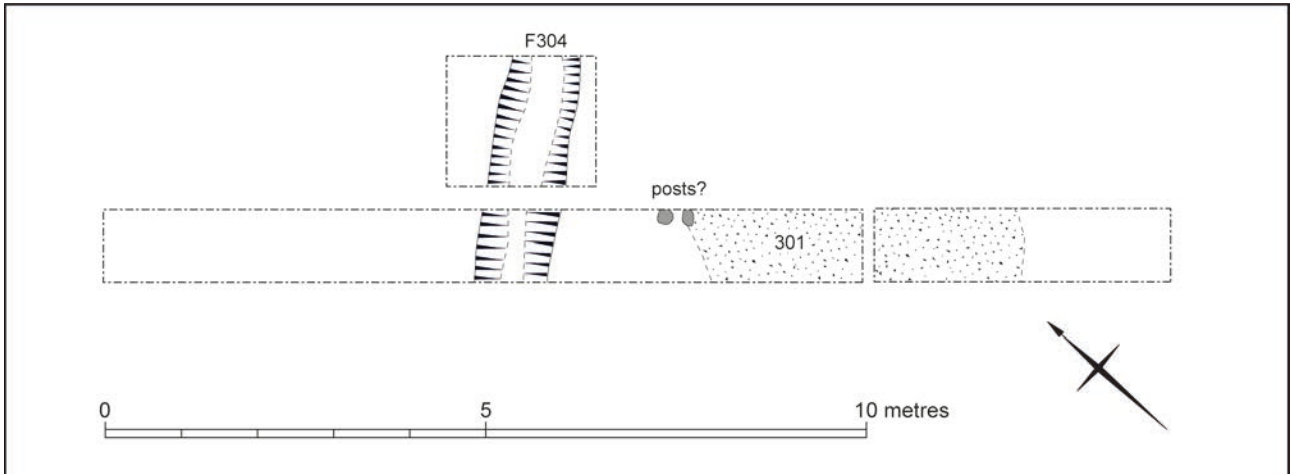
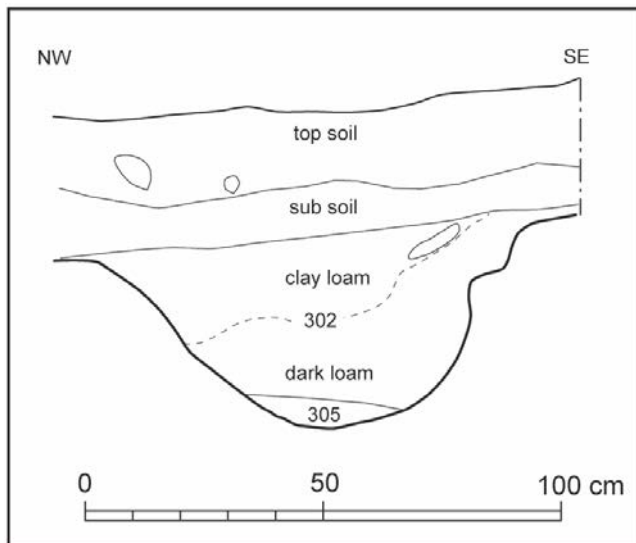


Figure 10. Plan of Trench Three.



The remainder of Trench 3 was entirely devoid of cut features. A thin layer of burnt pebbly stone in dark loam with flecks of charcoal began 3m from the SE edge of the ditch and extended for 4.3m into the interior of the enclosure (layer 301). Two shallow circular depressions at the SE edge of this layer could indicate the former positions of upright posts. The layer could represent the remnant of an occupation layer spared from later ploughing or it may have been the base of the perimeter bank that creates the earthwork and is most prominent on the SW side of the enclosure.



Figure 11. (above left) NE section of Trench Three.

Figure 12. (left) Possible packing stone for an upright timber post in the bottom of ditch F304.

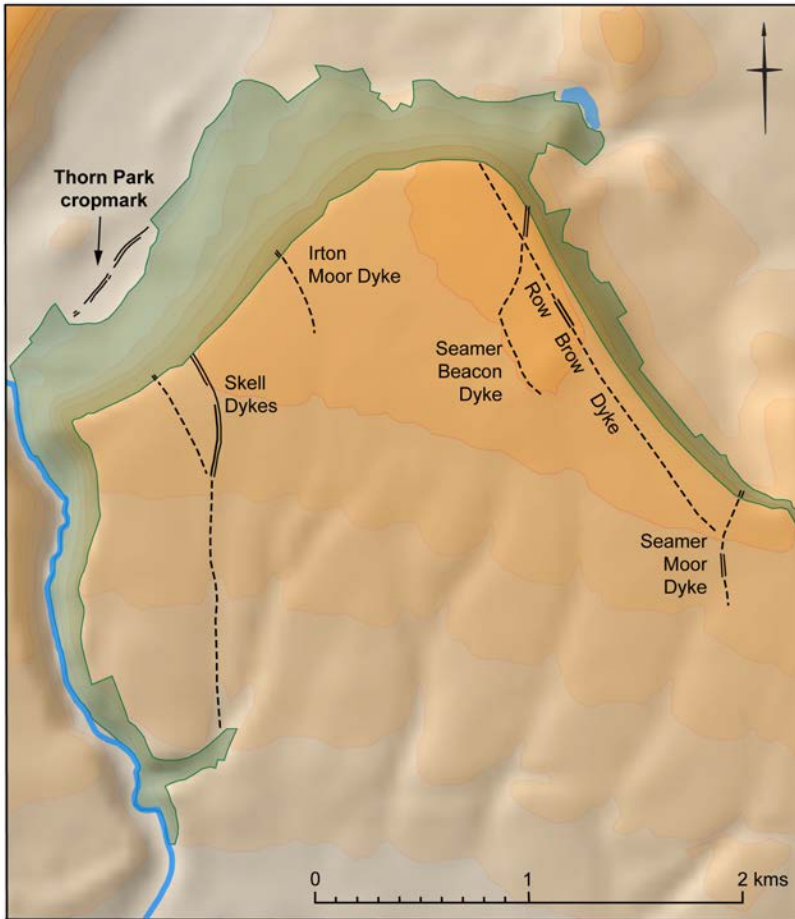


Figure 13.
Map showing the double-ditch cropmark at Thorn Park Farm in relation to known prehistoric linear boundaries SE of the Sea Cut valley.

Finds

Several flint flakes and a possible 'pounding' stone were recovered from the ditch fill (layer 302). A sample from the bottom of the ditch (layer 305) was processed to recover organic matter using both flotation and sieving. The flot sample contained a probable oak leaf and elderberry flowers as well as wood fragments. The sieve fraction contained seeds that are probably elderberry and sedge.

Interpretation

The ditch defining the enclosure is far too narrow to have been defensive and is more likely to have been a trench holding upright timber posts. This could account for the shallow circular depressions in the ditch bottom and possibly also for the large stone which may have formed packing material at the base of a post. The enclosure was therefore probably defined by a wooden palisade fronting an earthen bank that survives as a very reduced earthwork. The ridge and furrow

ploughing on the uphill side of the enclosure as plotted by Historic England appears to respect the enclosure (monument no. 1532826) which suggests that the enclosure predates the medieval cultivation. The discovery of several flint flakes in the backfill of the ditch along with the absence of any later material points to the possibility that the enclosure may be prehistoric in date though these artefacts could be residual so cannot be relied upon as dating evidence. The purpose of the enclosure is uncertain though the absence of any definite occupation material either from the ditch fill or the interior suggests it could have been for corralling livestock or storing agricultural produce.

4. Summary and Conclusions

The 2022 excavation established that both sites preserve archaeological evidence in the form of features cutting the subsoil with organic remains for environmental sampling preserved in the base fills. However little survives above ground at either location - the enclosure is barely visible as an earthwork and any surface evidence of the double-ditch feature has been lost to ploughing. The limited nature of the excavations and the absence of any firm dating evidence means that definite interpretation of the date and purpose of the two sites is not presently possible.

4.1 The double-ditch feature

As was discussed above, the interpretation of the feature as part of a route hugging the edge of dry ground is plausible. It could have been a forerunner of the present-day Low Road (sometimes called Lady Edith's Drive) which passes along the valley on the same alignment as the crop mark some 70-80m further to the SE.

The second interpretation to emerge from the excavation is that the cropmark is a linear boundary of possible prehistoric date. Of the prehistoric linear boundaries that survive on the high ground to the SE of the Sea Cut valley, the best preserved is the Skell Dikes which survive as an earthwork for 600m south from the valley top [Figure 13]. From the published profile across a section of the boundary (Rutter 1970, 17-18), the ditches are just over 5m apart with an intermediate bank and a second bank on the exterior of the east ditch. The 2022 excavation found no direct trace of an intermediate bank but the levelling of just such a feature could explain the thick deposit of grey silty clay (layer 103) sloping into the ditch from the NW side. The deliberate levelling of a bank to fill the ditch would be consistent with a phase of agricultural improvement.

The only other boundary known in the Sea Cut valley is the embankment on the opposite side of the valley. The best-preserved section of this earthwork survives as a massive bank several metres high with only intermittent trace of side ditches. The embankment is not dated other than at the NW end Historic England observed on aerial photography that it is overlain by ridge and furrow ploughing so it may well be medieval or earlier in date. While the form of this embankment is very different to the double-ditch cropmark investigated at Thorn Park Farm, the possibility exists that the two features are broadly contemporary and that together they bounded opposing sides of the Sea Cut valley at its west end.

4.2 The cropmark enclosure

The excavation results indicate the site was a small stockaded or palisaded enclosure with an internal bank with no definite evidence of occupation. As was mentioned above, it sits at the base of one of the glacial ridges on a distinct natural platform projecting forwards from the slope towards the Tilla Beck. The ground between the enclosure and the watercourse was probably naturally quite marshy but nevertheless a good location to hold livestock near to a ready supply of water. We can only presume that it did not sit in isolation but was part of a complex of tracks and other enclosures which cannot now be traced on the ground. It is interesting to note that several other possible enclosure of similar shape and dimensions may exist within the farm and beyond. The geophysical survey in April 2022 detected a possible enclosure adjacent to the linear cropmark centered at NGR 498777 488048 (see Appendix One). Google Earth aerial imagery from 2018 shows the faint outline of another possible square enclosure near to the linear cropmark at NGR 498599 487442. A third possible enclosure is visible on the same 2018 imagery further east down the valley at Ox Pasture Hall centered on NGR 500240 489003.

4.3 Future work

The 2022 project at Thorn Park Farm was limited in scale but nevertheless was shaped by broad questions regarding the landscape development of the valley and in particular to understand the context for the Bronze Age metalwork finds and the location and extent of the medieval deer park. The 2022 work has demonstrated that archaeological remains survive on the farm but we are still a long way from having a detailed overview of how the landscape developed despite the indications from the earlier Raincliffe survey of many established routes leading into the valley. The main problem is the ability to detect the archaeology since little survives on the surface or has been observed as cropmarks. Measures to advance understanding could include the following objectives:

- Charcoal samples collected during the excavation from the basal deposits of the double-ditch feature and the enclosure should be sent for radiocarbon analysis as this is the best chance currently exists to establish the date of the two features.
- The embankment on the north side of the valley is an important component of the archaeological landscape and may be the medieval 'Kings Dike'. The monument could be evaluated archaeologically through detailed survey of selected sections and by excavation targeted at recovering samples for scientific dating.
- The possible sites indicated by the geophysical survey results and by Google imagery could be investigated on the ground for surface remains followed up by trial excavations.
- Geophysical survey offers the best method to add detailed understanding to how the landscape has changed and a programme could be initiated to investigate more of the farm in the hope of locating further archaeological features.
- Undertake an analytical survey of the historic buildings noted in Historic England records at Thorn Park Farm (see 2.3 above).

5. Acknowledgements

The 2022 fieldwork at Thorn Park Farm were undertaken by the following members and friends of the Scarborough Archaeological and Historical Society: Marion Adamson, Jan and Martin Bland, Ann and Nigel Clark, Stephen Clothier, Gareth Davies, Louise Emms, Mark Franklin, Stephen Gandolfi, Storme Gathercole, Dawn Haida, Chris Hall, Phil Hibbard, Elaine Jamieson, Tom Manney, Rosie Martin, Dan Normandale, Sue Ogilvy, Mick Panton, Jane Peutrell, Jen Ryan, Robin Siddle, Simon Temlett and Andy Volans.

The farmer, Chris Wilson, is thanked for giving permission for the April and October excavations and for his help and advice. Other workers at the farm are thanked for helping with the logistics and for backfilling the trenches in April. The excavation was directed by Trevor Pearson and supervised by Martin Bland, Chris Hall and Elaine Jamieson who also undertook the walk-over survey of the farm. The geophysical survey was led by Dan Normandale assisted by various members of the field team and with support and advice from Alison Spencer. Robin Siddle and Tom Manney undertook the metal detecting survey and Simon Temlett used a drone for low-level aerial photography. Andy Volans is thanked for preliminary processing of two soil samples and providing a report. Gareth Davies is thanked for moving the tools and also, with Stephen Gandolfi, for drawing attention to possible archaeological features on Google Earth imagery.

The report was written by Trevor Pearson and edited by Chris Hall.

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Thorn Park Farm

Summary of results from geophysical surveys April 2022

Scarborough Archaeological and Historical Society

1. Introduction

Geophysical survey was conducted in April 2022, as part of ongoing archaeological investigations at Thorn Park Farm, near East Ayton, North Yorkshire. Survey was primarily targeted at known features, visible from aerial photography as crop marks in three grassed, grazing fields, adjacent to Low Road and Raincliffe Woods.

2. Methodology

The survey was conducted using an electrical resistance meter (RM Frobisher TAR-3), which injects electrical current into the ground using a pair of probes, spaced 50cm apart horizontally. The resistance to the current flow in the ground below the probes (at approximately a vertical depth of 50 cm) is measured in Ohms and recorded once every metre in grids of 30 metres squared, resulting in 900 readings per grid, unless otherwise specified in this document.

In the context of sub-surface archaeology, infilled features such as ditches typically return lower resistance values, due to relatively higher retained moisture levels which facilitates electrical conductivity - the inverse of resistance. Conversely, structural features, composed of masonry, bricks or similar, will provide a more effective barrier to conductivity, as will air-filled voids, thus returning relatively higher resistance values. Surrounding soils also have distinct resistance signatures, ranging from lower for finer-grained, cohesive clays and silts to higher for coarser-grained sands and gravels. Conditions were dry on all surveys, although surface waterlogging precluded further survey on April 3. Drier surface conditions were available on April 22-24 when the majority of survey was conducted.

The resultant resistance values were saved to micro-SD card and uploaded to Snuffler, a freeware survey analysis tool. Numerical results from each grid were converted to greyscale images, individually scaled to accentuate relative differences in values and identify any distinguishable anomalies, which may signify archaeological features. In all images, white denotes lower resistance values grading to black for higher resistance values.

3. Results

Figure 1 provides an overview of survey results from April 2022, annotated with the known feature of a 'double ditch' identified from aerial photography on Historic England's Aerial Archaeology app <https://historicengland.maps.arcgis.com/apps/webappviewer/index.html?id=d45dabecef5541f18255e12e5cd5f85a>

Note that only those grids which have been georeferenced to GNSS have been included in this report. This includes all grids surveyed on April 3 and 22-24. The location and numbering of these grids are shown in Figure 2. Subsequent figures and further sections of this text refer to these grid numbers.

Previous resistance survey on March 6 as well as magnetometry survey results from the same day have been omitted due to lack of georeferencing, although these surveys did provide valuable geo-intelligence for deciding on the optimal locations for April's surveys.

Also discounted, were a small number of grids surveyed using a wider separation of probes (1 metre spacing) on the TAR-3. The results were analysed as invalid for reasons still to be fully determined.

The grids discussed in this summary were clustered in 3 areas and detailed findings are discussed in Section 4.

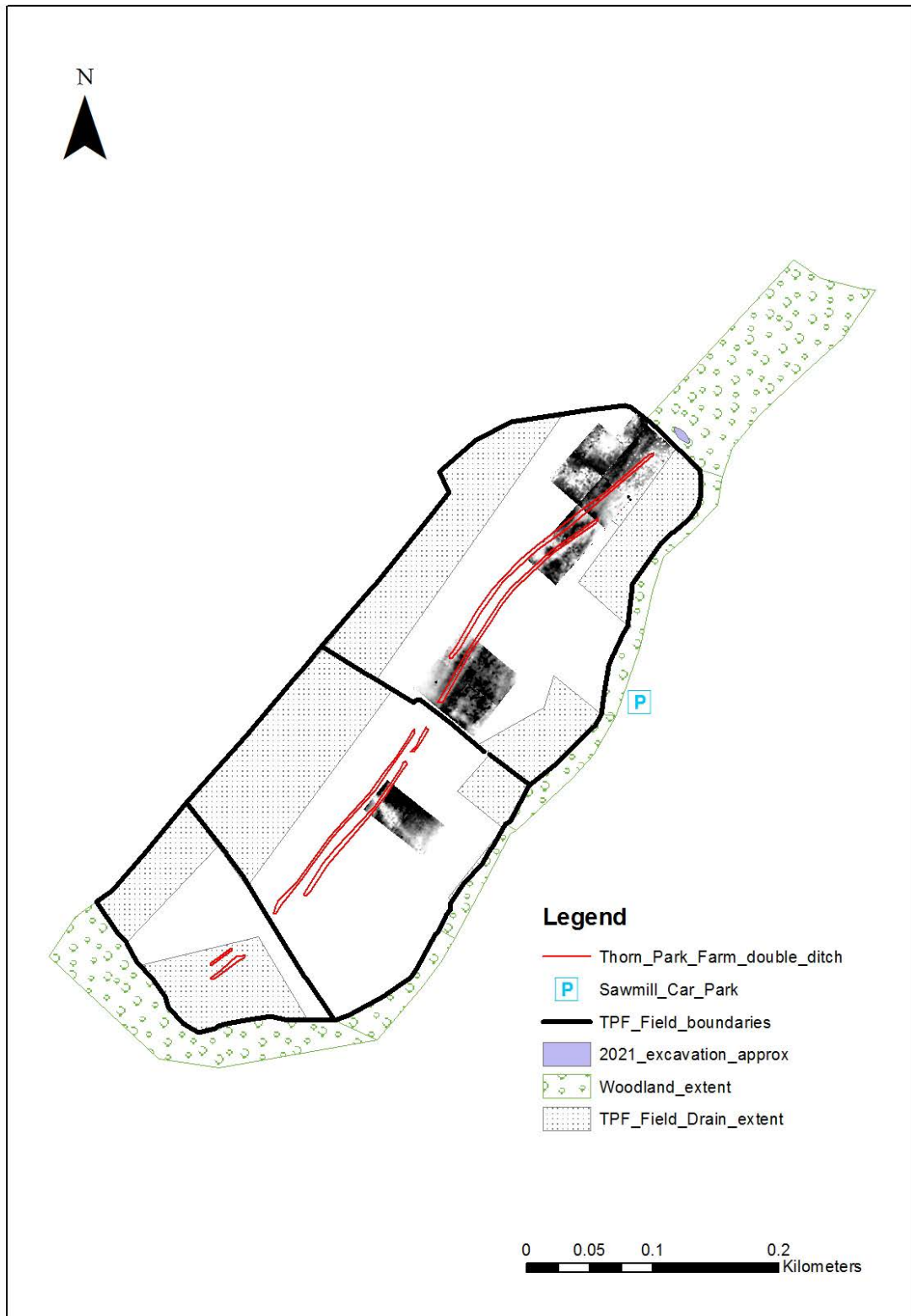


Figure 1 – Overview of geophysical survey grids - white denotes lower resistance values grading to black for higher resistance values; additional annotation includes the plotted location of the ‘double ditch’ feature (in red) and approximate location of installed sub-surface field drains (stippled), as provided in sketch format by Peter and Chris Wilson.

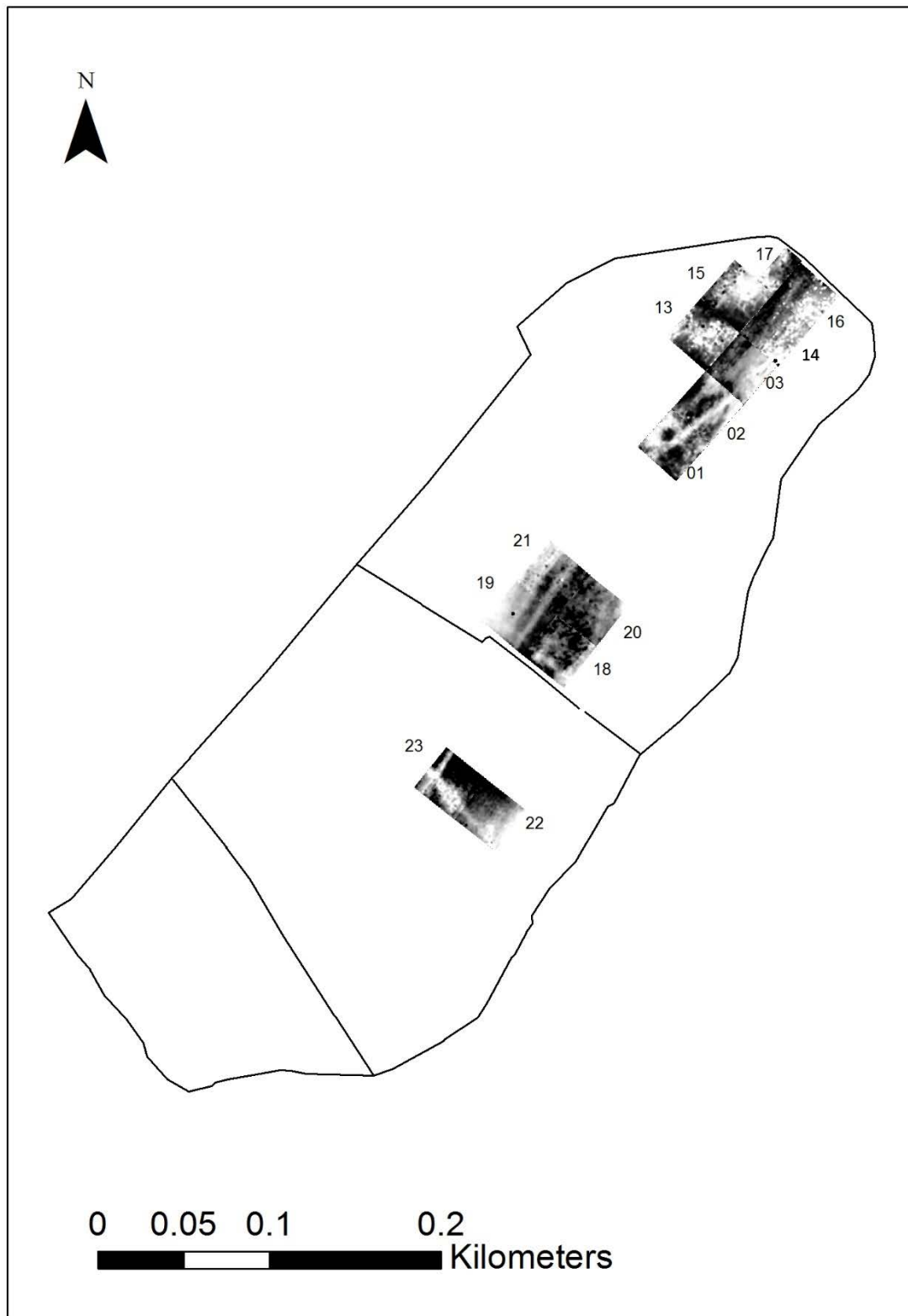


Figure 2 – Location and numbering of geophysical survey grids referred to in this summary. Field boundaries shown as black line.

4. Discussion

a) Grids 01-03 (April 3) and 13-17 (April 22-23) – see Figures 3 and 4

Both of the parallel ditch features were detected as continuous linear anomalies of lower resistance values, matching the overall mapped extent of the ditches.

There do not appear to be any distinguishable anomalies in proximity (i.e., extending beyond the double ditch) to the 2021 excavation site in the adjacent woodland (approximate location annotated on Figure 3).

Recent works to alleviate waterlogging in the footprints of Grids 14 and 16, by way of 'flat lifting' the clayey topsoil have also left a distinctive lower resistance response, adjacent to the easternmost limit of the longer ditch feature.

Note the proximity of the field drainage network in Figure 3, which will affect the results of any further survey in this area.

Hand dug pits from metal detecting sweeps on April 22 are discernible from high resistance 'holes' in the data, due to the unconsolidated, void-ridden backfill. A red dot in Grid 03 denotes an invalid value in the data.

Grids 16 and 17 are reduced in size from the standard 30 metre square grids, due to proximity to fencing and woodland. Grid 16 was 30 x 25 metres and Grid 17 was 25 x 12 metres.

The georeferenced location of the two excavation trenches from April 22-24, in relation to the geophysical grid results is illustrated in Figure 4.

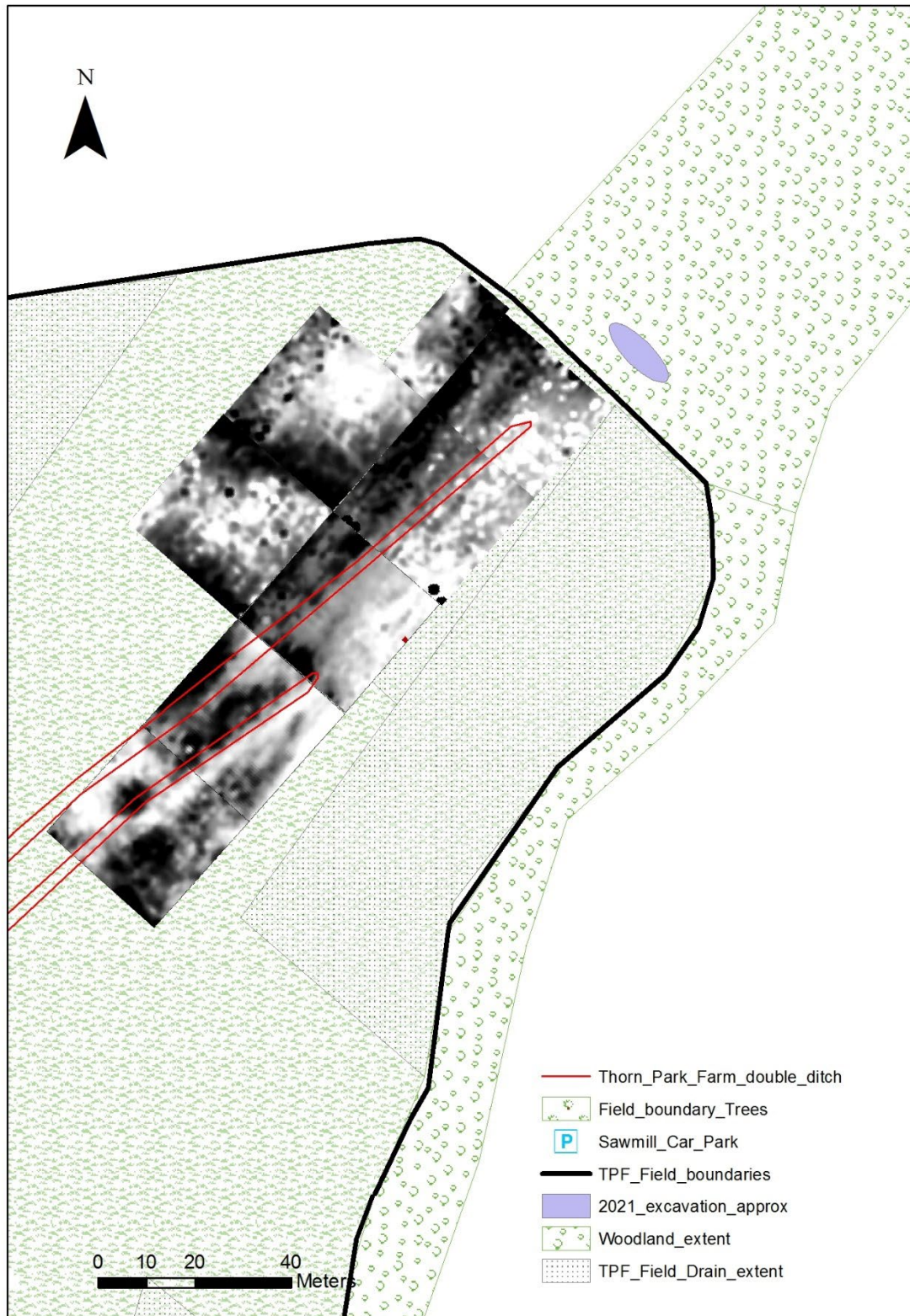


Figure 3 – Grids 01-03 and 13-17 - white denotes lower resistance values grading to black for higher resistance values; additional annotation includes the plotted location of the ‘double ditch’ feature (in red) and approximate location of installed sub-surface field drains (stippled), as provided in sketch format by Peter and Chris Wilson.

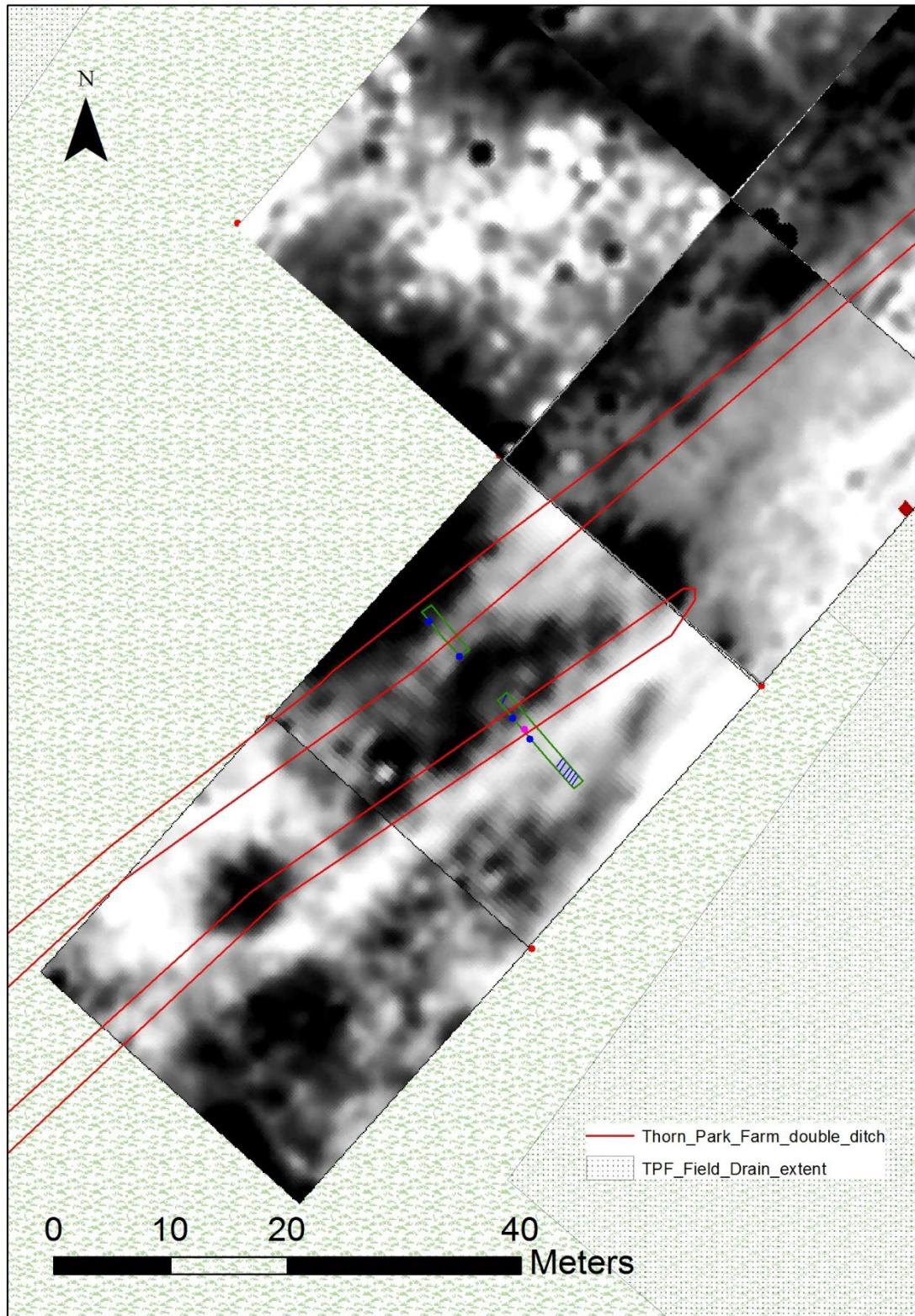


Figure 4 – Location of 2 no. excavation trenches (in green and blue) in relation to Grid 02 and the mapped position of the cropmark, in red, denoting the double ditch feature.

b) Grids 19-21 (April 24) – see Figures 5 and 6

These grids were positioned in this location following the results from non-georeferenced survey on March 6th. On that occasion, diagnostic responses (lower resistance) were captured for the double ditch feature, coincident with their aerially mapped extent. On April 24, these features are again distinguishable, although the shorter ditch feature response is somewhat lost in a wider spread of lower resistance values.

In Figure 6, a possible rectilinear feature has been highlighted in yellow. It lacks sufficient definition to be interpreted any further and there is no corroborating evidence from aerial photography. A more detailed re-survey, with increased readings per metre may provide further definition.

Again, note the proximity of field drainage networks in Figure 5 which will impact on the results of any further survey work in these locations.

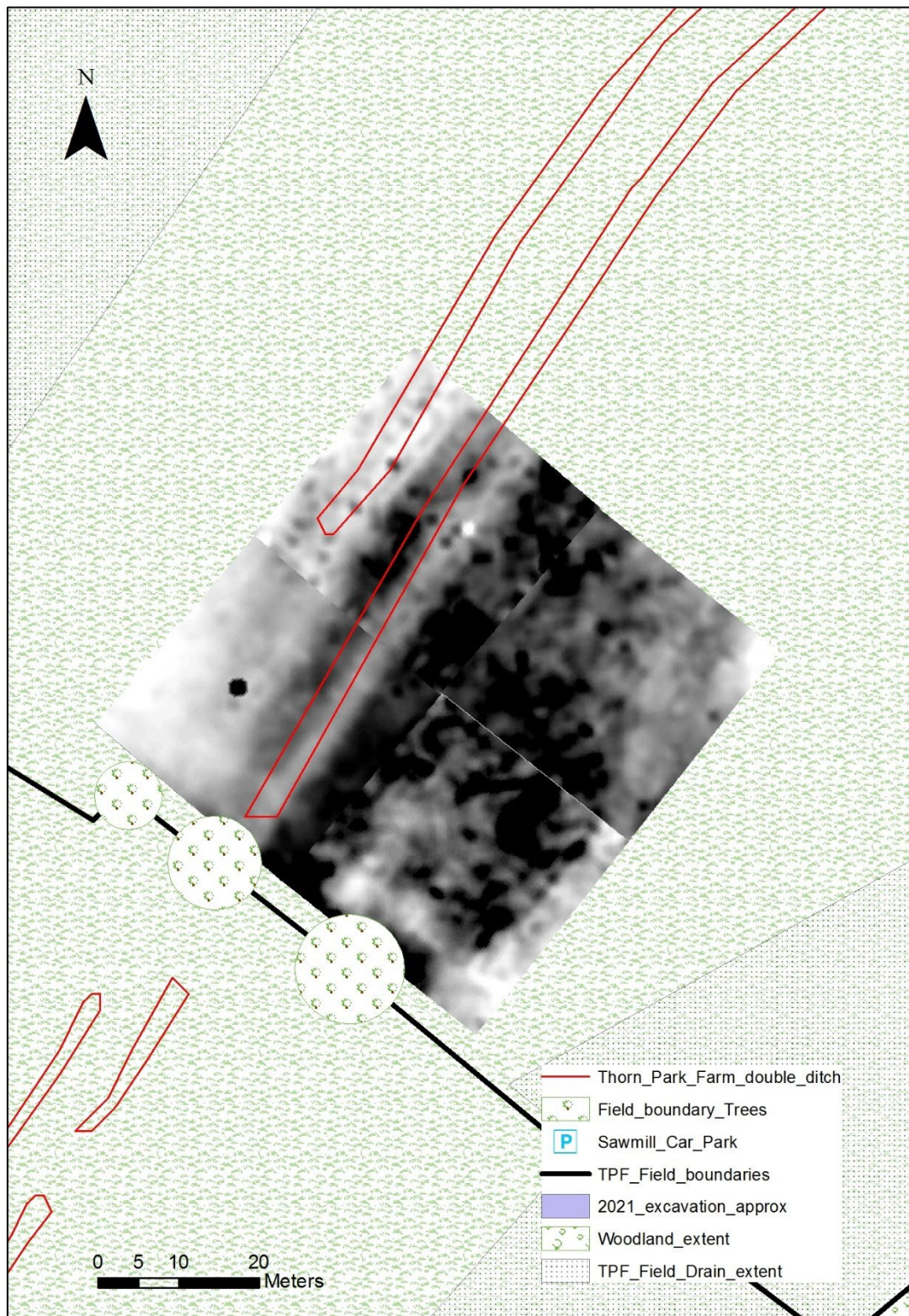


Figure 5 – Grids 18-21 - white denotes lower resistance values grading to black for higher resistance values; additional annotation includes the plotted location of the ‘double ditch’ feature (in red) and approximate location of installed sub-surface field drains (stippled), as provided in sketch format by Peter and Chris Wilson.

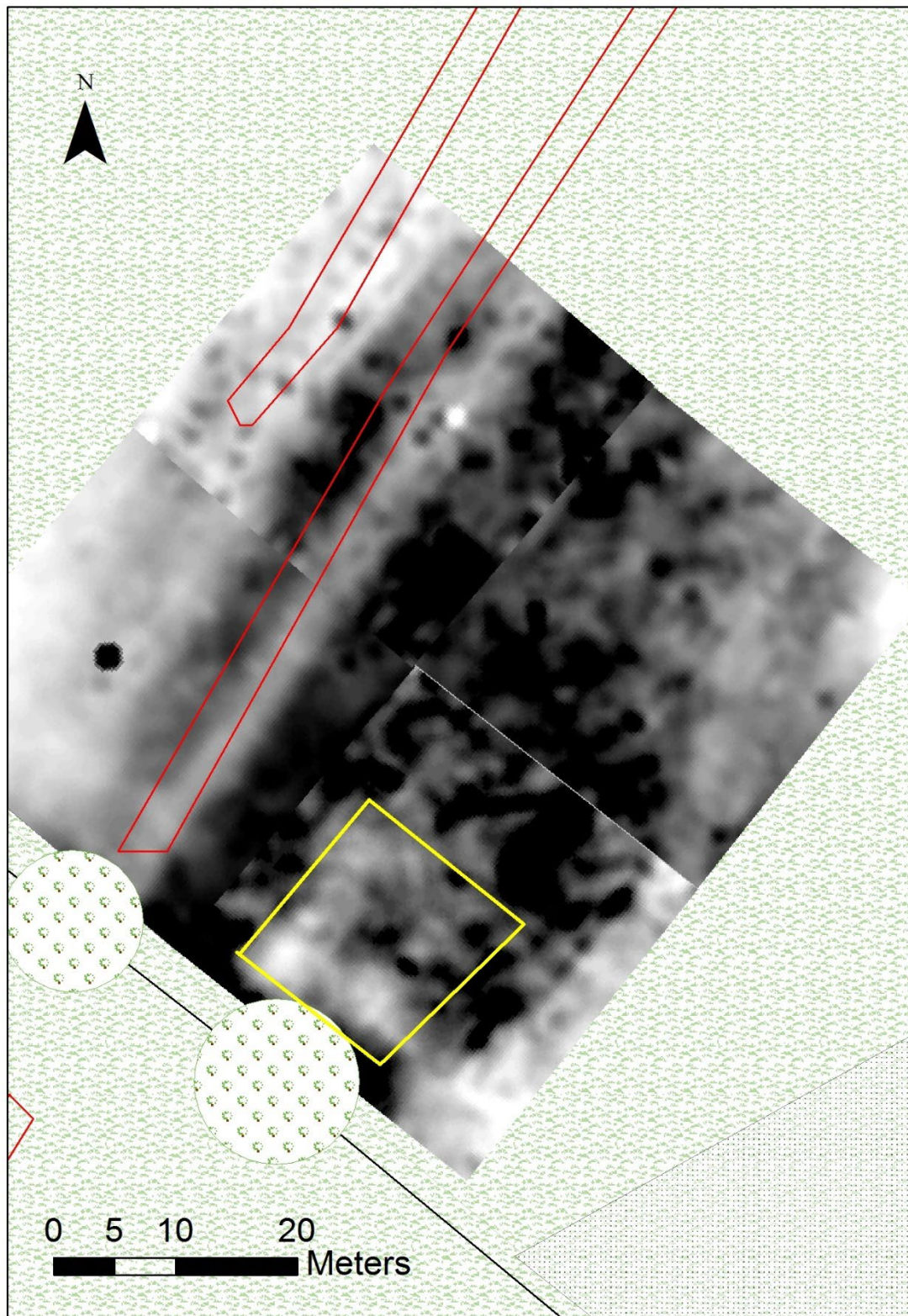


Figure 6 – Possible rectilinear feature highlighted in yellow within Grid 18; white denotes lower resistance values grading to black for higher resistance values.

c) Grids 22-23 (April 24) – see Figures 7 and 8

Survey was carried out in the adjacent field on April 24 for the purpose of investigating a faint cropmark, shown on Google aerial photography from 2018, of a possible square enclosure.

This feature was not detected, however, a substantial linear, lower resistance, anomaly was identified, as highlighted in yellow in Figure 8. This anomaly trends south-east to north-west along the entire length of the two grids (60 metres total), with a maximum lateral width of 9 metres. It intersects, in plan, with the southernmost of the double ditch features.

Given the similar resistance value ranges to the known ditch feature, this new anomaly is tentatively interpreted as an infilled artificial ditch feature, which is cut or cuts the double ditch feature. Given the potential for a chronological relationship between the two, further intrusive investigation is suggested. Wider geophysical survey is also recommended to establish the further extent of this anomaly and where there are further associated possible features.

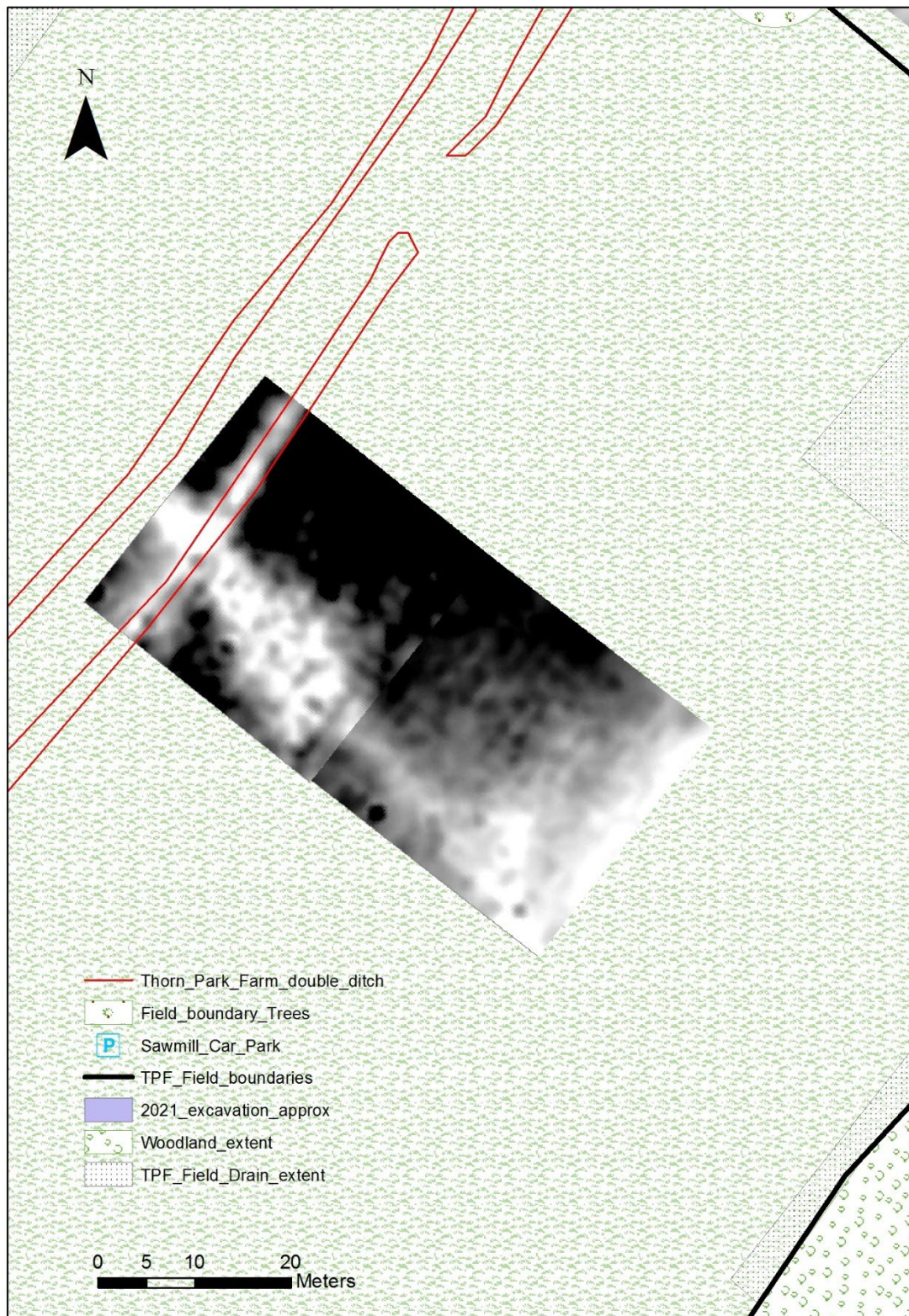


Figure 7 – Grids 22-23 - white denotes lower resistance values grading to black for higher resistance values; additional annotation includes the plotted location of the ‘double ditch’ feature (in red) and approximate location of installed sub-surface field drains (stippled), as provided in sketch format by Peter and Chris Wilson.

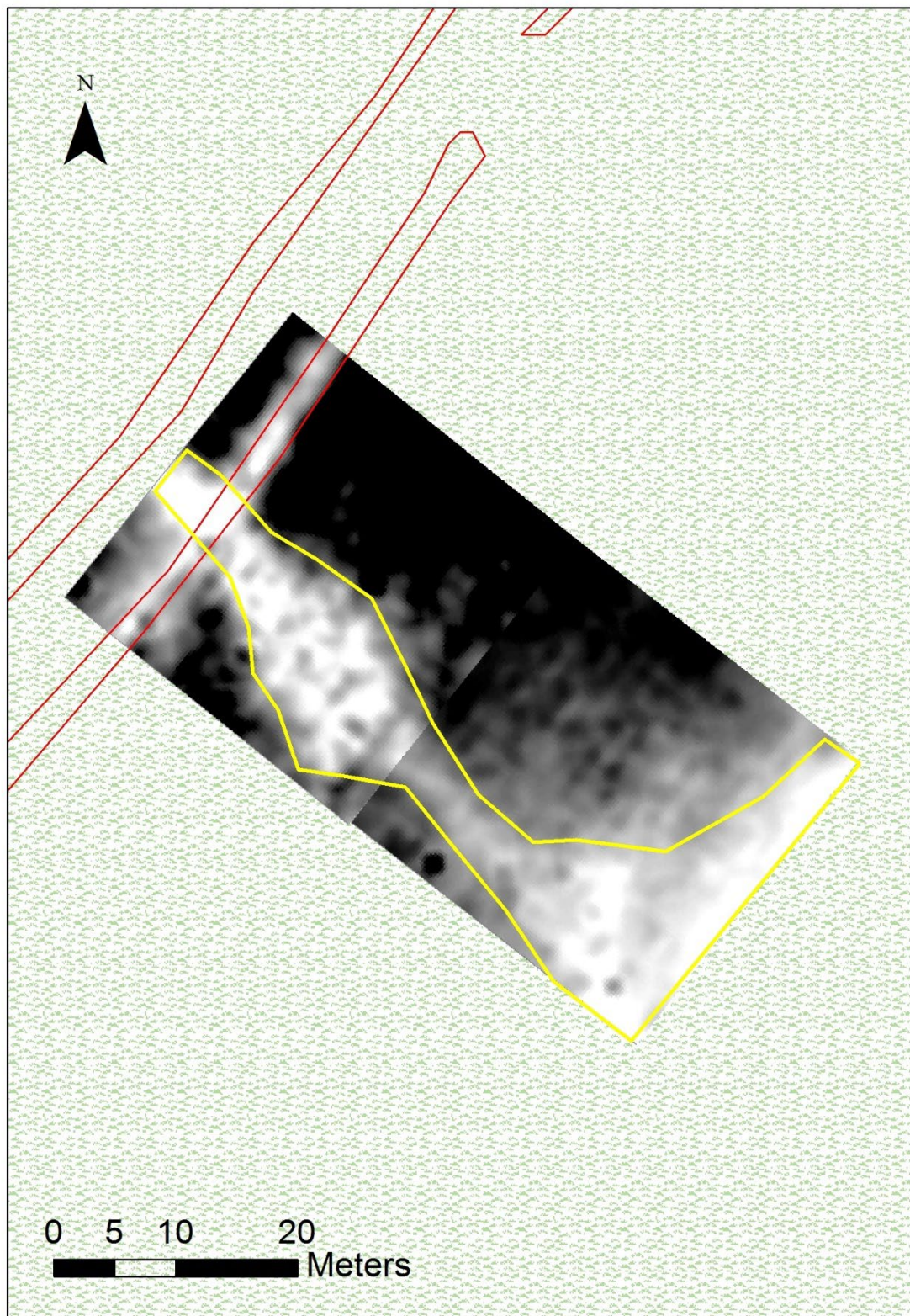


Figure 8 – Possible rectilinear feature highlighted in yellow within Grids 22-23; white denotes lower resistance values grading to black for higher resistance values.

5. Conclusions

Geophysical survey using electrical resistance has positively confirmed the sub-surface persistence of a double ditch feature, thus corroborating aerial photography crop mark evidence. Additionally, a previously undetected linear feature has been identified in an adjacent field, interacting in some way with the known double ditch feature. A second, more tenuous rectilinear feature has also been flagged for further survey.

Further targeted survey is recommended for the purpose of establishing the fuller extent of the linear feature and any other features which may similarly flank the double ditch feature. Any further survey must take account of the fact that significant areas of the three fields have been disturbed in recent times to install field drainage runs. However, by definition these are situated in the lower elevation extents of the site and consequently are less likely to yield archaeological features of interest, in relation to the higher ground where the double-ditch feature is situated.

6. Acknowledgements

The indefatigable efforts of SAHS field team in completing these surveys is greatly appreciated, especially in the face of occasionally faltering technology, snapping ropes, and a liberal sprinkling of cowpats. Thorn Park Farmers Chris and Peter Wilson are also thanked for imparting knowledge of their field drainage endeavours.

Dan Normandale

SAHS

27 April 2022

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