

Upper Farm
Tiffield
Northamptonshire



Ridge and Furrow Earthwork Survey

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Land at Upper Farm, Tiffield, Northamptonshire. Ridge and Furrow Earthwork Survey and Assessment.

List of Contents

1	INTRODUCTION.....	1
1.1	PROJECT DETAILS AND BACKGROUND.....	1
1.2	LOCATION, TOPOGRAPHY AND GEOLOGY.....	1
2	SURVEY AND ASSESSMENT METHOD.....	1
2.1	INTRODUCTION.....	1
2.2	SOURCES CONSULTED.....	1
2.3	LEGISLATION, GUIDANCE CONSULTED AND CRITERIA APPLIED.....	2
2.4	KNOWN HISTORICAL BACKGROUND TO THE FIELD SYSTEM.....	2
2.5	SITE EARTHWORK WALKOVER SURVEY.....	3
2.6	ANALYSIS OF THE WIDER FIELD SYSTEM USING GOOGLE EARTH AERIAL PHOTOGRAPHS AND LiDAR.....	3
2.7	ASSESSMENT OF SIGNIFICANCE.....	4
3	CONCLUSION.....	5
4	BIBLIOGRAPHY.....	7

List of Figures

- Figure 1 Site location
Figure 2 Interpretative hachure plot of the earthworks on the site.
Figure 3 LiDAR plot of the earthworks on the site
Figure 4 Potentially earlier field system underlying the ridge and furrow.

List of Plates

- Plate 1 Extant ridge and furrow earthworks, looking east.
Plate 2 Extant ridge and furrow earthworks, looking west.
Plate 3 Extant ridge and furrow earthworks curving into an inverted 'S' looking north.
Plate 4 Southern boundary of the site.
Plate 5 Bunded bank of the main pond, and the probable concrete pond liner.

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1 INTRODUCTION

1.1 Project details and background

1.1.1 Oxford Archaeology (OA) was commissioned by Urban Infill, to undertake an earthwork survey, and assessment of the significance of ridge and furrow earthworks on their client's land at Tiffield, Northamptonshire. The assessment is being undertaken to inform whether the significance of the ridge and furrow would prevent the field being used for the deposition of excavated materials from a proposed adjacent development.

1.2 Location, topography and geology

1.2.1 The field containing the ridge and furrow lies immediately to the west of Upper Farm, Tiffield, between the main road (Tiffield Road), and the farm, at c125m above Ordnance Datum. The centred grid reference for the site is SP 70108 52377, and its boundaries are shown on Figure 1.

1.2.2 The site lies in grass and contains ridge and furrow earthworks across it. It lies in a comparatively undulating landscape that rises to broad irregular hills to the north east and east. To the south and west the land drops gradually towards a tributary of the River Tove.

1.2.3 The solid geology of the site is Limestone (Wellingborough Limestone Member) and the superficial deposits are not recorded (British Geological Survey website <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>).

2 SURVEY AND ASSESSMENT METHOD

2.1 Introduction

2.1.1 In order to assess the relative importance of the ridge and furrow earthworks, the earthworks on the site were examined by the use of LiDAR and Google Earth aerial photography. The earthworks were also examined in the context of the wider landscape. The results of this assessment were then examined, confirmed and expanded upon during a ground field visit.

2.2 Sources consulted

2.2.1 The initial phase of work involved consultation with, and examination of:

- The 2m interval LiDAR tile DTM SP7052, manipulated for multiple hillshading, simple local relief modelling, slope gradient and anisotropic sky-view.
- The Google Earth (GE) website, for aerial photographic images of the area from 1945 to 2010.
- The historic Ordnance Survey maps at 6" to the mile from 1884 to 1952.

2.2.2 A full list of the sources consulted are included in Appendix 1, key sources included:

- Her Majesty's Stationery Office (HMSO), 1982. An Inventory of the Historical Monuments in the County of Northamptonshire, Volume 4, Archaeological Sites in South-West Northamptonshire. London.
- David Hall, 1995. The Open Fields of Northamptonshire. Northamptonshire County Council

2.2.3 The online archive of Northamptonshire Record Office (NRO) lists no estate or title maps for the parish. An Enclosure map and act do exist, but were not examined for this report, however, the map and act are summarised in the HMSO publication (1982), which was consulted for this report.

2.3 Legislation, guidance consulted and criteria applied.

2.3.1 An updated assessment of the survival and preservation of ridge and furrow earthworks, *Turning the Plough 2* (EH, GCC, 2012), was consulted to help assess the nature of threat and the rarity of the ridge and furrow earthworks on the site. The study was commissioned under the National Heritage Protection Plan (NHPP) theme 2D1 (Agricultural and Forestry Impacts), and exclusively addressed ridge and furrow. One of the case studies covered in the report (Easton Neston) is the neighbouring parish to Tiffield, and lies to the south.

2.3.2 Significance was assessed using guidance outlined in the Highways Agency document *Design Manual for Roads and Bridges* (2007), *Conservation Principles* (HE 2008), and *Scheduled Monuments: nationally important but non-scheduled monuments* (DCMS, 2013).

2.3.3 The existing hedgerows have not been examined in detail in this report, but the Hedgerow Regulations 1997 make provision for the protection of hedgerows considered to be of landscape and/or historical and natural history importance. For the purposes of Section 97 (hedgerows) of the Environment Act 1995 and these Regulations, a hedgerow is “important” if it:

- (a) has existed for 30 years or more; and
- (b) satisfies at least one of the criteria listed in Part II of Schedule 1.

2.3.4 The relevant Part II of the schedule 1 criteria are that it:

- It marks a boundary between parishes existing before 1850;
- It marks an archaeological feature of a site that is a scheduled monument or noted on the Historic Environment Record; or
- It marks the boundary of a pre-1600 estate or manor or a field system pre-dating the Enclosure Acts (guidance published in 1997 links this to the main period of parliamentary enclosure in the mid-19th century).

2.3.5 Before the removal of any hedgerow to which these Regulations apply, Northamptonshire County Council must be notified. If the planning authority considers the hedgerow to be of some historic significance, it may serve a hedgerow retention notice to the effect that the hedgerow should not be removed.

2.4 Known historical background to the field system.

2.4.1 At Domesday in 1086, Tiffield comprised two small manors, collectively with arable land for five and a half ploughs, and seven acres of woodland.

2.4.2 Tiffield was enclosed by Act of Parliament in 1780, and the Act and accompanying map show that there were three common (open) fields in the parish, likely to be medieval in origin. The first of these was Meadow Field, which lay to the south of the village, Water Slade Field to the north and north west, and Full-Well Field to the east and north east. Although the map was not viewed for this report, it is presumed that the site lay within Water Slade field to the north of the parish.

- 2.4.3 The eastern arm of the parish, to the east of the site, lay beyond the area of the open fields, and the HMSO (1982) argue that the field names here indicate that the area is one of old enclosures (pre-18th century Enclosure), carved out from woodland. Although there are some traces of ridge and furrow here visible on the aerial photographs, they are probably more likely to be either post medieval, or associated with small farm units assarted from the woodland.
- 2.4.4 The HMSO Inventory of Monuments in Northamptonshire (1982) records that the formation of the furlongs of ridge and furrow (blocks of ridge and furrow strips) in the parish, being sometimes at right angles to each other, is an unusual form for Northamptonshire.

2.5 Site earthwork and walkover survey

- 2.5.1 The LiDAR tile for the site was manipulated from various angles and gradients to examine the field for all traces of extant earthworks, a composite of these have been plotted on Figures 2-4.
- 2.5.2 The LiDAR quite clearly shows the ridge and furrow earthworks in the field. The earthworks show particularly clearly in the central area of the field then diminish but are still clear eastwards and westwards. The LiDAR also shows the two ponds within the field and a broad sinuous mound to the west of the main pond.
- 2.5.3 The walkover survey was undertaken on the 30th July 2015, in slightly overcast but generally clear conditions. The whole of the site was accessible, and there were no limitations to the survey.
- 2.5.4 The site was overviewed from all corners, the perimeter, and from two transects walked across the centre of the field on an east-west axis. The ridge and furrow earthworks were very clear (Plates 1-3), particularly in the centre and south of the site. The ridges measured up to 6m in width by 0.5m in height, and the furrows measured up to 2m in width by 0.25m in depth.
- 2.5.5 The ponds within the field do not appear on the historic mapping up to 1952, and must therefore post-date this. The walkover survey identified what appeared to be a concrete or cement lining to the pond around the lip of the main pond (Plate 5), and what appeared to be a brick water management structure associated with the pond. The broad sinuous north-south bank to the west of the main pond (**OA 6**) was c18m in width at its northern end, narrowing southwards to a tail c6m in width at its southern end. The bank stood up to 1.2m in height, diminishing southwards.
- 2.5.6 There are two potentially historic boundaries within the site. The first **OA 7** lies on the western boundary of the site and comprises a hedge chiefly of hawthorn but with some sycamore, and sporadic semi-mature ash trees, and has an external ditch c1.2m in depth x c1.6m in width. If the road to the west of the site is still on its medieval alignment, the boundary may represent the medieval furlong or field boundary. The second, **OA 8**, comprises an external hawthorn hedge and an internal, south facing lynchet up to 1.8m in height. The lynchet is likely to have been formed by the action of ploughing against the south facing slope of the hill, and as such, may also represent a medieval furlong boundary.

2.6 Analysis of the wider field system using Google Earth aerial photographs and LiDAR.

- 2.6.1 The LiDAR appears to show an earlier field system underlying the open field of which the ridge and furrow on the site forms a part (see Figure 4). Part of the earlier field system boundary has been incorporated into the open field as a furlong boundary (**OA 1**). In other areas it appears to underlie the ridge and furrow of the open field

(OA 2, 3). The main sinuous earthwork boundary bank within the earlier system (OA 3) follows the topography along the line of the 130m contour. Part of this earlier field system, in the form of a broad bank appears to run along the eastern boundary of the site, and under the ridge and furrow in its south east corner. The earlier system also includes a small square enclosure c120m to the south east of the site (OA 4) measuring c140m in width, itself containing a central sub-square feature measuring c50m north-south x c50m east-west. These features may represent an earlier, perhaps Romano-British farmstead.

- 2.6.2 An examination of the Google Earth (GE) aerial photographs from 1945 shows that there was significant survival of ridge and furrow earthworks within, and in the immediate vicinity of the site, with well preserved earthworks to the south, east and west all showing more clearly than those within the site. All of these immediately adjacent earthworks have disappeared by the time of the 2010 aerial photographs, which show only the ridge and furrow as cropmarks, and which do not show as earthworks on the LiDAR tile. The reason for the particularly good preservation for the ridge and furrow earthworks in the centre of the site is unclear, but the better preservation of this section is shown on the 1945 aerial photograph, so the denuding of the areas to the east and west must pre-date this.
- 2.6.3 Examining Google Earth for the wider area, it can be seen that the ridge and furrow earthworks of the former open fields of Tiffield are comparatively well preserved to the south, east and west of the village. The preserved ridge and furrow within the site lies to the north of the village.

2.7 Assessment of significance.

- 2.7.1 The Principles of Selection for Scheduled Monuments (EH, 2013) have been used to provide a framework for the assessment of significance, guided by the documents *Turning the Plough 2* (EH, GCC, 2012), *Design Manual for Roads and Bridges* (HA, 2007), *Conservation Principles* (EH, 2008), and *Scheduled Monuments: nationally important but non-scheduled monuments* (DCMS, 2013).
- 2.7.2 The assessment has been summarised here, divided by the 2013 criteria:
- **Period.** The earthworks within the site date to the medieval period, and were probably in use from at least the twelfth or thirteenth centuries up until the time of enclosure in 1780. The LiDAR tile also appears to show an earlier field system below the ridge and furrow that may date to the Romano-British period.
 - **Rarity.** As outlined in *Turning the Plough 2* (2012), ridge and furrow, once very common, is now an increasingly rare resource, particularly well preserved ridge and furrow, within a coherent landscape context.
 - **Documentation / finds.** There is an Enclosure map of the parish dating to 1780 (not studied for this report) that details the pre-enclosure field system.
 - **Group value.** There is a significant group value to the earthworks on the site as, whilst they are a fossilised outlier of surviving earthworks, they are related to the wider system that collectively comprise the former open fields of Tiffield and associated parishes. The loss of any part of the surviving ridge and furrow diminishes the whole.
 - **Survival / Condition.** Although partially damaged by two 20th century ponds, the earthworks on the site, whilst denuded are reasonably well preserved and appear in good condition. The survival of the earthworks themselves is

significant and any deposits that they may seal may also be of potential significance.

- **Fragility / Vulnerability.** Again outlined in *Turning the Plough 2* (2012) ridge and furrow has a number of vulnerabilities from ploughing to equestrian activities and building development. The lack of designation of the vast majority of ridge and furrow, makes the vulnerability more unpredictable, as many activities that affect them are unregulated.
- **Diversity.** The ridge and furrow on the site is relatively well preserved, but does not contain within it other, more unusual characteristics of the open field (such as a Gore, Joint or Rick Place). The western and north western boundaries of the site may represent furlong boundaries, as suggested by the mapping and GE, and may also therefore be fossilised remnants of the medieval landscape.
- **Potential.** The potential for the earthworks on the site to contain a valuable profile (view of its make up) that may increase understanding of ridge and furrow construction / formation is high. There is also the potential for the site to contain deposits relating to the earlier field system.

2.8 Discussion

- 2.8.1 The ridge and furrow earthworks on the site are a fossilised remnant of a much larger field system that was still largely intact in 1945, but can only be traced in this part of the parish by cropmarks in certain fields. Whilst there are other more complex survivors of the field system to the south, west and east of the village, the site is the only significant extant remnant of the open field in the northern part of the parish. As the aerial photographs from 1945 to 2010 show, the earthworks are a part of a resource that, once common, is diminishing both regionally and nationally. Whilst the loss of a small area of this resource may superficially not be seen as significant, especially given that better preservation of ridge and furrow exists elsewhere in the parish, its affect on the integrity of the whole resource could be seen as significant. The loss of any integral areas erodes the overall coherent group value, character and context of the whole resource.
- 2.8.2 To lessen the direct physical impact of any proposed soil deposition, the ridge and furrow and associated deposits could be preserved *in situ*. This would involve levelling the ground surface by infilling the areas between the ridges, so that the area of the furrows were levelled up to that of the ridges. This would preserve any archaeological deposits *in situ*. Prior to levelling a detailed earthwork survey would be needed to record the earthworks prior to their infilling and a form of a geotextile layer or similar would need to be laid down so that at a later date, if applicable, the earthworks could easily be restored. This would prevent damage to the *in situ* earthworks and any archaeology that may be protected below them but would still lead to a loss, potentially reversible, of their visual presence within the landscape.
- 2.8.3 The hedgerows have been not been discussed in any depth within this document, but the hedgerows forming the west and north-west of the site may well be covered by the Hedgerow Regulations Act of 1997. Their potential removal would need to be approved by Northamptonshire County Council.

3 CONCLUSION

- 3.1.1 The earthworks within the site, particularly in the centre of the field are both reasonably well preserved and clear. There are no particularly unusual characteristics of open fields within the site (Gore, Joint, Rick Place etc), but they do represent the sole surviving remnant of a field system that was extensively preserved as earthworks in the vicinity in 1945.
- 3.1.2 Even partially damaged by two 20th century ponds, the earthworks represent an important and largely intact northern outlier of this once extensive system. This medieval field system once extended over much of this, and neighbouring parishes, and are of a monument type that is frequently overlooked and becoming rarer. The actual earthworks will be preserved *in situ* through careful recording and protection. However, the visual loss of a small element of a larger field system within the wider historic landscape whilst slight, contributes to the piecemeal erosion of the whole, and remove all visual evidence from this northern area.

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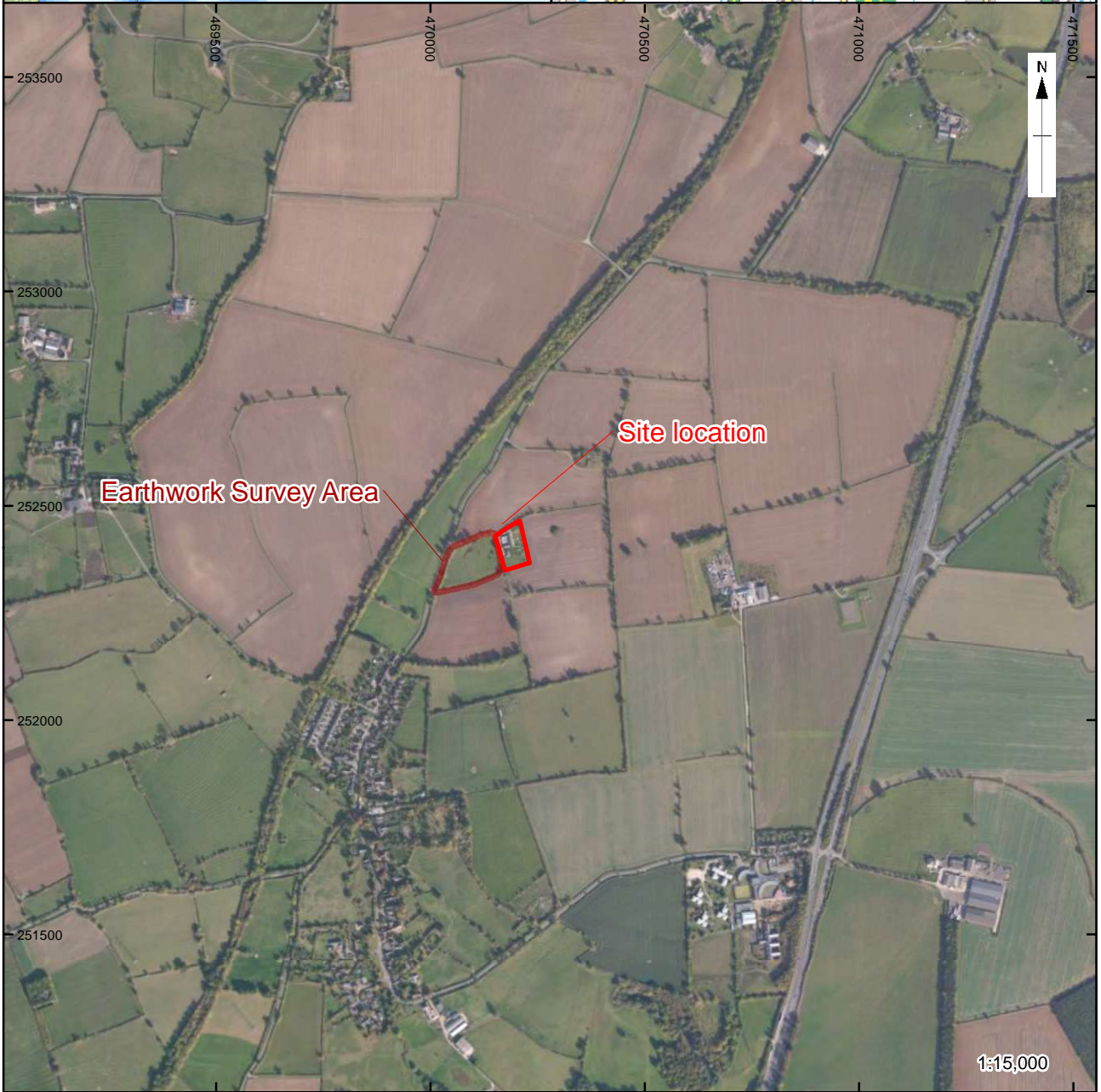
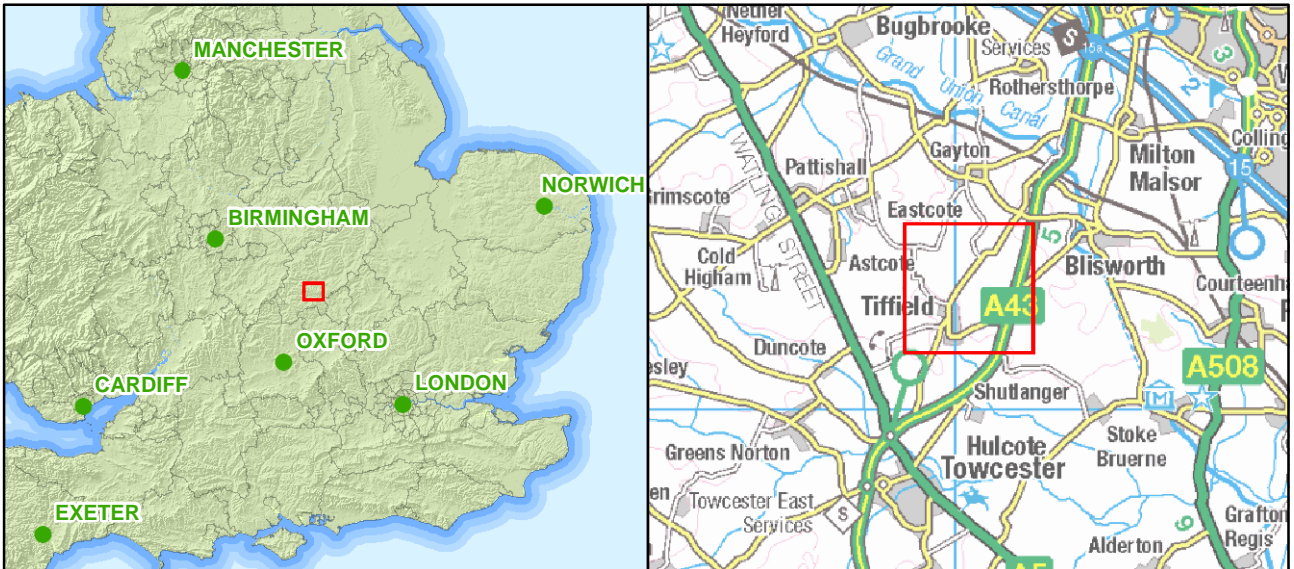
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Figure 1: Site location

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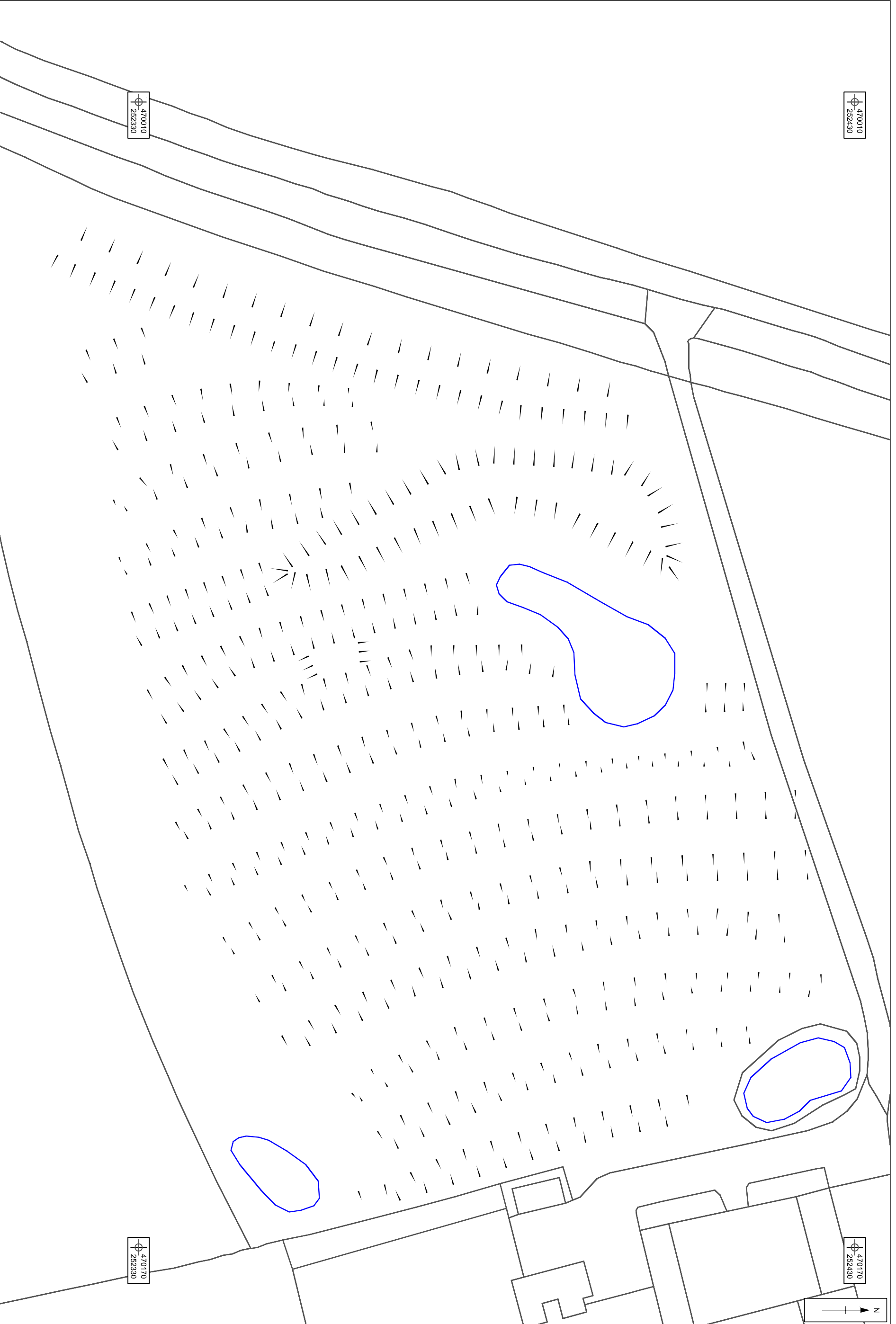
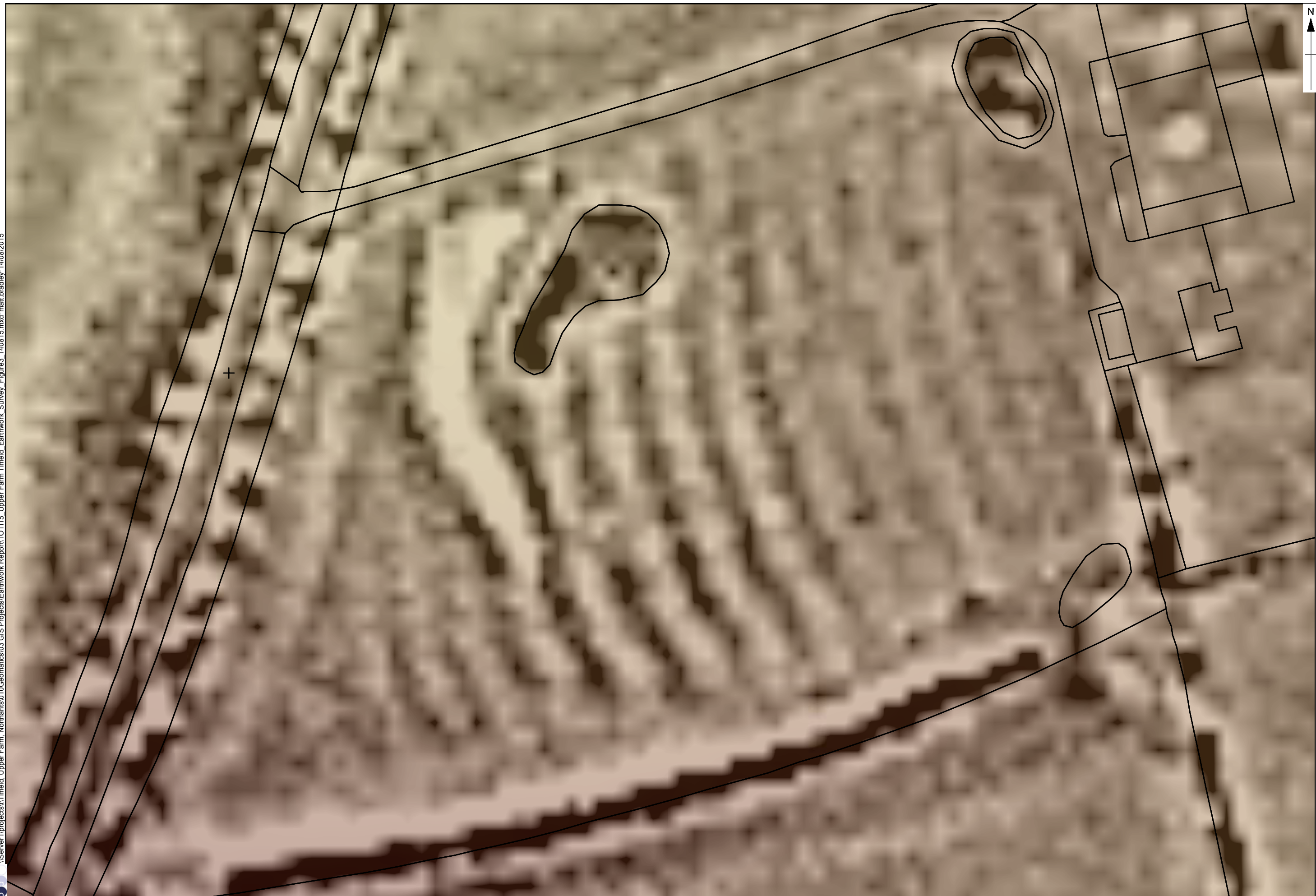


Figure 2: Interpretative hachure plot of the earthworks on site

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Figure 3: LiDAR plot of the earthworks on the site

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Figure 4: Potentially earlier field system underlying the ridge and furrow



Plate 1 - Extant ridge and furrow earthworks, looking east.



Plate 2 - Extant ridge and furrow earthworks, looking west.



Plate 3 - Extant ridge and furrow earthworks curving into an inverted 'S' looking north.



Plate 4 - Southern boundary of the site.



Plate 5 - Bunded bank of the main pond, and the probable concrete pond liner.



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