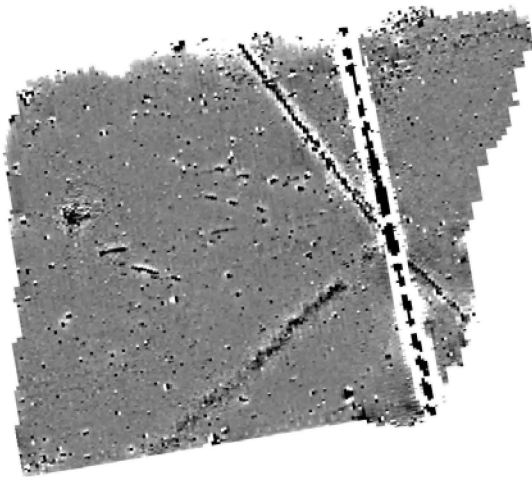




Northamptonshire Archaeology

Archaeological geophysical survey of land at
Station Drive, Kirby Muxloe, Leicestershire
December 2012



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Report 13/8

January 2013



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QUALITY CONTROL

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Checked by	Pat Chapman	<i>PC</i>	16/01/2013
Verified by	Mark Holmes	<i>MH</i>	16/01/2013
Approved by	Andy Chapman	<i>AC</i>	16/01/2013

OASIS REPORT FORM

PROJECT DETAILS		OASIS No: 140638	
Project name	Archaeological geophysical survey of land at Station Drive, Kirby Muxloe, Leicestershire.		
Short description	Northamptonshire Archaeology was commissioned to carry out a detailed magnetometer survey of a proposed development area at Station Drive, Kirby Muxloe Leicestershire. The survey results showed the area to contain some archaeological remains, including one boundary ditch and several other features of potential archaeological significance. Medieval ridge and furrow earthworks were observed at the southern end of the survey area.		
Project type	Geophysical survey		
Site status	None		
Previous work	None known		
Current Land use	Pasture		
Future work	Unknown		
Monument type/ period	Undated ditches		
Significant finds	N/A		
PROJECT LOCATION			
County	Leicestershire		
Site address	Station Drive, Kirby Muxloe		
Study area	c 7.25ha		
OS grid reference	452180 303440		
Height OD	90-100m AOD		
PROJECT CREATORS			
Organisation	Northamptonshire Archaeology (NA)		
Project brief originator	CgMs Consulting		
Project Design originator	NA		
Director/Supervisor	John Walford		
Project Manager	Mark Holmes		
Sponsor or funding body	CgMs Consulting		
PROJECT DATE			
Start date	17 December 2012		
End date	16 January 2013		
ARCHIVES	Location	Content	
Physical	N/A		
Paper	NA	Site survey records	
Digital	NA	Geophysical survey & GIS data	
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report		
Title	Archaeological geophysical survey of land at Station Drive, Kirby Muxloe, Leicestershire, December 2012		
Serial title & volume	Northamptonshire Archaeology Reports 13/8		
Author(s)	John Walford and Chris Chinnock		
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**ARCHAEOLOGICAL GEOPHYSICAL SURVEY OF LAND AT
STATION DRIVE, KIRBY MUXLOE, LEICESTERSHIRE
DECEMBER 2012**

ABSTRACT

Northamptonshire Archaeology was commissioned to carry out a detailed magnetometer survey of a proposed development area at Station Drive, Kirby Muxloe Leicestershire. The survey results showed the area to contain some archaeological remains, including one boundary ditch and several other features of potential archaeological significance. Medieval ridge and furrow earthworks were observed at the southern end of the survey area.

1 INTRODUCTION

Northamptonshire Archaeology (NA) was commissioned by CgMs Consulting to conduct a geophysical survey in advance of a proposed development on land at Station Drive, Kirby Muxloe, Leicestershire (NGR 452180 303440; Fig 1). The aim of the survey was to investigate whether there were any archaeological remains present which might be affected by the proposed development.

The fieldwork was conducted on 17th-18th December 2012 and comprised the detailed magnetometer survey of c 7.25ha of land.

2 TOPOGRAPHY AND GEOLOGY

The proposed development area consists of four irregularly-shaped pasture fields located alongside and to the south of Station Drive, in Kirby Muxloe (Fig 1). These fields stand at an elevation of 90-100m aOD and slope gently down towards the north and east. At the southern and eastern boundaries, there are steeper slopes down towards a stream which forms part of the site boundary.

The solid geology of the area comprises Edwalton Member mudstone. The superficial geology of the site comprises Till (Diamicton), with glacio-fluvial sands and gravels on the eastern side of the site and a narrow band of alluvium along the eastern boundary (BGS 2012).

3 ARCHAEOLOGICAL BACKGROUND

Existing archaeological evidence for the site and the archaeological and historical background of the general area, based on a consideration of evidence in the Leicestershire Historic Environment Record (HER) for the site and a surrounding search area of 1km radius from the centre of the site, is summarised below. A gazetteer of the HER records is included as Appendix I. The locations of monuments recorded in the

HER are shown in Appendix II. The full suite of historic Ordnance Survey mapping has been consulted in order to discuss historic land use. Only two of these maps contained relevant information and these are discussed below and included as Appendix III.

Kirby Muxloe is an ancient settlement, recorded as 'Carbi' in the Domesday Book. Its most notable archaeological site is Kirby Muxloe Castle (SAM: 17114), a 15th-century castle built on the site of a 14th-century moated manor house and standing close to the historic core of the village.

The present survey area lies c 1km to the south of the castle, beyond the known limits of medieval settlement. The closest archaeological sites are a Roman road (MLE 3019), which passes just beyond the north-western corner of the area, and a probable Roman settlement (MLE 208) which lies in the fields to the west. Fieldwalking of the latter site in the 1980s recovered in excess of sixty sherds of Roman pottery, and a quantity of worked flint (MLE 6997).

The 1903 Ordnance Survey provides the first record of the footpath which crosses Field 4 from north-west to south-east. It also shows the presence of a building, called 'the Links' at the southern end of Field 2, and a smaller building to the east, between Fields 3 and 4. On the 1915-16 edition of the map, the latter building is identified as a club house. These buildings were presumably associated with the golf course which currently occupies the land immediately to the west of the proposed development area (Appendix III).

4 METHODOLOGY

The survey was conducted with Bartington Grad 601-2, twin sensor array, vertical component fluxgate gradiometers (Bartington and Chapman 2003). These are standard instruments for archaeological survey and can resolve magnetic variations as slight as 0.1 nanoTesla (nT).

An independent system of 30m grids was established within each of the fields to be surveyed. The grids were established with a tape measure and optical square and were tied in to the Ordnance Survey National Grid by measurement to field boundaries and other points of detail. The gradiometers were carried at a brisk but steady pace through each grid square, collecting data along 1m spaced traverse lines. Measurements were automatically triggered every 0.25m along the traverses, giving a total of 3600 measurements per square.

All fieldwork methods complied with the guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; IfA 2011) and with the method statement for the project (NA 2012).

The survey data was processed using Geoplot 3.00v software. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function and destaggering of the data was performed as necessary.

The processed data is presented in this report in the form of grey-tone plots at a scale of +/- 4nT black/white. These plots have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Fig 2). An interpretative overlay is shown in Figure 3, and plots of the unprocessed survey data are shown in Figure 4.

5 SURVEY RESULTS

5.1 Field 1

The survey data contains a series of parallel linear anomalies, aligned roughly east to west, which reflect the existing ridge and furrow earthworks across most of the field (Fig 3). Intersecting linear anomalies (Fig 3) indicate the presence of electrical and temporary fences marking out horse paddocks. There is a possible ditch aligned from north-east to south-west along the southern edge of the field, and a more certain example following a parallel course across the north-west corner. The latter lies in an area of ridge and furrow earthworks, and has no obvious surface expression. It is thought, therefore, to pre-date the ridge and furrow.

5.2 Field 2

This data from this field contains a few dipolar anomalies, most likely representing buried ferrous material of modern date. The alternating ferrous halo along the eastern edge of the field may indicate the presence of a pipe beneath the adjacent track

5.3 Field 3

Extensive magnetic disturbance is present along the north-east boundary of the field. This is of uncertain origin, but perhaps represents debris from the construction of the railway line immediately to the north. Roughly north-south positive linear anomalies in the centre of the field may be archaeological. The results, however, are diffuse and may represent geological patterning. A modern pipeline can be seen as a very strong anomaly aligned north-south through the western half of the field and continuing into Field 4.

5.4 Field 4

The linear anomaly seen in Field 1 continues on a south-west to north-east course. However, in Field 4 the anomaly is much weaker and more diffuse. It is suggested that this is a result of modern ploughing which has not affected Field 1 as indicated by the existing ridge and furrow earthworks. Other possible archaeology includes an annular feature associated with an area of very weak magnetic noise, and a series of short linear features, six of which lie in a regularly spaced pattern. These might represent a ring ditch and other backfilled trenches or ditch segments, but could also represent fairly modern features, perhaps former earthworks or structures associated with the nearby golf course.

A strong linear anomaly starting in the south-east corner and following a straight line to the southern end of Station Drive represents a footpath still in use and first recorded on the 1903 Ordnance Survey map. The pipe seen in Field 3 continues on the same

course through Field 4. In the north-east corner of the field small linear features may represent gullies or field drains leading to the stream on the eastern boundary of the site. Further isolated dipolar anomalies can be seen across the field, marking probable buried ferrous material of modern date.

Some of the data from around the margins of the fields is magnetically disturbed. There are magnetic halos caused by adjacent fences and buildings. Large dipolar anomalies, caused by ferrous objects and general magnetic noise perhaps indicate accumulations of builders' rubble or domestic rubbish.

6 CONCLUSION

The survey has identified some potential archaeological features within the proposed development area. A substantial ditch extends across Field 1, where it is apparently overlain by ridge and furrow earthworks, and continues north-eastwards into Field 4. There may be other ditches along the southern edge of Field 1 and through the middle of Field 3, although these are less securely identified.

In Field 4 there are several features of uncertain significance, including one that resembles a ring ditch. These could be of archaeological significance but, considering the proximity of the former club house (as shown on the 1915-16 Ordnance Survey map), it would not be surprising if some proved to be the remains of golf course infrastructure, such as greens, bunkers and tees.

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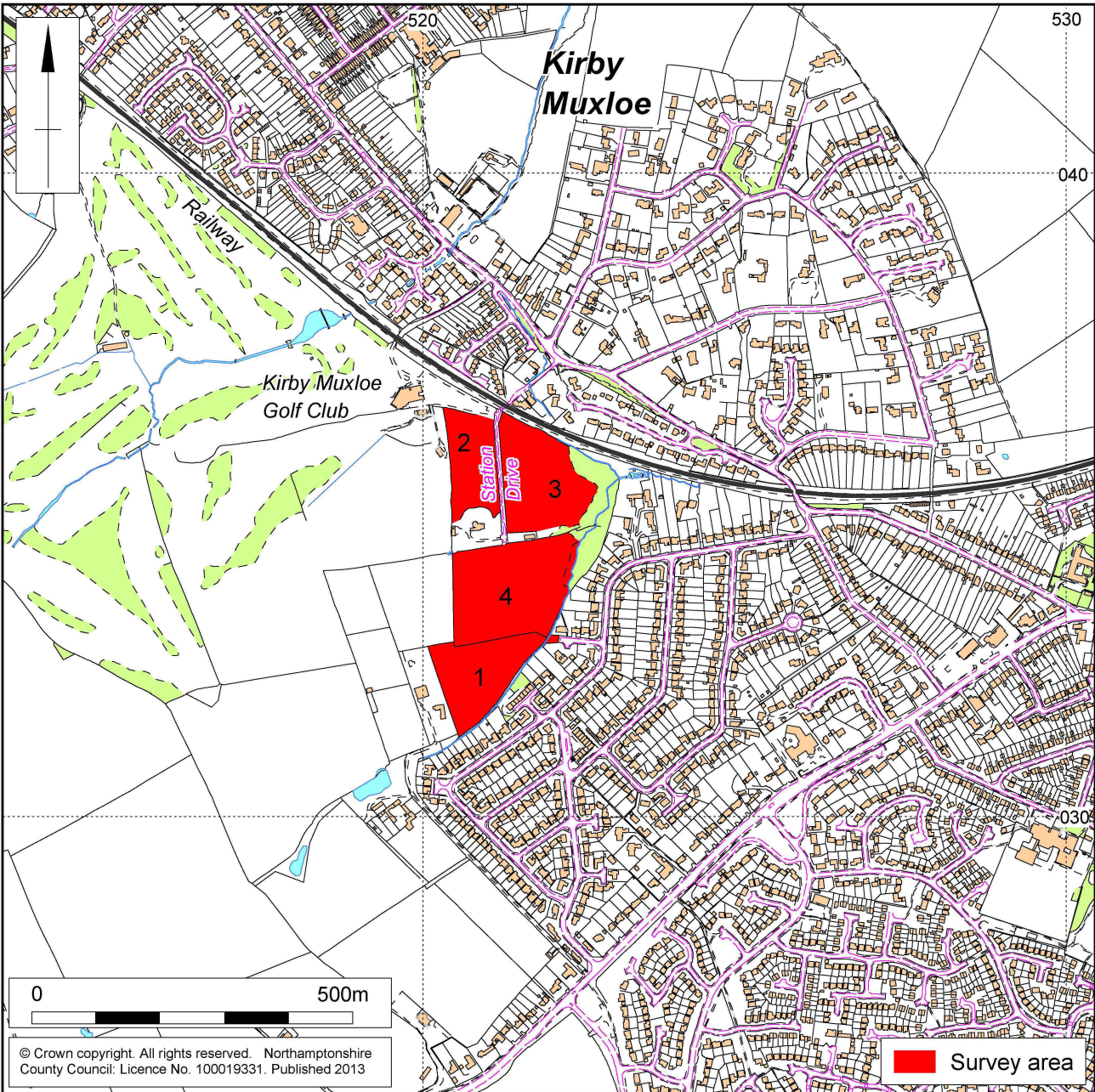
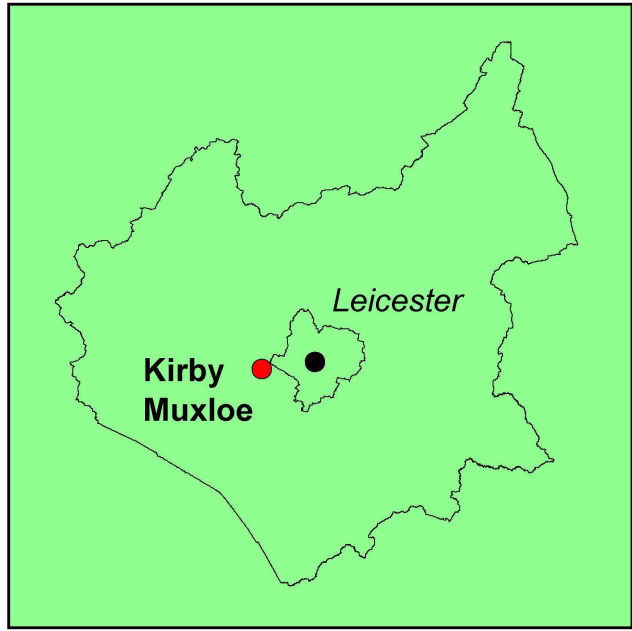
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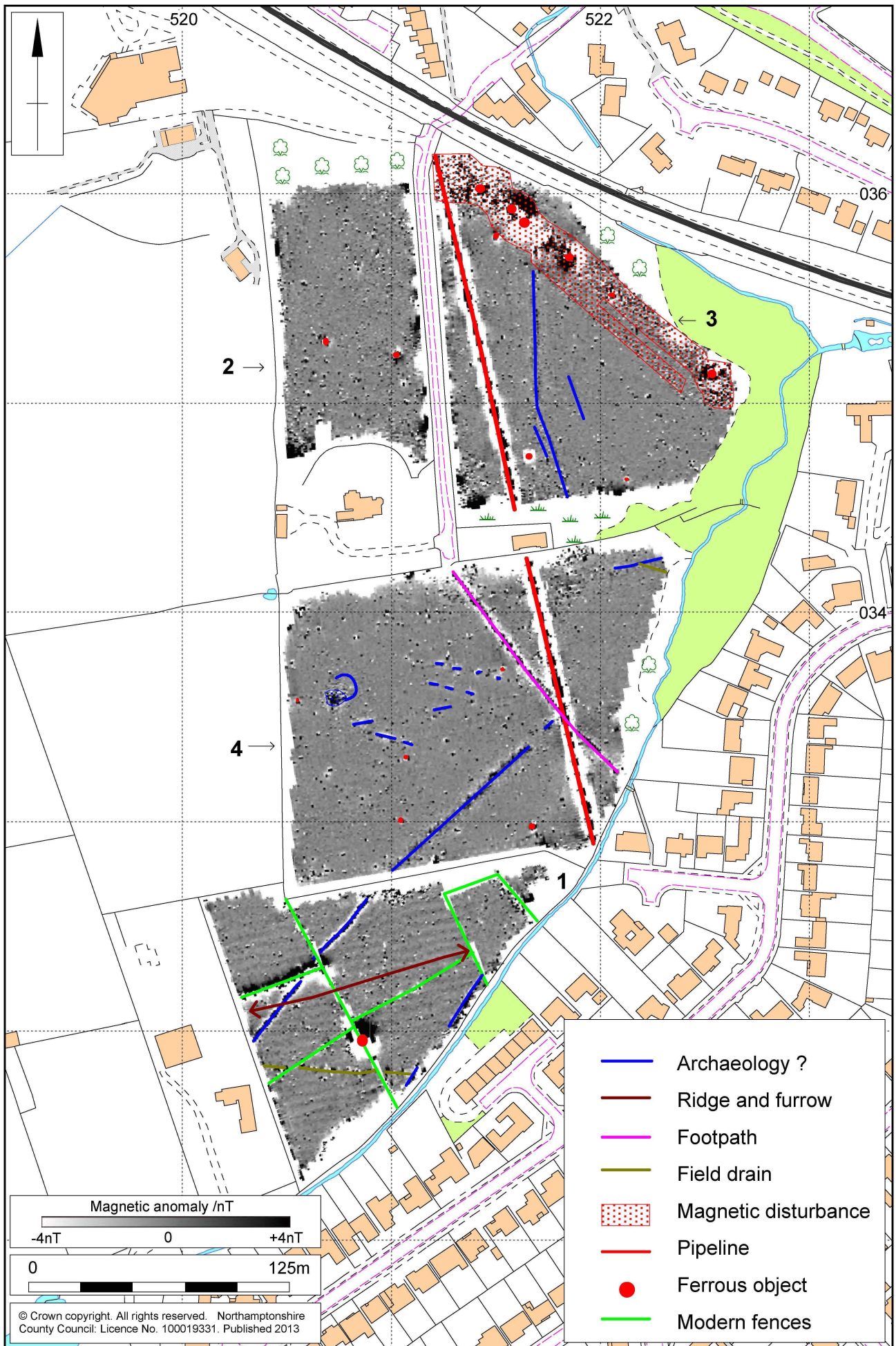
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Site Location Fig 1



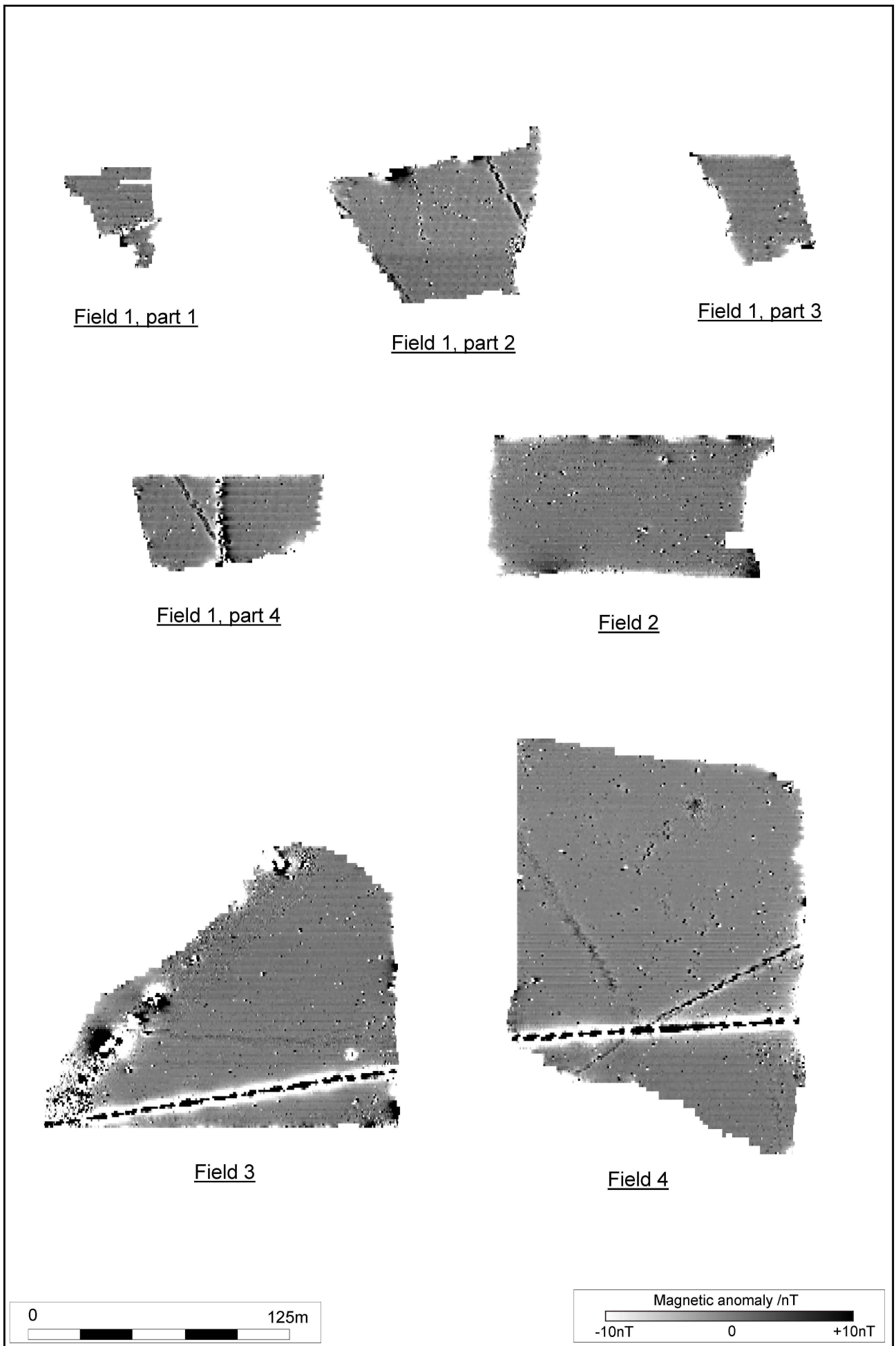
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Magnetometer survey results Fig 2



1:2500

Magnetometer survey interpretation Fig 3



Scale 1:2,500

Unprocessed magnetometer data Fig 4

Appendix I

HER Number	Name & Description	Location	Date
MLE199	Moated site, north of Harkaway, Kirby Muxloe The OS noted a soil mark of a sub-rectangular enclosure on aerial photographs. In 1983 this was photographed under snow. It was thought to be a medieval moat - perhaps a forest lodge	SK 513 026	Medieval
MLE208	Site north of Forest Farm, Kirby Muxloe During the since the 1980s various Roman finds have been recovered from this area - over 60 sherds of pottery and other ceramics such as tile fragments. In 2000 a fragment of a late Iron Age/early Roman terret was recovered	SK 518 033	Roman
MLE211	Historic settlement core of Kirby Muxloe The medieval and post-medieval historic settlement core of the village, as deduced from landscape maps etc	SK 521 046	Early Medieval to Late Post-medieval
MLE3019	Mancetter Road Roman road from Leicester (Ratae Corieltavorum) to Mancetter (Manduessedum). The line is marked by current day roads and cropmarks	SK 393 985	Roman
MLE6644	Coin, High Trees, Forest Drive, Kirby Muxloe In 1983, a silver half groat of Edward III (dated to 1369-77) was found in the garden of the above house	SK 524 039	Late Medieval
MLE6645	Seal matrix from north-west of Forest House, Leicester Forest East, Blaby In 1989 a copper alloy seal matrix was found here. It had a design of a standing figure, draped, beneath a canopy	SK 524 025	Late Medieval
MLE6997	Flint from north of Forest Farm, Kirby Muxloe During fieldwalking in the 1980s a quantity of worked flint was recovered including two waste flakes, a core, a blade core and a blade tool	SK 518 034	Early Mesolithic to Late Neolithic
MLE7713	Finds from west of Holmewood, Kirby Muxloe During metal detecting in the 1980s two copper alloy coins (one probably Marcus Aurelius, 161-180) and a copper alloy stud that was plausibly Roman were found	SK 524 043	Early Roman
MLE7714	Site south-east of Oaks Farm, Kirby Muxloe Twelve sherds of Roman pottery were found here in 1987. These may represent substantial activity as they are large (unbroken) sherds	SK 514 029	Roman
MLE8914	Site, Forest Drive/Hastings Road, Kirby Muxloe Excavation in 1997 recorded a late Iron Age/early Roman settlement. Two thirds of a round house were found, with pits and postholes suggesting other structures in the vicinity. Over 475 sherds of pottery and a small quantity of flint were recovered	SK 524 039	Late Iron Age to Early Roman
MLE11076	Oaks Farmhouse, Hinckley Road, Kirby Muxloe Late C18th house now used as two dwellings	SK 511 031	Late Post-medieval to Modern
MLE11085	The Spinneys, Stamford Road, Kirby Muxloe House, influenced by Ernest Gimson (Arts and Crafts movement), dated 1898	SK 526 038	Late Post-medieval to Modern
MLE11087	Boyer's Lodge, Warren lane, Leicester Forest East, Blaby Early C17th timber framed building, the only surviving keeper's lodge associated with Leicester Forest	SK 526 026	Early Post-medieval to Modern
MLE11088	Outbuildings at Boyer's Lodge, Warren Lane, Leicester Forest East, Blaby Outbuildings associated with the C17th building 'Boyer's Lodge'	SK 526 026	Late Post-medieval to Modern
MLE16056	Leicester to Swannington Railway/Midland Railway, Leicester & Burton Branch line The railway was the sixth steam railway in the country. It was designed by Robert Stephenson and opened in 1832. At Swannington an incline was built to haul the coal trucks up the track from the mines. It became part of the Midland Railway system in 1846	SK 46 07	Late Post-medieval to Modern
Listed Buildings			
DLE1128	Boyer's Lodge, Warren lane, Leicester Forest East – Grade II House. Early C17, with left bay rebuilt C19-C20, and early C18 rear wing. Refurbished c.1985	SK 526 026	

DLE1117	Oaks Farmhouse, Hinckley Road, Kirby Muxloe – Grade II House, now used as 2 dwellings	SK 511 031	
DLE1126	The Spinneys, Stamford Road, Kirby Muxloe – Grade II House. Dated A 1898 D EPR AR on pargetting of bay window on left side. For Edward Percy Rose, dentist. Architect not known but influenced by work of Ernest Gimso	SK 526 038	
	Event		
ELE5050	Land at Moel Lllys, Forest Drive, Kirby Muxloe An archaeological desk-based assessment - Archive interpretation/documentary research	SK 528 037	
ELE5946	Settlement Carmel, Hastings Road, Kirby Muxloe A late Iron Age to Early Roman Settlement - Arch intervention/excavation/trial trench	SK 524 039	
ELE6321	Carmel, Hastings Road, Kirby Muxloe An archaeological evaluation prior to the residential development - Arch intervention/excavation/trial trench	SK 524 039	
ELE7150	M1 Junction 21-30 widening: Airborne laser scanning (Lidar) analysis Field survey/measured/topographic	SK 485 151	
ELE7290	Land at Leicester Forest East Report on Archaeological Geophysical Survey - Field survey/geophysical	SK 521 024	
ELE7458	Land at Leicester Forest East, Leicestershire Archaeological Desk-based Assessment - Archive interpretation/documentary research	SK 521 024	
ELE7644	Land off Beggars Lane, Leicester Forest East An archaeological evaluation - Arch intervention/excavation/trial trench	SK 521 024	
ELE7720	Land off Beggars Lane, Leicester Forest East Archaeological Assessment - Archive interpretation/documentary research	SK 521 024	
ELE5049	Land at Carmel, Hastings An archaeological desk-based assessment - Archive interpretation/documentary research	SK 524 039	

Appendix II

1km around SK 5212 0338

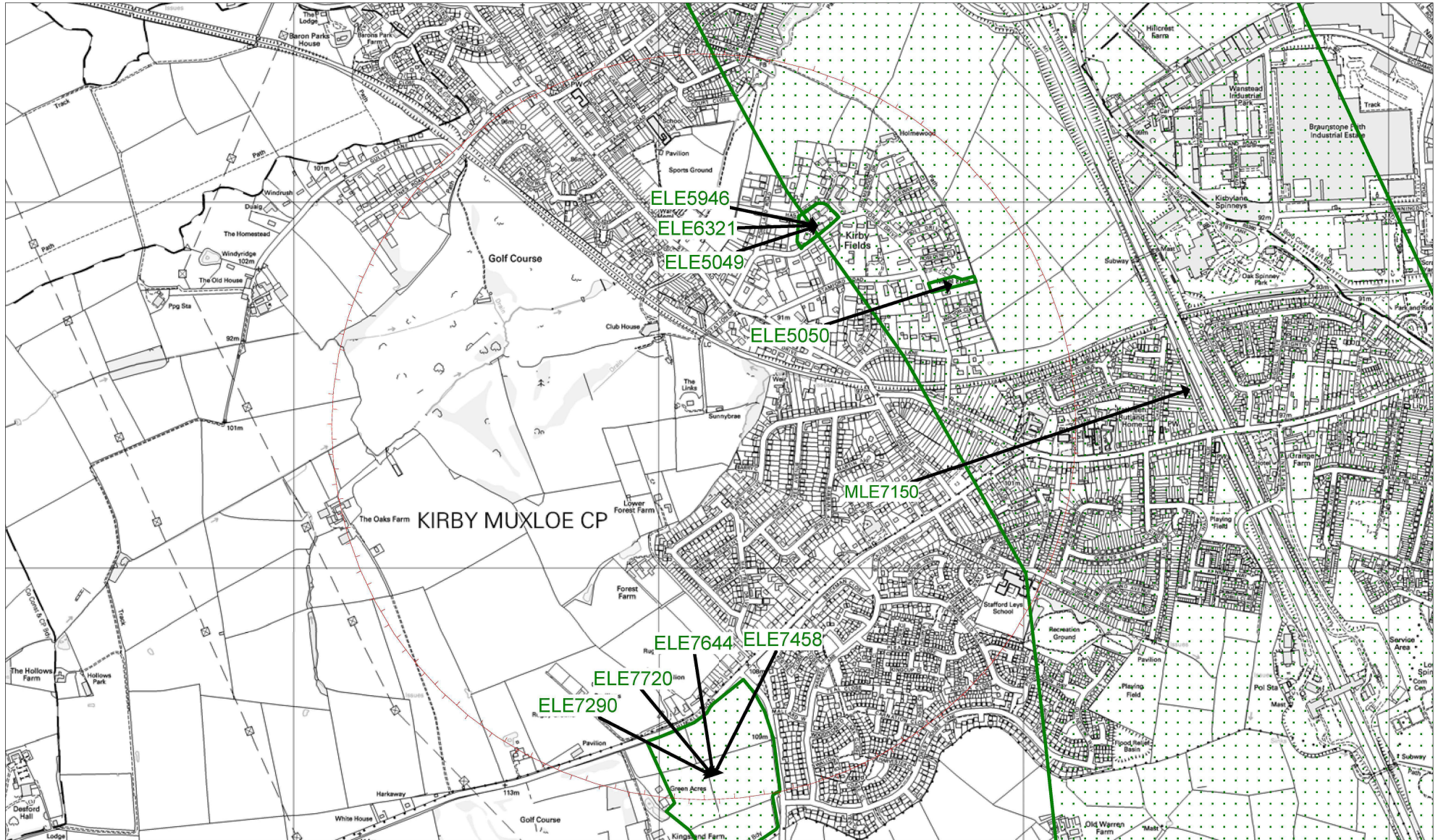
Event records

Compiled by Helen Wells on 6 December 2012

Historic & Natural Environment Team
Leicestershire County Council
Room 400, County Hall
Glenfield
Leicester
LE3 8RA



Scale 1:15000



1km around SK 5212 0338

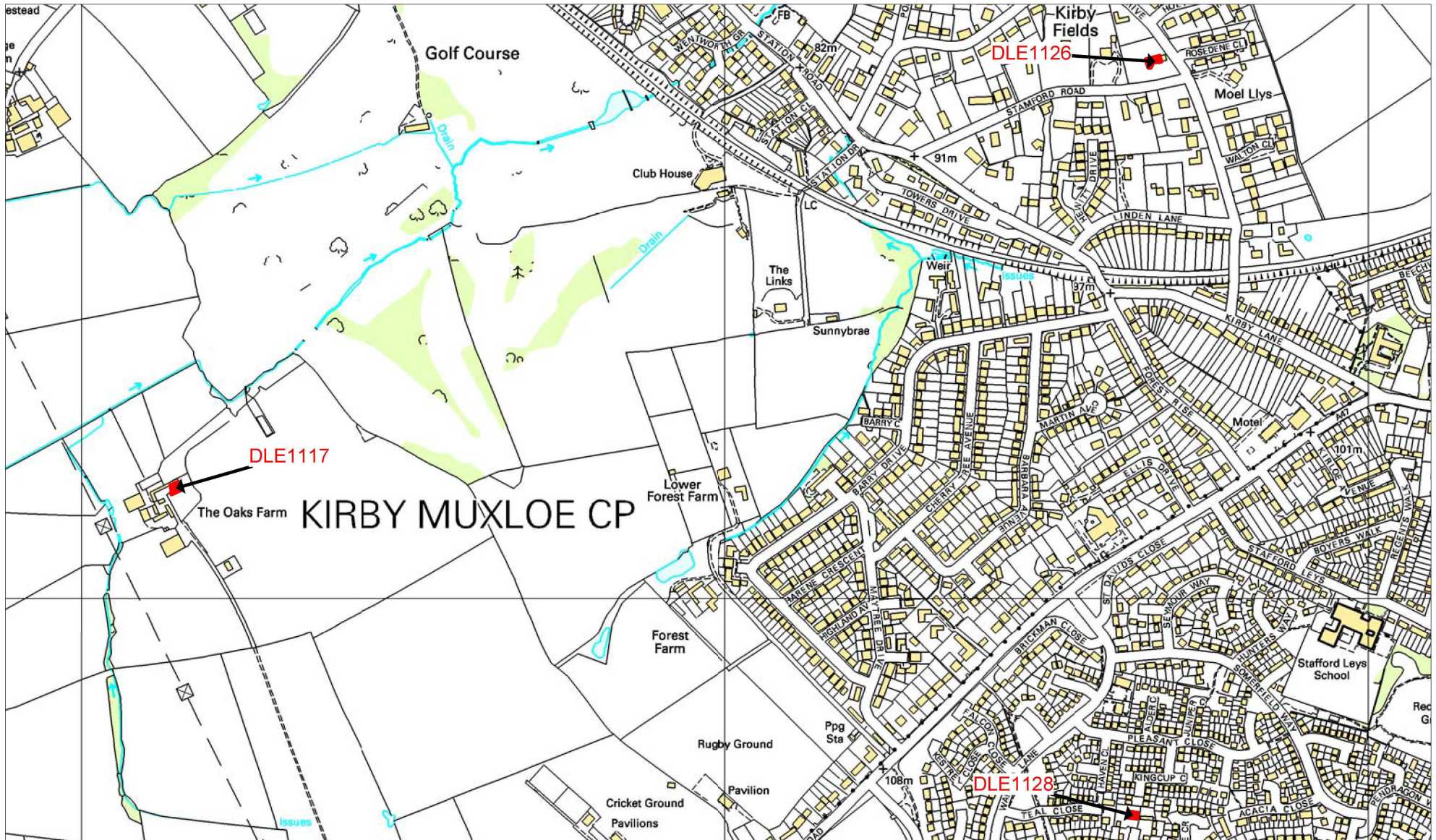
Listed Buildings

Compiled by Helen Wells on 6 December 2012

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Leicester
LE3 8RA



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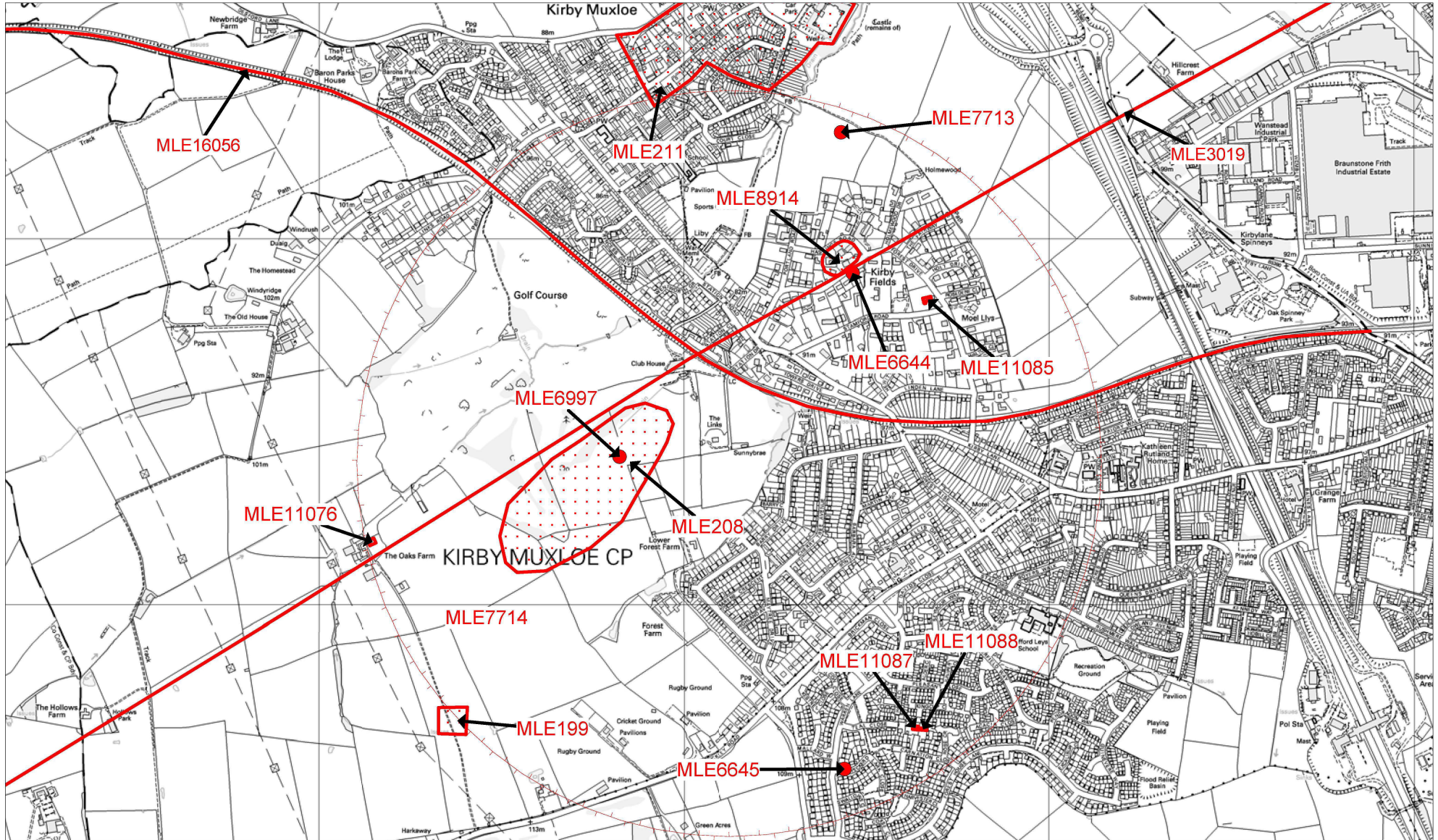
Known archaeological remains and historic buildings

Compiled by Helen Wells on 6 December 2012

Historic & Natural Environment Team
Leicestershire County Council
Room 400, County Hall
Glenfield
Leicester
LE3 8RA



Scale 1:15000



Appendix III

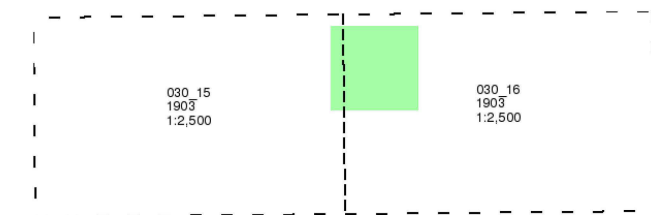
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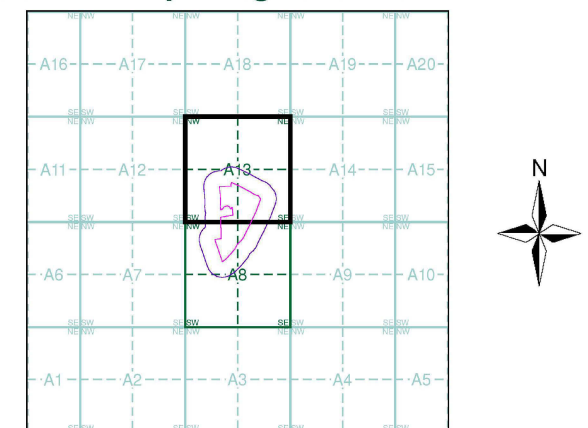
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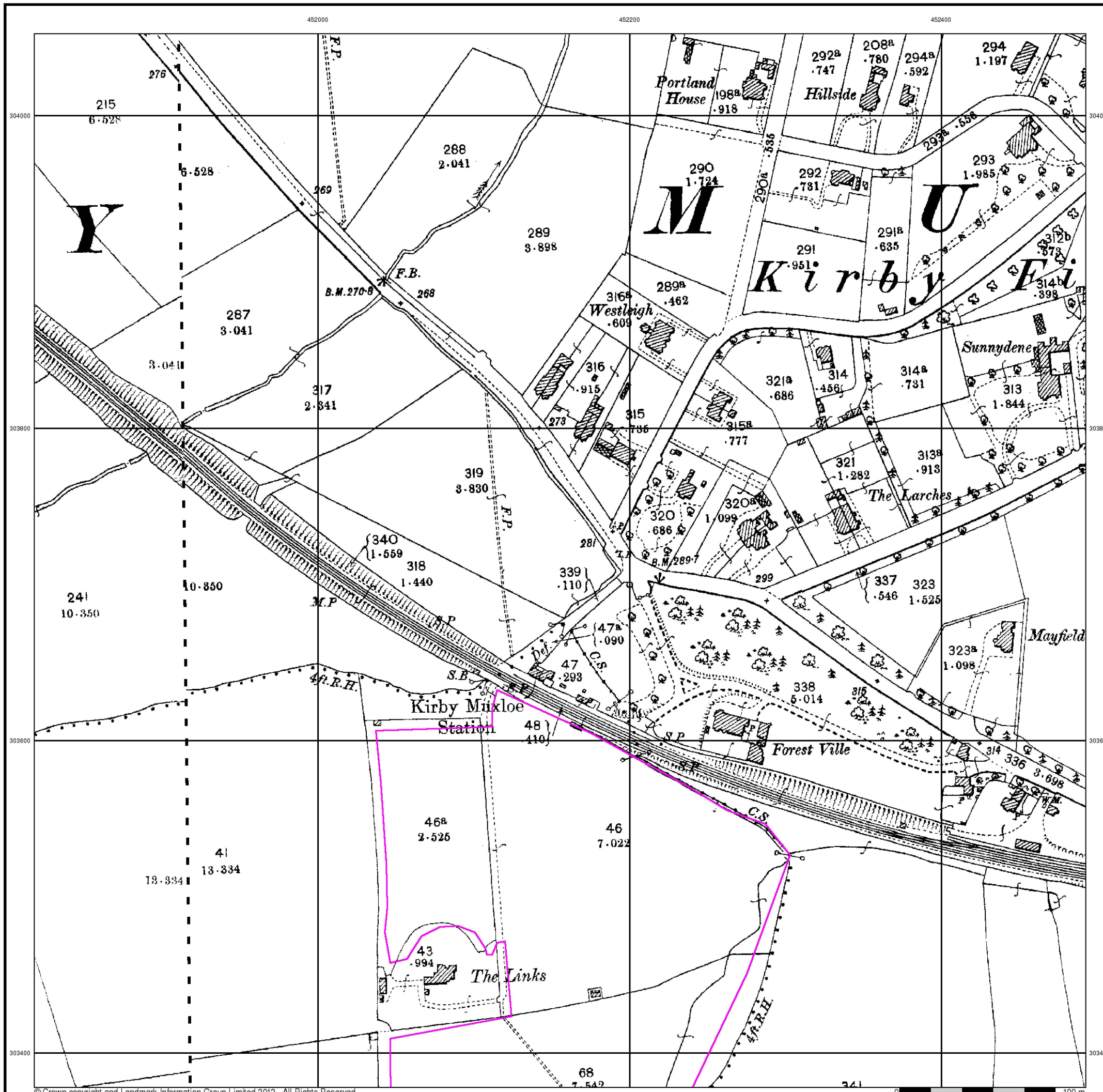


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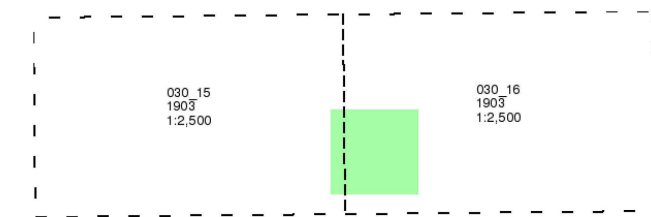
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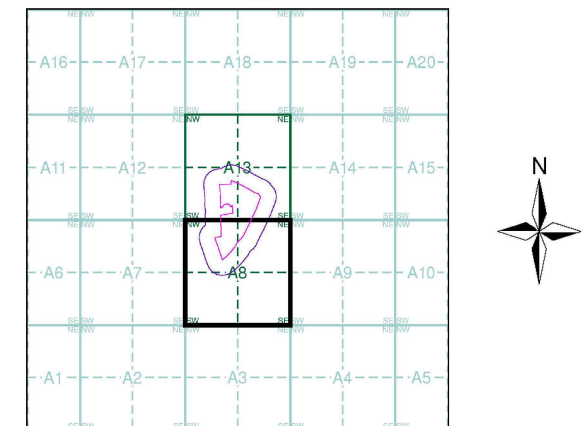
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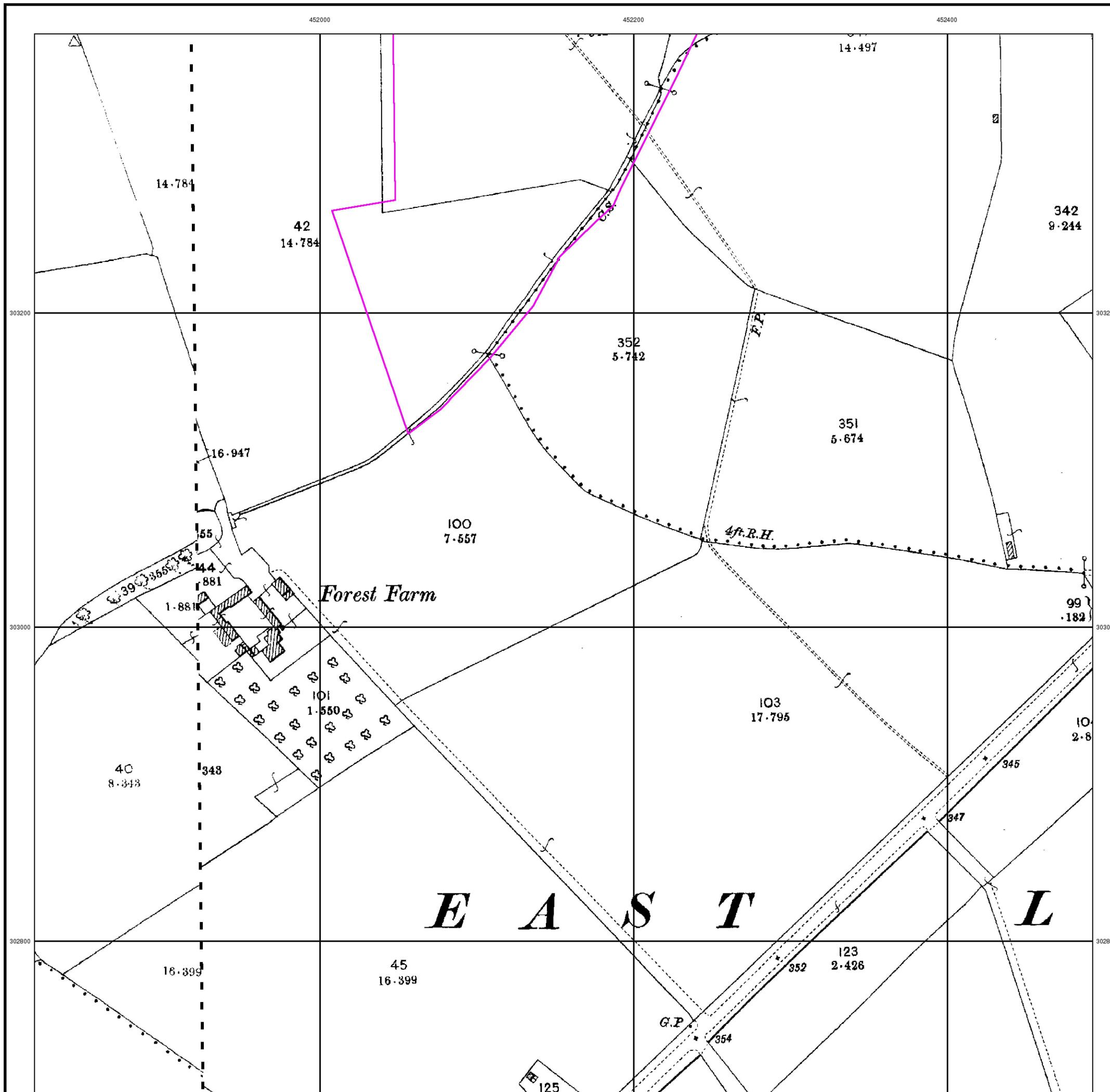


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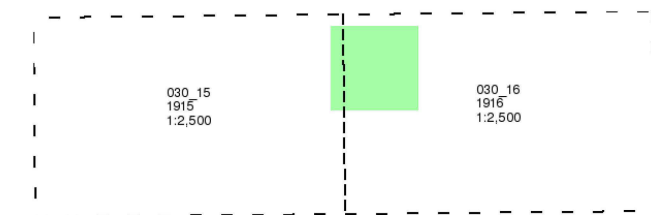
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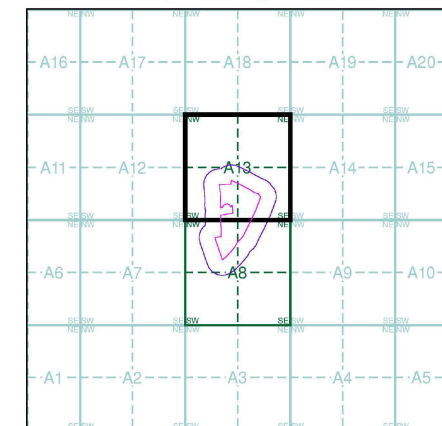
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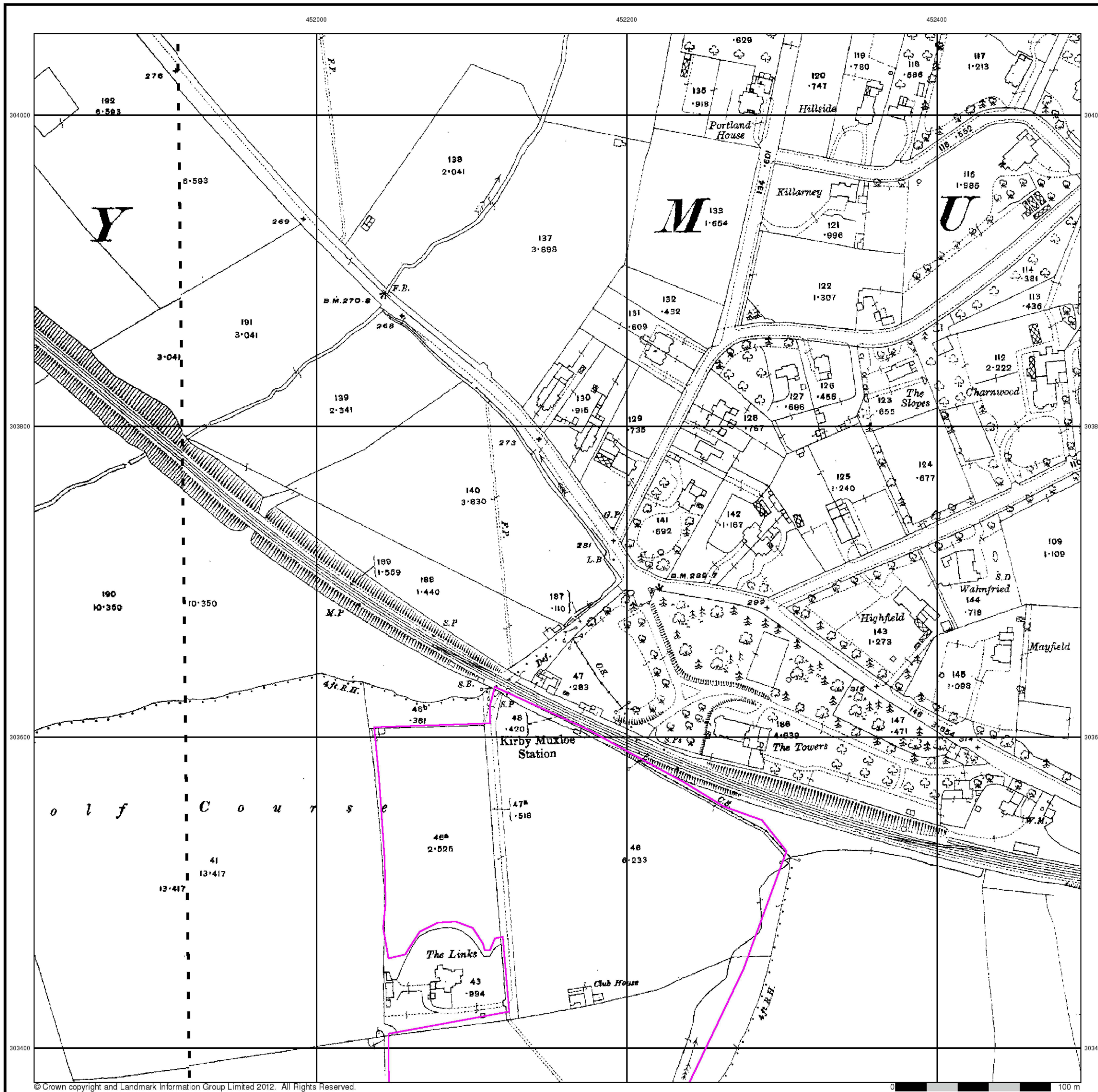


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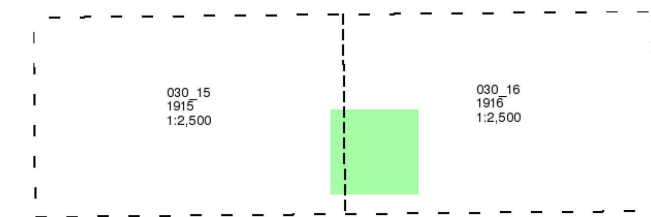
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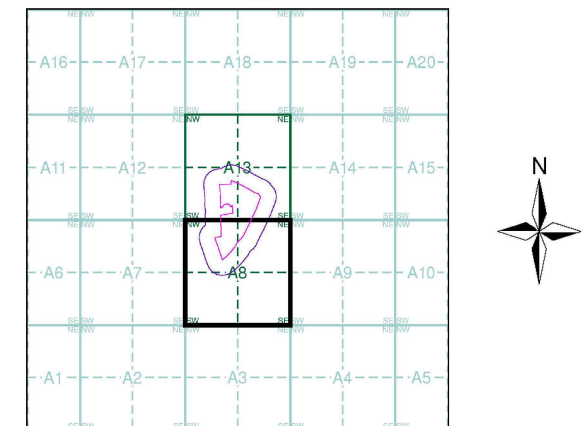
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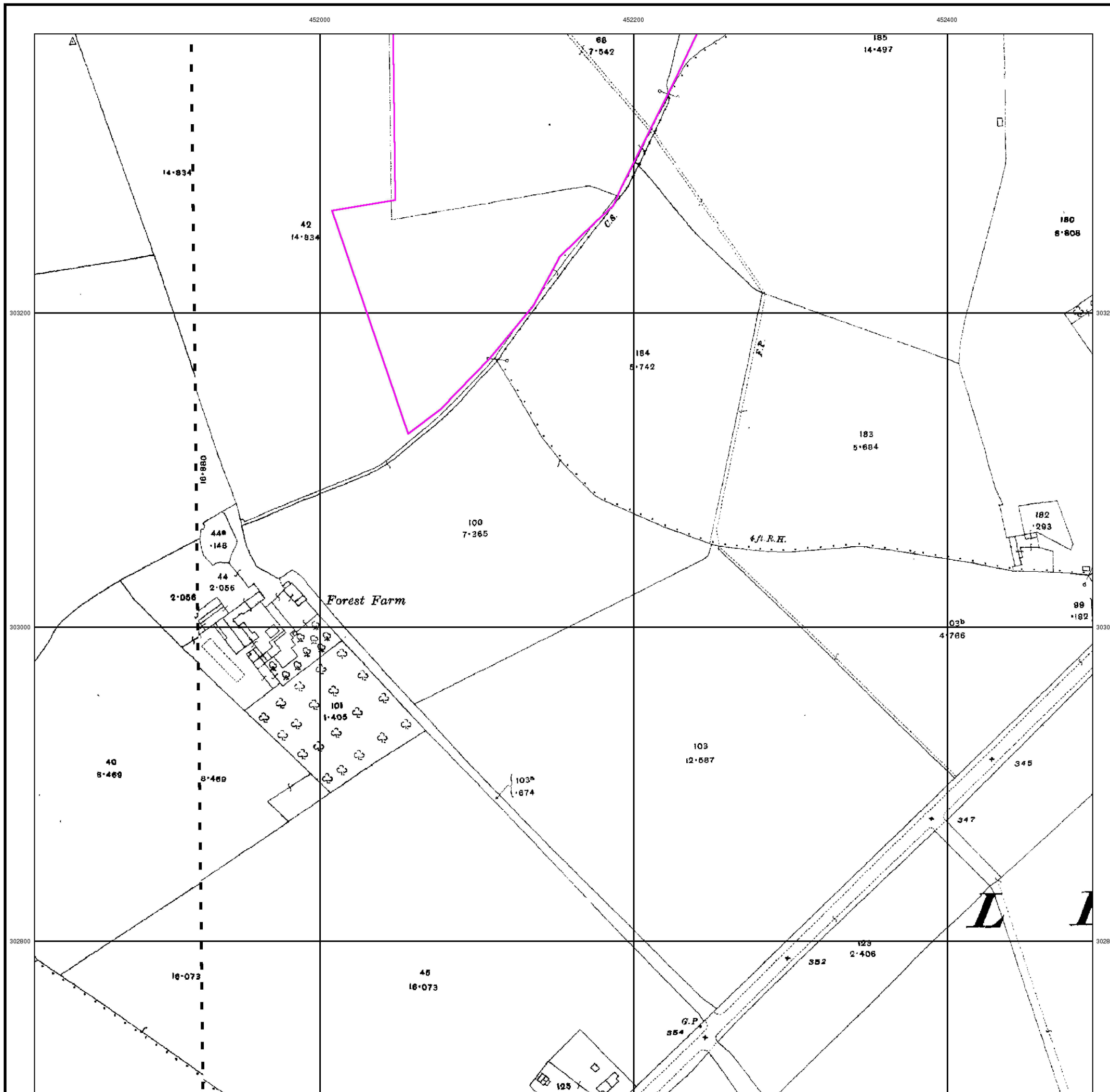


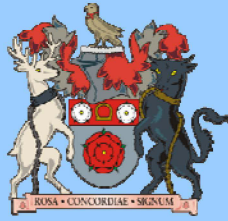
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