

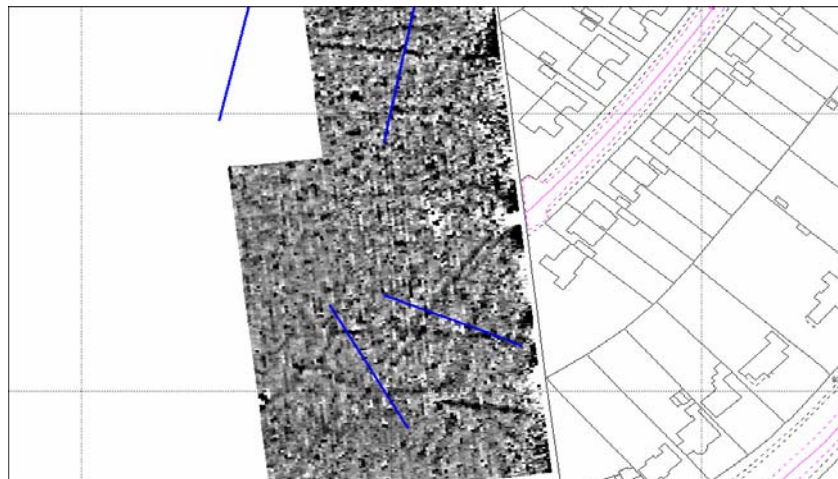


**Northamptonshire  
County Council**

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# Northamptonshire Archaeology

**Archaeological Fieldwalking, Geophysical  
Survey and Trial Trench Evaluation  
on land west of Kettering, Northamptonshire  
October-November 2005**



Northamptonshire Archaeology

December 2005

Report 05/143

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## OASIS REPORT FORM

PROJECT DETAILS		
Project title	Archaeological Fieldwalking, Geophysical Survey and Trial Trenching on land west of Kettering, Northamptonshire, October-November 2005	
Short description (250 words maximum)	A series of archaeological surveys on 19 ha of land proposed for housing west of Kettering resulted in no discoveries of archaeological significance. Features revealed by geophysical survey were probably caused by superficial and geological variations.	
Project type (eg desk-based, field evaluation etc)	Surface collection, geophysical and trial trench evaluation surveys	
Previous work (reference to organisation or SMR numbers etc)	none	
Future work (yes, no, unknown)	Unknown	
Monument type and period	none	
Significant finds (artefact type and period)	none	
PROJECT LOCATION		
County	Northamptonshire	
Site address (including postcode)	Land west of Kettering between West Furlong and A14	
Easting (use numeric 100km grid square no.)	4853	
Northing	2784	
Height OD	86m OD	
PROJECT CREATORS		
Organisation		
Project brief originator	Northamptonshire County Council Historic Environment Team Leader	
Project Design originator	Northamptonshire Archaeology	
Director/Supervisor	Paul Mason	
Project Manager	Andy Mudd for Northamptonshire Archaeology	
Sponsor or funding body	Bucclough Estates	
PROJECT DATE		
Start date	October 2005	
End date	November 2005	
ARCHIVES		
		Content (eg pottery, animal bone etc)
Physical	Finds	1 box pottery
Paper	Contexts, registers Plans, sections	1 file site records
Digital	Report, illustrations	Fieldwalking, geophysical survey and trenching data and plots.

## STAFF

Project Manager	Andy Mudd BA MIFA Adrian Butler BSc MA AIFA
Fieldwork (Surface Collection)	Adrian Burrow MA
Fieldwork (Geophysics)	Adrian Butler Ian Fisher BSc
Fieldwork (Trenching)	Paul Mason BA
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Illustrations	Adrian Butler Drew Smith BA

## QUALITY CONTROL

	Print name	Signature	Date
Checked by	P Chapman		
Verified by	A Maull		
Approved by	A Chapman		

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# ARCHAEOLOGICAL FIELDWALKING, GEOPHYSICAL SURVEY AND TRIAL TRENCH EVALUATION ON LAND WEST OF KETTERING, NORTHAMPTONSHIRE

OCTOBER-NOVEMBER 2005

## ABSTRACT

*Northamptonshire Archaeology conducted fieldwalking, geophysical and trial trench surveys on four fields covering 19 ha of land west of Kettering. The fieldwalking resulted in the recovery of very few surface finds. Reconnaissance geophysical survey identified a few anomalies of interest. Sample detailed survey over the scanned anomalies detected subtle variation in the local geology in Field 1, whereas in Field 2 possible glacial fissuring was identified. A single potential archaeological linear ditch was located in the north of Field 2. Four trial trenches targeted on these anomalies failed to reveal any features of archaeological interest.*

## 1 INTRODUCTION

Northamptonshire Archaeology undertook archaeological investigations on behalf of Cluttons Planning and Regeneration (acting for the landowner Buccleuch Property), on approximately 19 ha of land on the western edge of Kettering, Northamptonshire (Centre: NGR SP 853784, Fig 1). The land is under consideration for residential development.

The work entailed a series of field evaluations, comprising a surface collection (fieldwalking) survey, geophysical reconnaissance and detailed surveys, and sample trial trench evaluation.

The archaeological investigations were undertaken at the request of Northamptonshire County Council's Historic Environment Team (NCCHET), as advisers to Kettering Borough Council, in order to inform the planning process. The work was conducted to a specification written by Northamptonshire Archaeology and approved by NCCHET (NA 2005).

## 2 ARCHAEOLOGICAL BACKGROUND

The proposed development is in an area of archaeological potential, although NCCHET have indicated that there are no known archaeological remains lying within it. A cropmark site, probably indicating an Iron Age or Roman farmstead, lies about 400 m to the west (SMR site ref. 3665) while immediately to the east Roman finds may indicate the former presence of a Roman settlement on land now under housing (SMR site ref. 3807).

### 3 TOPOGRAPHY AND GEOLOGY

The survey area encompassed four fields (1-4; Fig 1) on the western edge of Kettering, Northamptonshire. All fields were under arable cultivation, containing young cereal seedlings. The fields were distributed on a west-facing slope, immediately east of the A14 road. The area identified for the surveys lay east of a high voltage power line passing through the western two fields (3 & 4; Fig 1)

The solid geology of the area comprises Northamptonshire Sand and Ironstone to the top of the hill in Fields 1 and 2. Sloping down to the west two further deposits are exposed: Upper Lias Clay masked by alluvium on the margin of the site. The soils covering the site belong to the Banbury association (Soil Survey of England and Wales 1983, Sheet 3).

### 4 METHODS

#### **Fieldwalking survey**

The 19 ha site was walked systematically at slow pace along parallel transects, aligned with regard to field boundaries, and spaced every 20 m. The individual surface finds were gathered and plotted in 20 m stints within each individual transect (Fig 2).

#### **Reconnaissance geophysical survey**

An initial geophysical reconnaissance survey, using the technique of magnetometer scanning, was carried out over the c 19 ha site. The objective was to identify areas or localised instances of anomalous magnetism indicating possible buried archaeological remains.

The survey utilised Geoscan Research FM-series fluxgate gradiometers on regularly spaced traverses 15 m apart. Significant magnetic anomalies (in this case an arbitrary cut-off point of greater than  $\pm 3\text{nT}$ ) were logged and plotted, either individually or as group data depending upon their density. The anomalies have subsequently been plotted on Ordnance Survey base mapping of the site (Figs 3-5).

#### **Detailed Gradiometer Survey**

About 2 ha of the site was covered by detailed gradiometer survey, the exact areas and extents being determined, in agreement with NCCHEAT, by the results of the reconnaissance. The survey was undertaken using Bartington Grad601-2 fluxgate gradiometers. The Grad601-2 is constructed as a dual-sensor instrument with two vertical gradiometers separated on a yoke to enable two lines of survey to be recorded in tandem.

A total of 22 separate 30m x 30m grid-squares were surveyed in detail. Each grid square was traversed at rapid walking pace in zigzag traverses spaced at 1m intervals with data recorded every 0.25m along these. All fieldwork was carried out in accordance with English Heritage and the Institute of Field Archaeologists Guidelines (English Heritage 1995; Gaffney, Gater and Ovendon 2002).

The data was analysed using Geoplot 3.00s software. Low (negative) magnetism is shown as white and high (positive) magnetism as black in the resultant greyscale plots. To avoid the introduction of bias, minimal processing was carried out on the data. The 'Zero Mean Traverse' function was applied in order to bring the average level of each line of data into a balanced zero.

The processed data is presented here in the form of greyscale highlighting the magnetic anomalies (-3nT / +3nT scale, Fig 3) and an interpretive plot (Fig 4) and are referred to directly in the following Survey Results section.

#### **Trial trench evaluation**

A total of four trenches, each 50 m long, were requested by NCCHET, targeted on linear anomalies found in the geophysical survey (Fig 6). The trenches were located using a Leica GS50 GPS and the excavations were undertaken using standard methods as specified in the methods statement (NA 2005, sections 3.13-3.29).

## **5 SURVEY RESULTS**

### **Fieldwalking**

A total of 67 transects were walked. The entire survey area was covered except for a small area on the extreme north-east corner of Field 4 where there was a modern accumulation of material with very heavy vegetation cover.

The weather conditions were poor. There were extended periods of heavy rain and light levels were consistently low. Walking conditions were otherwise fair. The fields were well drained, with a low seedling crop, making artefact visibility good.

The vast majority of material on the surface of the fields was 18<sup>th</sup>- and 19<sup>th</sup>-century ceramic and modern debris, which was not recorded. The only finds of archaeological significance came from Field 3. These comprised two worked flints, a medieval potsherd and a 17<sup>th</sup> century glazed sherd. They are shown on Figure 2.

Both worked flints were small scrapers formed from blocky cortical flakes, one with uni-marginal retouch along approx. 70% of its circumference, the other a uni-marginal end-scraper. Both were crude, expedient tools, probably of late Neolithic date, recovered from the east side of the field.

The medieval sherd was most likely a Paffrath-type ware from Germany, dating to the 13<sup>th</sup> century and probably being part of a ladle (Iain Soden *pers. com.*).

### **Geophysical Reconnaissance Survey**

Initial gradiometer 'scanning' was completed across all areas (Fig 3). A highly magnetic steel gas pipeline was located orientated north through the west of Field 2 and centrally through Field 3. Nine discrete magnetic anomalies were located over the site, three each in Fields 1, 2 and 3. All the scanned anomalies fitted the profile of buried pits or erratic magnetic geological features (e.g. boulder or intrusive deposit).

### **Detailed Geophysical Survey**

#### *Field 1 (Figs 4 & 5)*

Survey of Field 1 detected an area dominated by east-west orientated magnetic striations. In general this rippling effect did not exceed  $\pm 1.5\text{nT}$ , suggesting that it is a background effect caused by magnetic variations within the local iron-based geology.

#### *Field 2 (Figs 4 & 5)*

The larger area survey carried out within Field 2 produced a number of intriguing magnetic anomalies. Intense anomalies along the eastern boundary were a response to iron objects, such as gates, along the fence. Several linear and curving positive anomalies were detected in the southern half of the area. From the authors experience, it would appear likely that this group of anomalies of less than  $1.0\text{nT}$  reflect the glacial fissures common to jointing found in ironstone geology. Such features may often be mistaken for archaeological ditches. However, an east-west linear anomaly located in the north of the area appeared to represent a ditch on the basis of its higher magnetic intensity.

### **Trial trenching**

The four trenches were positioned in Field 2 (Fig 6). Two northern ones (Trenches 1 and 2) were targeted to intercept the east-west linear anomaly, while the two other trenches were targeted on other anomalies in the southern part of the survey area.



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All trenches showed a stratigraphy comprising *c* 300-400 mm topsoil over natural sandy silt with ironstone. Two small sub-circular features were found in Trench 3, one of which contained fragments of clay tobacco pipe. No features of archaeological significance were present.

## 6 CONCLUSIONS

The archaeological investigations over the *c* 19 ha site revealed nothing of archaeological interest. The collection of material from the fieldwalking may be regarded as exceptionally sparse given that 'background' scatters of prehistoric flintwork and medieval pottery, attributed to casual losses and transient activity or manuring, are often found on this type of geology. This sparseness is supported by the geophysical reconnaissance survey in which few potential archaeological features were recorded.

Sample detailed survey over the scanned anomalies in Field 1 detected subtle variation in the local geology whereas in Field 2, possible glacial fissuring in the rock was identified. A single potential archaeological linear ditch was located in the north of Field 2. This was not, however, evident in the trial trenches (1 and 2) for reasons which are not clear, but were perhaps due to its shallowness, with the magnetic variation consequently limited to the topsoil. The other anomalies targeted by the trenching were probably natural variations as suspected.

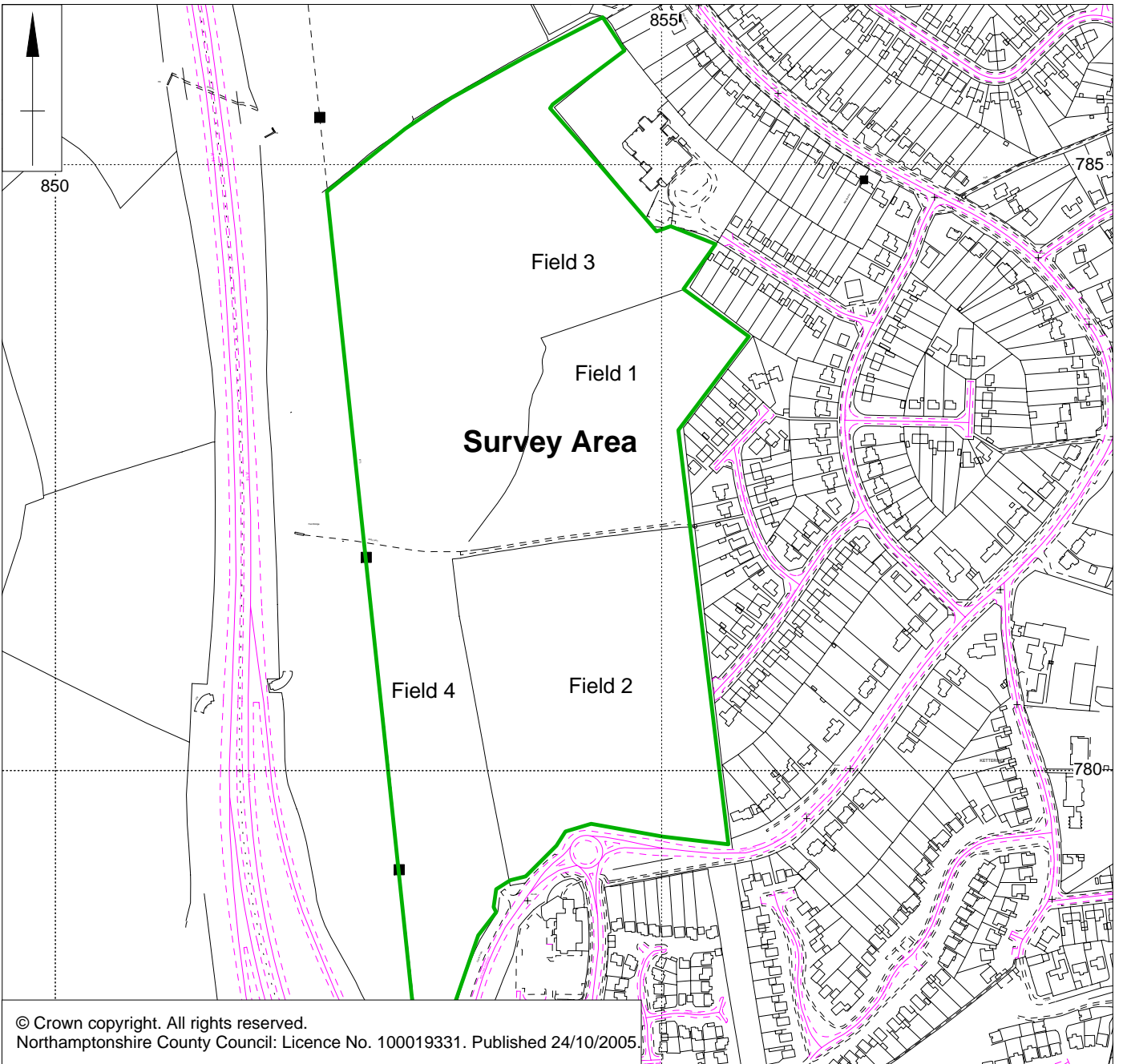
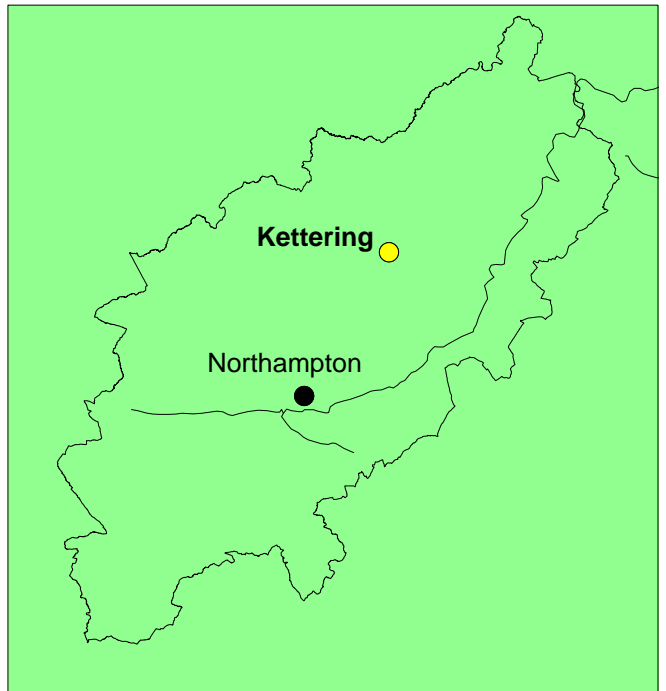
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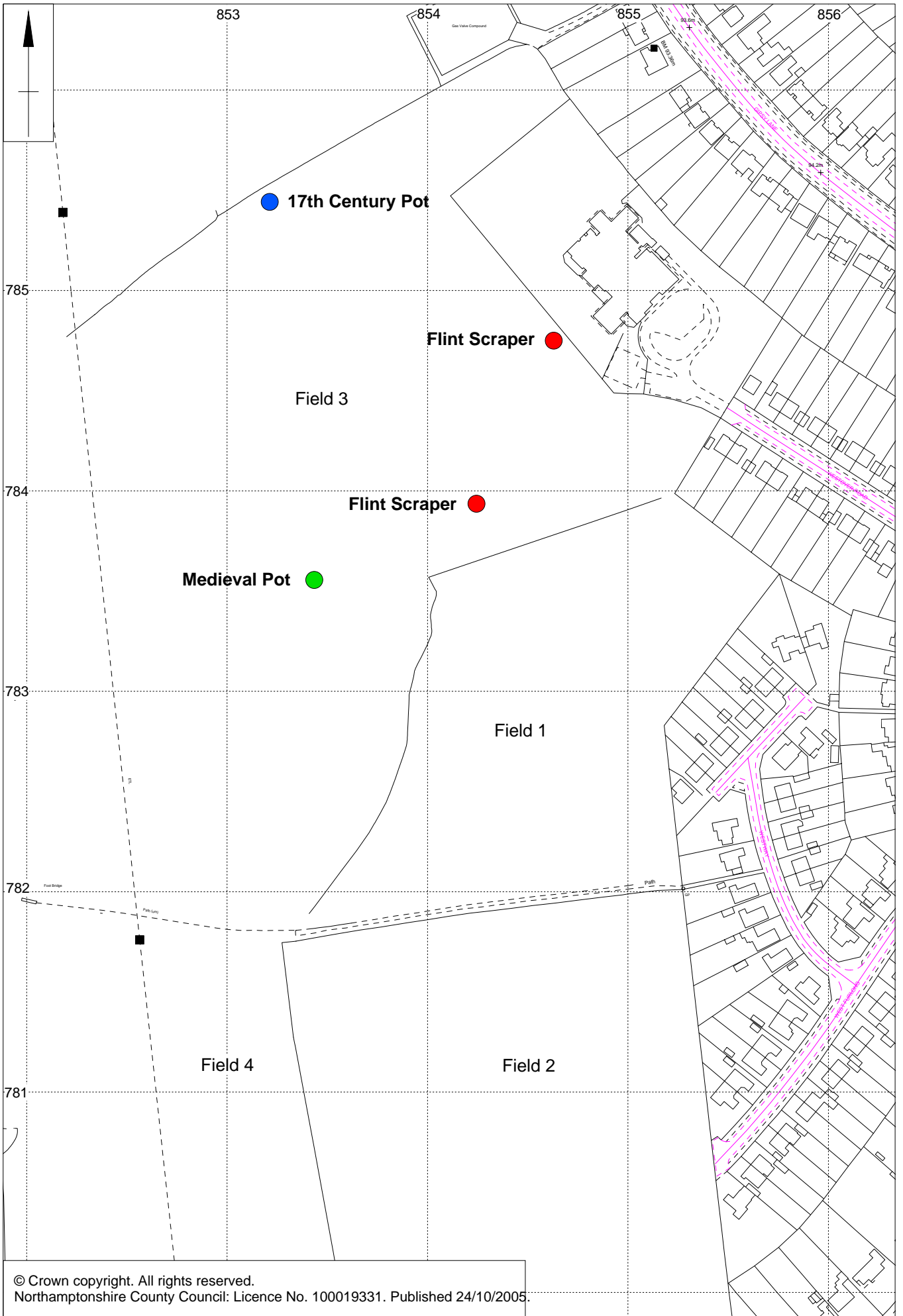
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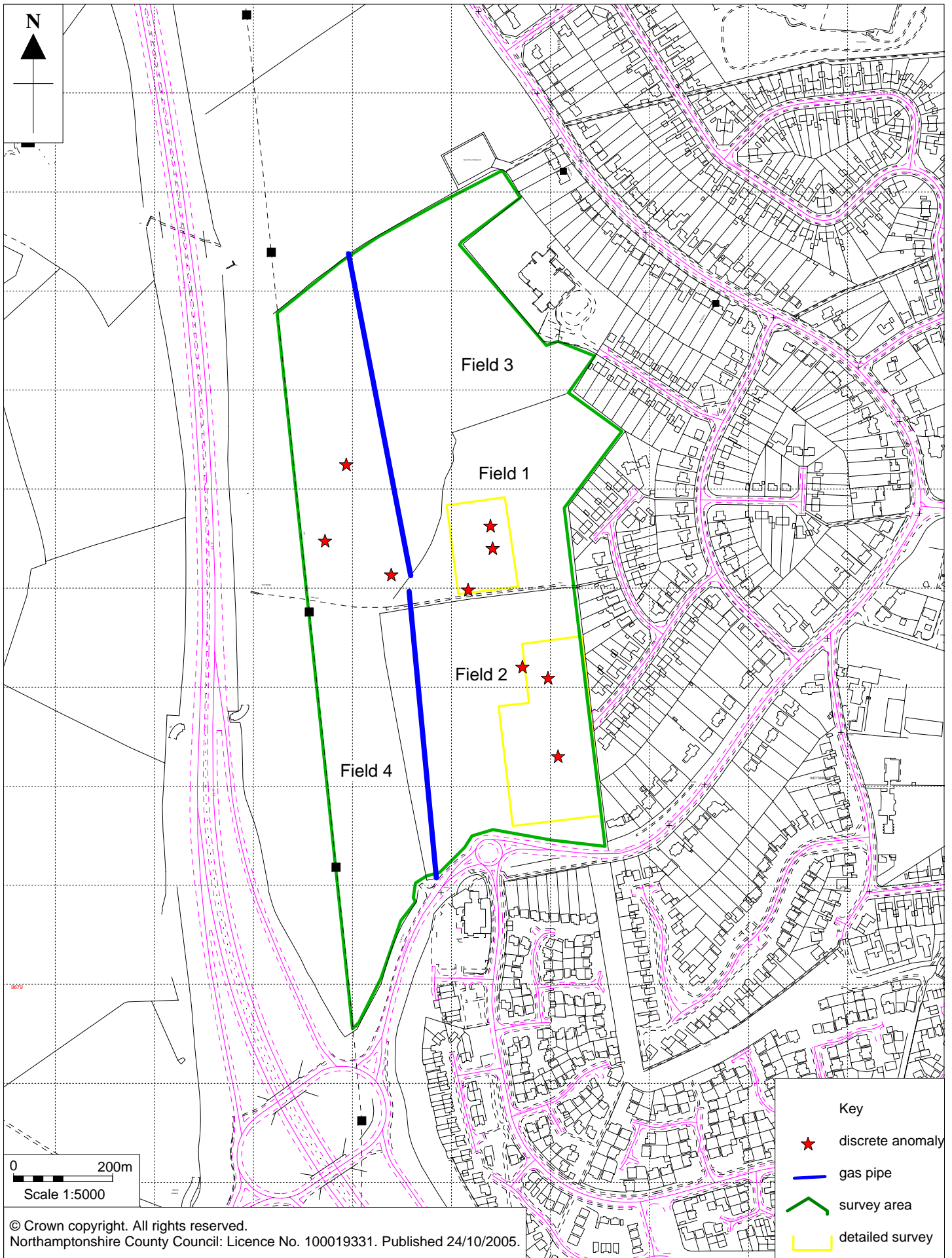
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Fig.1



Scale 1:2500

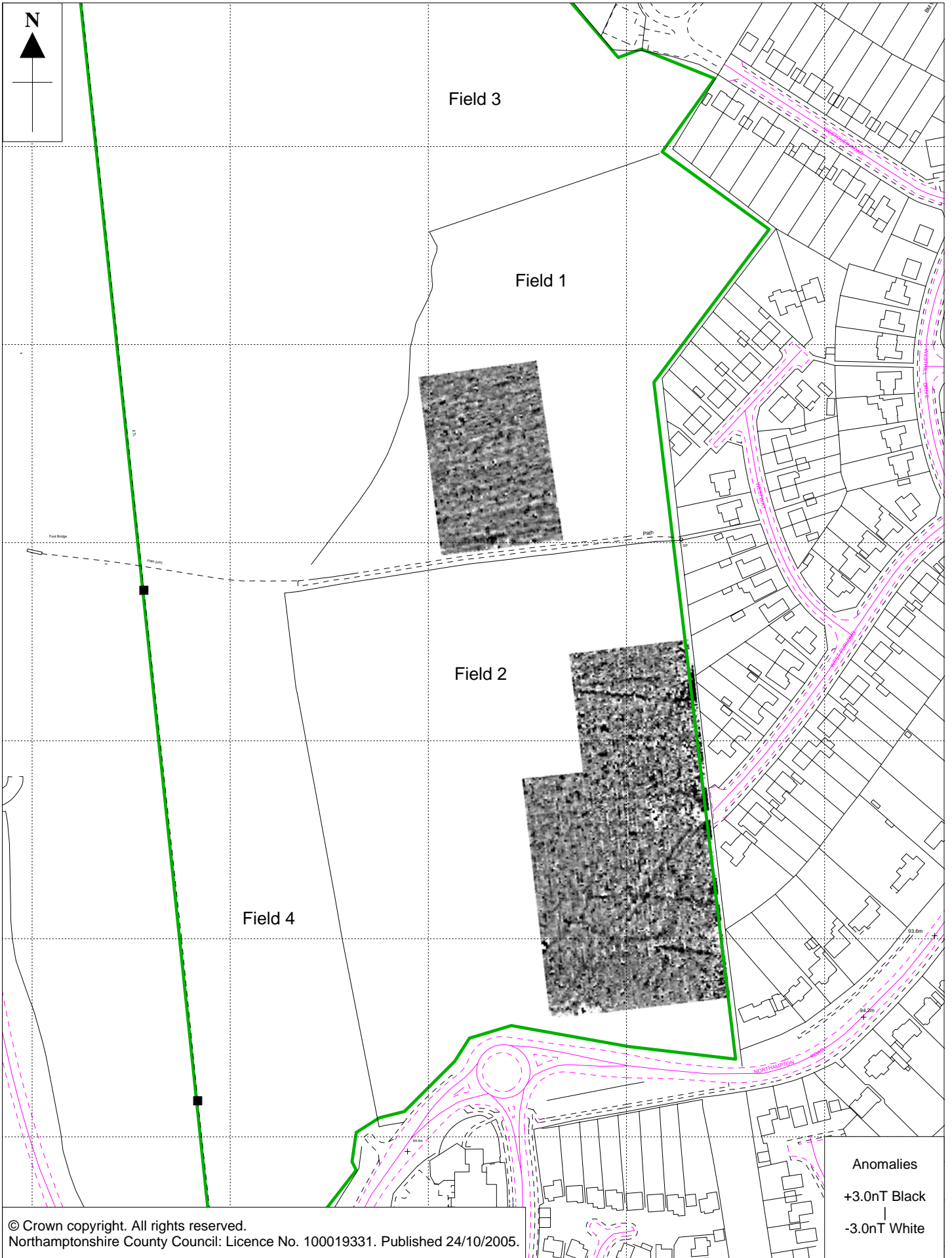
Fig 2



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Fig 3: Geophysical Reconnaissance Results



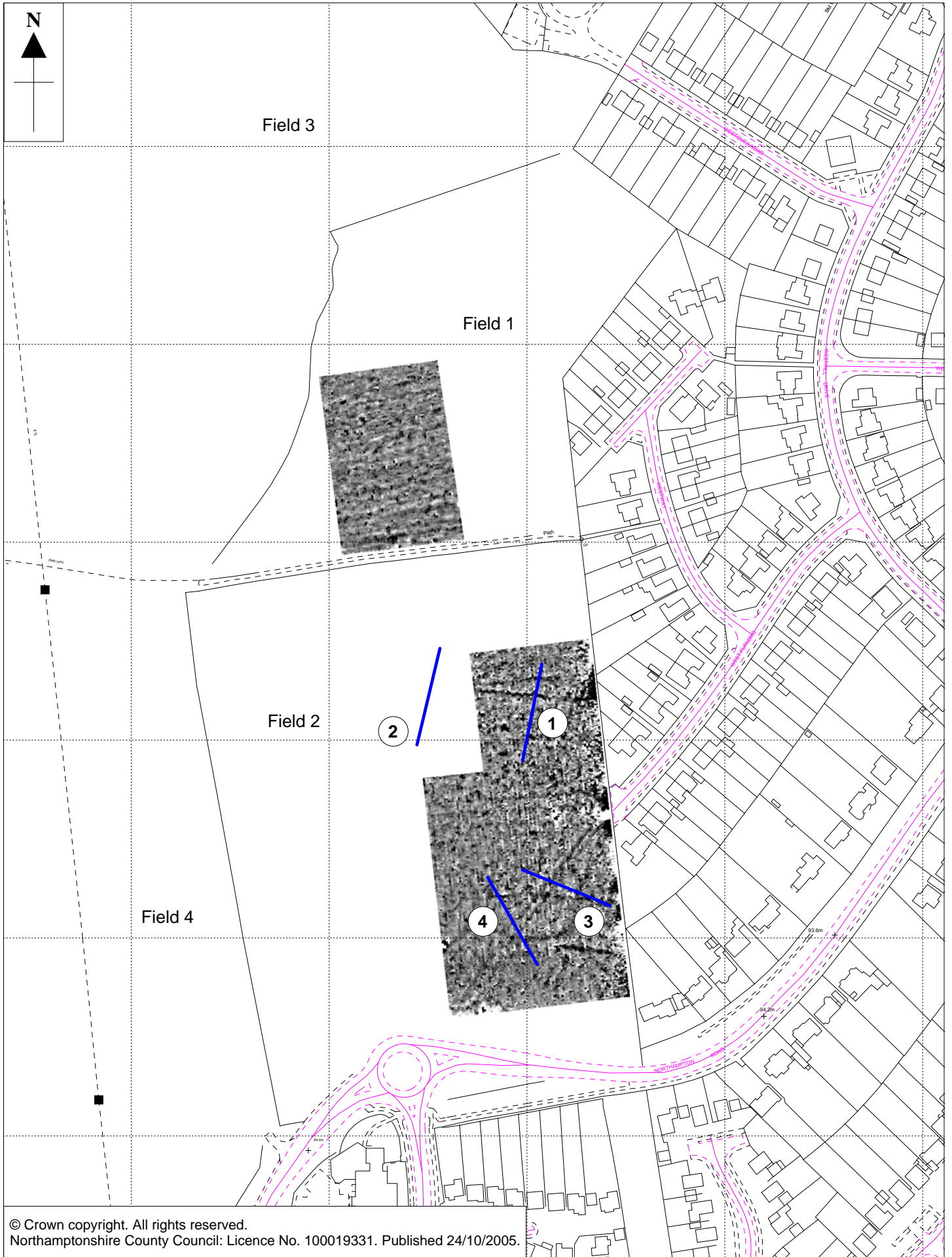


Scale 1:2500

Fig 4: Gradiometer Survey Results



Fig 5: Gradiometer Results with Interpretation



Scale 1:2500

Fig 6: Trench Location