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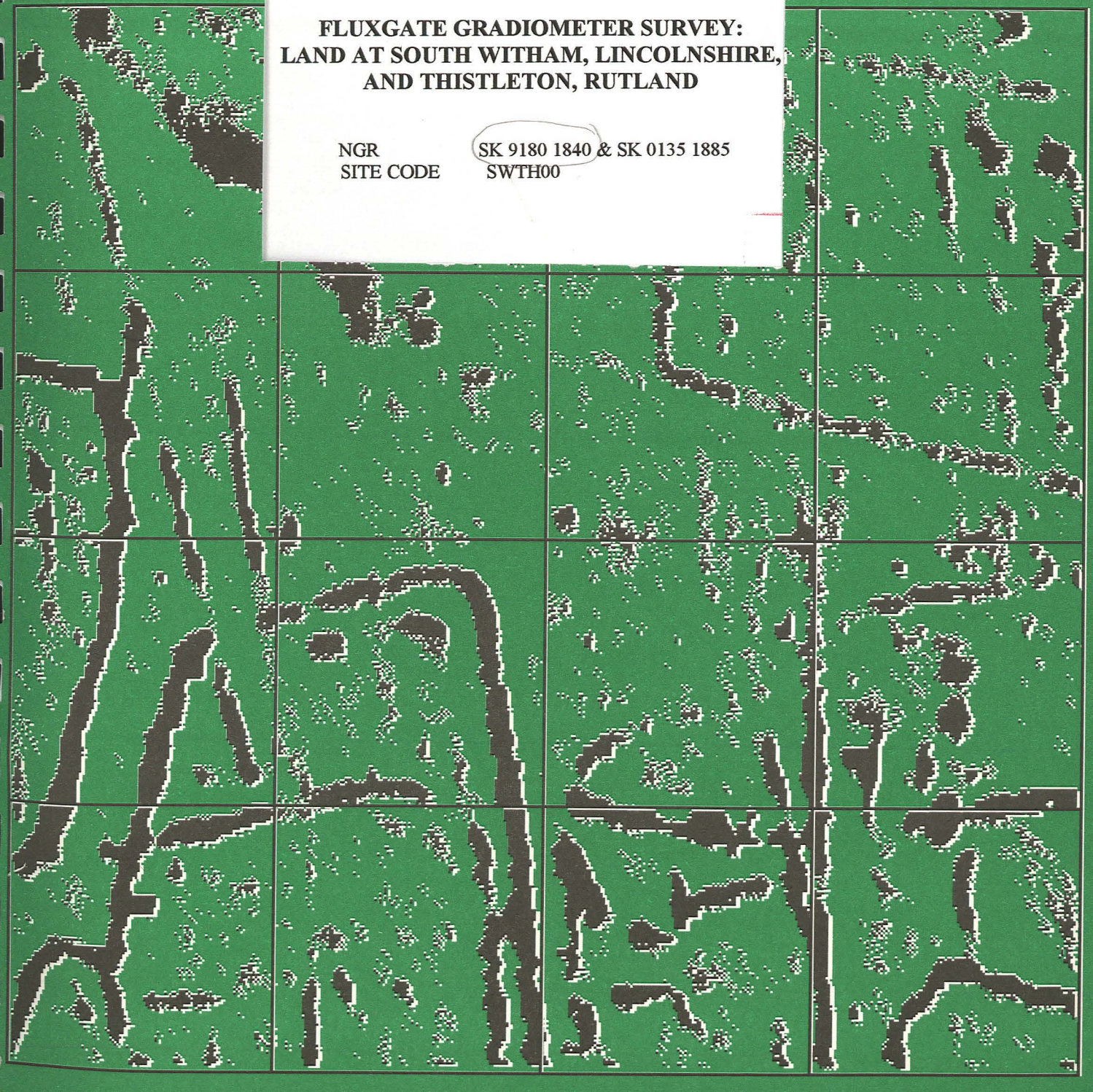
PRE-CONSTRUCT GEOPHYSICS

FLUXGATE GRADIOMETER SURVEY: LAND AT SOUTH WITHAM, LINCOLNSHIRE, AND THISTLETON, RUTLAND

NGR SK 9180 1840 & SK 0135 1885
SITE CODE SWTH00



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Report prepared for T Smith (Minerals Consultant)
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Illustrations

Summary

- *A fluxgate gradiometer survey was undertaken on 5.25 hectares of land at South Witham, Lincolnshire and Thistleton, Rutland*
- *The survey identified significant magnetic variation across the area, some of which is thought to relate to human activity*
- *Some of the anomalies can be resolved as features produced by agricultural activities, geological processes, and the provision of mains service: others appear to indicate the presence of sub-surface archaeological features*
- *A number of linear anomalies possibly represent traces of boundary and/or trackway features, while others appear to be the remains of ridge and furrow field systems*
- *Some of the larger discrete anomalies may be the product of quarrying*
- *Individual and groups of discrete anomalies may represent areas of in-situ burning*
- *A well defined group of anomalies situated on the line of the proposed site access, in Thistleton parish, may be resolved as a sub-rectangular enclosure, with morphological characteristics suggesting it is part of a Late Iron Age or Romano-British settlement*
- *Scatters of discrete anomalies across the site attest to the possible presence of ferrous and brick/tile debris*

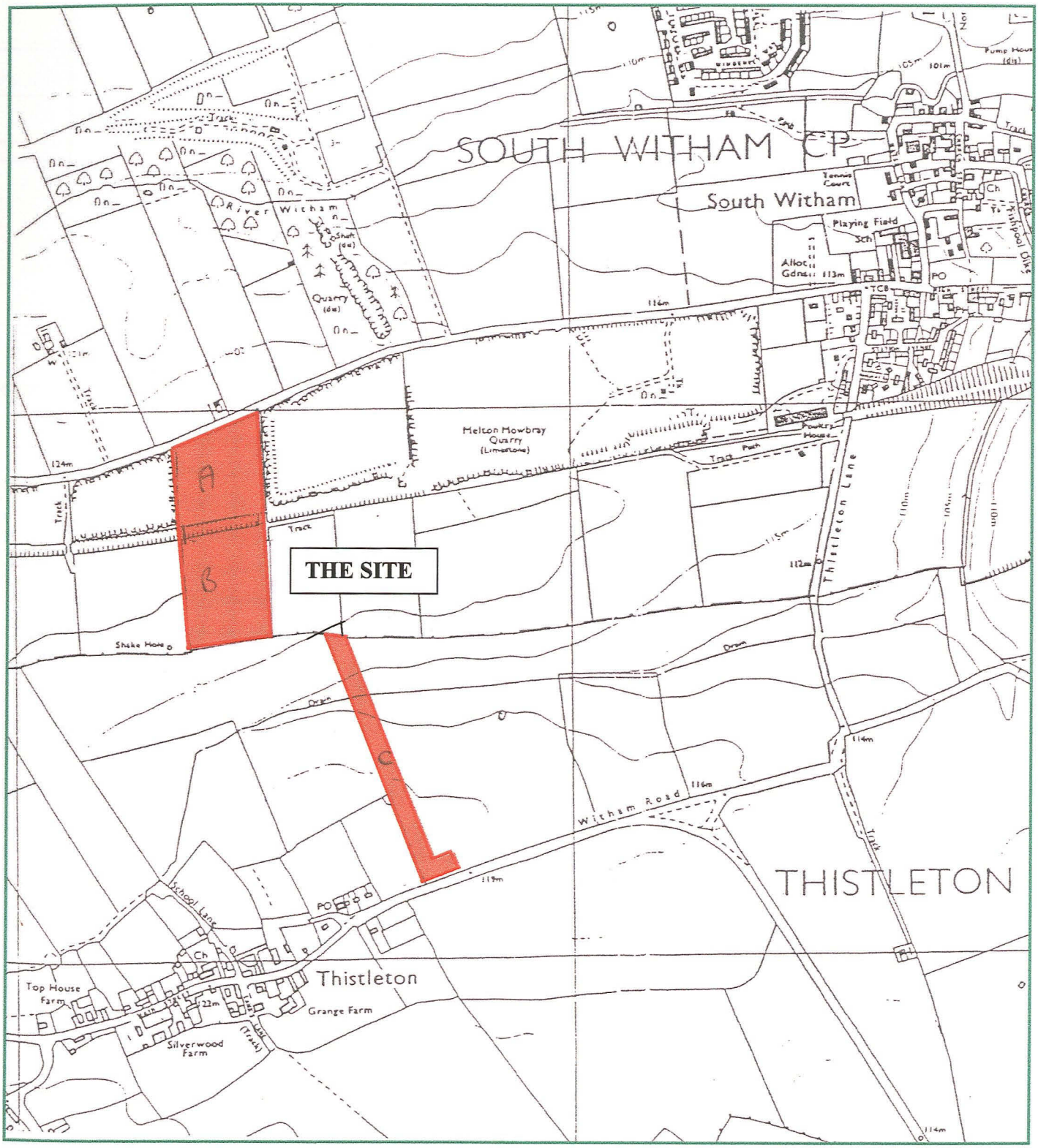


Fig. 1: Location of site **Scale 1:10,000**

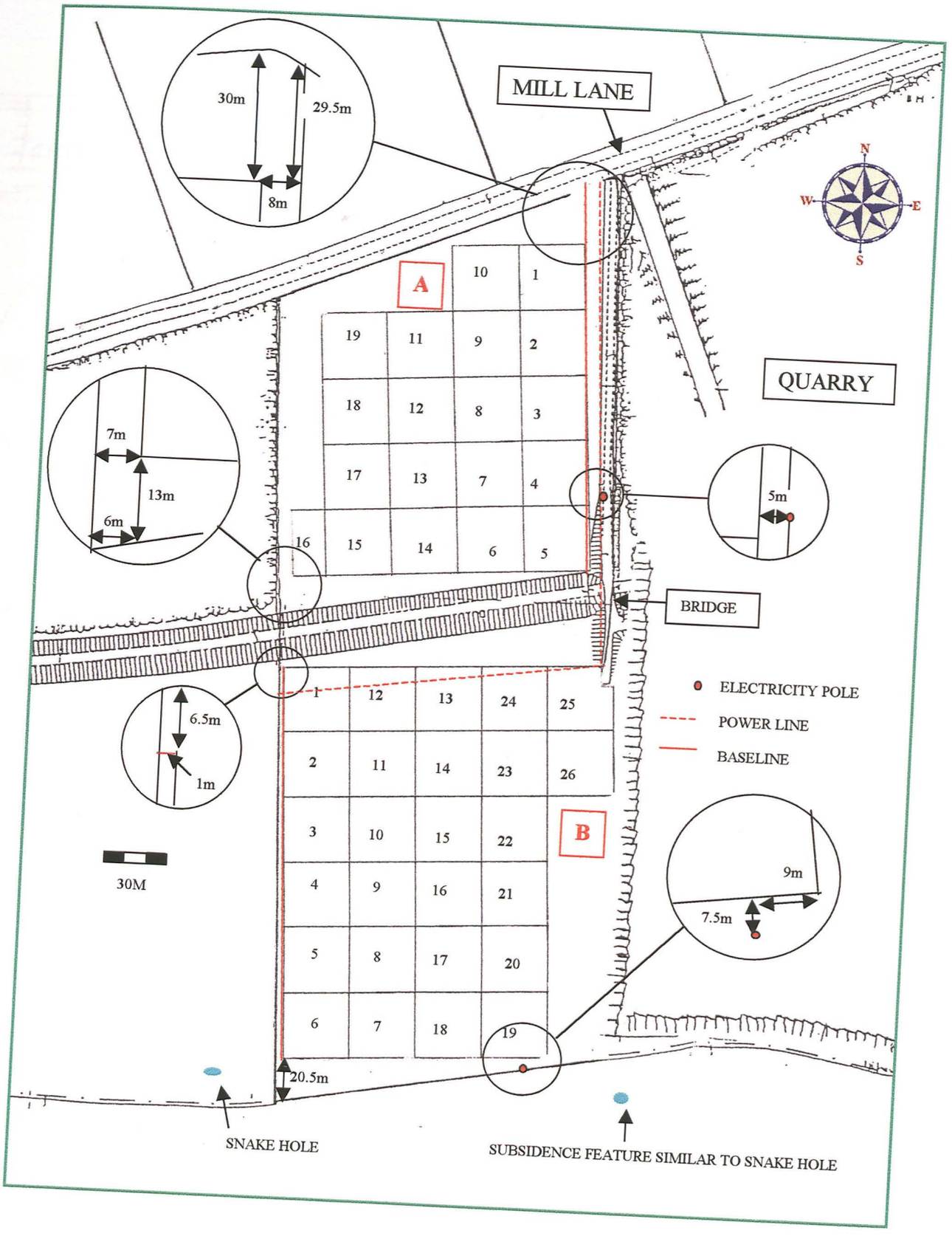


Fig. 2: Location of grids, Area A and B. Scale 1:2500

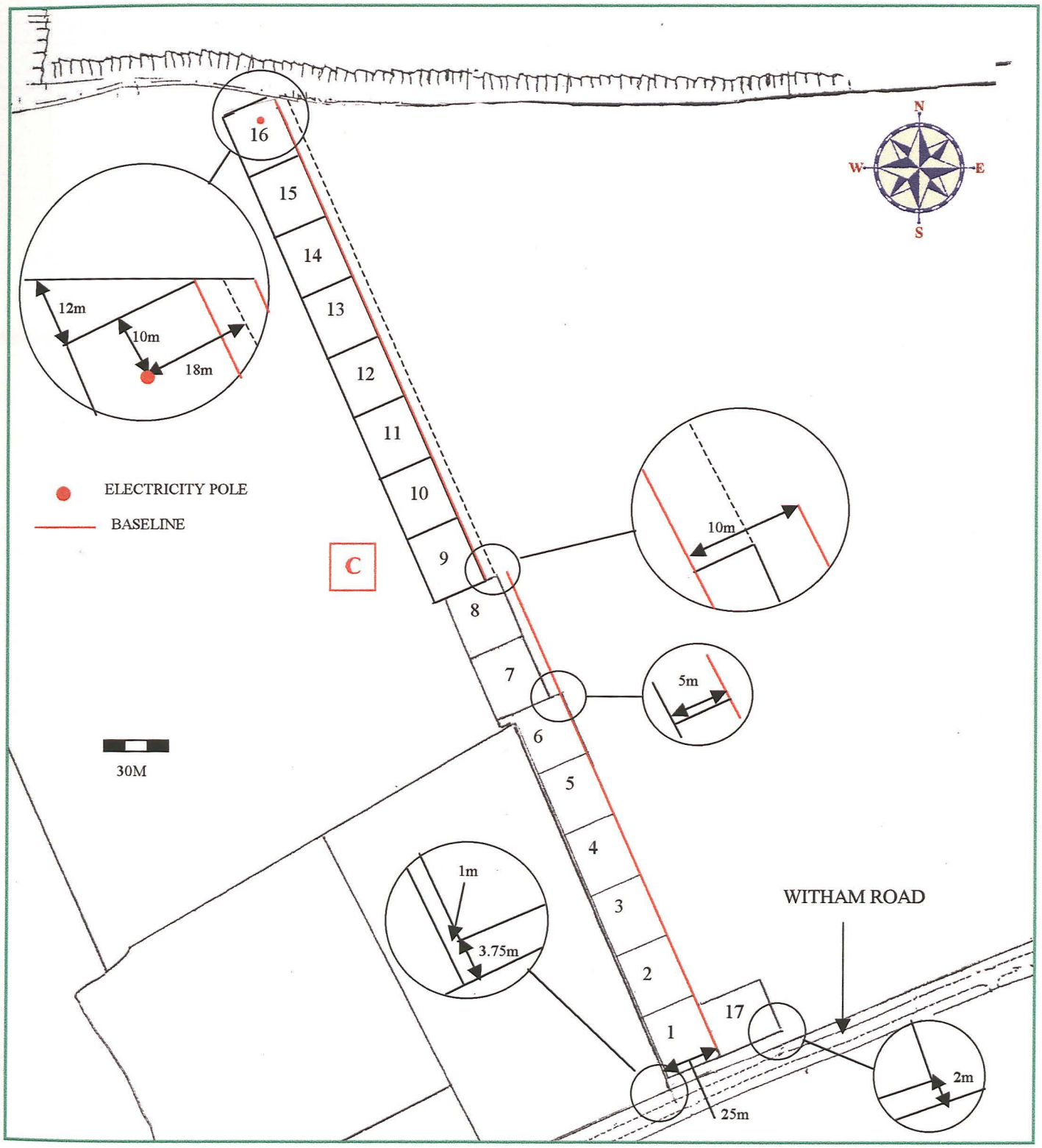


Fig. 3: Location of grids, Area C. Scale 1:2500

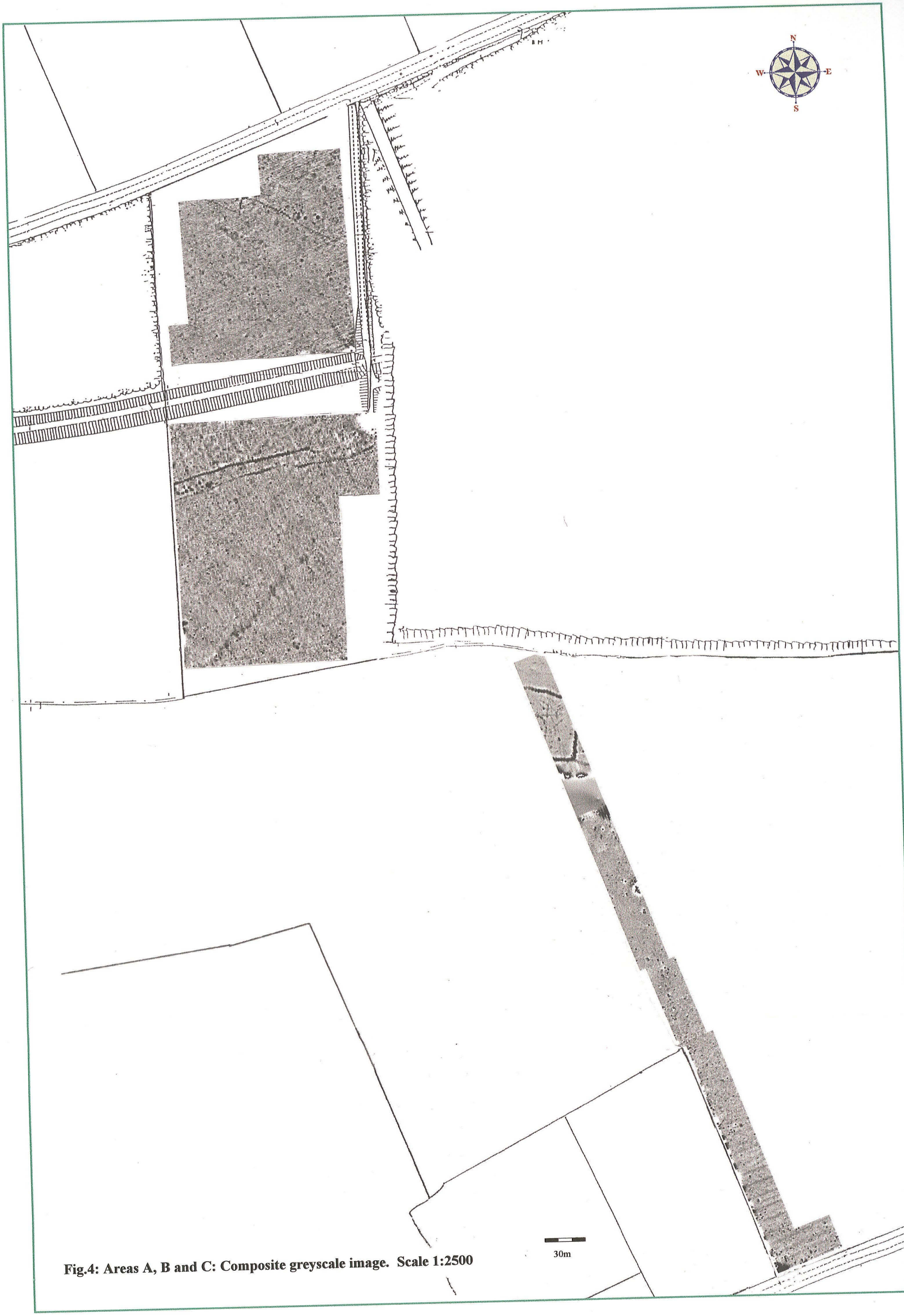


Fig.4: Areas A, B and C: Composite greyscale image. Scale 1:2500

1.0 Introduction

T Smith (Minerals Consultant) commissioned Pre-Construct Archaeology (Lincoln) to undertake an evaluation of land at South Witham, in southern Lincolnshire, and in the adjoining parish of Thistleton, Rutland. This work was to be carried out to satisfy conditions issued by both Lincolnshire and Leicestershire County Councils, with respect to a planning application to extract limestone. The results are presented as a combined report, to provide a wider context for each data set.

Pre-Construct Geophysics undertook the survey in accordance with a specification prepared by Pre-Construct Archaeology (Palmer-Brown, 2000).

The gradiometer survey methodology was based upon guidelines set out in the English Heritage document *'Geophysical Survey in Archaeological Field Evaluation'* (David, 1995).

2.0 Location and description

South Witham lies within the administrative district of South Kesteven, Lincolnshire. The site is located directly south of Mill Lane, approximately 1km to the west of the village. It comprises two fields, which are separated by a disused railway cutting. The northern area (**A**: Fig. 2) is a sub-rectangular unit of c. 2.38 ha, of which 1.67ha were surveyed. It has recently supported a potato crop, the remnants of which remained on the surface at the time of survey. The passage of agricultural machinery had resulted in moderate rutting of the ground surface, which was otherwise relatively level. The site is bounded on all sides by hedging, beyond which lies a track to the east, the railway cutting to the south, and Mill Lane to the north. A power line extends along the eastern edge of the site.

The southern area (**B**: Fig. 2) is a sub-rectangular unit of c. 3.019ha, of which 2.34ha were surveyed. The site, which supported recently mown rough vegetation at the time of survey, has a gentle south facing slope. There is a slight east-west ridge, roughly parallel to, and c. 30-50 m from, the northern boundary. Hedges define the northern, western and southern perimeter. The eastern edge abuts existing quarry workings. Power lines traverse the northern and southern areas of the site.

The proposed access road lies to the south-east of **Area B** (**C**: Fig. 3). A corridor 25m wide by x 510m long was surveyed. This work extended north-westwards from Witham Road to the southern edge of the existing quarry. Hedging forms the southern and northern boundaries, also constituting c. 180m of the western boundary. The ground surface currently supports a young wheat crop.

Grids 1-7 and grid 17 are located on a gentle south-facing slope. Grids 8-13 are situated on a more pronounced north-facing slope, with the ground rising again between grid 14 and the northern edge of the site. The gross topographical variation along the north-south axis has resulted in some distortion. When the survey results were superimposed onto the flat two-dimensional surface of the base map, this is particularly acute with regard to grids 7-16. This discrepancy should be taken into account when re-locating the survey. A sub-surface land drain and an aviation fuel

pipe bisect the site in grid 13 (D. Abernathy, *pers comm*: Fig.13). An electricity pole, which carries an east-west power line, is located in grid 16.

Snake Hole, a natural feature created by subsidence, is situated to the south-west of **Area B**; a similar, unmapped example was noted c.100m further to the east (Fig.2).

The drift geology comprises deposits of Pleistocene Boulder Clay, and its derivatives, which overlie Jurassic, Inferior Oolite Series, Lower Lincolnshire Limestones (G.S.G.B, 1967).

Central National Grid Reference SK 9135 1885 (**Areas A** and **B**), SK 9180 1840 (**Area C**).

3.0 Archaeological and historical background

The etymology of the place names suggest that the villages of South Witham and Thistleton both have Saxon origins, but there is evidence indicating that the area was settled in the prehistoric and Roman periods.

Both settlements lie close to a putative prehistoric trackway running from Great Casterton to Long Bennington. A Neolithic flint axe was discovered near Manor Farm (SMR 33696), approximately 1km to the east of the proposed development.

A number of significant Iron Age and Romano-British sites have been discovered within the area. Eighteen Corieltauvium coins and associated Iron Age pottery were recovered from deposits underlying a Roman temple, situated c. 1.2km to the south of the site (Todd, 1991). The earliest structure was a circular timber building of the 1st century AD, which appears to have formalised the focus of a pre-existent ritual site. Its replacement was an unusual stone foundered round-house constructed during the 2nd century AD. In the later 3rd century, a large bassilican structure succeeded the circular building. This latter edifice was based upon Classical prototypes and was associated with an adjacent hall-like building. A silver plaque recovered from the site suggests that these buildings were shrines to the god *Veteris*. Near the temple lay a villa complex comprising a main dwelling and ancillary structures, constructed and occupied during the 3rd and 4th centuries AD.

In the parish of South Witham, evidence of Romano-British occupation includes the discovery of an inhumation cemetery, which lies to the immediate east of the proposed development site (Hardwick, 1999).

Also within the parish is Temple Hill, lying approximately 2km to the north-east of the development area. Excavations in 1966-7 uncovered the site of a Preceptory, originally the property of the Knights Templars, but which later passed in to the hands of the Knights Hospitallers, and was abandoned and ruined by 1332 (*ibid.*).

4.0 Methodology

Detailed area survey using a fluxgate gradiometer is a non-intrusive method of evaluating the archaeological potential of a site. The fluxgate gradiometer detects magnetic anomalies caused by areas of high or low magnetic susceptibility. These areas are caused by changes in the composition of the subsoil or the underlying geology. Archaeological features are the result of man-made changes to the composition of the soil and the introduction of intrusive materials such as brick and stone. These features create detectable magnetic anomalies. In addition, activities that involve heating and burning will create magnetic anomalies, as will the presence of ferrous metal objects. The anomalies detected by a fluxgate gradiometer survey can often be resolved into entities sharing morphological characteristics with features of known archaeological provenance: this enables the formulation of an informed, but subjective, interpretation.

Magnetic variation between archaeological or naturally produced features and the natural background level can result from:

- different depth or density of fill with respect to the depth or density of surrounding soils magnetically similar to the fill
- the magnetic properties of materials introduced as a result of human activity (e.g. rubble, stone, brick/tile, ferrous metal etc.) in contrast to those within surrounding natural deposits
- the magnetic susceptibility of areas of burning as opposed to unburnt areas
- the magnetic properties of localised, naturally deposited minerals, such as occur in the fill of palaeo-channels, in contrast to those of the surrounding soils.

The area surveys were conducted using a *Geoscan Research* fluxgate gradiometer (model FM36) with an electronic sample trigger set to take 4 readings per metre (a sample interval of 0.25m). The zigzag traverse method of survey was used, with 1m wide traverses across 30m x 30m grids. The sensitivity of the machine was set to detect magnetic variation in the order of 0.1 nanoTesla. The base lines were established as shown in figures 2 and 3.

The data from the surveys were processed using *Geoplot* (*v. 3.0*). It was desloped (a means of compensating for sensor drift during the survey) and clipped to reduce the distorting effect of extremely high or low readings caused by discrete pieces of ferrous metal on the site. The results are plotted as greyscale and trace images.

The site was surveyed by David Bunn on the 8th and 25th August, the 30th September, and the 21st and 23rd October 2000.

Instrument	Geoscan Research fluxgate gradiometer FM36 Sample trigger ST1	
Grid size	30m x 30m	
Sample interval	0.25m	
Traverse interval	1.0m	
Traverse method	Zigzag	
Sensitivity	0.1nT	
Processing software	Geoplot (*v. 3.0*)	
Weather conditions	22/8/2000	Fine, sunny, warm
	25/8/2000	Fine, sunny, warm
	30/9/2000	Fine, sunny
	21/10/2000	Cool, overcast
	23/10/2000	Cool, overcast

Table 1: Summary of survey parameters

5.0 Results

5.1 Area A (Figs. 5,6 7)

The survey detected moderate magnetic variability, which can be resolved into a number of anomalies distributed across the site.

A linear anomaly traverses the site from south-east to north-west in the northern part of the site (Fig.6: **1**). The nature of this feature and its apparent association with linear anomalies (**2**) and (**3**), which run perpendicular and parallel to anomaly (**1**) respectively, suggests that they are integral components of a boundary system, defined by ditches.

The junction of anomalies (**1**) and (**2**) occurs at the north-western edge of the survey and coincides with discrete anomaly (**4**), the full extent of which was not determined. This anomaly, and a group of similar anomalies (**5**) (shown in dark yellow), may result from episodes of burning. A similar series of more diffuse anomalies, (**6**) (examples shown in pale blue), could result from localised quarrying. However, geological processes may account for some of these magnetically weaker features, which occur across **Areas A** and **B**. Snake Hole and another, unmapped example of such natural subsidence/solution features are visible on the surface, being located to the south-west and south of **Area B** respectively (Fig.2). Topsoil filling the upper part of features such as these could produce a magnetic response similar to that of a man-made pit. Anomaly (**7**), a large and ill-defined feature located in the central part of the site, may represent a larger example of such natural processes. It is abutted at its northern end by a series of curvilinear anomalies (**8**) that display some regularity. Similar results have been obtained elsewhere with this method of survey (e.g. Lyall, 1996; Snee and Bunn, 1999; Bunn and Hardwick, 2000). Investigation suggests this phenomenon results from 'ice wedging', a form of glacial fracturing of the bedrock, often seen in limestone areas (e.g. Palmer-Brown & Rylatt, 1999). Examples of (**8**) were also detected in **Area B**.

A series of faint south-east to north-west aligned anomalies were detected in the southern half of **Area A** (Fig.6: example **9**, shown in green). Similar features also appear in **Area B** (**16**), only relatively recently divided from **Area A** by the construction of the railway line. They probably represent the remains of a ridge and furrow field system, the strips being c. 7-10m wide.

The random distribution of small, discrete anomalies (fig.6: example **10**, shown in red) across the site probably represent ferrous/brick and tile debris, which are often deposited as a result of agricultural practices (midden spreading, thrown horseshoes, etc).

The whole of the survey area is crossed by a series of closely spaced anomalies, aligned from north-east to south-west (Fig.6: example **11**, shown in pink) which probably result from modern plough scoring. Similar features were detected in **Area B**, orientated on a north-west to south-east axis and magnetically weaker.

The magnetic disturbance along the southeast corner of the site, anomaly (**12**), was due to the proximity to an electric fence.

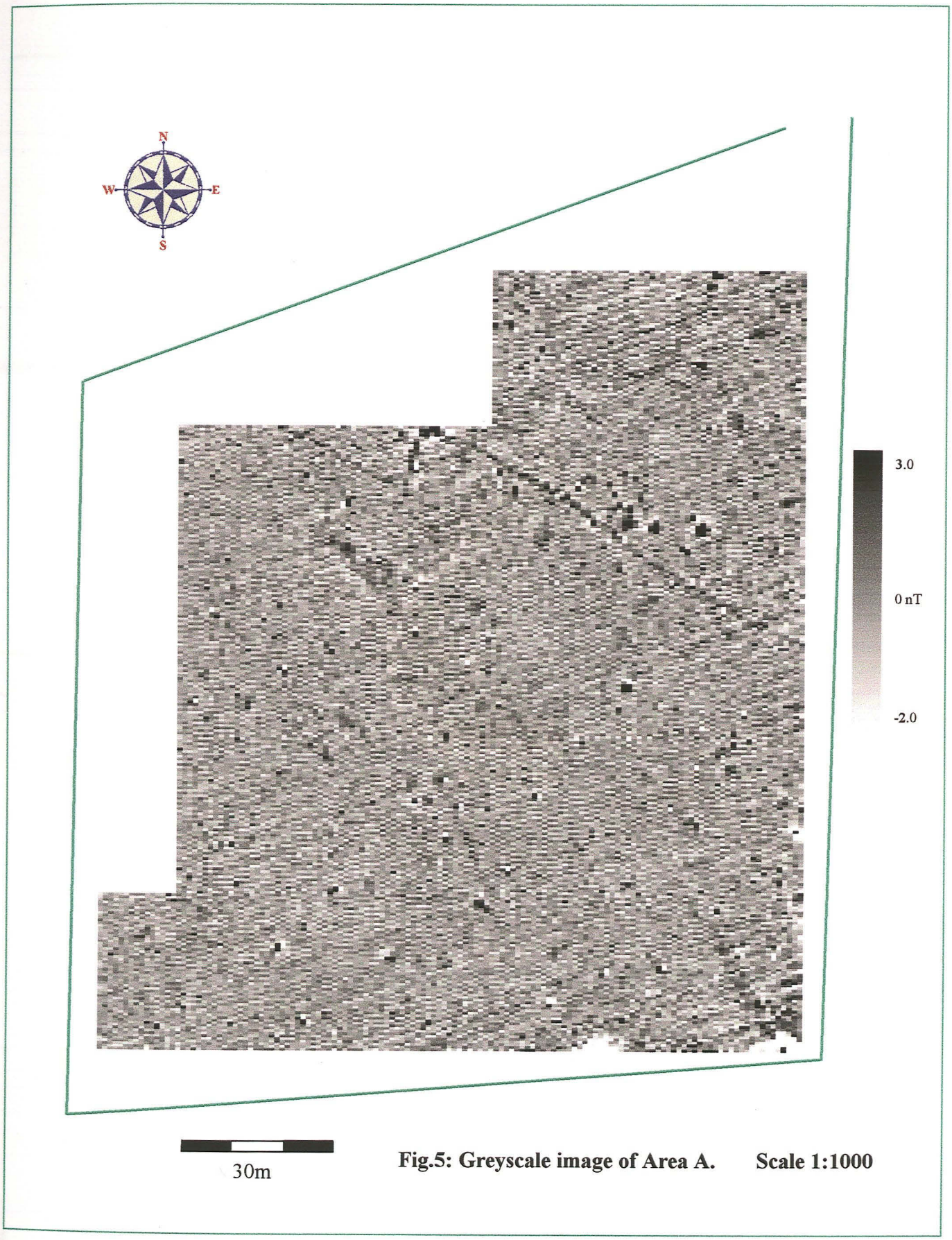


Fig.5: Greyscale image of Area A. Scale 1:1000

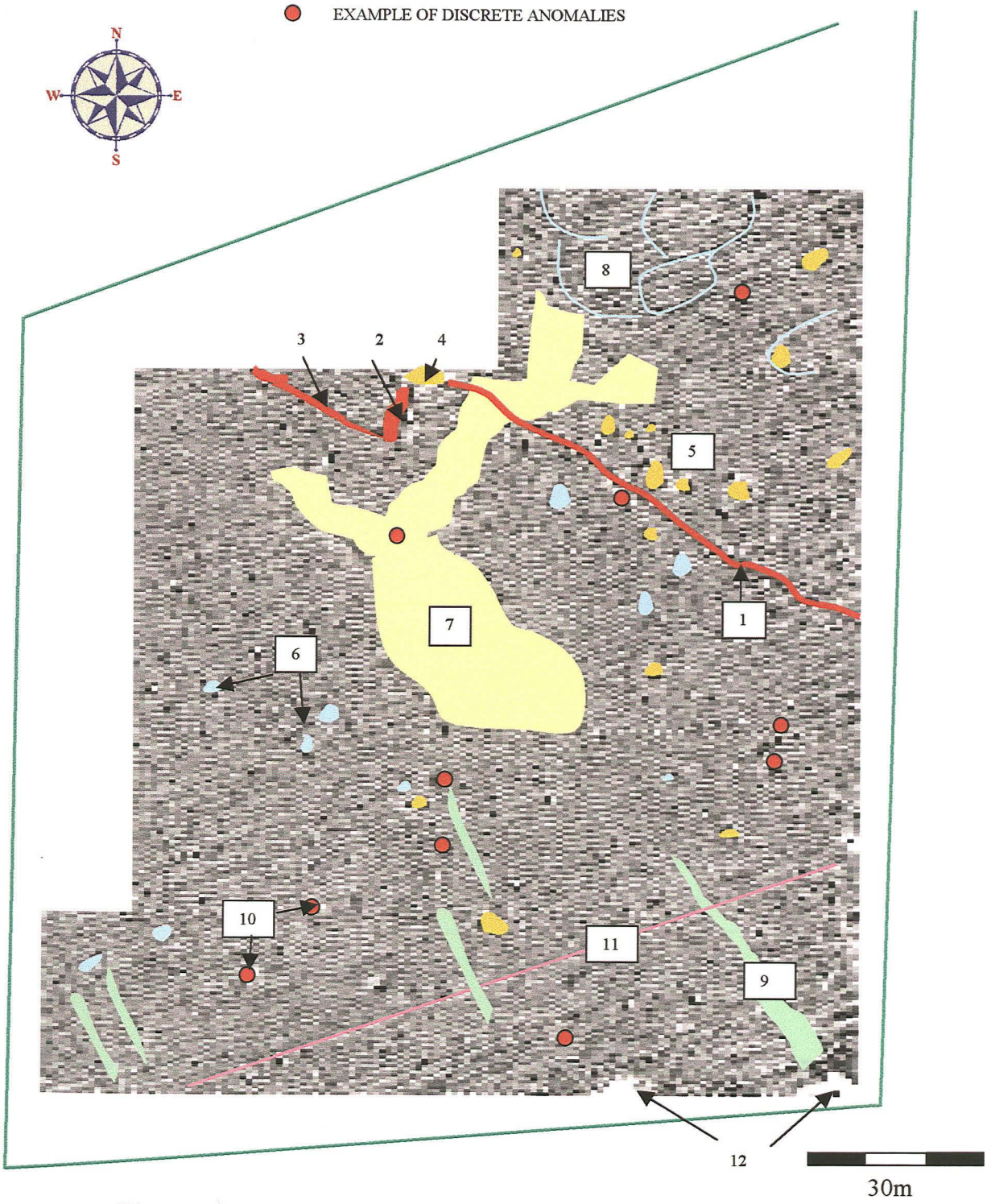


Fig.6: Interpretive image of Area A. Scale 1:1000

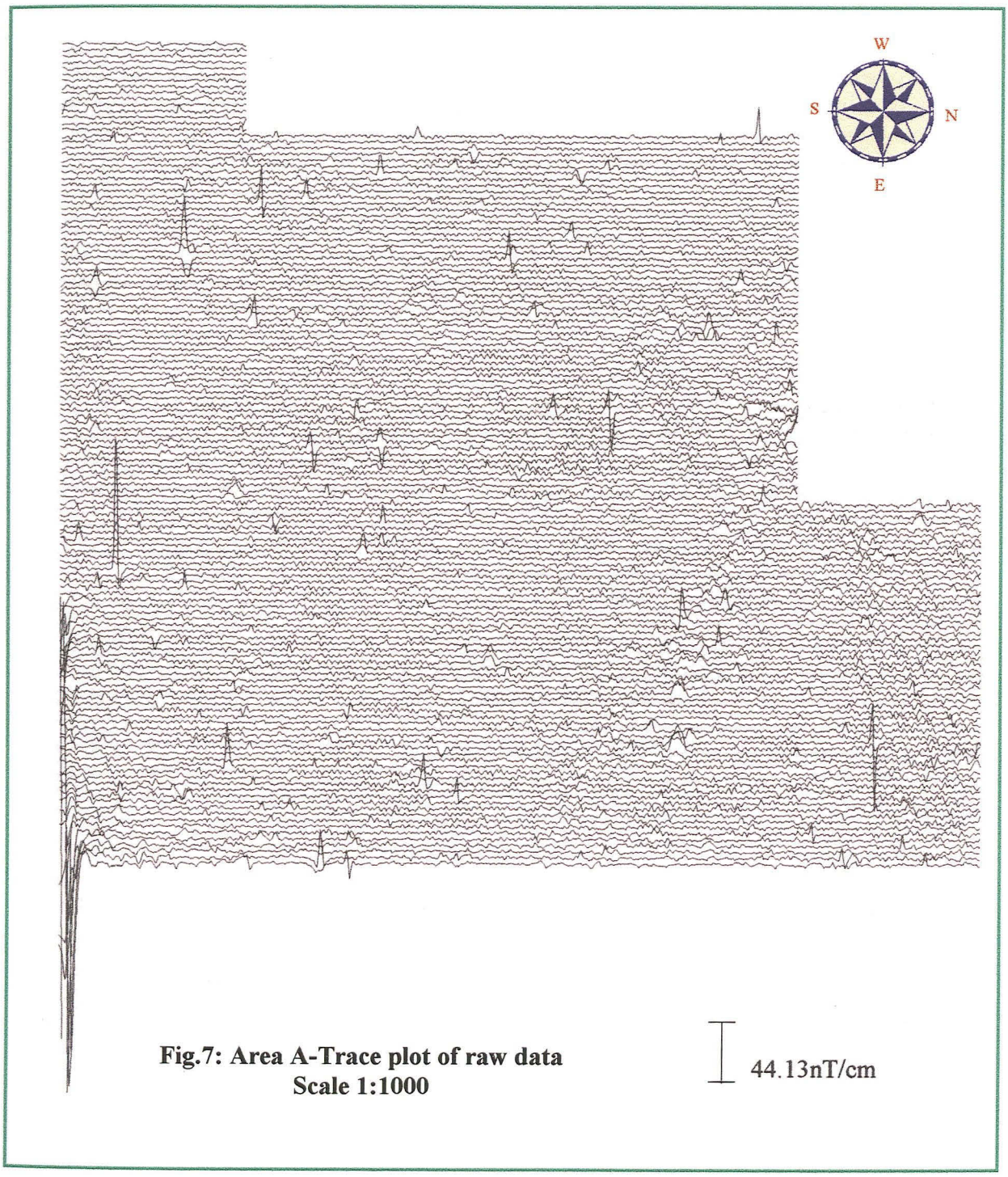


Fig.7: Area A-Trace plot of raw data
Scale 1:1000

5.2 **Area B** (Figs. 8,9,10)

Relatively strong magnetic signals were produced by two, roughly parallel, linear anomalies (Fig.9: **13** and **14**), which traverse the northern part of **Area B** along the southern face of a slight ridge. The spatial relationship of these anomalies suggests that they represent a track or road flanked by a pair of ditches. However, geophysical survey techniques are unsuited to the task of elucidating any chronological sequence or relationships. Consequently, it is possible that (**13**) and (**14**) were not contemporaneous, but in fact represent successive phases of boundary definition. It is also interesting to note that both (**13**) and (**14**) appear to be segmental in form; this is particularly apparent at the eastern end of (**13**). This pair of anomalies appears to define an area containing a group of discrete anomalies (**15**) situated toward the western edge of the survey. Indeed, it appears that (**14**) was possibly diverted slightly southwards to accommodate them. This implies that there is a chronological relationship between (**14**) and (**15**). The strength of magnetic signals obtained for (**15**) suggest that these are areas of burning, but the density of the features raises the possibility that they are not pits containing significant quantities of magnetically enhanced material.

A series of north-west to south-east orientated linear anomalies, (**16**), possibly represent the remains of ridge and furrow cultivations (discussed in 5.1 as **9**). It does not appear that there is any spatial relationship between (**16**) and the pair of ditches (**13**)/(**14**). In the eastern half of the survey, it appears that the ditches cut across and truncate the putative furrows, because (**13**) and (**14**) both appear as unbroken, stronger signals. However, it is still dangerous to use this as a basis for establishing a sequence: furrows are usually shallow features, a factor which may account for the intermittent nature of (**16**), as many may have been completely truncated by later ploughing. In contrast, the ditches, (**13**) and (**14**), may be relatively deep and contain material with a greater magnetic signature. Thus, even if the ditches were earlier, the signal they produce would mask the relationship with (**16**).

It is worth noting that much of **Area B** is situated on a south-facing slope and, consequently, later ploughing may have resulted in soil creeping downslope and building up to the south of anomaly (**14**). Therefore, some features may be lying too deep to be detected by gradiometry.

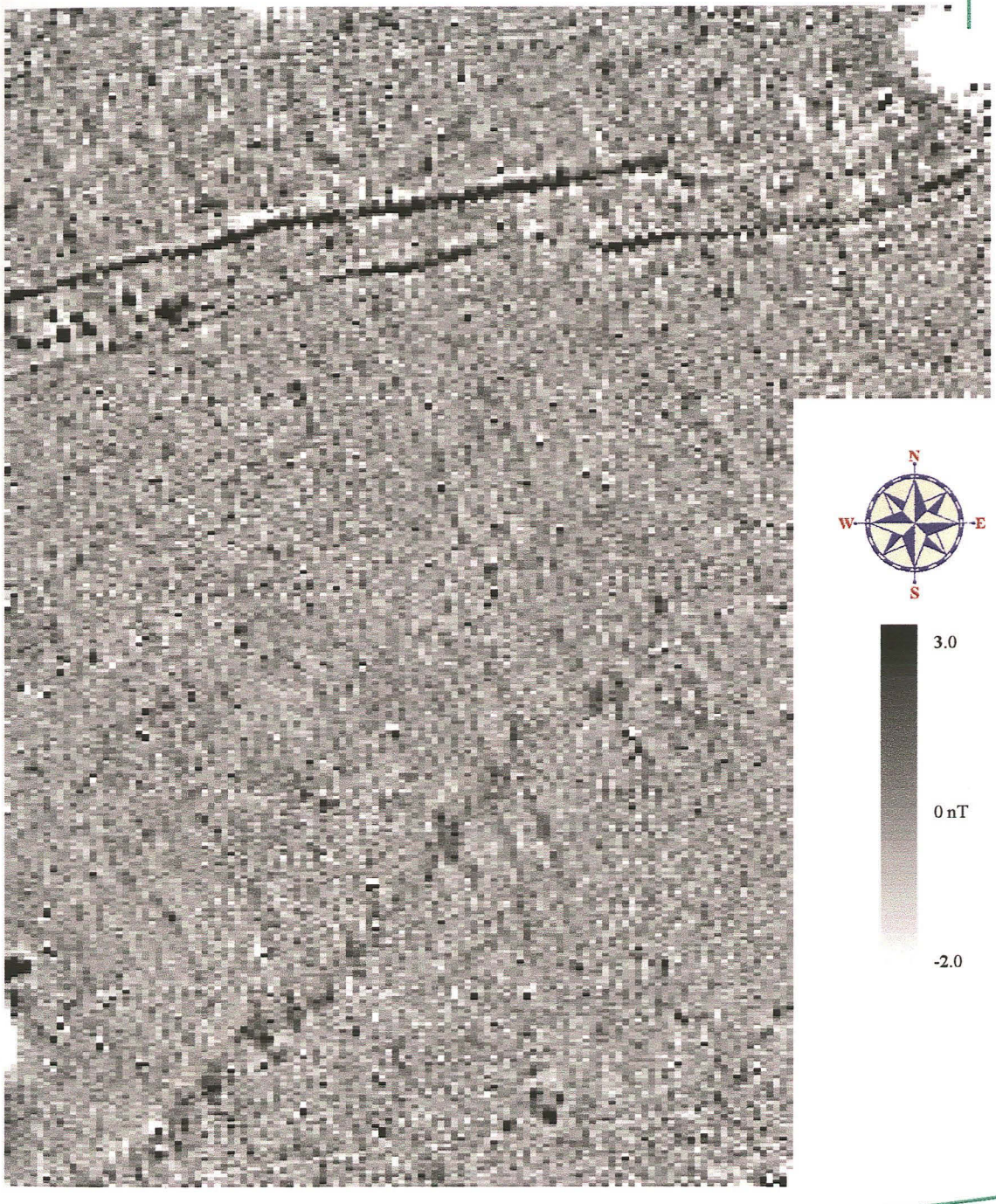
The southern part of the site is traversed by a south-west to north-east aligned linear anomaly, (**17**). A geological fault exists to the east of the site and is visible in the quarry face (J. Barnes, quarry manager, *pers comm.*). Anomaly (**17**) may signify its continuation through the development area.

The survey also detected two straight linear anomalies, (**18**) and (**19**), that are located at the northern and southern parts of the site respectively. They run parallel to each other, and the similarity of their magnetic responses implies shared origins. Compaction of limestone rich soil could result in negative magnetic enhancement, although, if wheeled traffic were responsible, it is likely that pairs of closely spaced anomalies would have been detected. An alternative interpretation is that they indicate the location of land drains, the gravel backfill of which would possess poor magnetic susceptibility.

A number of discrete anomalies were noted across **Area B**, which are analogous to others, (**5**), seen in **Area A**. However, there appears to be fewer examples than observed in **A**. Again, it is possible that these anomalies represent the location of fires.

Anomaly (**20**) represents an example of the randomly distributed anomalies that were discussed in section 5.1 (i.e. ferrous and ceramic litter in the topsoil).

The strong magnetic disturbance detected in the north-east corner of the site, (**21**), can be correlated to an area that has been raised, probably with hardcore, as an access to a bridge spanning the railway cutting.



30m

Fig.8: Greyscale image of Area B. Scale 1:1000

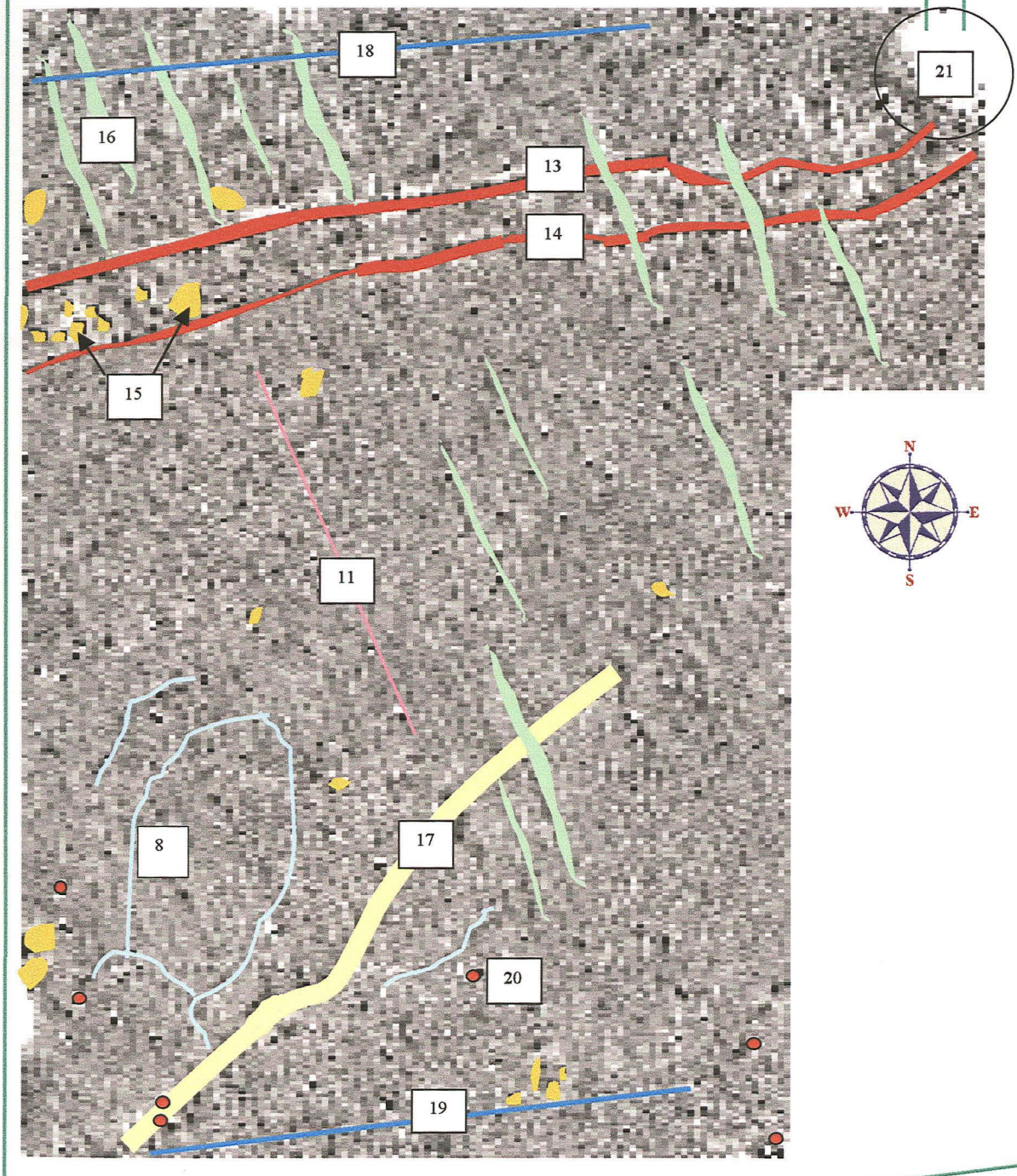


Fig.9: Interpretive image of Area B. Scale 1:1000

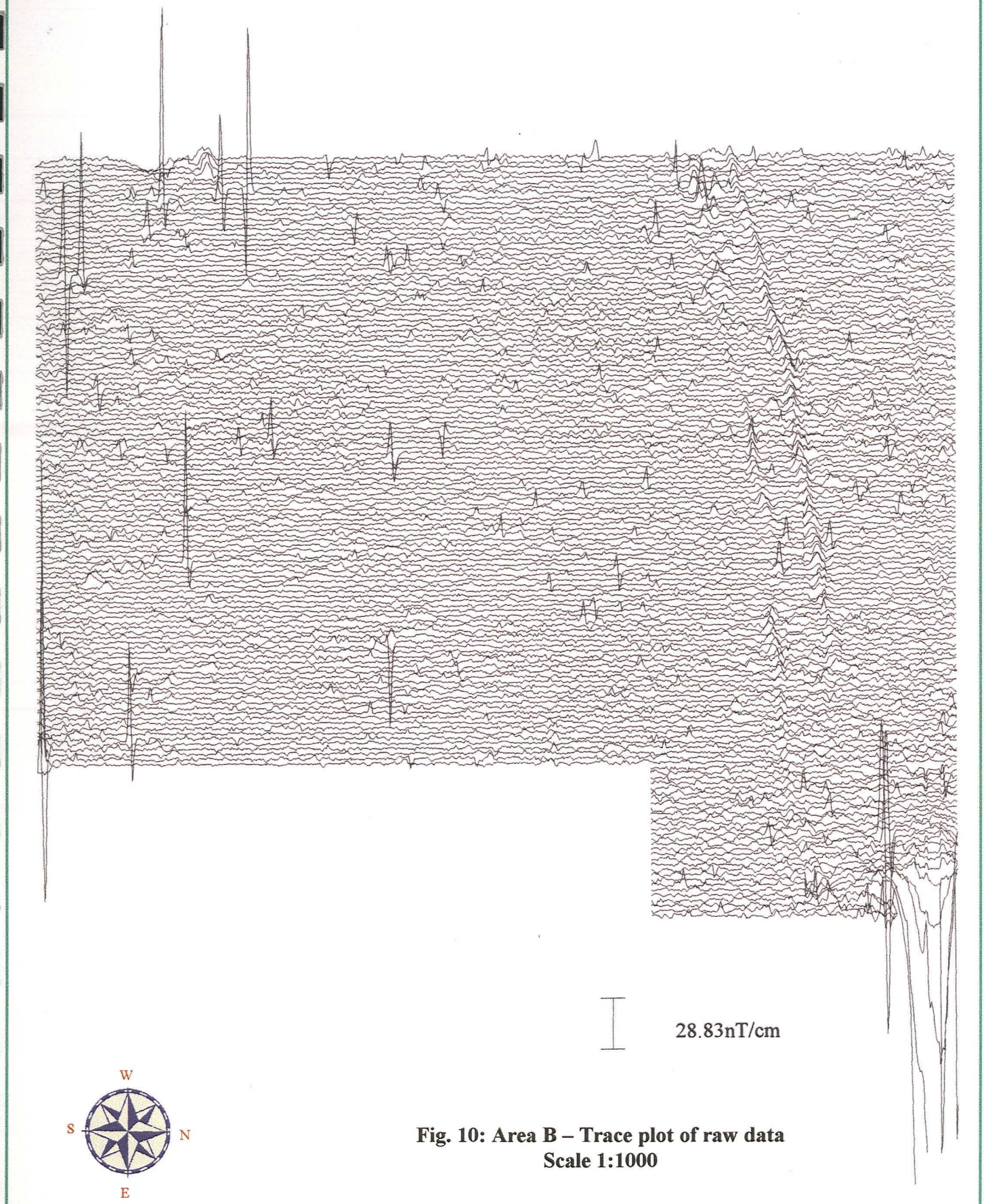


Fig. 10: Area B – Trace plot of raw data
Scale 1:1000

5.3 **Area C** (Figs. 11,12,13,14,15)

Much of the area surveyed yielded results of limited archaeological potential.

Anomaly (**22**) corresponds with the location of a recently removed hedgerow (see Fig.1), whilst anomaly group (**23**), at the western edge of the survey, reflects the presence of miscellaneous debris in, and along, the hedgerow that forms south-western boundary of the site.

A series of diffuse striations, (**24**), run perpendicular to the survey corridor. These are probably traces of ridge and furrow field system, the strips of which were c. 9m wide. They are restricted to the southern part of **Area C** and run parallel with Witham Road, lying in relatively close proximity to Thisleton.

A very weak anomaly, (**25**), was detected to the north of (**22**). Tentatively interpreted as representing an 'L-shaped' feature, due to its low magnetic enhancement and lack of resolution. It appears to share a spatial relationship with the, magnetically stronger, anomalies that were detected at the northern end of the survey, and which exhibit archaeological potential (see Fig.13).

Anomaly (**26**), located on the eastern edge of the survey area and probably modern in origin, may be associated with the northern extent of anomaly (**22**), although no direct relationship is apparent from the survey results.

A strong magnetic response, (**27**), was detected at the lowest point of the site, in an area known to contain a fuel pipeline (D. Abernathy, *pers comm*). The strength of the signal generated by this pipe has partially masked a weaker linear anomaly situated immediately to the south (**28**). This was probably produced by a drain (see Fig.1) that has recently been relocated underground.

The small discrete anomalies (Fig. 12: examples **29** shown in red) detected by the survey are similar in character to those discussed in section 5.1.

Potentially significant archaeological anomalies were detected in the northern part of the site. The interpretive greyscales, figures 13 and 14, represent clipped and raw images respectively.

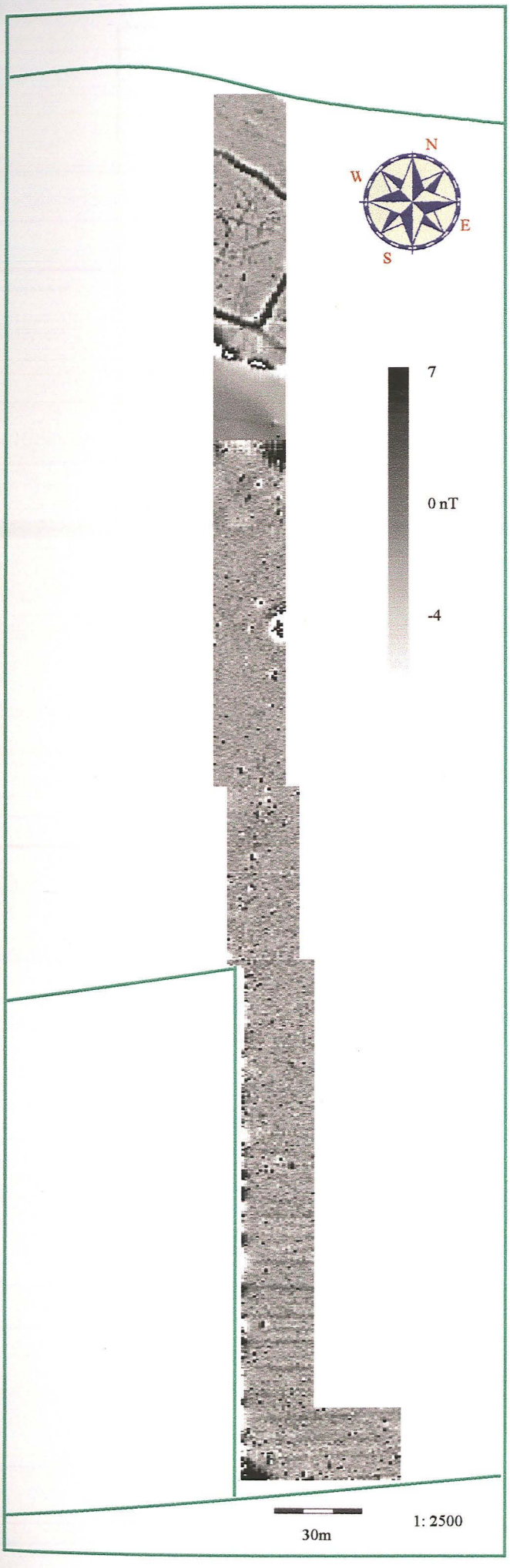
Anomalies (**30**), (**31**), and (**32**) represent three sides of an enclosure defined by ditches. A further linear anomaly, (**33**), was detected at the south-east corner of the enclosure. This suggests that the long axis of this group of features is aligned east-west, the enclosure itself exceeding 50m in length. The width of the enclosure can be established with more certainty, the interval between (**30**) and (**32**) being c. 45m.

A number of linear, curvilinear, and discrete anomalies were detected within the enclosure, suggesting that ditches (**30**) to (**32**) defined and contained a small domestic settlement. The spatial relationships and density of the internal features make interpretation difficult, based on the survey results alone. However the curvilinear anomaly, (**34**), at the western edge of the survey area probably represents part of circular building measuring c. 15m in diameter. Anomaly (**35**), to the east of (**34**) may reflect the remains of another, less well-defined, circular structure. It is possible that a

third circular footprint, (**36**), exists to the south of (**34**) and (**35**), although this interpretation is offered only tentatively. The remaining linears are located mainly between the curvilinear anomalies (Fig. 13: (**37**), shown in orange. It seems likely that anomalies (**34**) to (**37**) result from more than one phase of activity.).

Anomaly (**38**) runs parallel to the north of anomaly (**30**), and this relationship suggests that it is possibly associated with the above group. However, this interpretation remains tentative for the same reasons as outlined in 5.2 (above).

The greyscale image of the raw data (Fig. 14) reveals the presence of five magnetically strong anomalies, (**39**)-(**43**), four of which overlie or, more probably, are contained within linear anomalies (**30**) and (**31**). Consequently, these anomalies may result from items or materials deliberately placed in the ditches. The fifth anomaly, (**43**), although within the confines of settlement feature, may be an example of modern debris present in the plough soil, or could result from some magnetically enhanced material incorporated into the fill of a pit or gully.



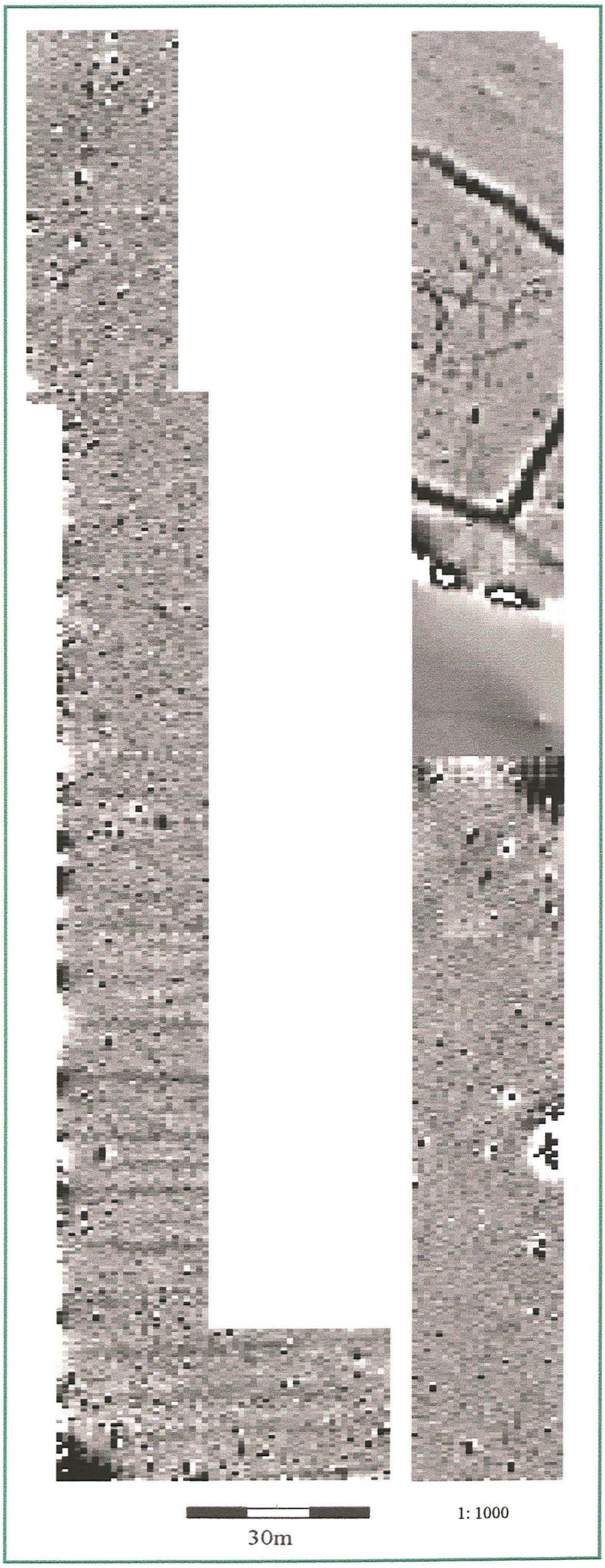


Fig. 11: Greyscale images of Area C

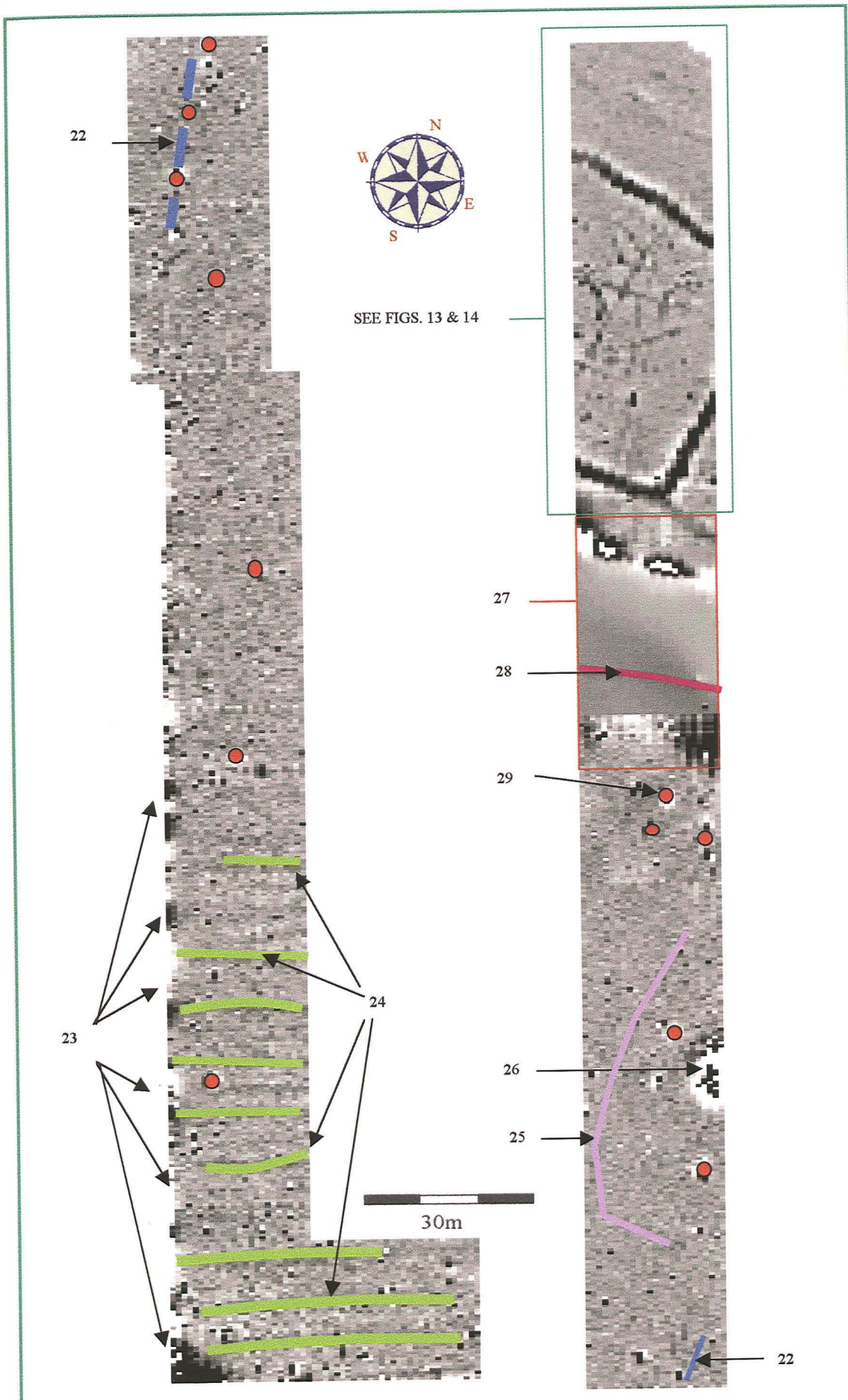


Fig.12: Interpretive plan of Area C. 1:1000

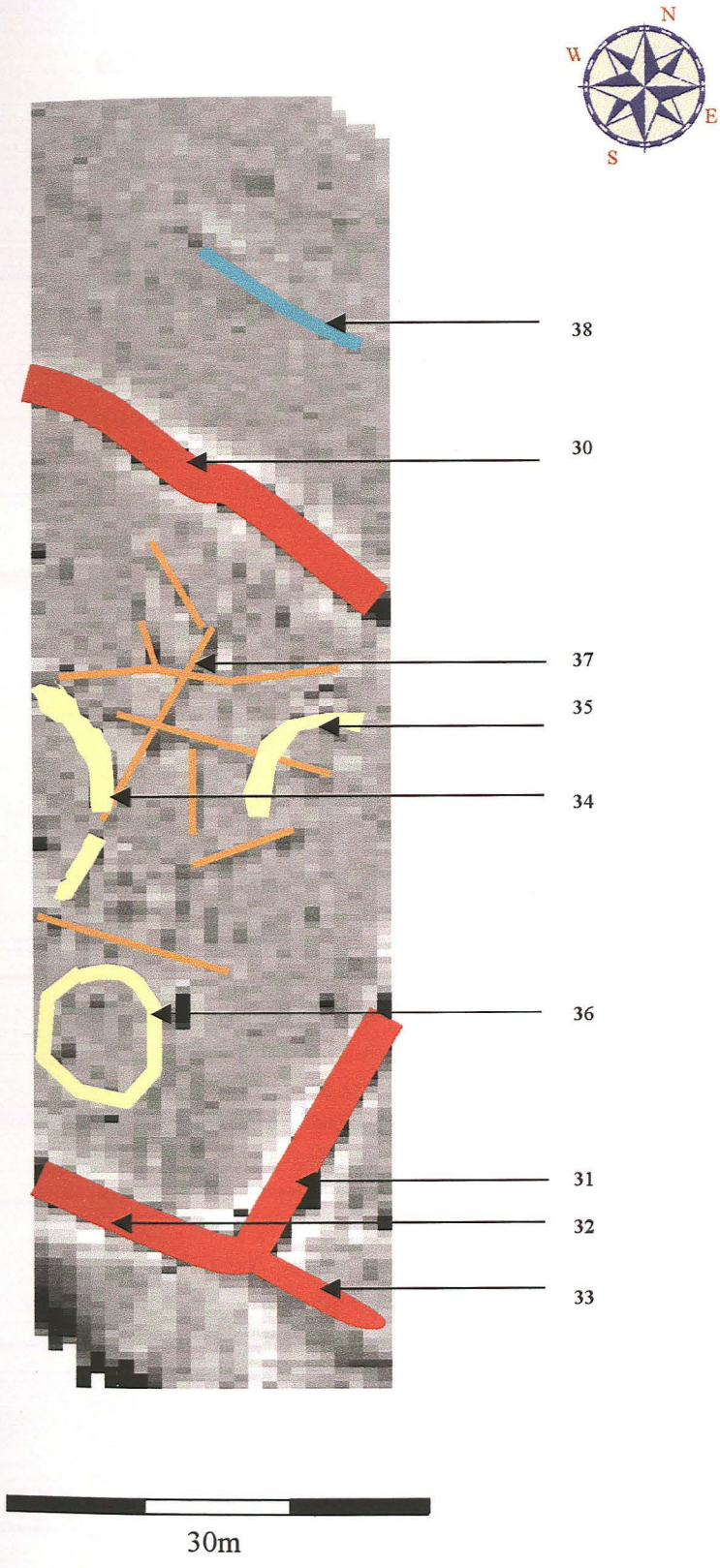


Fig. 13: Interpretive plan of settlement feature 1:500

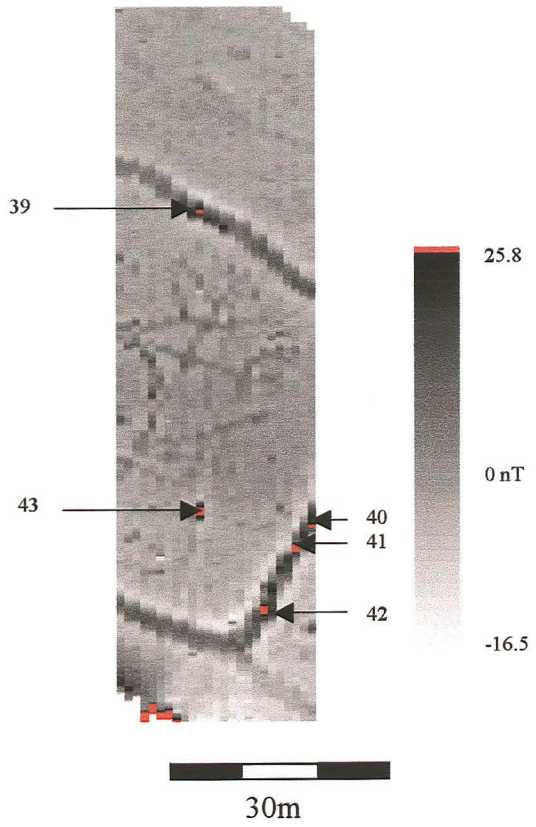


Fig. 14: Greyscale of raw data Showing possible artefacts within enclosure ditch 1:1000

6.0 Conclusions

Significant magnetic variability was detected across each of the three areas surveyed. This can be resolved into a range of features, with diffreing morphological characteristics. Many appear to have a natural origin and can be related to properties of the limestone bedrock, **(6)**/**(7)**/**(8)**/**(17)**.

Cartographic sources, local informants, and morphology enable other features to be assigned a modern provenance. Included in this group are plough scores **(11)**, distortion by boundary features, or boundaries themselves, **(12)**/**(22)**/**(23)**, drainage features,**(18)**/**(19)**/**(26)**, and a fuel pipeline, **(26)**. Additionally, all areas were characterised by a random distribution of discrete dipolar anomalies, **(10)**/**(20)**/**(28)**, which are often produced by ferrous or ceramic debris introduced as a result of cultivation.

Many of the other anomalies represent features of suspected or definite human origin, which are consequently of archaeological significance. Those lying in **Areas A** and **B** will be discussed as a single unit, while **Area C** will be considered separatly.

One set of anomalies are common to both **Areas A** and **B**. These are a series of parallel linear features aligned north-west to south-east, **(9)**/**(16)**. **Areas A** and **B** are separated by a railway cutting, which certainly post-dates the creation of **(9)**/**(16)**. Consequently, they should be considered as components of the same entity. It is probable that these anomalies represent the surviving furrows of an open furrow system. They can be discerned from a point c. 100m to the south of the road forming the northern boundary of **A**, and run perpendicular to the latter. They appear to continue through much of **Area B**, seemingly terminating c. 45m from the southern boundary of that field. This suggests that the individual *selions* had a length of c. 250m. The minimum interval between adjacent pairs is c. 7m. Where this distance is greater, the interval appears to be a multiple of 7m, suggesting that similar intervening features exist or existed, but were not detected. As **Areas A** and **B** lie within the parish of South Witham, it seems probable that these strips were a component of the open field system surrounding that village during the medieval period.

Three related linear anomalies were detected in the northern half of **Area A**, **(1)**/**(2)**/**(3)**. They appear to represent a series of ditches defining a boundary, the offset between **(1)** and **(3)** suggesting that they form the south-western edge of two fields. The primary orientation of these features, namely east-south-east to west-north-west, differs noticeably from that of the road to the north, the putative medieval field system and the modern field boundaries. Therefore, it is tentatively suggested that this boundary system pre-dates all three.

Two roughly parallel linear anomalies, **(13)**/**(14)**, were observed to extend across the full width of **Area B**. While survey results cannot confirm their contemporaneity, (see 5.2), it is suggested that these features form a unit, namely ditches, flanking a track or roadway. The relationship with the furrows, **(16)**, is ambiguous, but they appear to represent two distinct phases of activity. Any attempt to establish a sequence of activity is further confused by the fact that the furrows appear to respect, and run perpendicular to the raod to the north of **Area A**, the course of which is roughly paralleled by **(13)**/**(14)**. Consequently, whether this putative trackway represents a

previous alignment of the road or an ancillary route between field remains open to conjecture.

It is also notable that **(13)**/**(14)** appear to be constituted by a number of shorter segments. This may indicate that they were created in a piecemeal way, possibly resulting from the use of gang labour. The enclosed area expands towards the western edge of **B**, with **(14)** swinging slightly southward to accomplish this. Within the c. 12m wide area thus defined are a concentrated group of anomalies characterised by strong magnetic signals, **(15)**. Such magnetic enhancement is often the product of burning. This suggests that **(15)** marks the location of a series of fires or of pits filled with burnt materials. The number and concentration of anomalies constituting **(15)** indicates a scale of activity consistant with industrial processes. This proposal is supported by the strength of the magnetic signal generated by the considerable volume of material filling **(13)**, which has a similar magnitude to that produced by **(15)**, and between which there appears to be a contemporaneous relationship.

The southern end of **Area C** was crossed by a series of linear features, **(24)**, which again appear to represent furrows. The horizontal interval between individual features is c. 8m. They share the same east-north-east to west-south-west alignment as Witham Road and presumably respect it or an adjacent predecessor. The most northerly component of **(24)** lies c. 100m from Witham Road, providing some indication of the width of the furlong(s).

The anomalies with the greatest potential archaeological significance are grouped together at tha northern end of **Area C**. The area of interest is defined by three linear anomalies, **(30)**/**(31)**/**(32)**, which appear to form three sides of a sub-rectangular enclosure. These features are almost certainly ditches, and the presence of several superimposed 'iron spikes' suggests that the fills contain cultural material. Within the area contained by **(30)**–**(32)** are two, or possibly three, large arcing anomalies, **(34)**/**(36)**. Morphologically, these appear to be sectors of circular gulleys, which are known to define the location of Late Bronze Age, Iron Age and rural Romano-British houses and ancillary buildings. The distance between the northern and southern boundaries of **(34)** suggests that it represents a building of c. 15m diameter. Such dimensions are consistent with structures excavated in the region (eg. Winterton, North Lincs.; Colsterworth, Lincs.) and further afield (eg. Little Woodbury, Wilts.; Draughton, Northants.) (Cunliffe, 1991).

Between the curving features are a series of narrow linear anomalies, which probably represent a series of gullies, **(37)**, sub-dividing the enclosure. The spatial relationships between **(34)**-**(37)** suggest that these features result from more than one phase of activity. Consequently, it is proposed that enclosure **(30)**-**(32)** was occupied for a sustained period of time.

A further linear anomaly, **(33)**, runs from the south-eastern corner of **(30)**-**(32)**. This raises the possibility that there is a further enclosure, or enclosures, to the east of **Area C**. Such chains of enclosures have been identified throughout much of the East Midlands and are generally characteristic of the later prehistoric and Romano-British settlement (Winton, 1998). Similarly, the diffuse and ill-defined anomaly, **(25)**, which lies c. 100m to the south of **(30)**-**(32)**, may be traces of an associated feature, although the weak magnetic response predisposes any detailed interpretation.

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