TATTERSHALL CASTLE ('TILT-YARD'), LINCOLNSHIRE

Gradiometer Survey

(Survey Ref : 1100597/TAL/LAS)

JUNE 1997

Produced by

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under the direction of

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Commissioned by

Lindsey Archaeological Services

on behalf of

The National Trust

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SUMMARY

Magnetometer survey was carried out at within a field, popularly known as the 'tilt-yard', adjoining the southeastern side of the moat of Tattershall Castle, Lincolnshire centred on TF 21200 57500 (NGR 521200 357500).

This survey was based upon the principle that past human activity and its associated debris usually creates slight but persistent changes in the local magnetic environment which can be sensed from the surface (using magnetometry).

Magnetometer survey detected a local pattern of linear features which indicate former boundaries and possible structural elements, together with a number of pits (mostly grouped); some appear to be several metres in diameter. Several broad linear features were recorded which are probably ploughed-down earthen banks.

1. INTRODUCTION

1.1 Oxford Archaeotechnics Limited were commissioned by Lindsey Archaeological Services to undertake magnetometer (gradiometer) survey on behalf of The National Trust within a field, popularly known as the 'tilt-yard', adjoining the southeastern side of the moat of Tattershall Castle, Lincolnshire. The location is shown on Fig. 1. The survey work was carried out in May 1997.

1.2 Tattershall Castle lies just southwest of Tattershall village, on the west bank of the River Bain. The present castle, including the great tower and surviving ancillary buildings within the outer ward, was built in brick in the first half of the 15th century (probably in the period 1430 - 1450) for Ralph, Lord Cromwell, Treasurer of England during the reign of Henry VI, on the site of an early 13th century stone castle, built by Robert de Tateshale in c.1231. Lord Cromwell's building accounts for the years 1434 - 1445 survive (Historical Manuscripts Commission 1925). Immediately to the east of the castle lies Holy Trinity Collegiate Church, the only building surviving from a college of priests endowed by Lord Cromwell towards the end of his life (d. 1456) for the maintenance of seven chaplains. The site of the college buildings (which would have including a hall, priests' accommodation, choristers' dormitory, kitchen, scriptorium, workshop etc.) is uncertain, although they are believed to have occupied a site on the south and east sides of the church. The complex also included a row of timber-built almshouses, predecessors of the brick buildings known as The Bede Houses which still stand immediately north of the churchyard (Curzon & Tipping 1929; National Trust 1974).

1.3 The castle had fallen into disrepair, its buildings roofless or ruinous, by 1726 (engraving by Samuel Buck), and by the beginning of the last century the ruins had been largely cleared, the stone burnt for lime, and the moats infilled.

Renovation work by Lord Curzon from 1912 to his death in 1924 restored the great tower and a number of the ancillary buildings, and re-excavated the moats. The discovery of a stone pier at the base of the inner moat during the course of this restoration work together with the observation of stone corbels built into the outer retaining wall confirmed the position of a bridge giving access to the so-called 'tilt-yard' at a point approximately half way along the northwestern boundary of the survey area (c. NGR 521120 357500) (Fig. 8). The full extent of the outer moat on the west side could not be restored, as a group of farm buildings had been erected on its line; the present return linking the outer and inner moats is therefore artificial. Similarly on the east side, although presumed to have continued southwards, the outer moat was diverted to meet the inner moat at a point some 20 m north of 'the present (tilt-yard') boundary (Curzon & Tipping 1929). The object of the present survey was to investigate the possibility of any structural remains within the 'tilt-yard', and also to determine whether the outer moat had originally extended across it.

1.4 The survey area, centred on TF 21200 57500 (NGR 521200 357500), comprised a narrow rectangular field some 0.9 ha in area (OS Field No. 1950), situated immediately south of the churchyard, and bounded on the northwest by the brick retaining wall of the inner castle moat; the southern boundary comprised a partially collapsed brick wall following an irregular course with a pronounced central projection to the south. A small area within the southeastern angle of the field was unsuitable for survey because of the presence of building materials and brick stores, and it was necessary to stand the survey off 5 m from the churchyard boundary, to avoid gross magnetic effects from the iron railings. The land was prepared seed bed at the time of survey.

1.5 The geology comprises sands and gravels.

2. MAGNETIC SURVEY DESIGN

2.1 Gradiometer survey was carried out using a Geoscan Research FM 36 Fluxgate Gradiometer (sampling 4 readings per metre at 1 metre traverse intervals in the 0.1 nT range).

2.2 Field data were stored to 3.5-inch disks, and the initial shade and stacked trace plots were processed using Geoscan Research Geoplot software.

2.3 Magnetometer data have been presented as grey scale, black & white, and stacked trace plots; an interpretation of the results is provided on Fig. 6, and an overview on Fig. 7.

3. MAGNETOMETER (GRADIOMETER) SURVEY RESULTS

3.1 Despite only a weak to moderate response to the gradiometer, the survey nevertheless recorded a number of features with archaeological potential. The gradiometer plots (Figs. 3 - 4) have defined three principal zones, each having a distinct magnetic identity, which are visible as three broadly similar-sized blocks, from east to west. The black and white plot (Fig. 5) shows the relative magnetic activity within these zones.

3.2 The easternmost block, measuring some 70 x 30 m, is relatively 'quiet' magnetically. Within this area lie a number of fleeting linear striations which are probably agricultural in origin (Fig. 6). One relatively strong anomaly, on a southwest - northeast alignment, situated some 10 m from the eastern boundary of the survey area, suggests a substantial pit or former hollow measuring approximately 5 x 2 m. A pattern of magnetic anomalies from what appears to be an irregular disjointed linear, possibly a ditch, running on a westnorthwest - eastsoutheast alignment, is visible for a distance of almost 50 m.

3.3 The central zone of magnetic activity is defined by two parallel (northnorthwest - southsoutheast) linears spaced some 40 m apart, whose alignment and position conforms with a marked projection in the brick boundary wall to the south. The rather erratic nature of the signals produced by these linears may result from partially surviving brick footings. Projected northwards, the line of the eastern linear corresponds with the existing western boundary wall of the churchyard.

3.4 The majority of the magnetic activity recorded within the survey area lies within, or is proximal to, the 40 m wide zone defined between these linears. The largest concentration of anomalies straddles the northern half of the westernmost linear. An area some 30 m in diameter contains clusters of positive and negative

anomalies showing rectilinear patterning dominated by northnorthwest - southsoutheast and orthogonal alignments. There is sufficient regularity to the pattern to indicate that structural elements may be present, or that magnetically enhanced material has been dispersed within former discrete boundaries. Numerous anomalies suggestive of pit forms are also visible in this area.

3.5 A second small focus, extending over an area some 15 m across, lies centrally within the survey strip, and is situated approximately 25 m east of the principal focus defined above, straddling the more easterly of the two principal linears. Within this zone the pattern of anomalies is less regular, giving the appearance of disturbed or pitted ground.

3.6 A broad weak negative anomaly approximately 5 m wide is visible extending diagonally across the central zone between the two principal linears. This feature gives the impression of a 'scar' which is not untypical of a former trackway, although this feature may equally represent a ploughed-down bank.

3.7 A negative anomaly visible close to the southern boundary and running parallel with it is not dissimilar to linear features recorded further west (see 3.8 below), which are interpreted as ploughed down bank material.

3.8 Magnetic activity noticeably decreases to the west of this central group of anomalies. The western third of the survey area is dominated by broad positive and negative (dark and light) bands running parallel with the southern boundary wall at this point. Although similar in appearance to patterning associated with Medieval ridge and furrow cultivation, it is conceivable that these features may be ploughed-down earthen banks.

3.9 There is a general litter of ferrous material across the survey area, although perhaps less than might be expected within a context where several periods of remodelling would have provided the opportunity for the incorporation of redistributed debris.

4. CONCLUSIONS

4.1 Gradiometer survey has identified three distinct zones of magnetic activity within the survey area.

4.2 The principal area of activity lies within the central third, defined by two parallel linears some 40 m apart, elements of which are still recognisable within the present landscape, notably within the projection of the southern boundary wall of the survey area, and alongside the churchyard.

4.3 A pattern of orthogonal linears detected close to the southeastern angle of the inner moat may signify the location of a former structure.

4.4 The western third of the survey area is crossed by broad linear patterning not inconsistent with ploughed-down banks or earthworks. In this context, the possibility that these linears represent banks flanking the infilled outer moat may be considered, although its topographic position, sited slightly higher than the remainder of the survey area and possibly representing artificially raised ground, may cast doubt on such an interpretation. Had the moat continued into the survey area, its absence from the gradiometer plot is curious, particularly as numerous presumably far less substantial silted hollows and pit forms have been recorded, although the possibility that the moat at this location, in contrast with excavated sectors elsewhere, may have been infilled with material of low magnetic susceptibility, effectively masking it from the gradiometer, cannot be entirely discounted.

REFERENCES

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NATIONAL TRUST, 1974. *Tattershall Castle Lincolnshire*. The National Trust.

Magnetometer survey by Oxford Archaeotechnics Limited under the direction of A.E. Johnson *BA(Hons)*, with M. Ayres *BSc(Hons), MSc, PhD.*

FIGURE CAPTIONS

Figure 1. Location maps. Scale 1:50,000 and 1:5000. Based upon OS 1:50,000 Map 122, and OS 1:2500 Sheet TF 2157.

Figure 2. Magnetometer survey: location. Based upon OS 1:2500 Sheet TF 2157.

Figure 3. Magnetometer survey: grey shade plot. (Geoscan Research Geoplot Licence No. GPB 885-6). Scale 1:1000.

Figure 4. Magnetometer survey. Stacked trace plot: raw data (Geoscan Research Geoplot Licence No. GPB 885-6). Scale 1:1000.

Figure 5. Magnetometer survey: black and white plots. Scale 1:1000.

Figure 6. Magnetometer survey: interpretation. (Geoscan Research Geoplot Licence No. GPB 885-6). Scale 1:1000.

Figure 7. Magnetometer survey: overview. Based upon OS 1:2500 Sheet TF 2157. (Geoscan Research Geoplot Licence No. GPB 885-6). Scale 1:2500.

Figure 8. Magnetometer survey results superimposed upon plan of castle and grounds, 1914 (after Curzon & Tipping 1929).

Tattershall Castle, Tattershall, Lincolnshire

Magnetometer survey: location

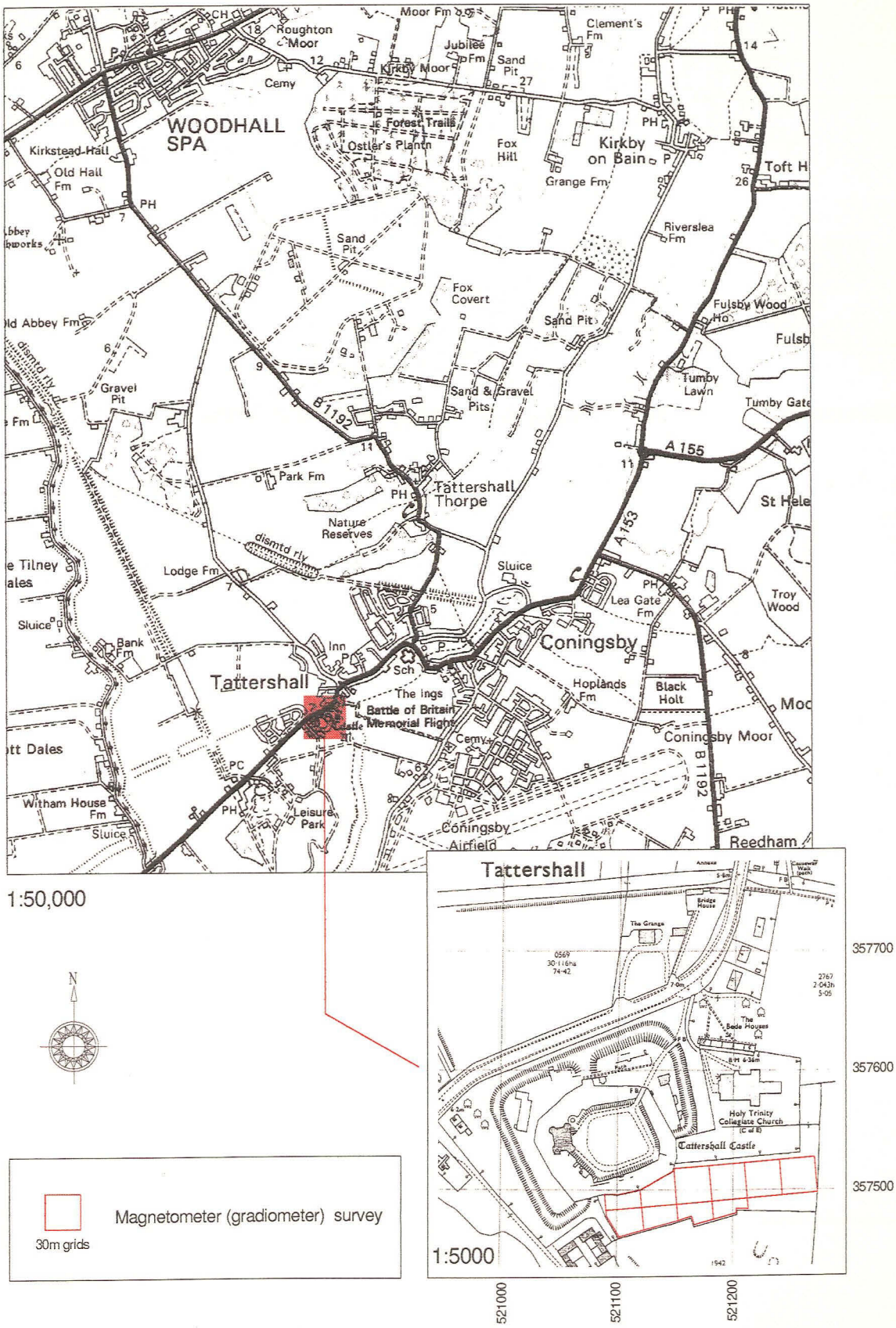

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FIG. 1

Tattershall Castle, Tattershall, Lincolnshire

Magnetometer survey: Location

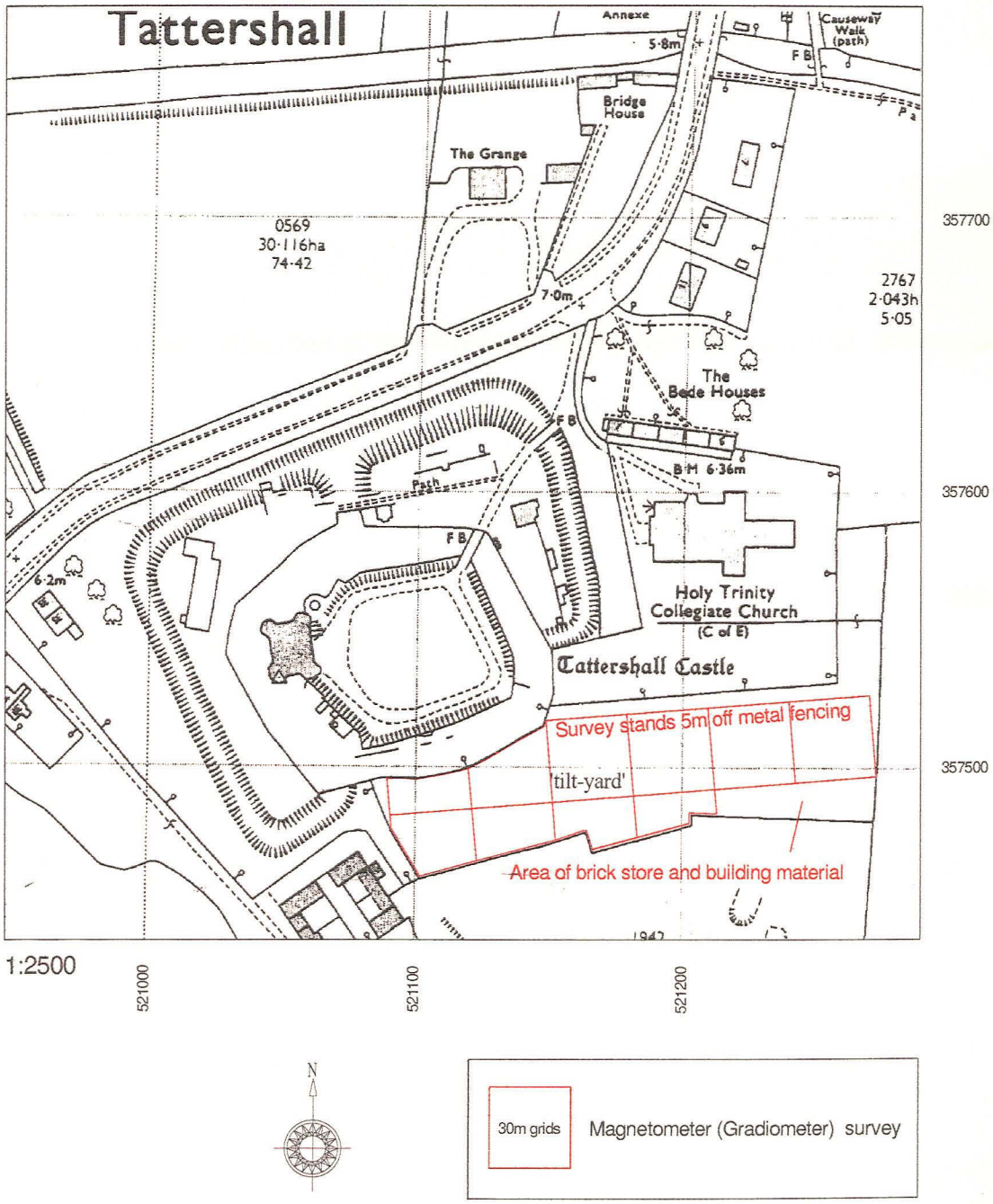

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FIG. 2

Tattershall Castle, Tattershall, Lincolnshire

Magnetometer survey: grey shade plot

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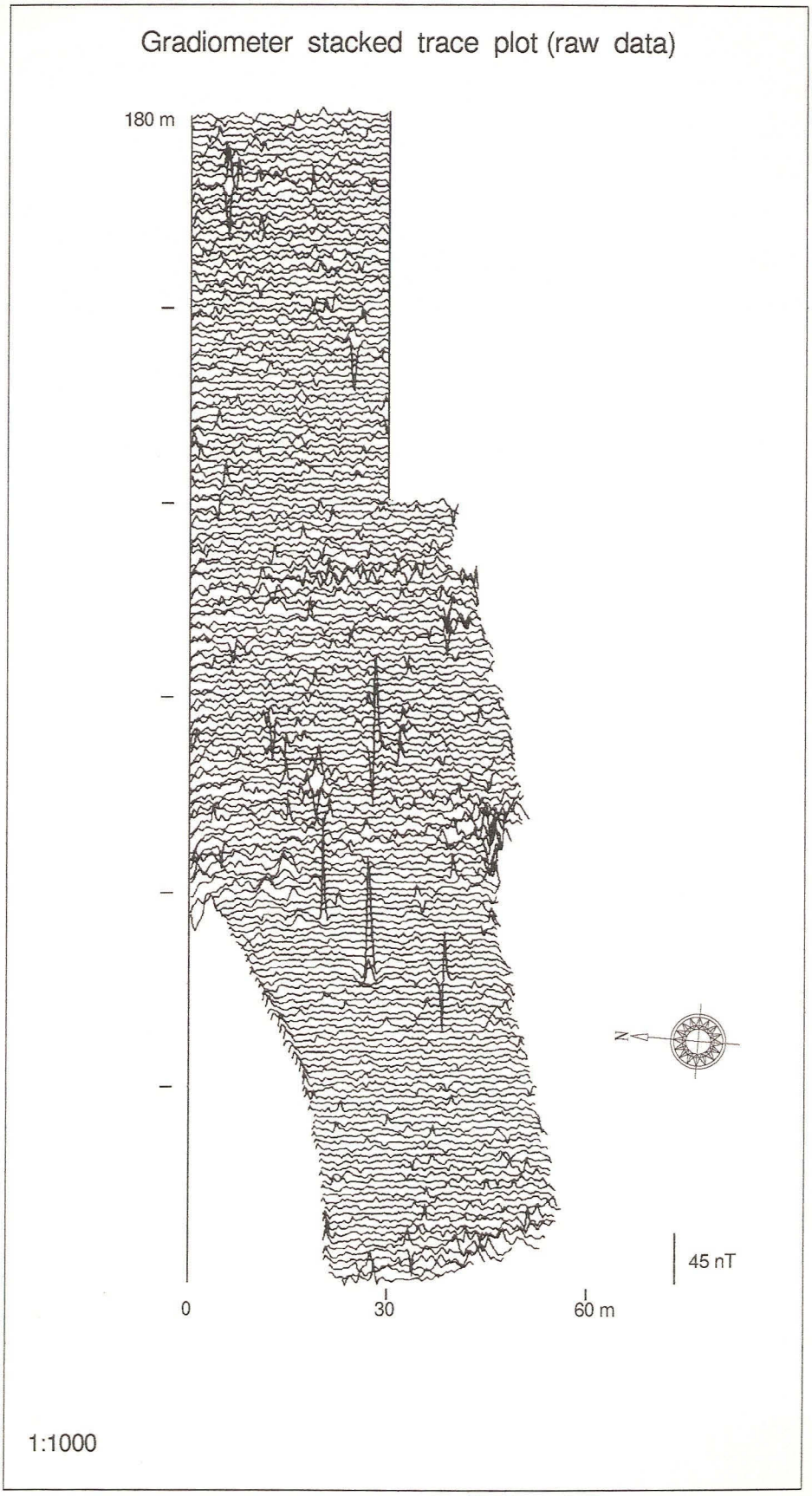
Tattershall Castle, Tattershall, Lincolnshire

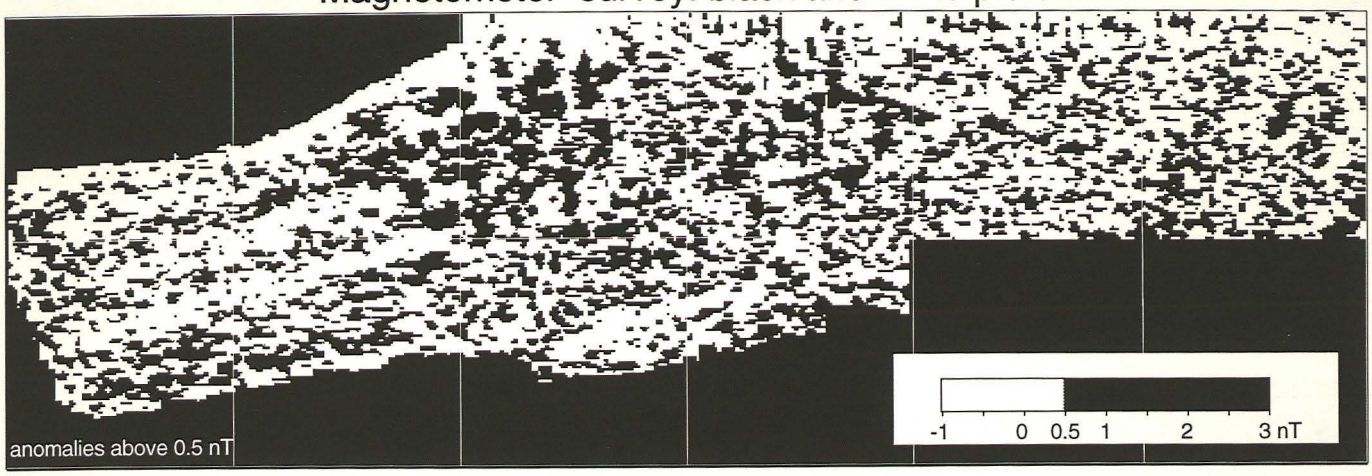
Magnetometer survey

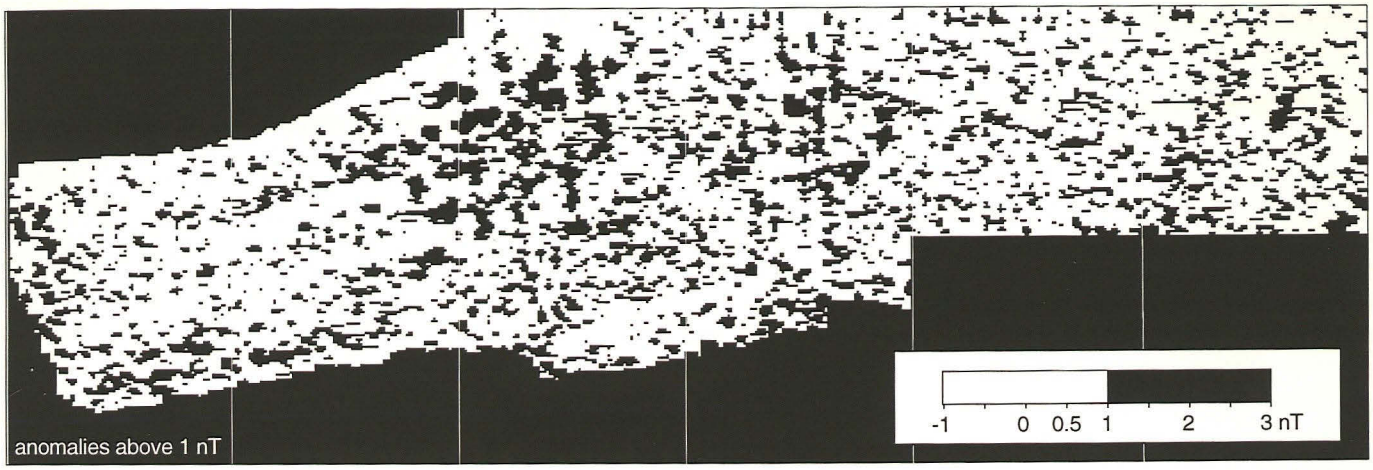


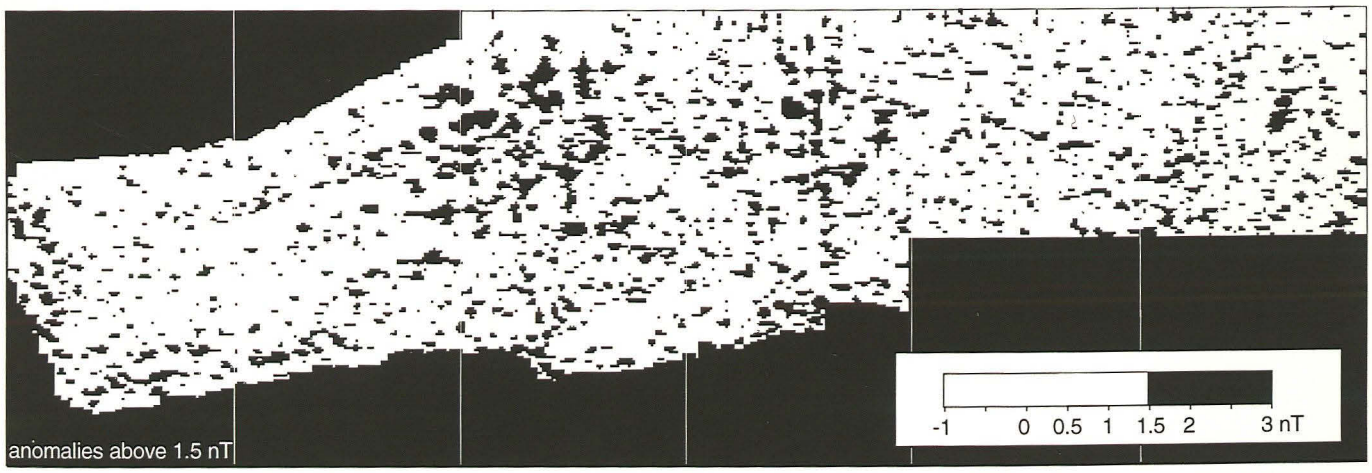
OXFORD ARCHAEOTECHNICS FIG. 4

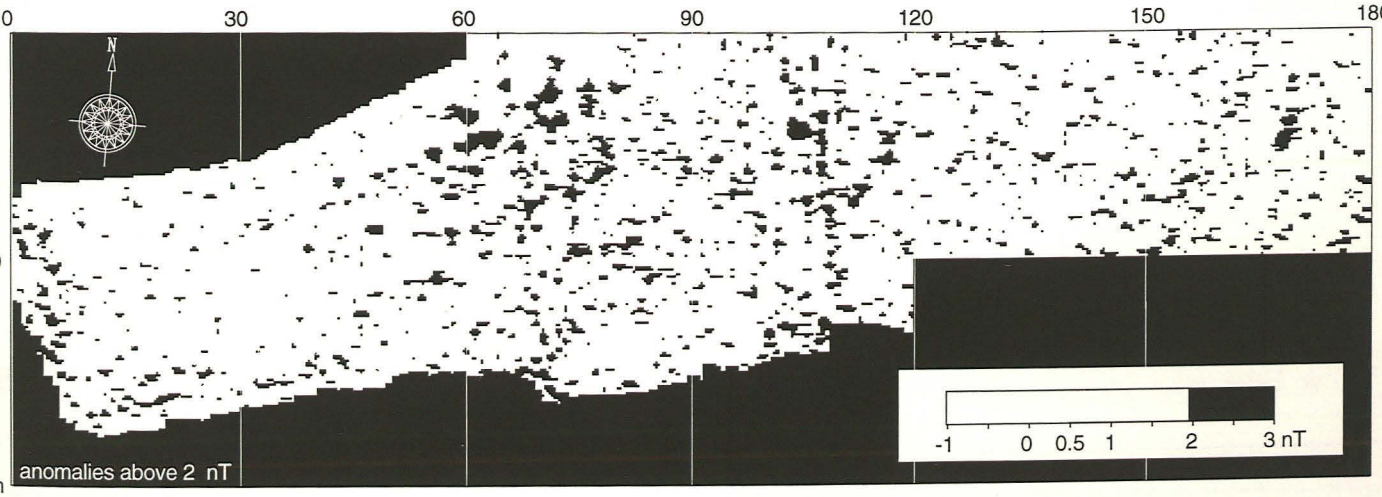
Tattershall Castle, Tattershall, Lincolnshire

Magnetometer survey: black and white plots









1:1000

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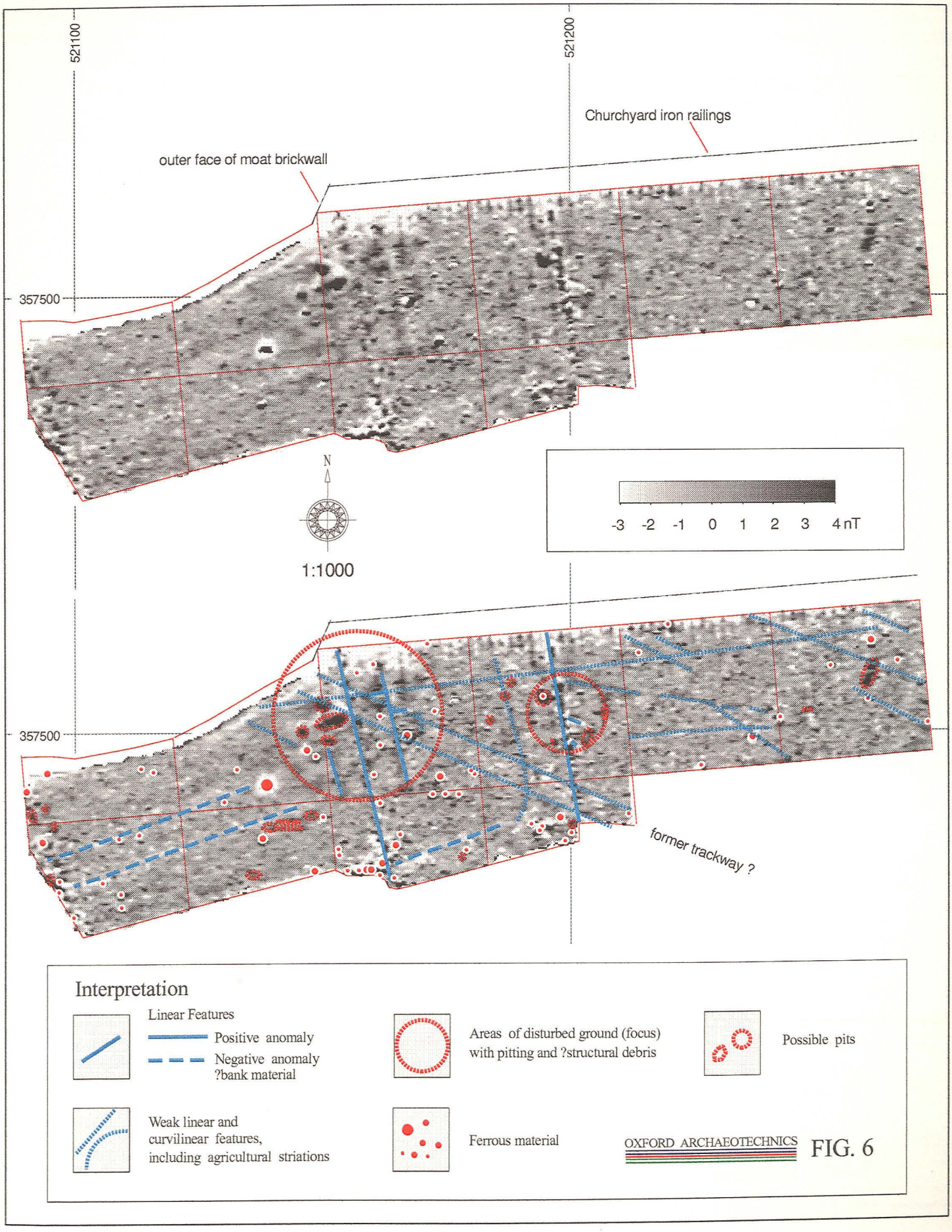
FIG. 5

Tattershall Castle, Tattershall, Lincolnshire

Magnetometer survey: grey shade plot



Interpretation

Linear Features
Positive anomaly
Negative anomaly
?bank material

Areas of disturbed ground (focus) with pitting and ?structural debris

Possible pits

Weak linear and curvilinear features, including agricultural striations

Ferrous material

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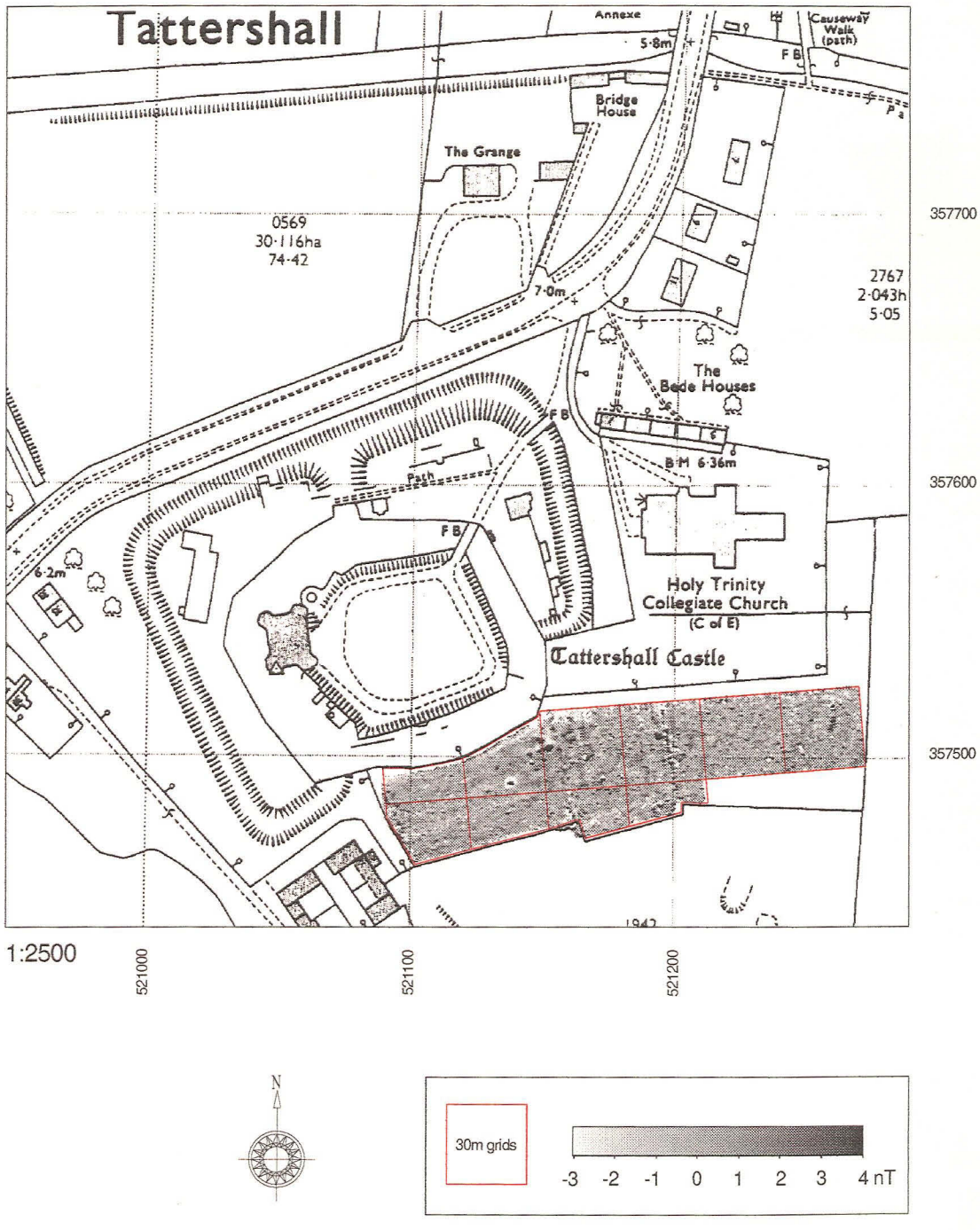
FIG. 6

Tattershall Castle, Tattershall, Lincolnshire

Magnetometer survey: overview

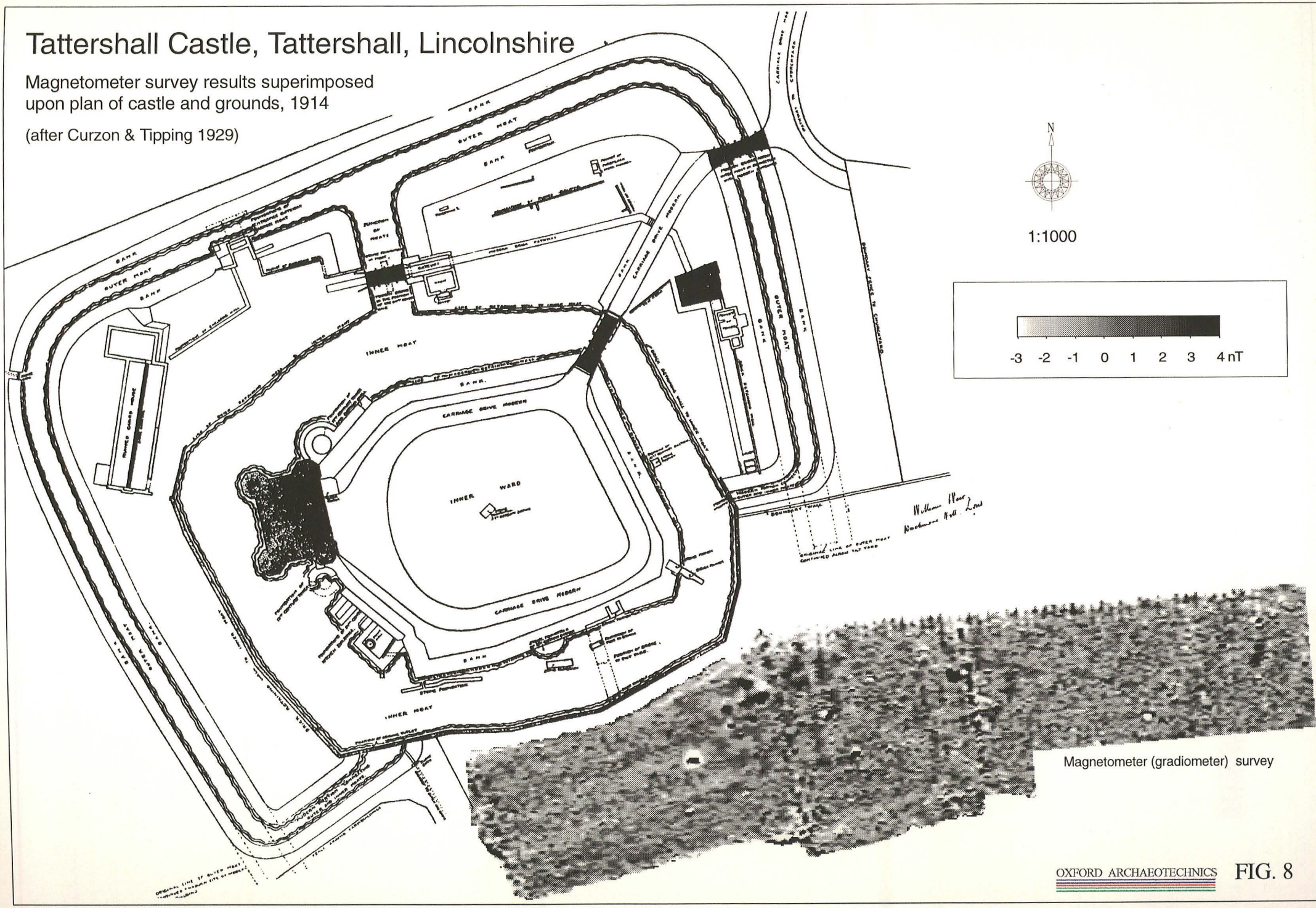


OXFORD ARCHAEOTECHNICS FIG. 7

Tattershall Castle, Tattershall, Lincolnshire

Magnetometer survey results superimposed upon plan of castle and grounds, 1914

(after Curzon & Tipping 1929)



OXFORD ARCHAEOTECHNICS FIG. 8

INTERNAL QUALITY CHECK

Survey Reference	1100597/TAL/LAS		
Primary Author		Date	
Checked By	APJ	Date	10.6.97
Checked By		Date	
Further Corrections		Date	

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