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Engineering Archaeological Services Ltd

E O L O G Y

*Adcocks Sawmill, Corby Glen
Geophysical Survey*

March 2000

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*Survey Commissioned
by
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*registered in England
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*Adcocks Sawmill, Corby Glen
Geophysical Survey*

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NGR

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Adcocks Sawmill Geophysical Survey - Introduction:

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Location and Topography

The area surveyed lies between the disused Adcocks Sawmill and the Corby Glen County Primary School. The field was generally flat with some remains of eroded ridge and furrow running approximately north east - south west. The field was under pasture.

Archaeological Background

The area surveyed is part of a proposed development on the disused sawmill site. The location near to the centre of Corby Glen suggests the possibility of archaeological remains within the development area. The area also contains the eroded remains of Ridge and Furrow and a slight bank in the south eastern sector of the survey area.

Aims of Survey

To locate and record any magnetic anomalies which may be the result of archaeological activity.

SUMMARY OF RESULTS

A number of magnetic anomalies were located, the majority of which represent the ridge and furrow, field system extant in the field. However, a few other anomalies were located including a possible ring ditch.

Adcocks Sawmill Geophysical Survey -Results:

Survey Results:

Area

Approximately 0.9 ha in the north eastern half of OS Field 5400 was investigated. Covering the majority of the proposed development area in this field. Only small areas were excluded near to modern fences (Figure 1).

Display

The results are displayed as Grey Scale Image and as X-Y Trace Plot (Figures 2 to 4).

Results:

Detailed Survey:

Fifteen 30 x 30 m grids were investigated. (Figure 1). A number of anomalies were located within the survey area (Figure 5) the most dominant of which is a linear feature along the southern edge of the survey. This corresponds to a bank crossing this part of the field and probably represents an old field boundary.

The agricultural history of the survey area is represented by a series of parallel anomalies shown in green on Figure 5. Those in the northern half of the survey area are the magnetic representation of the eroded ridge and furrow in the field. The similar anomalies in the southern half of the survey area would appear to be on a slightly different alignment and probably relate to the old field boundary.

A number of feint linear anomalies were recorded which are shown in red on Figure 5. The relationship between some of these would suggest they may represent the modern drainage of the field.

A very feint circular feature, approximately 12 m in diameter was recorded in Grid 6 (Figure 4). It is possible that an inner ring, approximately 5 m in diameter is also present. Both of these features are very feint, however if they are a true reflection of the archaeological record they may represent a ring ditch.

The two areas of magnetic disturbance (shown in blue on Figure 5) correspond to areas of modern disturbance.

Magnetic Susceptibility

Soil samples were taken from the area of detailed survey in order to assess the magnetic susceptibility of the soils. It was not possible to obtain a subsoil sample for comparison.

Sample	Volume susceptibility χ_v	Mass susceptibility χ_m
Grid 2	67	71.3
Grid 4	66	75.9
Grid 7	80	87.0
Grid 12	65	71.4

The susceptibilities as measured are at moderate levels and are generally consistent suggesting that the area is suitable for magnetic survey.

Adcocks Sawmill Geophysical Survey -Conclusions:

Conclusions

It is a fundamental axiom of archaeological geophysics that the absence of features in the survey data does not mean that there is no archaeology present in the survey area only that the techniques used have not detected it.

A number of magnetic anomalies were recorded. The majority of these reflect the agricultural history of the field with possibly two alignments of ridge and furrow and the modern drainage pattern being recorded.

A circular anomaly in Grid 6 may represent a ring ditch.

Adcocks Sawmill Geophysical Survey - Technical Information:

Techniques of Geophysical Survey:

Magnetometry:

This relies on variations in soil magnetic susceptibility and magnetic remanence which often result from past human activities. Using a Fluxgate Gradiometer these variations can be mapped, or a rapid evaluation of archaeological potential can be made by scanning.

Resistivity:

This relies on variations in the electrical conductivity of the soil and subsoil which in general is related to soil moisture levels. As such, results can be seasonally dependant. Slower than Magnetometry this technique is best suited to locating positive features such as buried walls that give rise to high resistance anomalies.

Resistance Tomography

Builds up a vertical profile or pseudosection through deposits by taking resistivity readings along a transect using a range of different probe spacings

Magnetic Susceptibility:

Variations in soil magnetic susceptibility occur naturally but can be greatly enhanced by human activity. Information on the enhancement of magnetic susceptibility can be used to ascertain the suitability of a site for magnetic survey and for targeting areas of potential archaeological activity when extensive sites need to be investigated. Very large areas can be rapidly evaluated and specific areas identified for detailed survey by gradiometer.

Instrumentation:

- 1. Fluxgate Gradiometer - Geoscan FM36**
- 2. Resistance Meter - Geoscan RM4/DL10**
- 3. Magnetic Susceptibility Meter - Bartington MS2**
- 4. Geopulse Imager 25 - Campus**

Methodology:

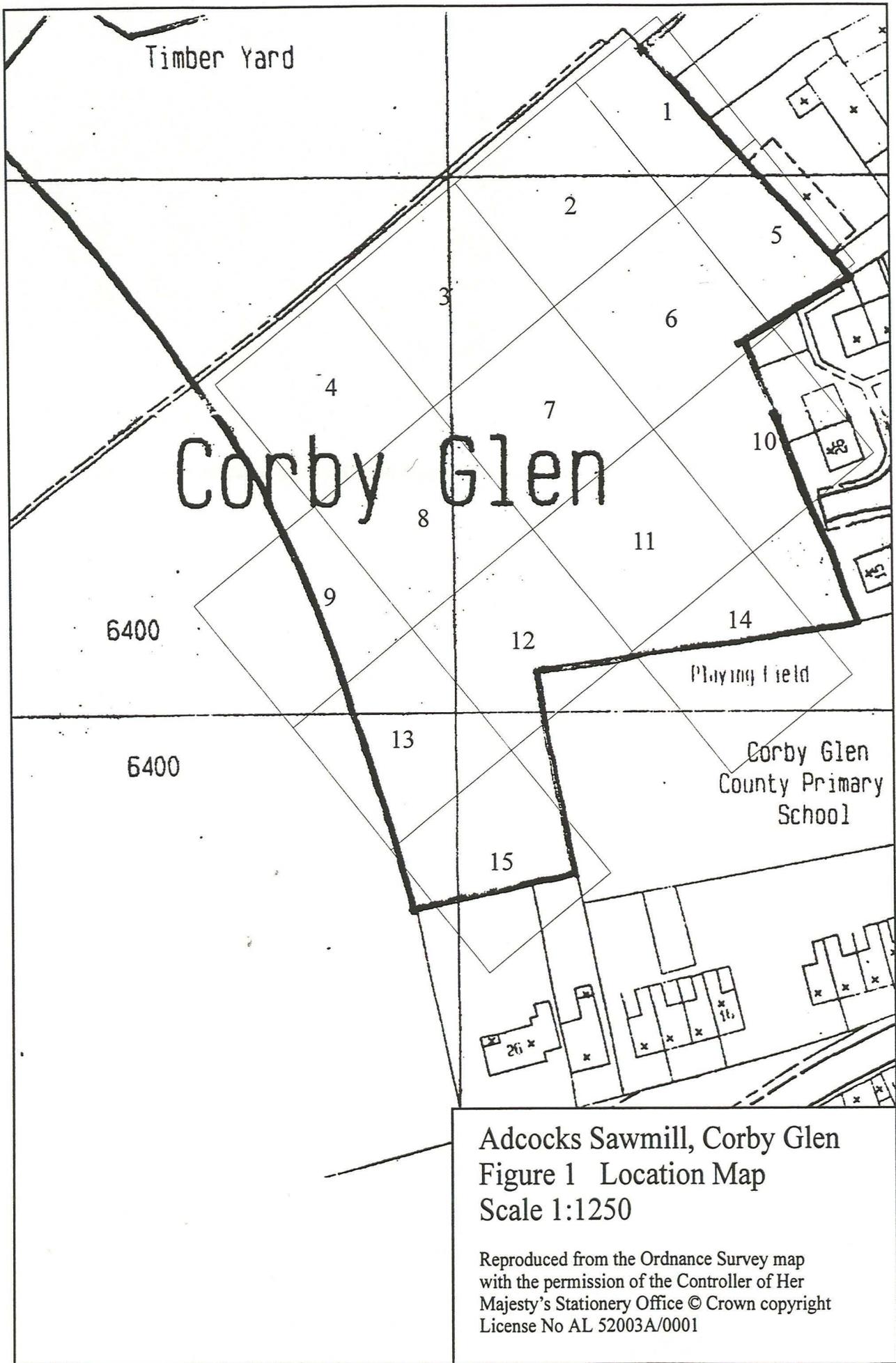
For Gradiometer and Resistivity Survey 20m x 20m or 30m x 30m grids are laid out over the survey area. Gradiometer readings are logged at either 0.5m or 1m intervals along traverses 1m apart. Resistance meter readings are logged at 1m intervals. Data is down-loaded to a laptop computer in the field for initial configuration and analysis. Final analysis is carried out back at base.

For scanning transects are laid out at 10m intervals. Any anomalies noticed are where possible traced and recorded on the location plan.

For Magnetic Susceptibility survey a large grid is laid out and readings logged at 20m intervals along traverses 20m apart, data is again configured and analysed on a laptop computer.

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Adcocks Sawmill, Corby Glen
Figure 1 Location Map
Scale 1:1250

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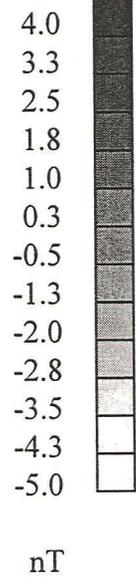
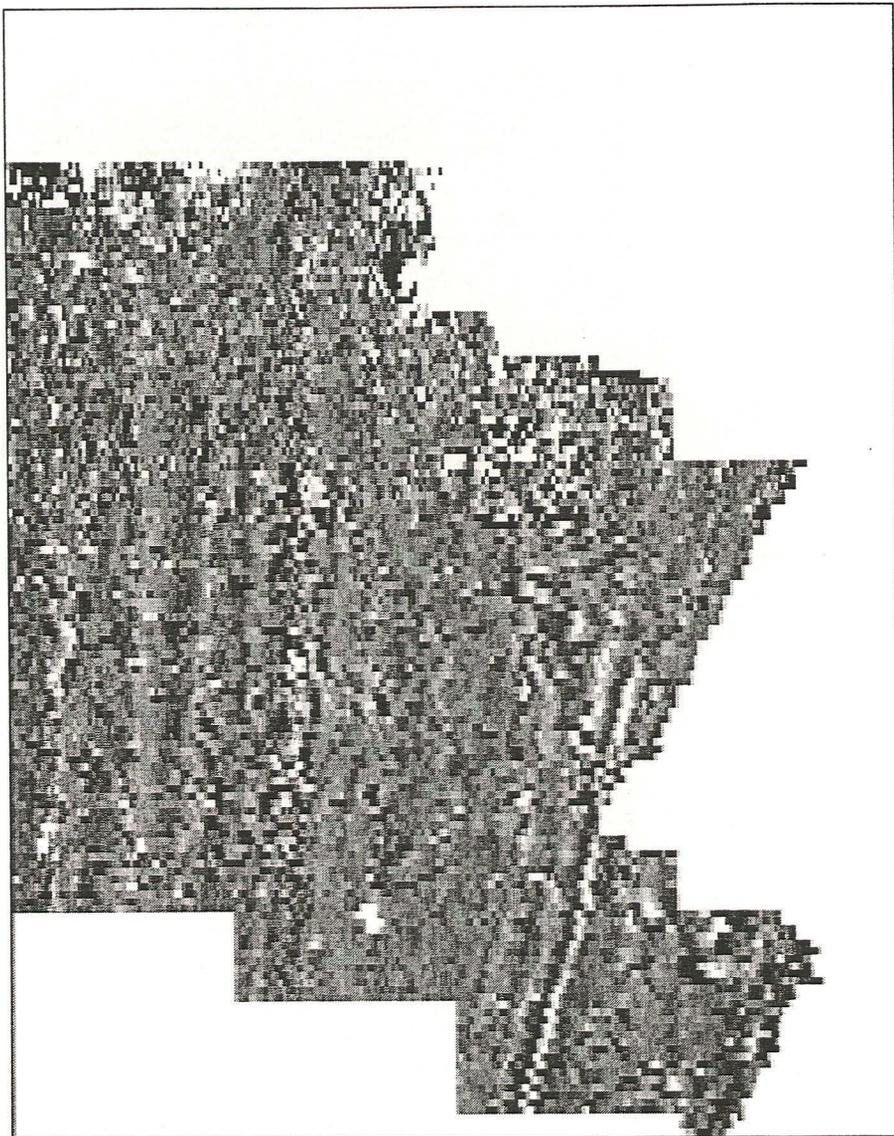
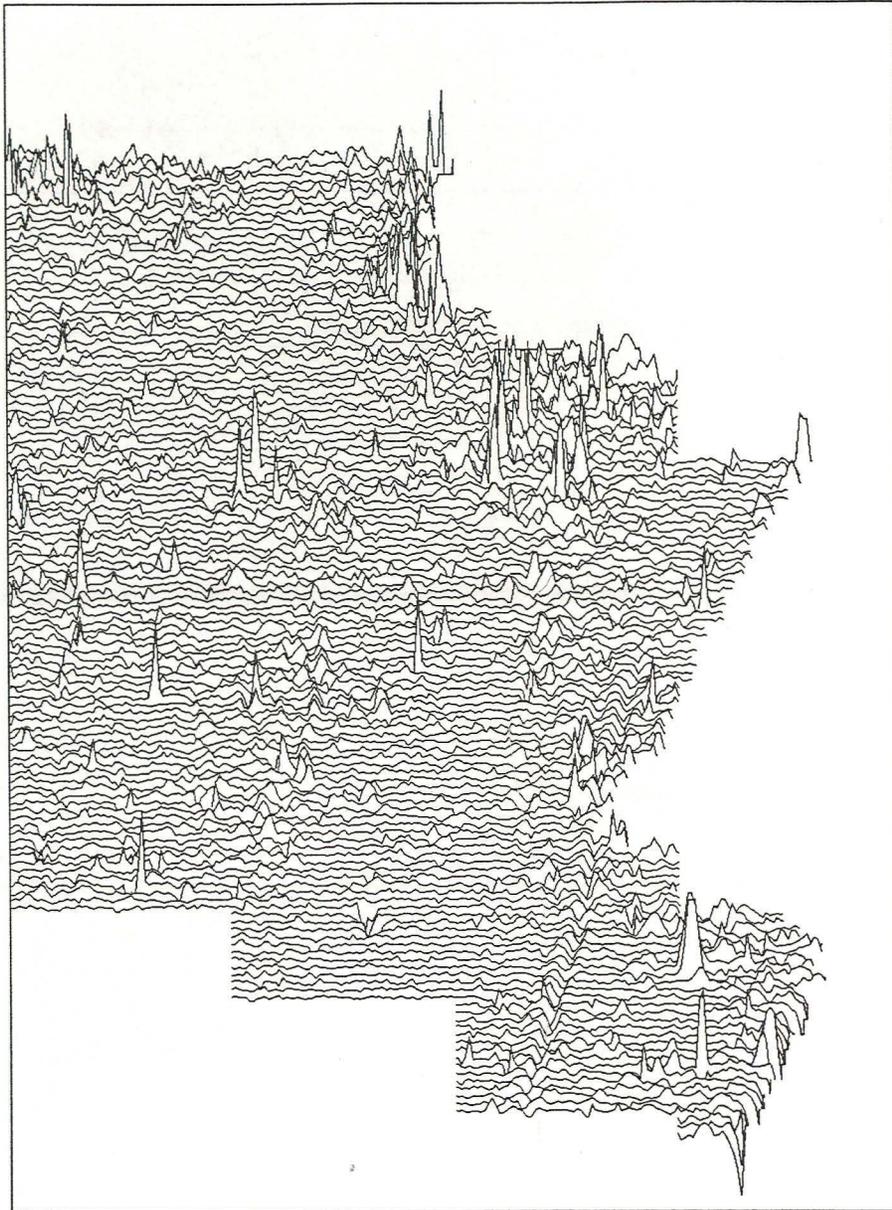
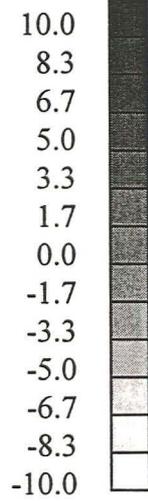
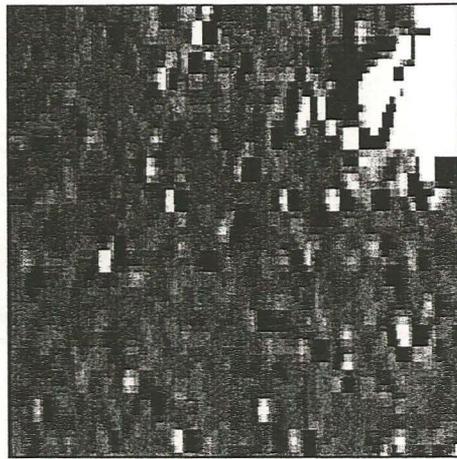


Figure 2: Adcocks Sawmill, Corby Glen
Grey Scale Plot
Scale 1:1000



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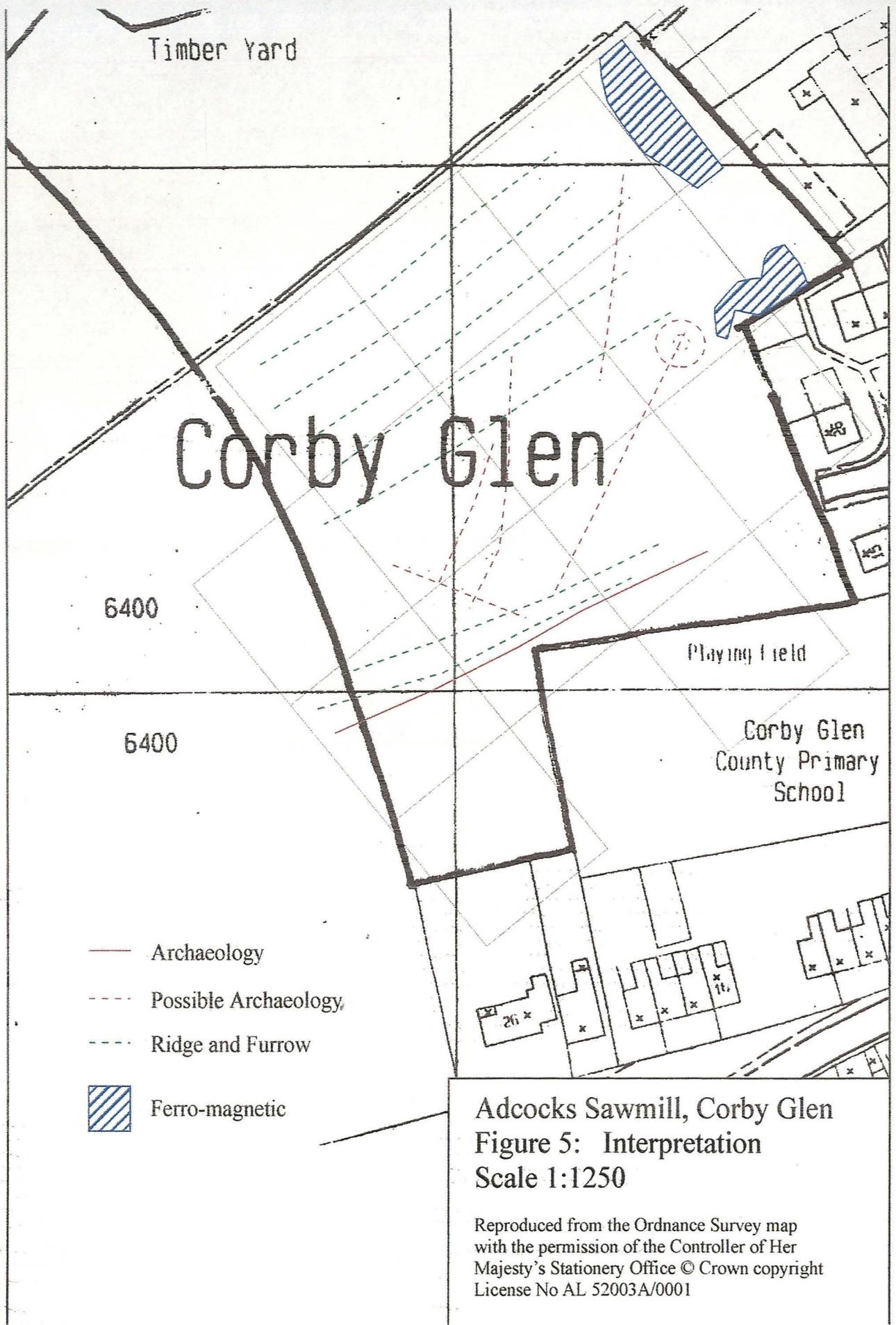
Figure 3: Adcocks Sawmill, Corby Glen
X - Y Plot
Scale 1:1000



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Figure 4: Adcocks Sawmill, Corby Glen
Detail Grey Scale Plot of Grid 6
Scale 1:500



Timber Yard

Corby Glen

6400

6400

Playing field

Corby Glen
County Primary
School

- Archaeology
- - - Possible Archaeology
- · · Ridge and Furrow
-  Ferro-magnetic

Adcocks Sawmill, Corby Glen
Figure 5: Interpretation
Scale 1:1250

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