



Planning, Transport
and Environment

INDEX DATA	RPS INFORMATION
Scheme Title Matteram - Tinkwistle By Pass	Details Geophysical Survey Stage 2
Road Number A57/A628	Date 2000
Contractor RPS	
County Derbyshire	
OS Reference	
Single sided ✓ Double sided ✓ A3 19 Colour 4	

A Report for

RPS CONSULTANTS

on a

Geophysical Survey

carried out at

**Mottram-Tintwistle By-pass,
Greater Manchester/Derbyshire**

June 2000

Job Ref. No. 1469



Author

E J F Mercer BA MSc

CONTENTS

- 1 Summary of results
- 2 Introduction
 - 2.1 Background synopsis
 - 2.2 Site location
 - 2.3 Description of site
 - 2.4 Site history and archaeological potential
 - 2.5 Survey objectives
 - 2.6 Survey methods
- 3 Methodology
 - 3.1 Date of fieldwork
 - 3.2 Grid locations
 - 3.3 Descriptions of techniques and equipment configuration
 - 3.4 Sampling interval, depth of scan, resolution and data capture
 - 3.5 Processing, presentation of results and interpretation

4 Results

5 Conclusions and Recommendations

- Figure 1 1:50 000 General location plan
- Figure 2a 1:12 500 Detailed location plan for the site at Tintwistle
- Figure 2b 1:12 500 Detailed location plan for the site at Mottram in Longendale
- Figure 3 1:500 Site plan showing location of grids and referencing for the site at Tintwistle
- Figure 4 1:500 Plot of raw magnetometer data for the site at Tintwistle
- Figure 5 1:500 Trace plot of raw magnetometer data showing positive values for the site at Tintwistle
- Figure 6 1:500 Trace plot of raw magnetometer data showing negative values for the site at Tintwistle
- Figure 7 1:500 Plot of processed magnetometer data for the site at Tintwistle
- Figure 8 1:500 Abstraction of magnetometer anomalies for the site at Tintwistle
- Figure 9 1:1250 Site plan showing location of grids and referencing for the site at Mottram in Longendale
- Figure 10 1:1250 Plot of raw magnetometer data for the site at Mottram in Longendale

Figure 11	1:750	Plot of raw magnetometer data for the site at Mottram in Longendale – west end
Figure 12	1:750	Plot of raw magnetometer data for the site at Mottram in Longendale – east end
Figure 13	1:1250	Trace plot of raw magnetometer data showing positive values for the site at Mottram in Longendale
Figure 14	1:1250	Trace plot of raw magnetometer data showing negative values for the site at Mottram in Longendale
Figure 15	1:1250	Plot of processed magnetometer data for the site at Mottram in Longendale
Figure 16	1:750	Plot of processed magnetometer data for the site at Mottram in Longendale – west end
Figure 17	1:750	Plot of processed magnetometer data for the site at Mottram in Longendale – east end
Figure 18	1:1250	Abstraction of anomalies for the site at Mottram in Longendale

1 SUMMARY OF RESULTS

The survey did not appear to locate any evidence of the three cropmarks or earthworks that had been noted in the archaeological appraisal of the proposed by-pass route corridor. The positive linear anomalies abstracted from the Tintwistle site are thought to be of natural origin. However, those at the Mottram in Longendale site may be of an archaeological origin although they are difficult to interpret.

2 INTRODUCTION

2.1 Background synopsis

Stratascan was commissioned to carry out a geophysical survey over two sites along a proposed corridor earmarked for a by-pass development. These sites contain cropmarks or earthworks of possible archaeological significance which required investigation prior to development.

2.2 Site location

The sites are located at Tintwistle and Mottram in Longendale which are situated to the north and north-west of Glossop and to the east and south east of Stalybridge respectively. The site at Tintwistle is located at OS ref. SK 029976 and the site at Mottram in Longendale is at OS ref SJ 994062.

2.3 Description of site

Both sites are laid down to pasture. The site at Tintwistle sloped steeply towards the south and east with a sharp drop along the southern edge of the field down to the A628.

The site at Mottram in Longendale is used as the Mottram showground and slopes gently southwards. The west side of the site contained numerous showring/stock fences as well as a large number of posts for the erection of temporary fences. Two apparently small local quarries located in the south could not be surveyed. To the east were a number of boreholes.

The underlying geology of the proposed route corridor comprises Kinderscout Grit and Pure Hill Grit of the Upper Carboniferous Millstone Grit series. This is overlain by glacial boulder clay. The overlying soils at the Tintwistle site are known as Rivington 2 which are typical brown earths (Soil Survey of England and Wales, Sheet 1 Northern England) and consist of well drained coarse loamy soils over rock. The overlying soils at the Mottram in Longendale site are known as Wilcocks 1 which are Cambic stagnogley humic soils (Soil Survey of England and Wales, Sheet 1 Northern England). These consist of slowly permeable seasonally waterlogged fine loamy and fine loamy over clayey upland soils with a peaty surface horizon.

2.4 Site history and archaeological potential

An archaeological assessment of the route corridor by the Greater Manchester Archaeological Unit identified a number of sites of archaeological potential. Three such

sites were chosen for further investigation in the form of geophysical survey. The site at Tintwistle contained a sub-circular shaped cropmark of c.15m in width which was identified from aerial photographic sources as an interrupted dark ring. Cropmarks were also noted from aerial photographs at Mottram in Longendale in the form of a large rectangular-shaped cropmark. On the ground at the Mottram in Longendale site a number of 'amorphous' earthworks had been noted.

2.5 Survey objectives

The objective of the survey was to locate features which may be associated with the cropmarks and earthworks and which may be of archaeological significance.

2.6 Survey methods

Magnetometry was used to survey both sites. More information regarding this technique is included in the Methodology section below.

3 **METHODOLOGY**

3.1 Date of fieldwork

The fieldwork was carried out over five days from Monday 28th June to Friday 1st July 2000 when the weather was variable.

3.2 Grid locations

The location of the survey grids for the site at Tintwistle has been plotted in Figure 3. The steep gradient of the slope has meant that the plotting of the magnetometer greyscale results appears to be out of place. However, the referencing information provided in Figure 3 is correct.

The location of the survey grids for the site at Mottram in Longendale has been plotted in Figure 9.

3.3 Description of techniques and equipment configurations

Although the changes in the magnetic field resulting from differing features in the soil are usually weak, changes as small as 0.2 nanoTesla (nT) in an overall field strength of 48,000nT, can be accurately detected using an appropriate instrument.

The mapping of the anomaly in a systematic manner will allow an estimate of the type of material present beneath the surface. Strong magnetic anomalies will be generated by buried iron-based objects or by kilns or hearths. More subtle anomalies such as pits and ditches can be seen if they contain more humic material which is normally rich in magnetic iron oxides when compared with the subsoil.

To illustrate this point, the cutting and subsequent silting or backfilling of a ditch may result in a larger volume of weakly magnetic material being accumulated in the trench

compared to the undisturbed subsoil. A weak magnetic anomaly should therefore appear in plan along the line of the ditch.

The magnetic survey was carried out using an FM36 Fluxgate Gradiometer, manufactured by Geoscan Research. The instrument consists of two fluxgates mounted 0.5m vertically apart, and very accurately aligned to nullify the effects of the earth's magnetic field. Readings relate to the difference in localised magnetic anomalies compared with the general magnetic background.

3.4 Sampling interval, depth of scan, resolution and data capture

3.4.1 Sampling interval

Readings were taken at 0.5m centres along traverses 1m apart. This equates to 800 sampling points in a full 20m x 20m grid. All traverses are surveyed in a "parallel" rather than "zigzag" mode as this results in a heading error.

3.4.2 Depth of scan and resolution

The FM36 has a typical depth of penetration of 0.5m to 1.0m. This would be increased if strongly magnetic objects have been buried in the site. The collection of data at 0.5m centres provides an optimum resolution for the technique.

3.4.3 Data capture

The readings are logged consecutively into the data logger which in turn is daily downloaded into a portable computer whilst on site. At the end of each job, data is transferred to the office for processing and presentation.

3.5 Processing, presentation of results and interpretation

3.5.1 Processing

Processing is performed using specialist software known as *Geoplot 3*. This can emphasise various aspects contained within the data but which are often not easily seen in the raw data. Basic processing of the magnetic data involves 'flattening' the background levels with respect to adjacent traverses and adjacent grids. 'Despiking' is also performed to remove the anomalies resulting from small iron objects often found on agricultural land. Once the basic processing has flattened the background it is then possible to carry out further processing which may include low pass filtering to reduce 'noise' in the data and hence emphasise the archaeological or man-made anomalies.

The following schedule shows the basic processing carried out on all processed magnetometer data used in this report:

<i>Zero mean grid</i>	<i>Threshold = 0.25 std. dev.</i>
<i>Zero mean traverse</i>	<i>Last mean square fit - off</i>
<i>Despike</i>	<i>X radius = 1 Y radius = 1</i>
	<i>Threshold = 3 std. dev.</i>
	<i>Spike replacement = mean</i>

3.5.2 Presentation of results and interpretation

The presentation of the data for each site involves a print-out of the raw data both as grey scale (Figures 4 and 10-12) and trace plots (Figures 5, 6 and 13, 14), together with a grey scale plot of the processed data (Figures 7 and 15-17). Magnetic anomalies have been identified and plotted onto an 'Abstraction and Interpretation of Anomalies' drawing for each site (Figures 8 and 18).

4 RESULTS

4.1 General observations

Generally, the anomalies abstracted from both sites are relatively faint in appearance. The majority of these anomalies besides modern debris or disturbance are positive rectilinear and curvilinear anomalies. However, there does not appear to be any anomalies relating to the cropmarks or earthworks located in the archaeological assessment.

4.2 Archaeological Appraisal

4.2.2 *Tintwistle*

Figure 8 shows the abstraction of anomalies for the site at Tintwistle. Around the south and west boundaries of the field an area of magnetic debris and disturbance can be seen. This is likely to be modern in origin.

Away from the boundaries a number of very faint positive linear anomalies have been abstracted. Many of these anomalies have been located running downslope. Due to the steep gradient of the survey area the anomalies are thought to be the result of pedological/geological effects.

There does not appear to be any anomalies of particular archaeological significance and, indeed, none relating to the circular cropmark which had been observed from aerial photographs.

4.2.3 *Mottram in Longendale*

The most notable anomaly seen in the survey results from Mottram showground is an area of strong magnetic debris along the west side. This correlates with a cinder path used as access on to the showground. Other areas of magnetic debris/disturbance have been abstracted in Figure 18 along with a large number of ferrous spikes scattered across the whole site. These are likely to be modern in origin with much of it probably relating to litter from past events which was noted on site.

A further category of anomalies abstracted in Figure 18 are a number of faint positive linear anomalies. These can be seen in two general clusters, in the centre of the survey area and towards the south eastern corner. It is difficult to interpret the function of these anomalies or their archaeological significance as they have no distinct characteristics or

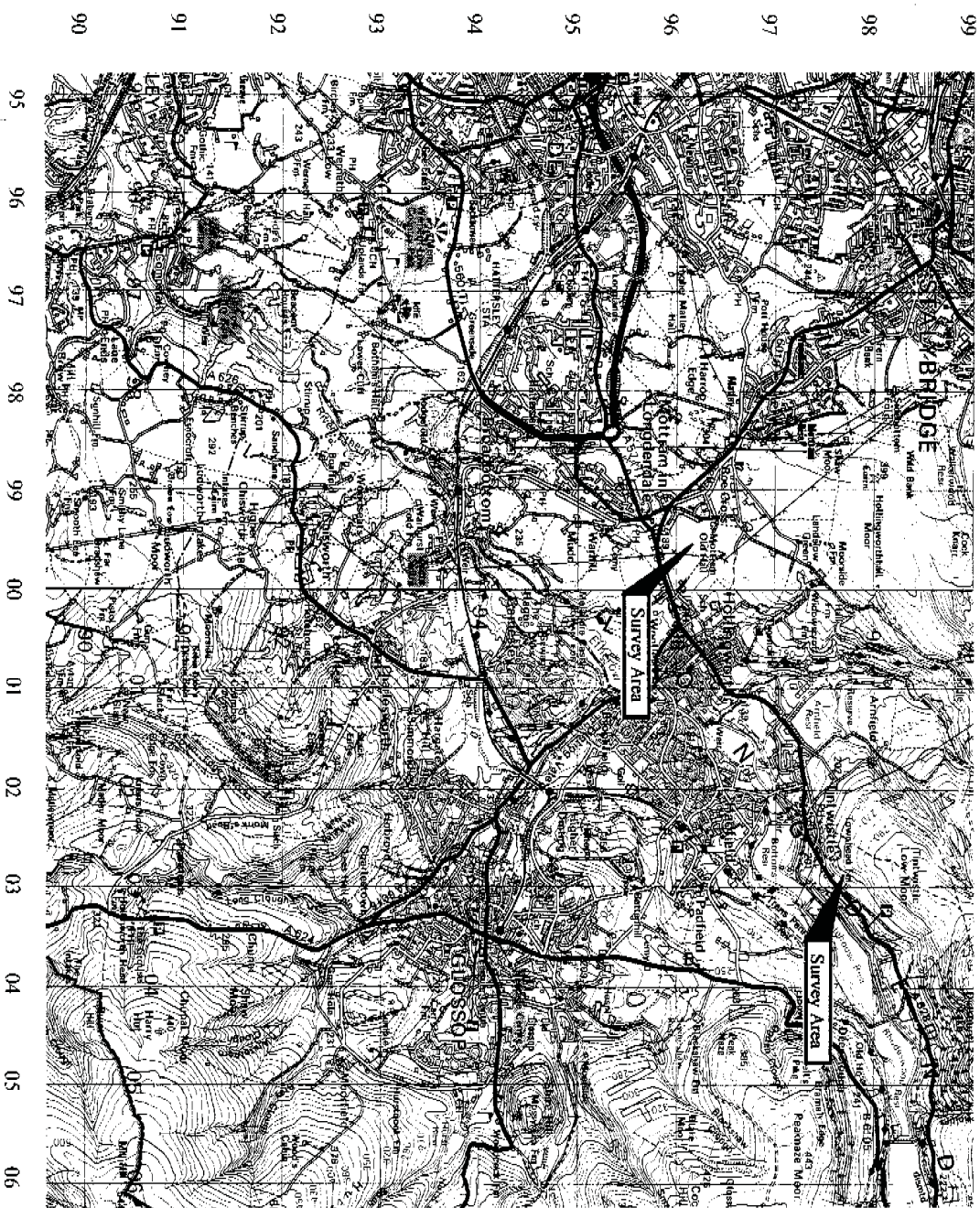
recognisable forms. It is possible that they are of archaeological potential but this would need to be clarified through further investigation.

5 CONCLUSIONS AND RECOMMENDATIONS

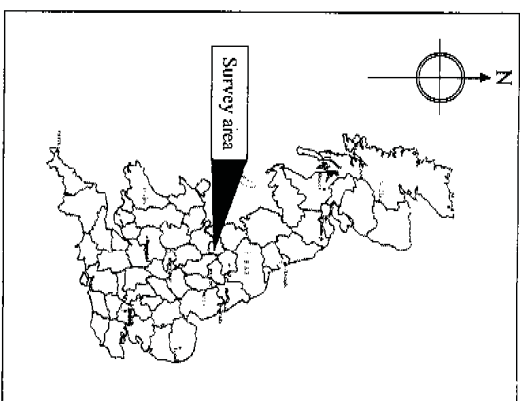
The survey at Tintwistle located numerous faint positive anomalies. However, their general direction downslope may be indicative of their cause relating to pedological or geological effects. The survey did not locate any evidence of the circular cropmark seen from aerial photographs on the site.

The survey at the Mottram in Longendale site also located a number of faint positive anomalies. However, their significance as archaeological features is difficult to ascertain. Therefore, it is recommended that they are investigated further.

Reproduced from Ordnance Survey's 1:50,000 map of 1997 and 1999 with the permission of the Controller of Her Majesty's Stationary Office. Licence No. AT 50125X
 StrataScan Ltd
 Vineyard House
 Upper Hook Road
 Upton Upon Severn
 WR8 0SA
 OS 100km square - SJ and SK



ORIGINAL AT A3



Sites centred on SJ 994062 & SK 029976
 NGR

Figure No.	Job no.	Date	Drawn
1	1469	June 2000	EJFM
			Checked PPB

Client

RPS CONSULTANTS

Project Title

Geophysical Survey,
 Mottam-Tintwistle By-Pass

Subject

GENERAL LOCATION
 PLAN

Scale

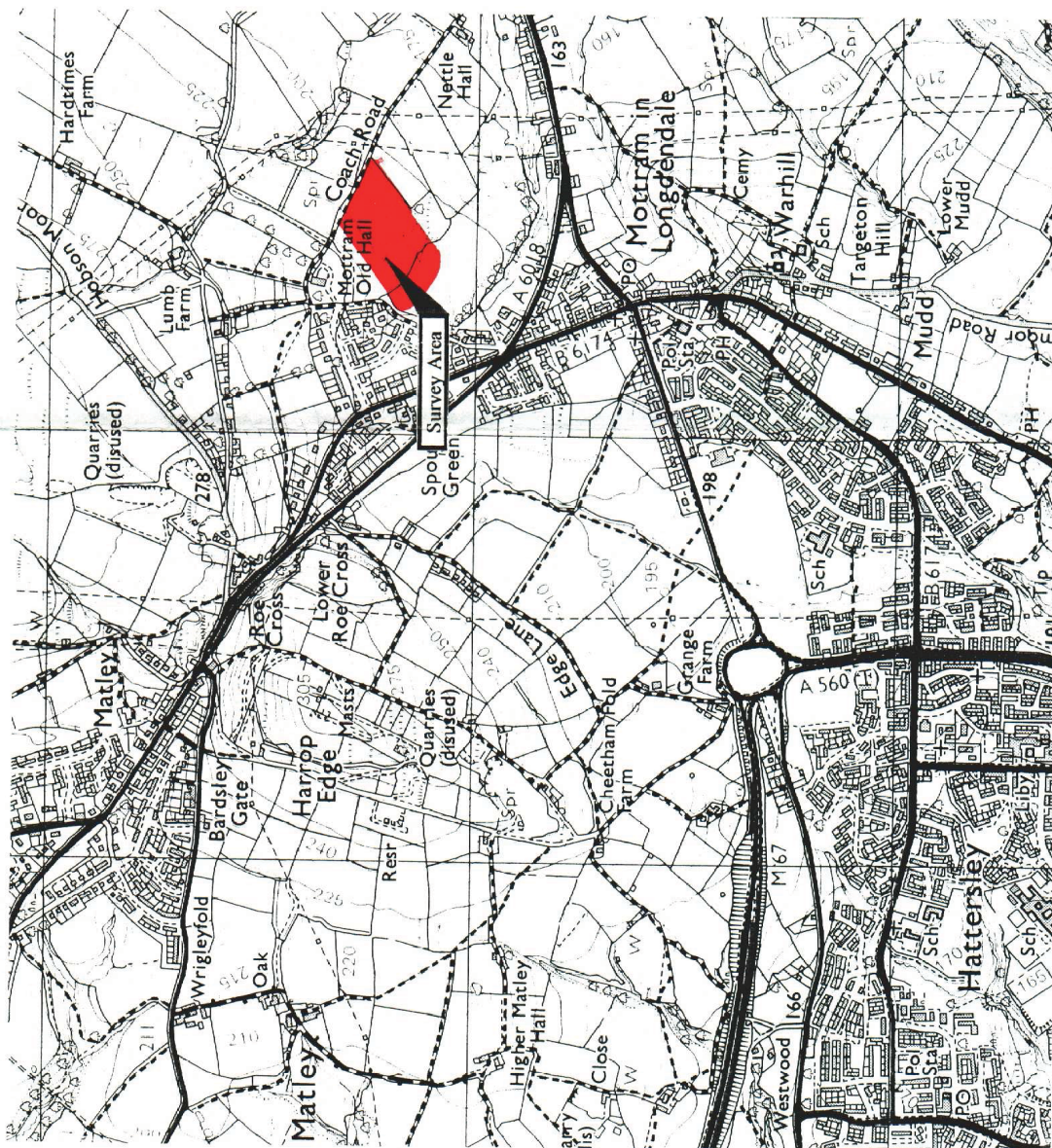


STRATASCAN
 GEOPHYSICAL & SPECIALIST
 SURVEY SERVICES

Vineyard House
 Upper Hook Road
 Upton Upon Severn
 Worcestershire
 WR8 0SA
 Tel. No. +44(0)1684 592266
 Fax +44(0)1684 594142
 E-Mail info@stratascan.co.uk



Reproduced from the OS 1:25 000 map of 1997 with the permission of the Controller of Her Majesty's Stationary Office.
 Copyright reserved
 Licence No. AL 501 25A
 Licencee:
 Stratascan Ltd
 5, The Old Rectory
 Upper Hook Road
 Worcester
 WR8 0SA
 OS 100km square - SJ



Site centred on NGR SJ 994062			
Figure No.	Job no.	Date	Drawn
2b	1469	June 2000	EJFM
			Checked
			PPB

Client
RPS CONSULTANTS

Project Title
 Geophysical Survey,
 Mottram-Tintwistle By-Pass

Subject
**DETAILED LOCATION
 PLAN FOR THE SITE AT
 MOTTRAM IN LONGENDALE**



STRATASCAN™
**GEOPHYSICAL & SPECIALIST
 SURVEY SERVICES**
 Vineyard House
 Upper Hook Road
 Upon Upon Severn
 Worcestershire
 WR8 0SA
 Tel. No. +44(0)1684 592266
 Fax +44(0)1684 594142
 E-Mail info@stratascan.co.uk

99

98

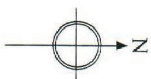
ORIGINAL AT A3

ORIGINAL IN
 COLOUR

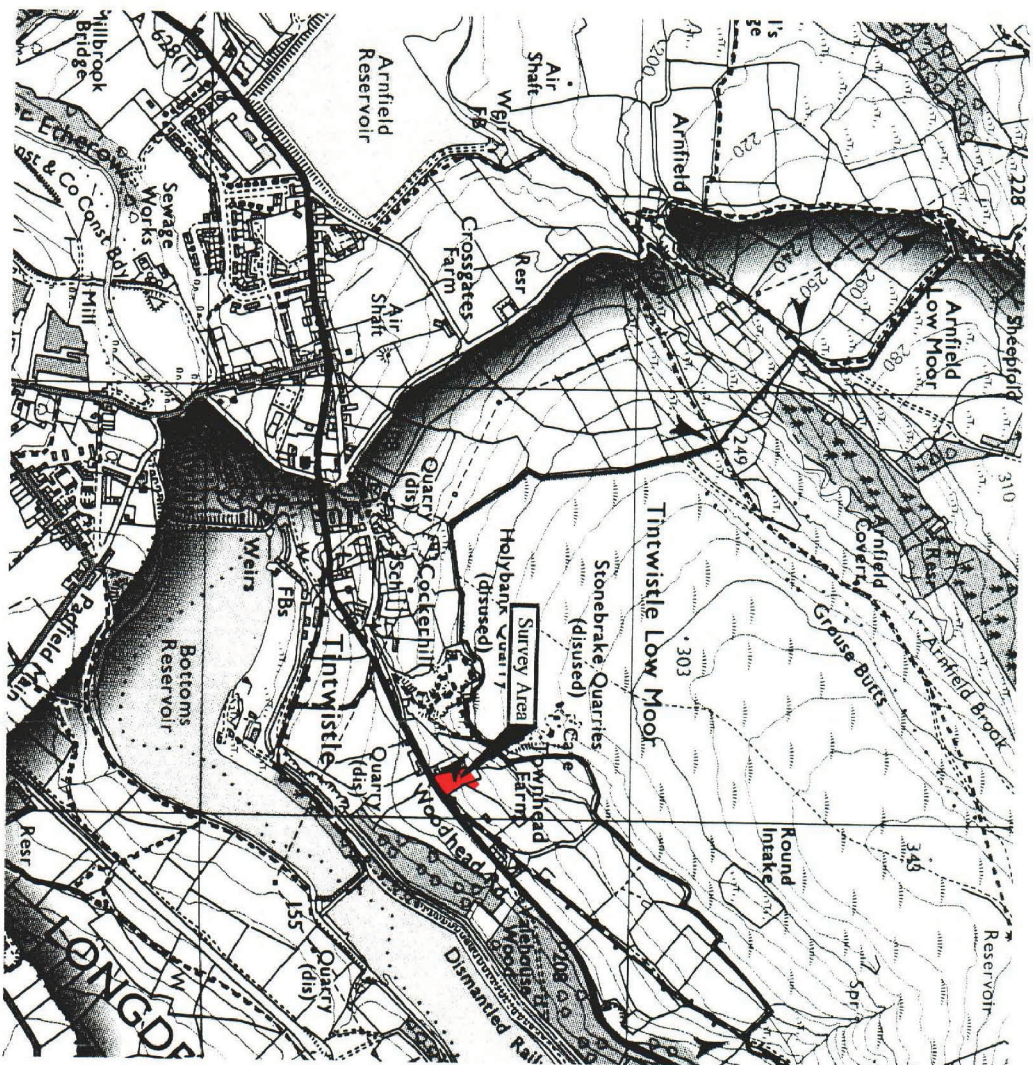
97

96

95



Reproduced from the OS 1:25,000 map of 1994
with the permission of the controller of His
Majesty's Stationery Office.
Copyright reserved
1:25,000 Scale
Landscape: OS, All 2012/14
Surrey: 1:25,000
Surrey: 1:25,000
Vineyard House
Upper Hook Road
Upon Upon Seven
Worcestershire
WR8 0SA
OS 1000m square = SK



98

97

ORIGINAL AT A3

02

ORIGINAL IN
COLOUR

03

Site centred on NGR SK 029976

Figure No.	Job no.	Date	Drawn
2a	1469	June 2000	ELFM
			Checked PPB

Client
RPS CONSULTANTS

Project Title
Geophysical Survey,
Mottam-Tintwistle By-Pass

Subject
DETAILED LOCATION
PLAN FOR THE SITE AT
TINTWISTLE

Scale
1:12 500
0m 100 200 300 400 500m

STATISCAM
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Upon Upon Seven
Worcestershire
WR8 0SA
Tel: No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@statiscam.co.uk





REFERENCING INFORMATION			
A-B	20.03m	A-C	22.5m
A-D	10.24m	B-C	11.47m
D-C	20m		
C&D	Grid node pegs		
B-C	Baseline points		
C-D			
A	Intersection/corner of fence/line		
B	Referencing point on fence/line		
GRID INFORMATION			
2	Grids surveyed		
	Areas not surveyed within grid		

Figure No.	Job no.	Date	Drawn
3	1469	June 2000	EJFM
			Checked PPB

Client
RPS CONSULTANTS

Project Title
Geophysical Survey,
Mottam-Tintwistle By-Pass

Subject
**SITE PLAN SHOWING
LOCATION OF SURVEY GRIDS
AND REFERENCING FOR THE
SITE AT TINTWISTLE**

Scale

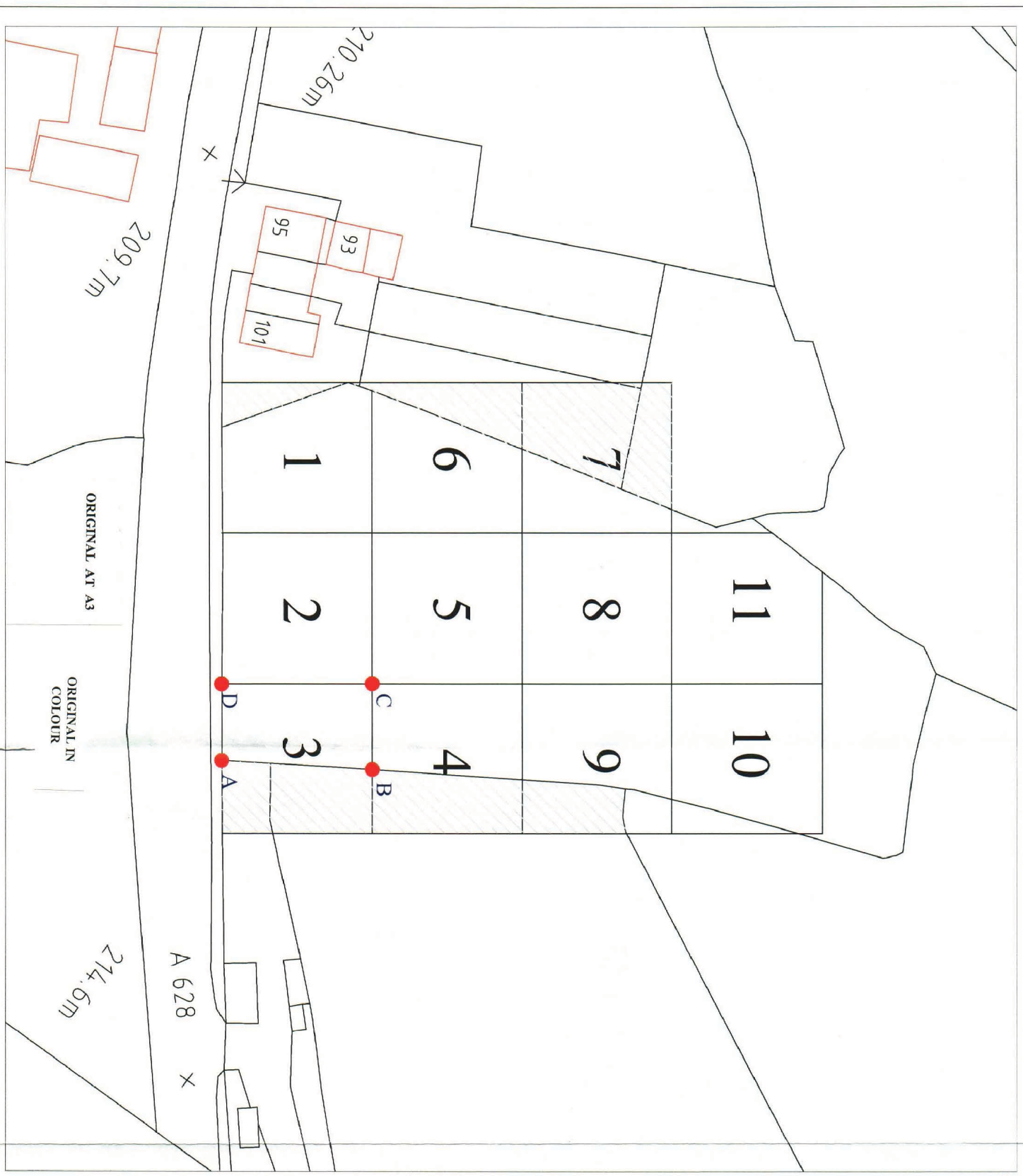


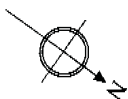
STRATASCAN
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Updon Upon Severn
Worcestershire
WR8 0SA

Tel. No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk







Plotting parameters
 Minimum - 9.4nT (white)
 Maximum + 4.3nT (black)

Figure No.	Job no.	Date	Drawn
4	1469	June 2000	EJFM
			Checked PPB

Client
 RPS CONSULTANTS

Project Title
 Geophysical Survey,
 Mottram-Tintwistle By-Pass

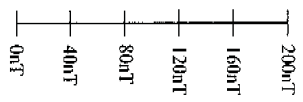
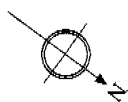
Subject
 PLOT OF RAW
 MAGNETOMETER DATA FOR
 THE SITE AT TINTWISTLE



STRATASCAN™
 GEOPHYSICAL & SPECIALIST
 SURVEY SERVICES

Vineyard House
 Upper Hook Road
 Upton Upon Severn
 Worcestershire
 WR8 0SA
 Tel. No. +44(0)1684 592266
 Fax +44(0)1684 594142
 E-Mail info@stratascan.co.uk





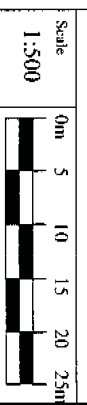
Plotting parameters:
40mT/cm
(Positive values displace
above the trace line. Hidden
values have not been plotted)

Figure No.	Job no.	Date	Drawn	Checked
5	1469	June 2000	EJFM	PPH

Client
RPS CONSULTANTS

Project Title
Geophysical Survey,
Moltram-Tintwistle By-Pass

Subject
TRACE PLOT OF RAW
MAGNETOMETER DATA
SHOWING POSITIVE VALUES

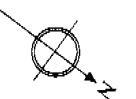


STRATASCAN
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Upton Upon Severn
Worcestershire
WR8 0SA
Tel. No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk

ORIGINAL AT A3





Plotting parameters;
-40nT/cm
(Negative values displace above
the trace line. Hidden values
have not been plotted)

Figure No.	Job no.	Date	Drawn	Checked
6	1469	June 2000	ELFM	PTB

Client
RPS CONSULTANTS

Project Title
Geophysical Survey,
Mortram-Tinlwisle By-Pass

Subject

TRACE PLOT OF RAW
MAGNETOMETER DATA
SHOWING NEGATIVE VALUES



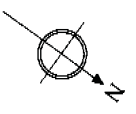
STRATASCAN™
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Upton Upon Severn
Worcestershire
WR8 0SA



Tel. No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk





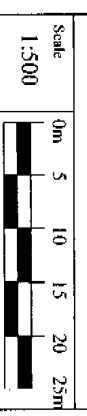
Plotting parameters
Minimum - 7.1nT (white)
Maximum + 4.2nT (black)

Figure No.	Job no.	Date	Drawn EJFM
7	1469	June 2000	Checked FPB

Client
RPS CONSULTANTS

Project Title
Geophysical Survey,
Mottram-Tintwistle By-Pass

Subject
**PROCESSED MAGNETOMETER
DATA FOR THE SITE AT
TINTWISTLE**



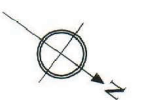
STRATASCAN™
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Upton Upon Severn
Worcestershire

WR8 0SA

Tel. No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk







	Positive linear anomaly - of possible geological/pedological origin
	Magnetic debris/disturbance associated with boundary

Figure No.	Job no.	Date	Drawn
8	1469	June 2000	EJFM
			Checked
			PPB

Client
RPS CONSULTANTS

Project Title
Geophysical Survey,
Mottram-Tintwistle By-Pass

Subject

ABSTRACTION OF
MAGNETOMETER ANOMALIES
FOR THE SITE AT TINTWISTLE



STRATASCAN
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

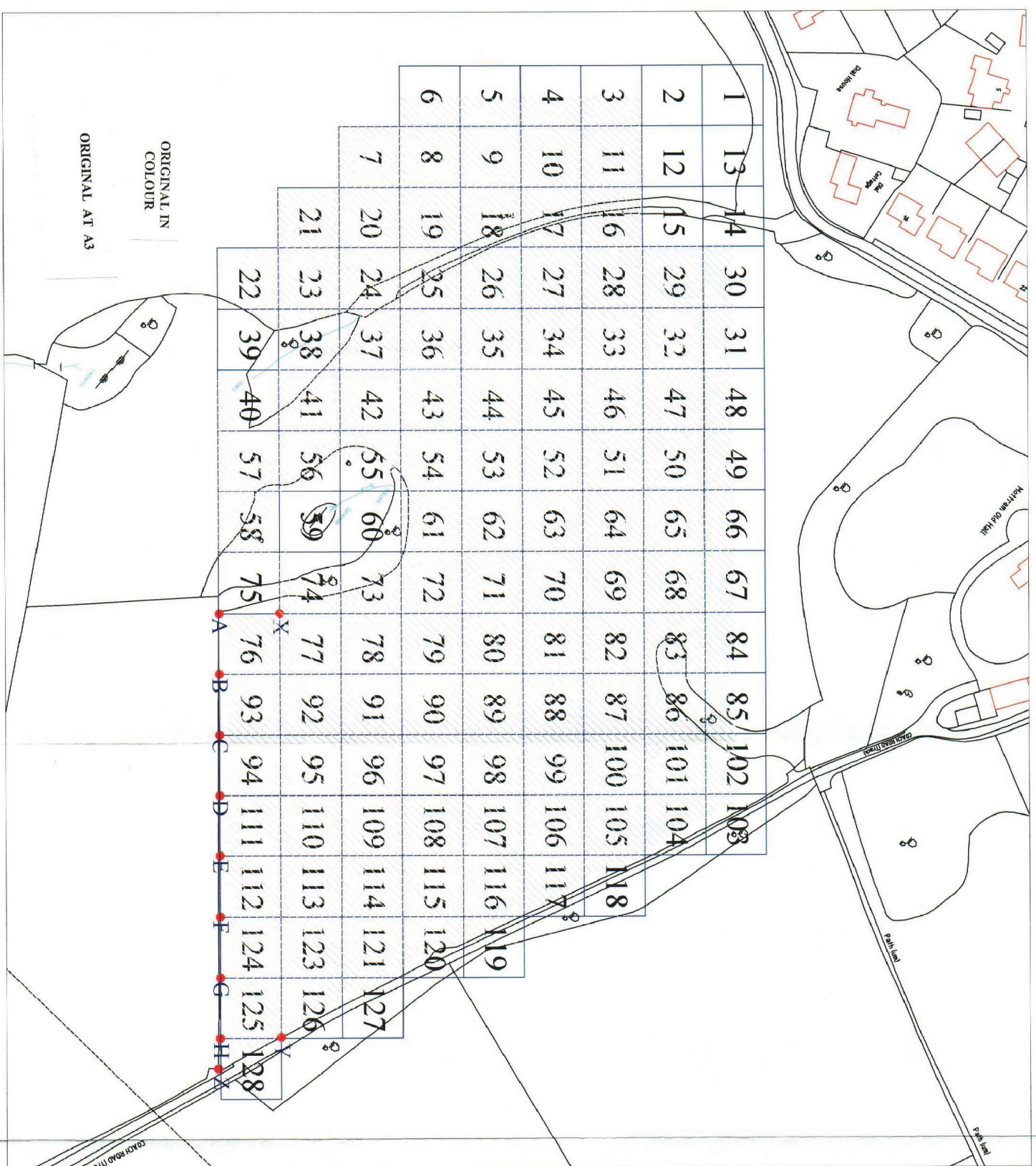
Vineyard House
Upper Hook Road
Upton Upon Severn
Worcestershire

WR8 0SA



Tel. No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk





ORIGINAL IN
COLOUR

ORIGINAL AT A3



REFERENCING INFORMATION			
H-Y	19.3m	H-Z	10.0m
Y-Z	23.07m	H-F	22.90m
X-Y	139.64m	F-D	30.8m
X-A-H 20m grid node pegs			
X-Y, A-H Baseline points			
Z	Referencing peg left in on end of fence line.		
Y	Referencing point for baseline on fence line		
A-H	Grid pegs left in on fence line		
GRID INFORMATION			
2	Grids surveyed		
	Areas surveyed within grid		

Figure No.	Job no.	Date	Drawn
9	1469	June 2000	EJFM
			Checked PPB

Client
RPS CONSULTANTS

Project Title
Geophysical Survey,
Mottram-Tinwistle By-Pass

Subject
SITE PLAN SHOWING LOCATION OF SURVEY GRIDS AND REFERENCING FOR THE SITE AT MOTTRAM IN LONGENDALE



STRATASCAN™
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Upton Upon Severn
Worcestershire
WR8 0SA

Tel. No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk

REGISTERED
MEMBER OF THE
INSTITUTION OF
SURVEYORS

ORIGINAL AT A3



Plotting parameters
Minimum -13.5nT (white)
Maximum +15.1nT (black)

Figure No.	Job no.	Date	Drawn
11	1469	June 2000	EJPM
			Checked PPB

Client
RPS CONSULTANTS

Project Title
Geophysical Survey,
Mottam-Tintwistle By-Pass

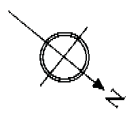
Subject
PLOT OF RAW MAGNETOMETER
DATA FOR THE SITE AT
MOTTAM IN LONGENDALE -
WEST END



STRATASCAN™
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Upon Upon Severn
Worcestershire
WR8 0SA
Tel. No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk





ORIGINAL AT A3

Plotting parameters
Minimum -13.5nT (white)
Maximum +15.1nT (black)

Figure No.	Job no.	Date	Drawn
12	1469	June 2000	EFM
			Checked PPB

Client
RPS CONSULTANTS

Project Title
Geophysical Survey,
Mottam-Tintwistle By-Pass

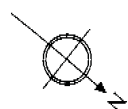
Subject
PLOT OF RAW MAGNETOMETER
DATA FOR THE SITE AT
MOTTAM IN LONGENDALE -
EAST END



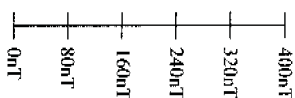
STRATASCAN™
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Upton Upon Severn
Worcestershire
WR8 0SA
Tel. No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk





ORIGINAL AT A3



Plotting parameters:
80nT/cm
(Positive values displace
above the trace line. Hidden
values have not been plotted)

Figure No.	Job no.	Date	Drawn
13	1469	June 2000	ELFM
			Checked PPB

Client
RPS CONSULTANTS

Project Title
**Geophysical Survey,
Mottam-Tintwistle By-Pass**

Subject
**TRACE PLOT OF RAW
MAGNETOMETER DATA SHOWING
POSITIVE VALUES FOR THE SITE
AT MOTTRAM IN LONGENDALE**

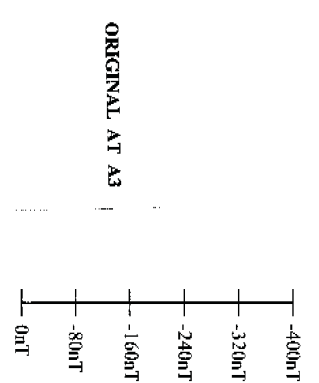
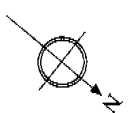


STRATASCAN
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Upton Upon Severn
Worcestershire



WR8 0SA
Tel No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk



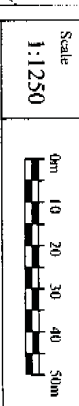
Plotting parameters:
 -80nT/cm
 (Negative values displace
 above the trace line. Hidden
 values have not been plotted)

Figure No.	Job no.	Date	Drawn
14	1469	June 2000	ELFM
			Checked PPB

Client
 RPS CONSULTANTS

Project Title
 Geophysical Survey,
 Mottram-Jimwisle By-Pass

Subject
 TRACE PLOT OF RAW
 MAGNETOMETER DATA SHOWING
 NEGATIVE VALUES FOR THE SITE
 AT MOTTRAM IN LONGENDALE

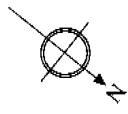


STRATASCAN
 GEOPHYSICAL & SPECIALIST
 SURVEY SERVICES

Vineyard House
 Upper Hook Road
 Upton Upon Severn
 Worcestershire

WR8 0SA
 Tel No. +44(0)1684 592266
 Fax +44(0)1684 594142
 E-Mail info@stratascan.co.uk





ORIGINAL AT A3

Plotting parameters
Minimum -8.6nT (white)
Maximum +8.7nT (black)

Figure No.	Job no.	Date	Drawn
15	1469	June 2000	EJFM
			Checked
			PTB

Client
RPS CONSULTANTS

Project Title
Geophysical Survey,
Motttram-Tintwistle By-Pass

Subject
PLOT OF PROCESSED
MAGNETOMETER DATA FOR
THE SITE AT MOTTRAM IN
LONGENDALE

Scale
1:1250



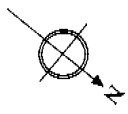
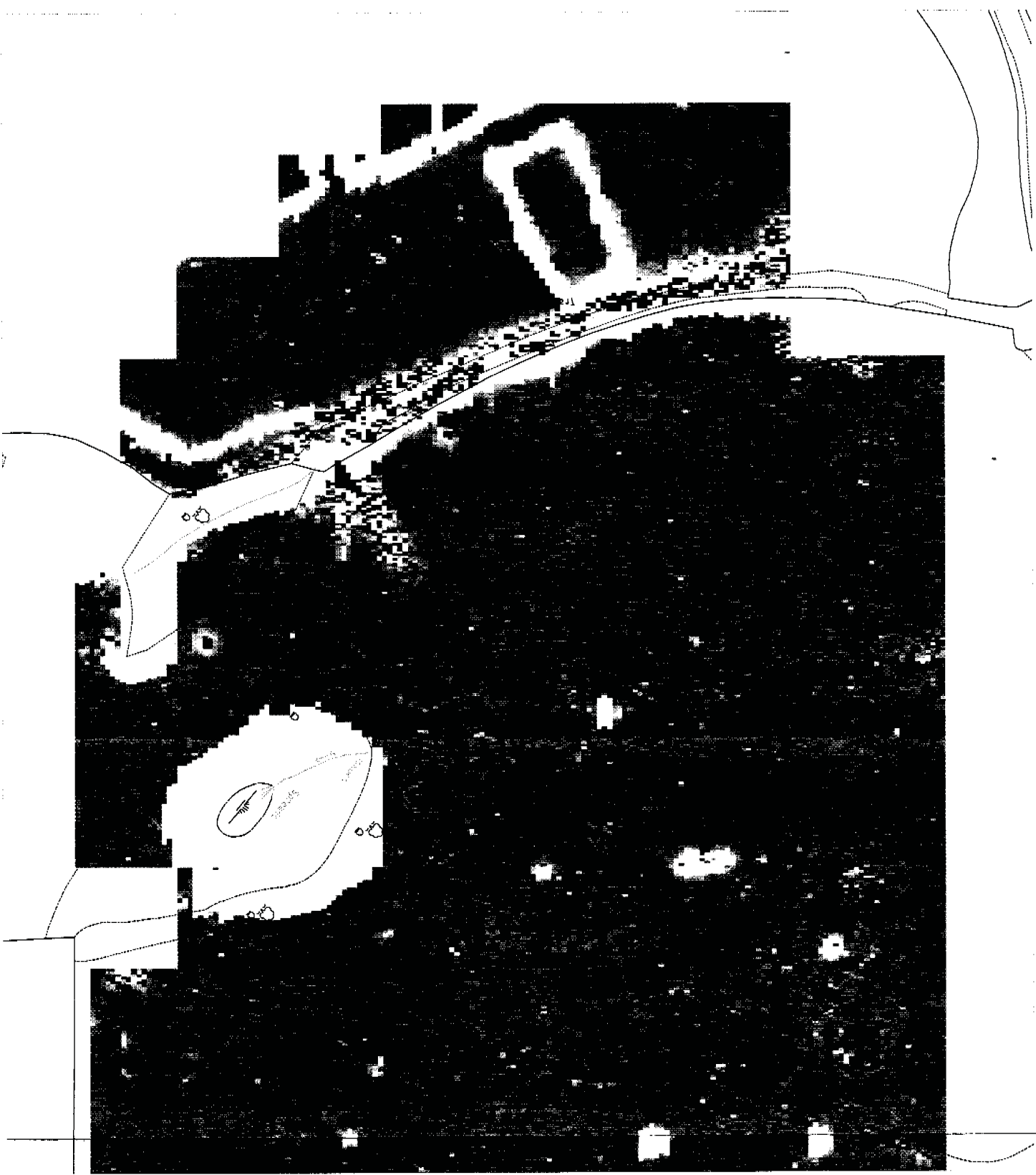
STRATASCAN™
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Upton Upon Severn
Worcestershire

WR8 0SA

Tel. No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk





ORIGINAL AT A3

Plotting parameters
Minimum -8.6nT (white)
Maximum +8.7nT (black)

Figure No.	Job no.	Date	Drawn
16	1469	June 2000	ELFM
			Checked PPB

Cleat
RPS CONSULTANTS

Project Title
Geophysical Survey,
Mottam-Tintwistle By-Pass

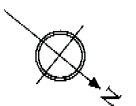
Subject
PLOT OF PROCESSED
MAGNETOMETER DATA FOR
THE SITE AT MOTTRAM IN
LONGENDALE - WEST END



STRATASCAN™
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Upton Upon Severn
Worcestershire
WR8 0SA
Tel. No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk





ORIGINAL AT A3

Plotting parameters
Minimum -8.6nT (white)
Maximum +8.7nT (black)

Figure No.	Job no.	Date	Drawn
17	1469	June 2000	EFM
			Checked
			PPB

Client

RPS CONSULTANTS

Project Title

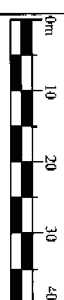
Geophysical Survey,
Mottam-Tintwistle By-Pass

Subject

PLOT OF PROCESSED
MAGNETOMETER DATA FOR
THE SITE AT MOTTRAM IN
LONGENDALE - EAST END

Scale

1:750

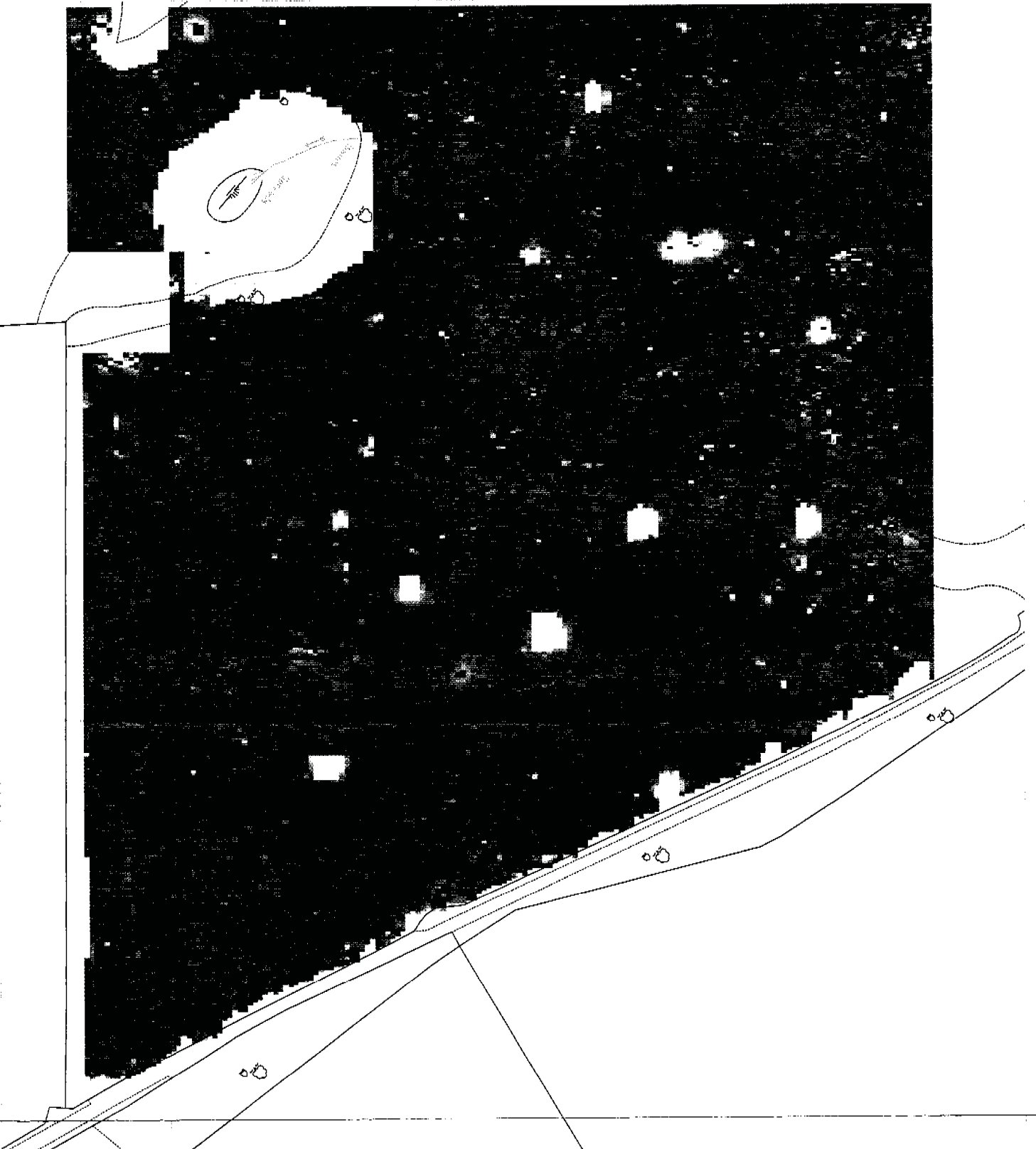


STRATASCAN
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

Vineyard House
Upper Hook Road
Upton Upon Severn
Worcestershire
WR8 0SA



Tel. No. +44(0)1684 592266
Fax +44(0)1684 594142
E-Mail info@stratascan.co.uk





ORIGINAL IN
COLOUR

ORIGINAL AT A3

	Positive linear anomaly - cut feature of possible archaeological significance
	Positive anomaly with negative return - ferrous object
	Area of magnetic debris/disturbance - probably modern in origin
	Area of magnetic debris relating to cinder path

Figure No.	Job no.	Date	Drawn
18	1469	June 2000	EJFM
			Checked
			PPB

Client
RPS CONSULTANTS

Project Title
**Geophysical Survey,
Mottram-Tintwistle By-Pass**

Subject
**ABSTRACTION OF
MAGNETOMETER ANOMALIES
FOR THE SITE AT MOTTRAM IN
LONGENDALE**

Scale	0m 10 20 30 40 50m
1:1250	

STRATASCAN™
GEOPHYSICAL & SPECIALIST
SURVEY SERVICES

REGISTERED ORGANISATION

Vineyard House
 Upper Hook Road
 Upton Upon Severn
 Worcestershire
 WR8 0SA

Tel. No. +44(0)1684 59266
 Fax +44(0)1684 594142
 E-Mail info@stratascan.co.uk

