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Survey Event No.	**77**
Survey Name	**N2 Slane Bypass, Co. Meath**

This Geophysical Report should be Referenced or Acknowledged as:

Leigh, J.M., 2010. Geophysical Survey Report: N2 Slane Bypass, Co. Meath. J.M. Leigh Surveys. Unpublished Report Ref 10/018. October 2010.

Detection Licence No.	10R054; 10R055
Ministerial Directions No.	Not Applicable
NRA Route No.	N2
NRA Scheme Name	Slane Bypass
NRA Scheme ID	MH/02/230

Survey carried out for Meath County Council

Survey funded by the National Roads Authority

Known problems with this report

There are no known archive issues with this report

Depositor	James Bonsall, NRA Fellowship Programme
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GEOPHYSICAL SURVEY REPORT

N2 SLANE BYPASS

COUNTY MEATH

LICENCE NO. 10-R-54 / 10-R-55

28/10/2010

CLIENT: ROUGHAN & O'DONOVAN

Roughan & O'Donovan

J.M.Leigh surveys

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GEOPHYSICAL SURVEY SUMMARY SHEET
N2 SLANE BYPASS, CO. MEATH

Site Name	N2 Slane bypass	**Ref No.**	10/018
Townland	Slane	**Licence No.**	10-R-54 & 10-R-55
County	Meath	**Licence Holder**	Joanna Leigh
NGR (centre) Area 1	E297400 / N275000	**Purpose**	Site investigation
NGR (centre) Area 2	E296700 / N272200	**Client**	Roughan & O'Donovan

Nearest RMP Area 1	ME019:013	**Classification**	Souterrain
NGR	E296650 / N274978	**Distance**	c.680m west of survey
Nearest RMP Area 2	ME026:003	**Classification**	Mound
	E296650 / N274978	**Distance**	c.350m west of survey

Soils & Geology	The local soils consist of grey brown podzolics with associated gleys over a parent material of till of Irish Sea origin with limestone and shale.
Current land use	Arable

Survey Type 1	Gradiometer Scanning	**Method**	Scanning mode
Instrument	Bartington Grad 601-2	**Grid size**	NA
Traverse Int.	10m	**Survey Area**	5.7 hectares

Survey Type 2	Detailed Gradiometer	**Method**	Zig-Zag traverses
Instrument	Bartington Grad 601-2	**Grid size**	20m
Sample Int.	0.25m	**Orientation**	NW-NE
Traverse Int.	1.00m	**Survey Area**	2.24 hectares

Summary of Results

Isolated responses are evident in all the data sets. An archaeological pattern is not evident and is most likely that natural variations in the sub-soil are represented here. Although the scatter of responses complicates interpretation, some areas of archaeological potential have been identified.

In Area 1A a cluster of responses is evident. The responses are considered to be of archaeological potential and may represent a spread of burnt material or the remains of a burnt mound. In Area 1B, clusters of responses of increased magnetic strength are evident. It speculated that clusters of archaeological pits are represented here.

In Areas 2A and 2B, linear responses and trends suggest ditch-type features, and is likely that former field divisions, perhaps representing a former field system, are represented here. A broad magnetically strong ferrous response in Area 2B may be of interest, however, it is likely that more deeply buried modern ferrous debris is represented here, as there are no clear responses indicative of habitation activity.

Report Date	**28th October 2010**	**Report Author**	**Joanna Leigh**

Geophysical Survey Report
N2 Slane Bypass,
Co. Meath

1 Introduction

1.1 A geophysical survey has been conducted by J. M. Leigh Surveys on behalf of Roughan & O'Donovan Ltd. Two areas within the CPO line of the proposed N2 Slane Bypass were highlighted for geophysical survey. Area 1 is located to the north east of Slane, off the existing N2 road, and totals 3.2 hectares. Area 2 is located to the immediate east of the existing N2, to the south of Slane, and is c.2.5 hectares in size. The aim of the survey was to locate and identify any areas of archaeological potential within the application areas.

1.2 The survey comprised of fluxgate gradiometer scanning and targeted detailed survey and was conducted under licences 10-R-54 and 10-R-55, issued by the Department of the Environment, Heritage & Local Government.

1.3 The survey fieldwork was undertaken on two separate fieldwork sessions due to the presence of crop in the fields under investigation. The northern half of Area 1 was surveyed on the 20th May 2010 and the remainder of Area 1 and Area 2 were surveyed on the 12th and 13th October 2010. The results are discussed as a whole in this report. The locations of Area 1 and Area 2 are presented in Figure 1 at a scale of 1:10,000.

1.4 There are no recorded monuments within the limits of the application areas. The nearest recorded monument to Area 1 is that of a Souterrain site (RMP ME019:013), located c.680m to the west in the Townland of Slane. A recorded mound site (RMP ME026:003) is located in the Townland of Johnstown, c.350m to the west of Area 2.

1.5 Previous archaeological works, including geophysical survey and archaeological test trenching, have been undertaken as part of the archaeological assessment of the proposed N2 Slane Bypass Road Scheme. These are summarised and discussed in the Environmental Impact Assessment (2009) prepared by CRDS Ltd. The areas currently highlighted for geophysical survey have resulted from amendments to the proposed road layout and CPO line.

2 Survey Methodology

2.1 A preliminary gradiometer scan of Areas 1 and 2, totalling 5.7 hectares, was undertaken to identify magnetic anomalies of potential archaeological origin. Anomalies identified were subject to detailed recorded gradiometer survey. Three detailed survey blocks, Areas 1A, 1B and 1C, were located in Area 1 (Figure 2). Two survey blocks, Areas 2A and 2B, were positioned in Area 2 (Figure 3). A total of 2.24 hectares of detailed survey was conducted to investigate anomalies identified during the gradiometer scanning. The location of the scanned anomalies and the subsequent detailed gradiometer survey area are presented in Figures 2 and 3, at a scale of 1:2,500. Both the preliminary scan and recorded survey were undertaken with a Bartington GRAD 601-2 dual sensor instrument.

2.2 The detailed survey area was set out and tied in to features on the provided mapping with a total station instrument and DGPS.equipment. Detailed tie in information is available on request.

Preliminary Gradiometer Scanning

2.3 Gradiometer scanning is a fast and effective technique for identifying areas of potential archaeological interest. Scanning is used in conjunction with targeted detailed survey, and is effective when assessing large areas.

2.4 The gradiometer instrument is set to scanning mode. 10m traverses of the application area are undertaken. The magnetic fluctuations on the instrument display panel are monitored and any anomalies of potential interest observed are marked in the field for further investigation through detailed gradiometer survey.

Detailed Gradiometer Survey

2.5 A detailed gradiometer survey detects subtle variations in the local magnetic field and measurements are recorded in nano-Tesla (nT). Some archaeological features such as ditches, large pits and fired features have an enhanced magnetic signal and can be detected through recorded survey.

2.6 Data was collected with a sample interval of 0.25m and a traverse interval of 1m, providing 1600 readings per 20m x 20m grid. The survey areas were located within a common site grid. The instrument was calibrated as recommended by the manufacturers' guidelines.

3 Data Display

3.1 . Three survey blocks (Area 1A, 1B and 1C) comprise Area 1 Figures 4 and 5 present a summary greyscale image and accompanying interpretation diagram of the detailed gradiometer survey in Area 1. Area 2 comprises of two detailed survey blocks (Areas 2A and 2B). A summary greyscale image of and accompanying interpretation drawing is presented in Figure 6. The greyscale images and interpretation drawings are all displayed at a scale of 1:1,500.

3.2 Numbers in parentheses in the text of the report refer to specific responses highlighted in the gradiometer survey interpretation diagrams.

3.3 The raw gradiometer data is presented as a PDF document on the accompanying CD. The raw data is displayed as a series of XY Trace plots, greyscale images and interpretation drawings. All the archive plots are displayed at a scale of 1:500.

3.4 The display formats referred to above, and the interpretation categories are discussed in the summary technical information section at the end of this report.

4 Site Description & Further Information

4.1 The pre-defined survey areas are located in arable fields, and fieldwork was undertaken when the fields were free from crop. Area 1 is located to the north of Slane and is contained within two fields. The northern field (Area 1A) has a gentle north facing slope, and the southern field (Area 1B, and 1C) has a gentle south-east facing slope. Area 2 is located to the south of Slane and also was contained within two fields. The eastern field (Area 2B) has a prominent north-east facing slope, with views of Slane and the Boyne Valley.

4.2 A large area of raised ground was evident in the western field of Area 2 (Area 2A). This was not suitable for detailed survey, and gradiometer scanning identified this as magnetically disturbed. No further obstacles were encountered during survey fieldwork.

5 Results of the Preliminary Gradiometer Scanning (Figure 2)

5.1 Gradiometer scanning was undertaken throughout the available application area. Traverses 10m apart were made in a north-west to south-east direction and the location of magnetic anomalies distinct from the natural background variation were noted on site and targeted for further investigation through detailed gradiometer survey.

5.2 The natural background magnetic variation was limited (±1nT) and multiple isolated anomalies above this range were noted throughout Areas 1 and 2. The anomalies were ill-defined and archaeological potential was unclear.

5.3 In the north of Area 1, an area of increased background response was noted and isolated magnetic anomalies were observed. A cluster of anomalies of potential archaeological strength (±10nT) were also identified in the north of Area 1. Detailed survey Area 1A was positioned here to investigate.

5.4 In the filed to the south of Area 1A, further isolated anomalies were noted. Another cluster of anomalies was identified and archaeological potential was unclear. Detailed survey Areas 1B and 1C were positioned in this field.

5.5 In Area 2 the natural background variation was ±2nT and multiple isolated anomalies were again detected. As with Area 1, the anomalies were ill-defined

and archaeological potential was unclear. The eastern field in Area 2 comprised of linear anomalies of potential interest. Detailed survey Areas 2A and 2B were positioned to investigate the archaeological potential of the isolated anomalies.

6 Results of the Detailed Gradiometer Survey Area 1 (Figures 4 & 5)

6.1 Detailed survey in Area 1 consisted of three survey blocks (Areas 1A, 1B and 1C). The survey blocks were positioned to investigate the results of the gradiometer scanning.

Area 1A

6.2 In the north-west of the data set are a cluster of responses (1). Although there is no clear archaeological pattern evident, they are of significant magnetic strength (±10nT), and are considered to be of archaeological potential. It is possible that a spread of burnt material or area of burning is represented here. The responses may suggest the location of a burnt mound feature, although this is speculative.

6.3 To the south of (1) are two positive linear trends. They are of weak magnetic strength and are barely discernable in the data. An archaeological interpretation is unclear and the trends do not appear to be associated with (1). It is possible that the trends represent former agricultural activity, and an archaeological interpretation is cautious.

6.4 To the east of the responses (1) are isolated responses (2) of potential archaeological interest. They have a magnetic strength of ±5nT, and may represent pit type features. However, the isolated nature of the responses makes archaeological interpretation tentative, and more deeply buried modern ferrous debris may be represented here.

6.5 In the south-east of the data set the magnetic background response appears elevated (3). Within the increased area of magnetic response are numerous isolated responses (4) of potential archaeological magnetic strength. It is possible that a spread of pit-type features is located here. However, the increased background response may indicate a natural origin for the isolated responses, and no further responses of archaeological interest have been identified in this area. Although an archaeological interpretation must be considered, it is equally likely that the responses represent natural variations in the sub-soil.

6.6 Isolated ferrous responses within the data set most likely represent buried modern ferrous debris and are not interpreted to be of archaeological interest.

Area 1B & Area 1C

6.7 As with Area 1A, numerous isolated responses have been identified. It is possible that numerous pit-type features are located here, however, the responses are numerous and no clear archaeological pattern is evident. It is equally likely that the responses are natural in origin.

6.8 Some of the isolated responses are of significant magnetic strength (±10nT) and may be of interest. A cluster of these responses (5) is located in the south of Area 1B and appears to form a 'U' shape. An archaeological interpretation must be considered and the responses may represent an archaeological feature. A cluster of pit-type features or large post holes may be represented here, although this is speculative.

6.9 To the south of (5), another cluster of responses (6) is evident. There is no clear shape or pattern, however the responses are of significant magnetic strength (±10nT) and are considered to be archaeological potential. An isolated response (7) is also of significant magnetic strength. It is possible that these responses represent pit-type features. This is speculative but an archaeological interpretation must be considered.

6.10 Further isolated responses are evident in Area 1C. However, there is no clear archaeological pattern and the responses may equally result from a natural origin. Archaeological interpretation is cautious.

7 Results of the Detailed Gradiometer Survey Area 1 (Figure 6)

7.1 Isolated responses are evident in Areas 2A and 2B. As with the data sets in Area 1, the responses have no clear archaeological pattern and a natural origin is equally likely. Archaeological interpretation of the scattered responses is cautious.

Area 2A

7.2 A magnetically strong response (8) and associated linear trends may be of interest. The response and trend may represent a former field division or ditch-type feature. Further trends are evident in the data set. Again, no clear archaeological pattern is discernable; the trends most likely represent ploughing activity.

Area 2B

7.3 In Area 2B, several linear responses and associated trends are evident. A linear response (9) and associated trend traverse the data set east to west. The response is considered to be of potential archaeological interest, and may represent an archaeological ditch-type feature. It is possible that a former field division, perhaps part of a former field system, has been identified. There are several linear trends orientated parallel to (9) that are indicative of ploughing activity.

7.4 Linear responses (10) and trend form a linear pattern suggesting another ditch-type response. This most likely represents a former field division.

7.5 A magnetically strong response (11) is evident in the west of Area 2B. The responses may be of interest, perhaps representing a burnt or fired feature, such as a hearth or kiln. However, the response appears isolated and it is more likely that modern ferrous debris is represented here. An archaeological interpretation is cautious.

8 Conclusion & Discussion

8.1 Gradiometer scanning identified numerous isolated anomalies throughout Areas 1 and 2. Detailed survey Areas 1A, 1B, 1C, 2A and 2B were positioned to investigate the scanned anomalies.

8.2 Detailed survey identified the numerous scanned anomalies as isolated responses, which are evident throughout all the survey areas. Although the responses are of archaeological strength, they have no clear archaeological pattern and a natural origin is preferred. Within the scatter of isolated responses, some responses of possible archaeological interest were identified.

8.3 A cluster of responses in the north-west of Area1A are of potential archaeological interest. The responses of some strength (±10nT) and are suggestive of a spread of burnt material. It is possible that a burnt mound is represented here.

8.4 In Area 1B, two clusters of responses (5) (6) are of potential archaeological interest. Although it is possible that the responses are natural in origin, an archaeological interpretation must be considered. It is possible that a cluster of pit-type features are represented here.

8.5 In survey Areas 2A and 2B, the scatter of isolated responses continues, and is considered to be a continuation of probable natural features. Linear trends and isolated response (8) in Area 2A may be of interest. The response may represent a former field division or ditch-type feature.

8.6 In Area 2C, a linear response (9) and associated parallel linear trends is suggestive of a former field division and ploughing activity. A fragmented linear response (10) is also evident, and suggests another former field division.

8.7 A magnetically strong response (11) is evident in the west of Area 2B. Although it is possible that ma burnt feature such as a kiln or hearth is represented here, there are no further responses indicative of occupational activity. The response is most likely modern in origin, and represents a more deeply buried modern ferrous object.

8.8 Consultation with a licensed archaeologist and with the Department for the Environment, Heritage and Local Government is recommended to establish if any further archaeological works are required.

Technical Information Section

Instrumentation & Methodology

Fluxgate Gradiometer Survey

Gradiometer survey is the most frequently applied survey instrument as it can be used in 'Scanning' or detailed survey mode.

Scanning

This is a fast and effective reconnaissance technique. The instrument is set in scanning mode and regular traverses of the investigation area are made, usually at 10m intervals. This allows a fast and effective scan of the application area, looking for any responses which may be of archaeological potential. As the traverses are made, the operator observes the instrument readout, and any responses of interest are marked for further investigation.

Detailed Gradiometer Survey

This is conducted to clearly define any responses detected during scanning, or can be applied as a stand alone methodology. Detailed survey is often applied with a sample interval of 0.25m and a traverse interval of 1m. This allows detection of potential archaeological responses. Data is collected in grids 20m x 20m, and data is displayed accordingly. A more detailed survey methodology may be applied where archaeological remains are thought likely. A survey with a grid size of 10m x 10m and a traverse interval of 0.5m will provide a data set with high resolution.

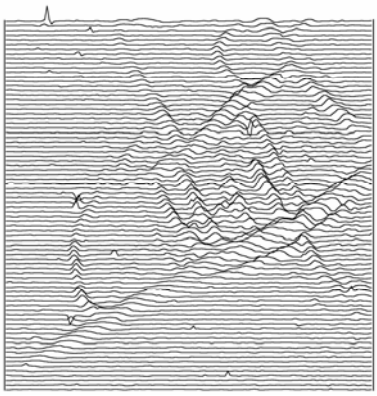
Bartington GRAD 601-2

The Bartington *Grad* 601-2 instrument is a specifically designed gradiometer for use in archaeological prospection. The gradiometer operates with a dual sensor capacity making survey very fast and effective. The sensors have a separation of 1m allowing greater sensitivity.

Frequent realignment of the instruments and zero drift correction; ensure a constant high quality of data. Extremely sensitive, these instruments can detect variations in soil magnetism to 0.1nT, affording diverse application throughout a variety of archaeological, soil morphological and geological conditions.

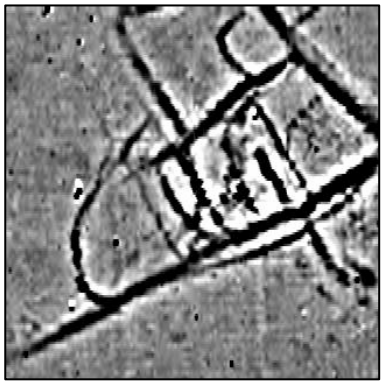
Gradiometer Data Display & Presentation

XY Trace



The data are presented as a series of linear traces, enabling a semi-profile display of the respective anomalies along the X and Y-axes. This display option is essential for distinguishing between modern ferrous materials (buried metal debris) and potential archaeological responses. The XY trace plot provides a linear display of the magnitude of the response within a given data set.

*Greyscale**



As with dot density plots, the greyscale format assigns a cell to each datum according to its location on the grid. The display of each data point is conducted at very fine increments, allowing the full range of values to be displayed within the given data set. This display method also enables the identification of discrete responses that may be at the limits of instrument detection. In the summary diagrams processed, interpolated data is presented. Raw un-interpolated data is presented in the archive drawings along with the xy-trace plots.

Interpretation

An interpretation of the data is made using many of the plots presented in the final report, in addition to examination of the raw and processed data. The project managers' knowledge and experience allows a detailed interpretation of the survey results with respect to archaeological potential.

**XY Trace and raw greyscale plots are presented in archive form for display of the raw survey data. Summary greyscale images of the interpolated data are included for presentation purposes and to assist interpretation.*

Glossary of Interpretation Terms

Archaeology

This category refers to responses which are interpreted as of clear archaeological potential, and are supported by further archaeological evidence such as aerial photography or excavation. The term is generally associated with significant concentrations of former settlement, such as ditched enclosures, storage pits and associated features.

? Archaeology

This term corresponds to anomalies that display typical archaeological patterns where no record of comparative archaeological evidence is available. In some cases, it may prove difficult to distinguish between these and evidence of more recent activity also visible in the data.

? Industrial

Such anomalies generally possess a strong magnetic response and may equate with archaeological features such as kilns, furnaces, concentrations of fired debris and associated industrial material.

Area of Increased Magnetic Response

These responses often lack any distinctive archaeological form, and it is therefore difficult to assign any specific interpretation. The resulting responses are site specific, possibly associated with concentrations of archaeological debris or more recent disturbance to underlying archaeological features.

Trend

This category refers to low-level magnetic responses barely visible above the magnetic background of the soil. Interpretation is tentative, as these anomalies are often at the limits of instrument detection.

Ploughing/Ridge & Furrow

Visible as a series of linear responses, these anomalies equate with recent or archaeological cultivation trends.

? Natural

A broad response resulting from localised natural variations in the magnetic background of the subsoil; presenting as broad amorphous responses most likely resulting from geological features.

Ferrous Response

These anomalies exhibit a typically strong magnetic response, often referred to as ‘iron spikes,’ and are the result of modern metal debris located within the topsoil.

Area of Magnetic Disturbance

This term refers to large-scale magnetic interference from existing services or structures. The extent of this interference may in some cases obscure anomalies of potential archaeological interest.

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Figure 5	Area 1: Summary Interpretation Drawing	1:1,500
Figure 6:	Area 2: Summary greyscale image & Interpretation drawing	1:1,500

Archive Drawings (PDF document on accompanying CD)

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A1.04	Area 1C: XY Trace plot, greyscale image & interpretation	1:500
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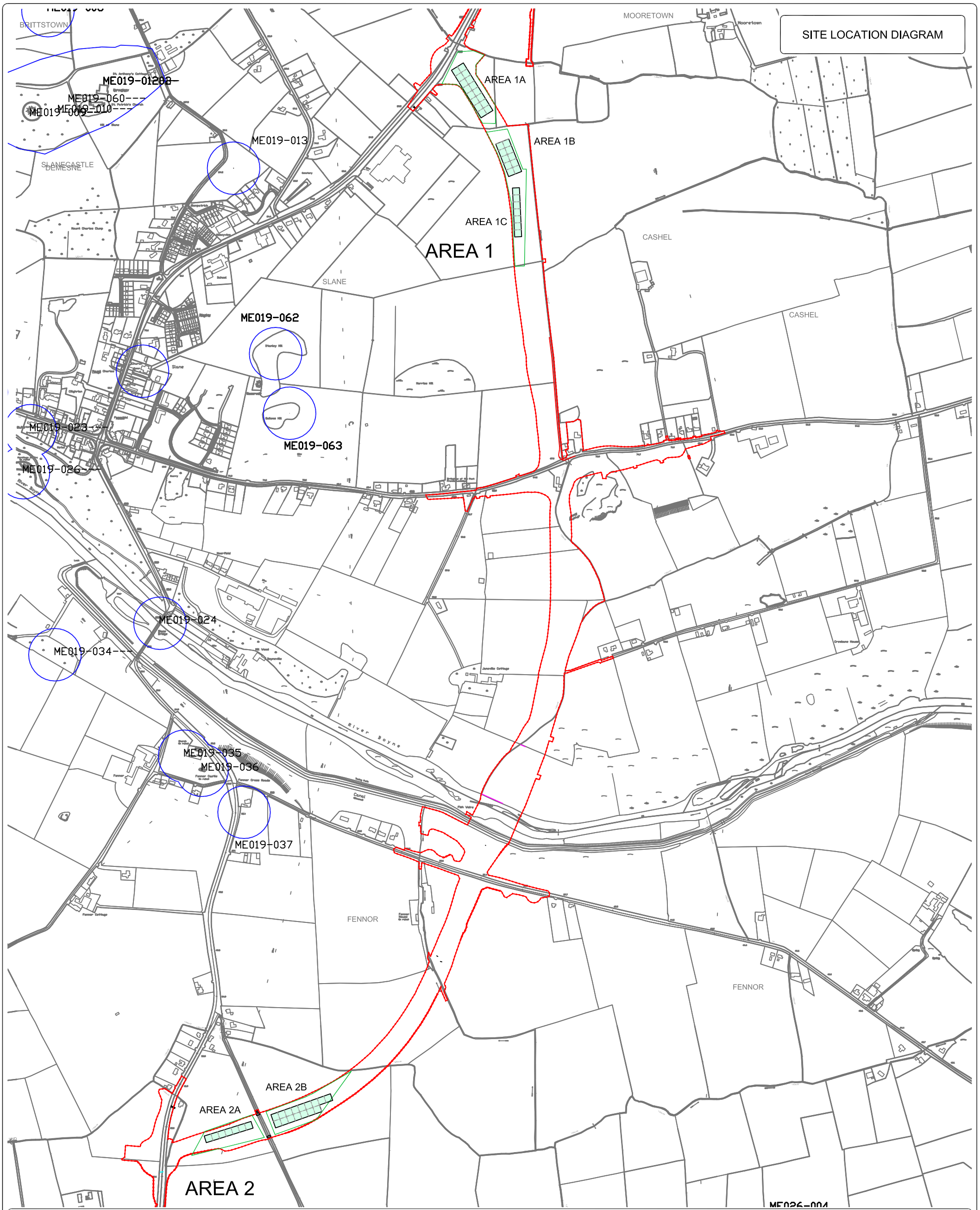

Client:	Project:	Title:	
Roughan & O'Donovan	GEOPHYSICAL SURVEY: N2 SLANE BYPASS COUNTY MEATH	SITE LOCATION DIAGRAM	

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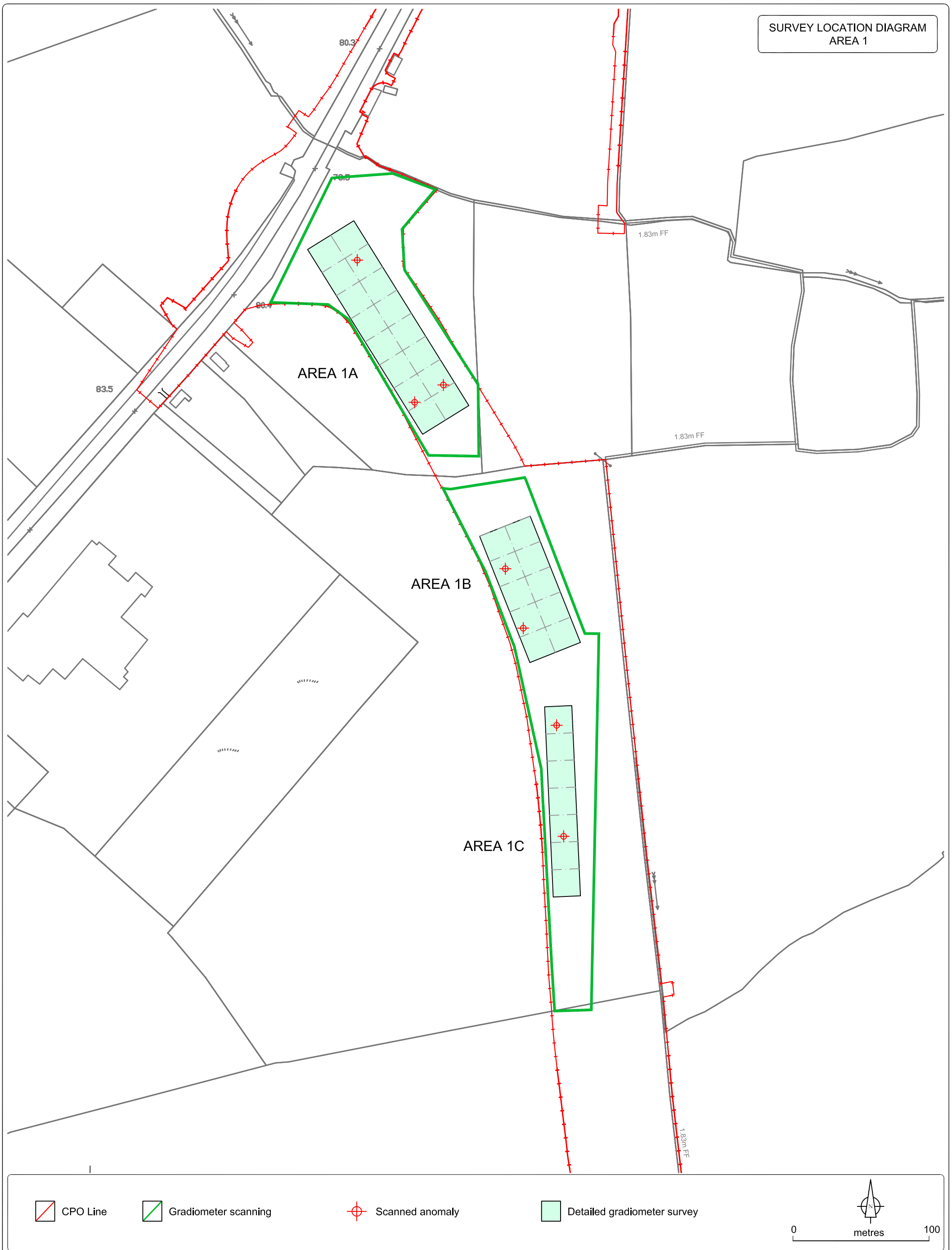
Scale @ A3:	1:10,000
Figure:	1
Licence No's.:	10 - R - 54/55
Issue Date:	28.10.2010



Client:	Project:	Title:		
Roughan & O'Donovan	GEOPHYSICAL SURVEY: N2 SLANE BYPASS COUNTY MEATH	SITE LOCATION DIAGRAM AREA 1	J.M.Leigh surveys www.jmlsurveys.com	Scale @ A3: 1:2,500 Figure: 2 Licence No's.: 10 - R - 54/55 Issue Date: 28.10.2010

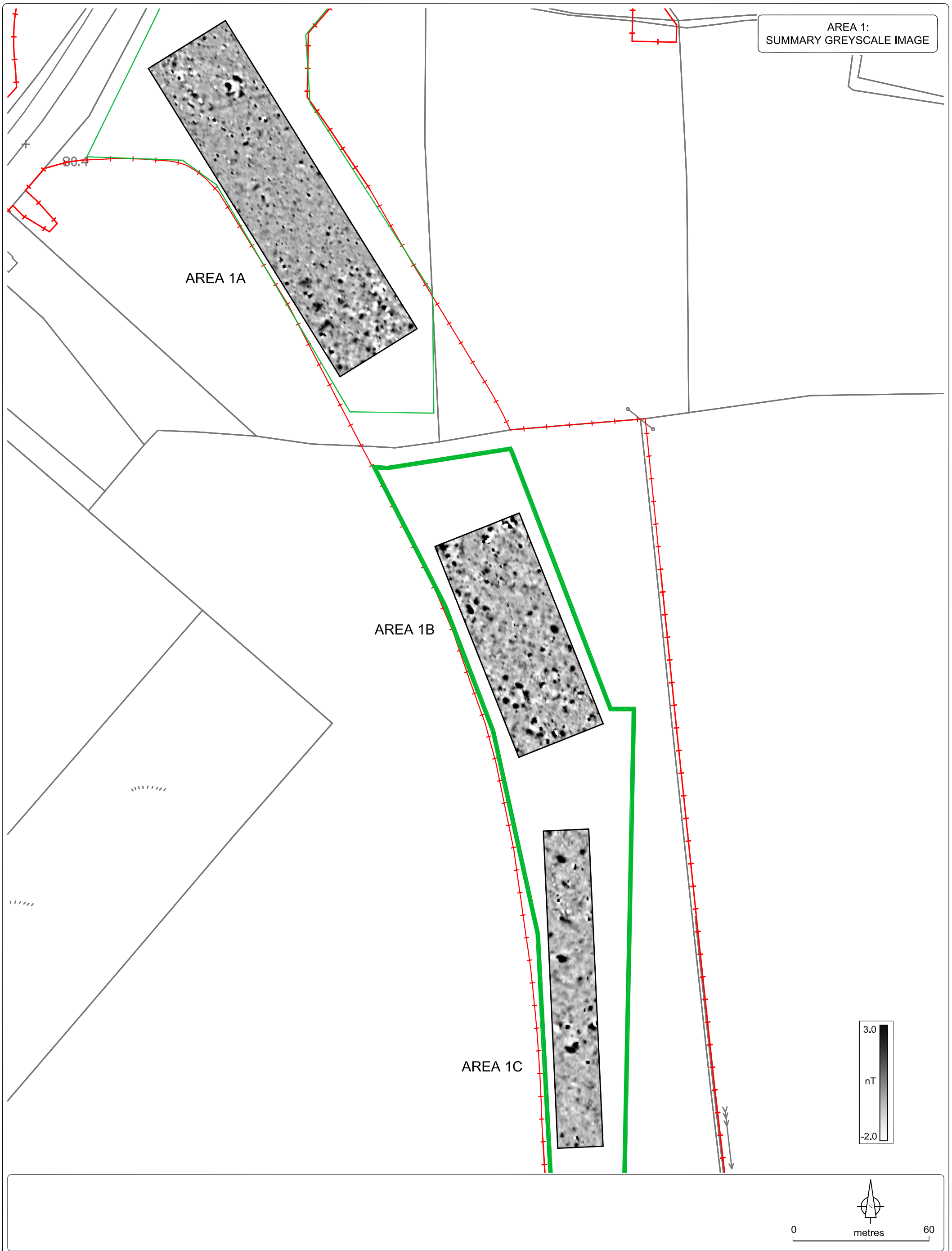
SURVEY LOCATION DIAGRAM
AREA 2

54.9
59.9
61.9
62.0
63.6
67.7
70.7
1.83m FF
UND
CR
10kV
AREA 2A
AREA 2B

CPO Line
Gradiometer scanning
Scanned anomaly
Detailed gradiometer survey
Scanning - modern disturbance
0 metres 100

Client: Roughan & O'Donovan	Project: GEOPHYSICAL SURVEY: N2 SLANE BYPASS COUNTY MEATH	Title: SURVEY LOCATION DIAGRAM AREA 2	J.M.Leigh surveys www.jmlsurveys.com

Scale @ A3:	1:2,500
Figure:	3
Licence No's.:	10 - R - 54/55
Issue Date:	28.10.2010



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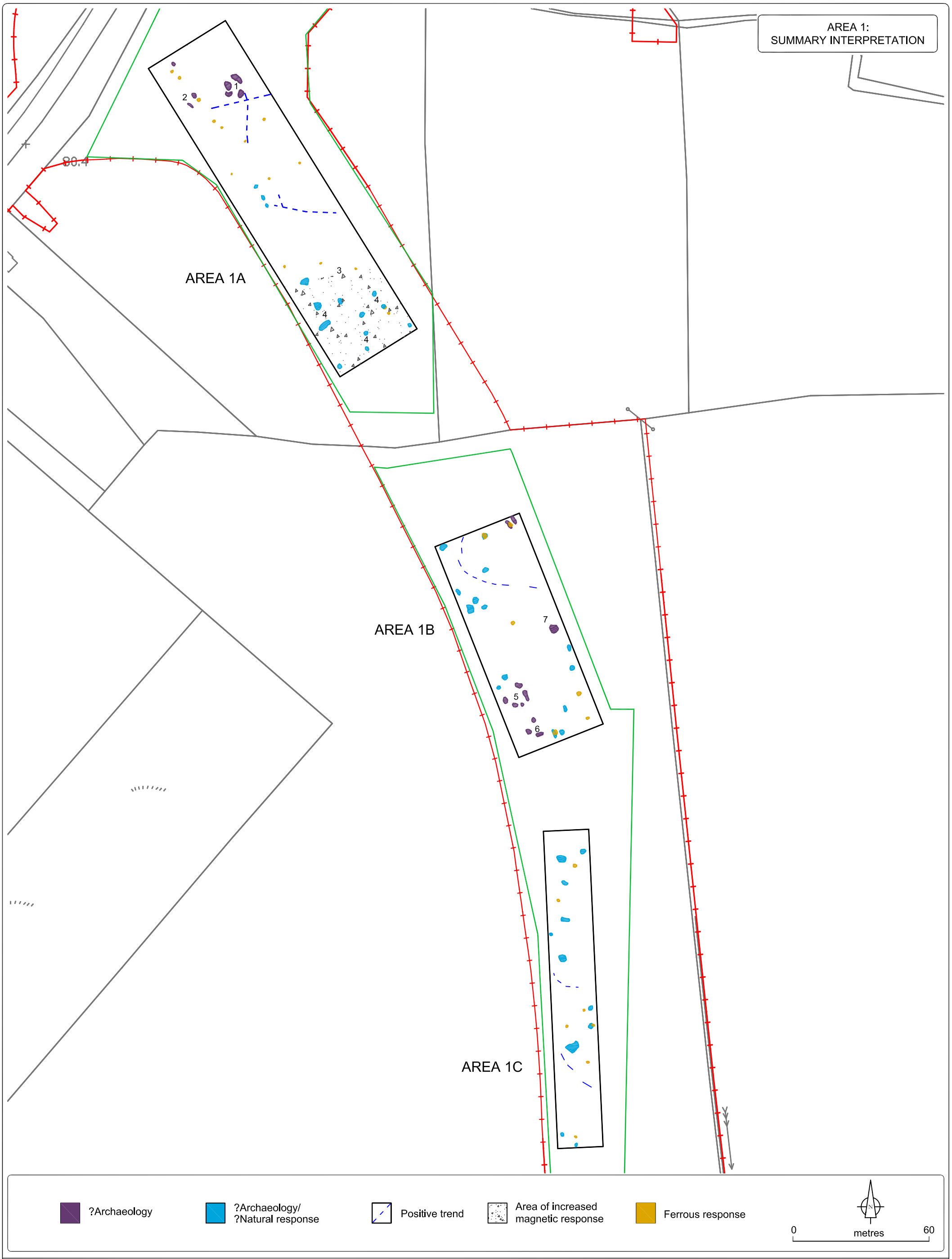
Roughan & O'Donovan	GEOPHYSICAL SURVEY: N2 SLANE BYPASS COUNTY MEATH	AREA 1: SUMMARY GREYSCALE IMAGE	J.M.Leigh surveys www.jmlsurveys.com	Scale @ A3: 1:1,500 Figure: 4 Licence No's.: 10 - R - 54/55 Issue Date: 28.10.2010



Client:
Roughan & O'Donovan

Project:
GEOPHYSICAL SURVEY:
N2 SLANE BYPASS
COUNTY MEATH

Title:
AREA 1: SUMMARY INTERPRETATION DIAGRAM

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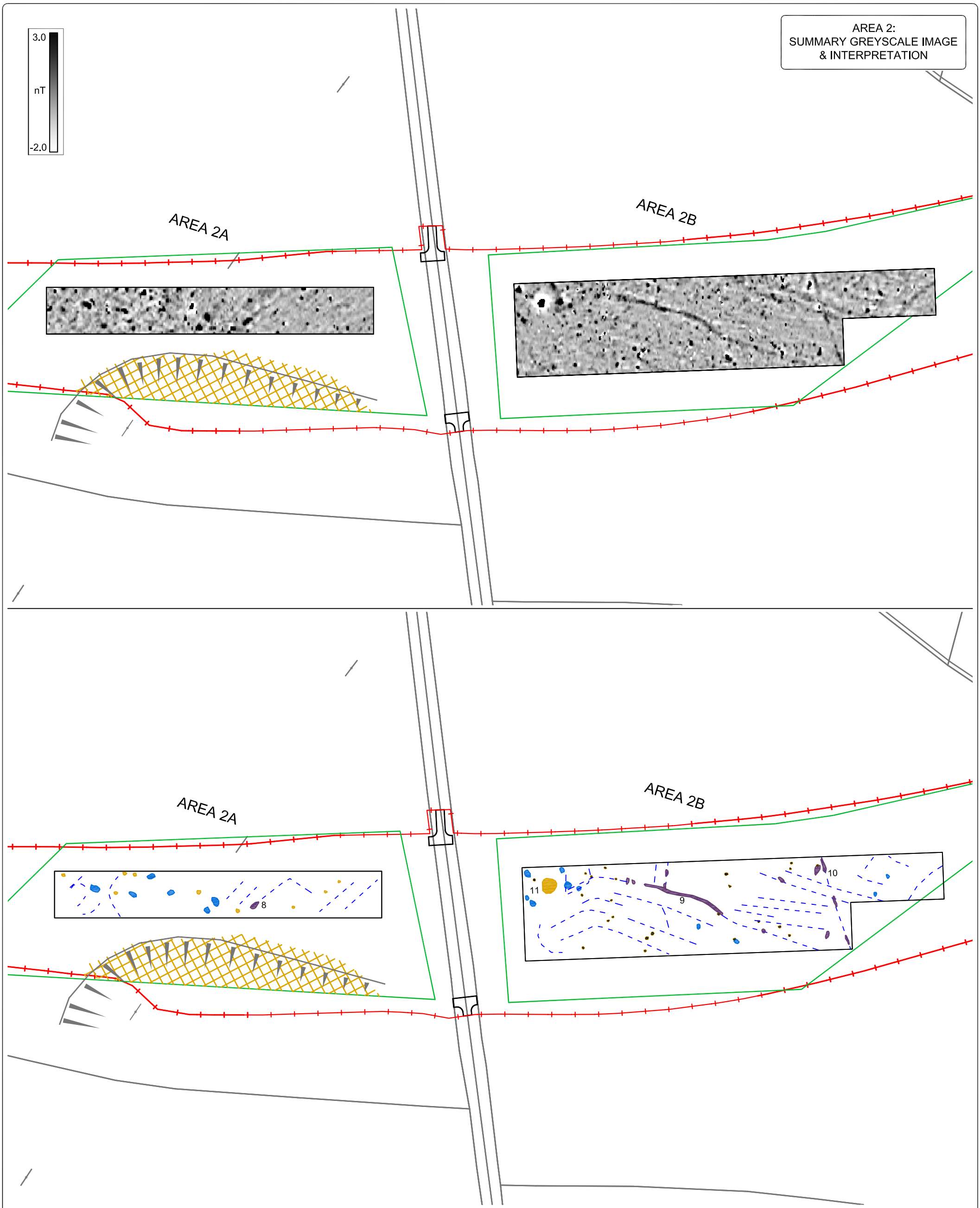
Scale @ A3:	1:1,500
Figure:	5
Licence No's.:	10 - R - 54/55
Issue Date:	28.10.2010

AREA 2:
SUMMARY GREYSCALE IMAGE
& INTERPRETATION



?Archaeology

?Archaeology/
?Natural response

Positive trend

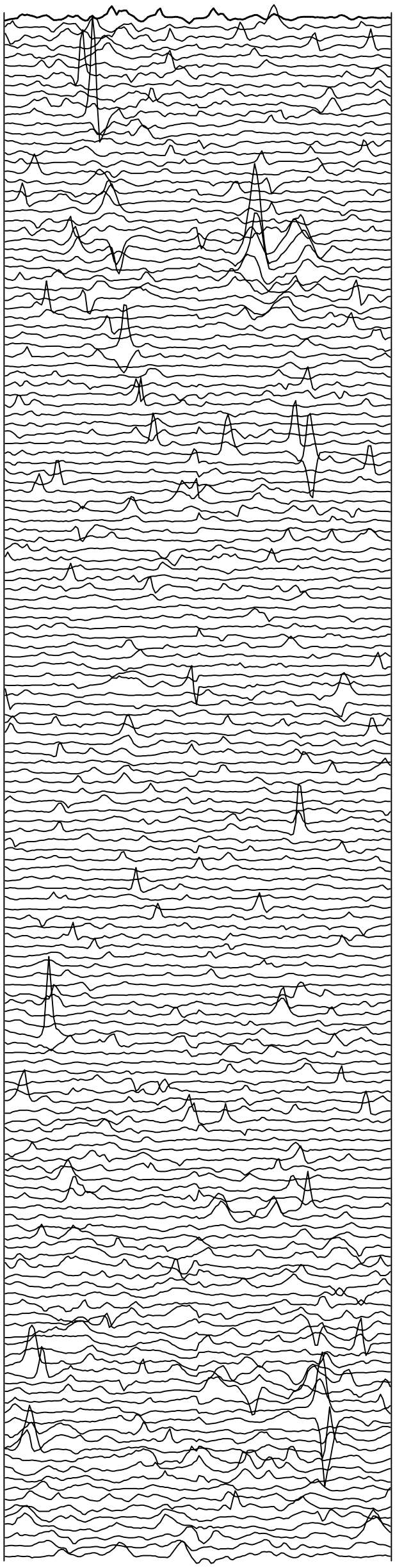
Ferrous response

Scanning
Magnetic disturbance

0 metres 60

Client:	Project:	Title:		
Roughan & O'Donovan	GEOPHYSICAL SURVEY: N2 SLANE BYPASS COUNTY MEATH	AREA 2: SUMMARY GREYSCALE IMAGE & INTERPRETATION	J.M.Leigh surveys www.jmlsurveys.com	Scale @ A3: 1:1,500 Figure: 6 Licence No's.: 10 - R - 54/55 Issue Date: 28.10.2010

ARCHIVE
AREA 1A: XY TRACE PLOT & RAW DATA GREYSCALE IMAGE



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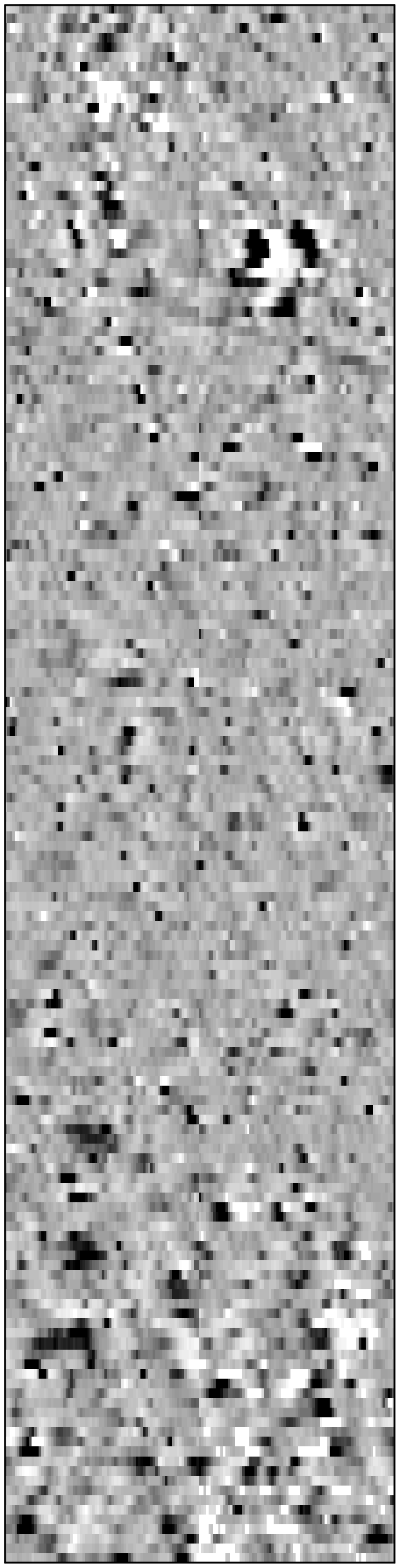

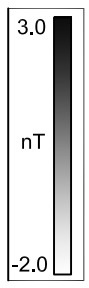

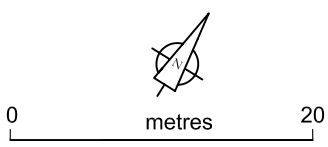

Client:
Roughan & O'Donovan

Project:
GEOPHYSICAL SURVEY:
N2 SLANE BYPASS
COUNTY MEATH

Title:
ARCHIVE
AREA 1A: XY-TRACE PLOT & RAW DATA GREYSCALE IMAGE

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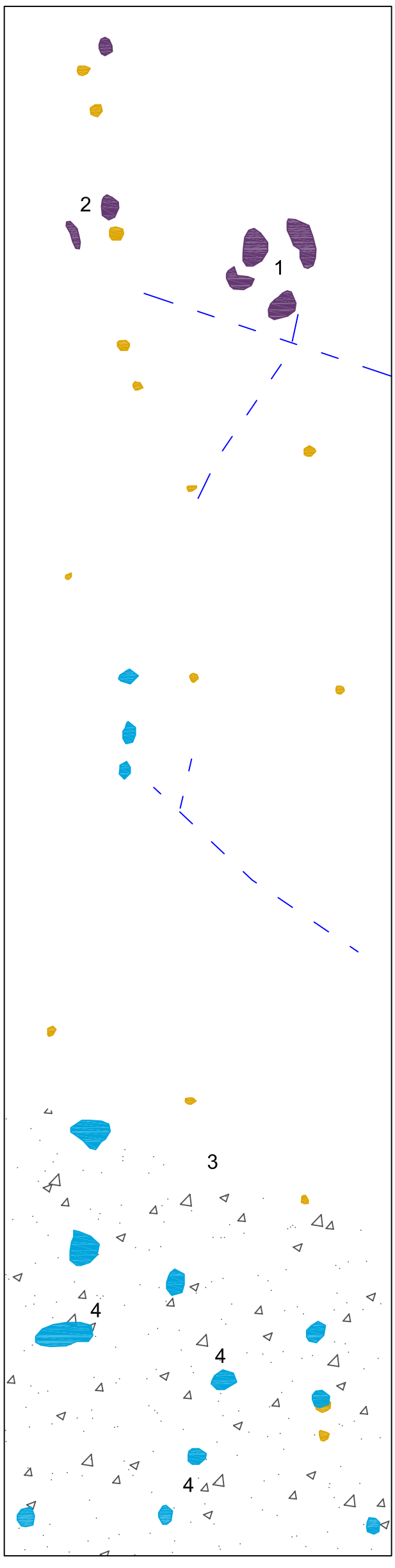
Scale @ A3:	1:500
Figure:	A1.01
Licence No:	10 - R - 54
Issue Date:	28.10.2010

ARCHIVE
AREA 1A: INTERPRETATION



?Archaeology

?Archaeology/
?Natural response

Positive trend

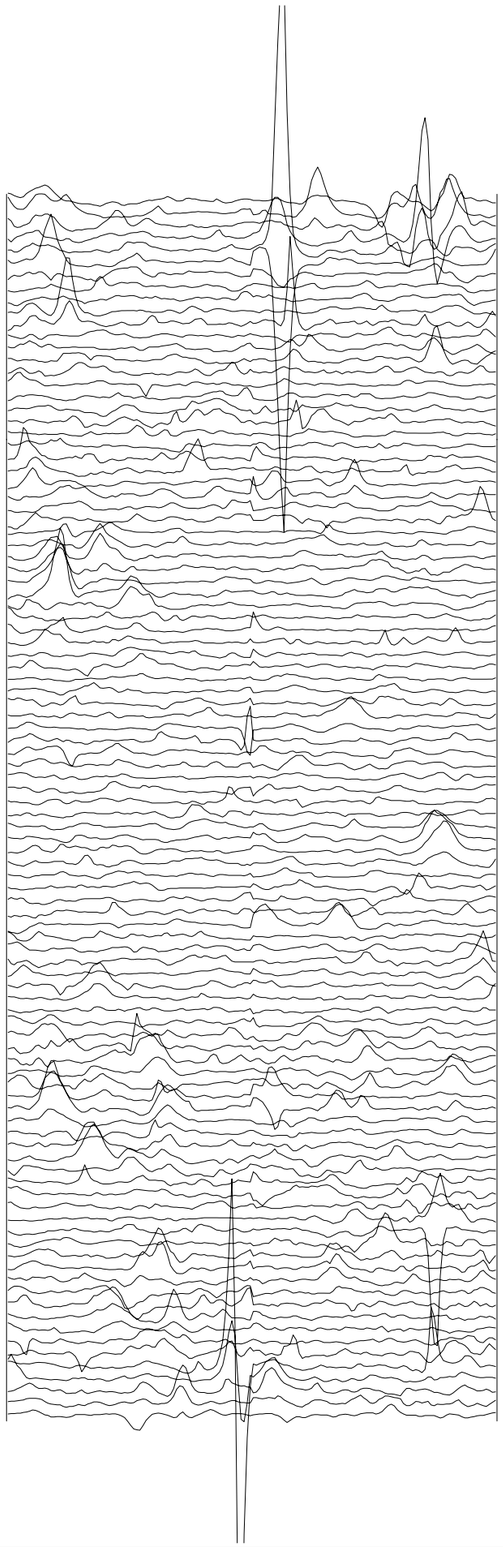
Area of increased
magnetic response

Ferrous response

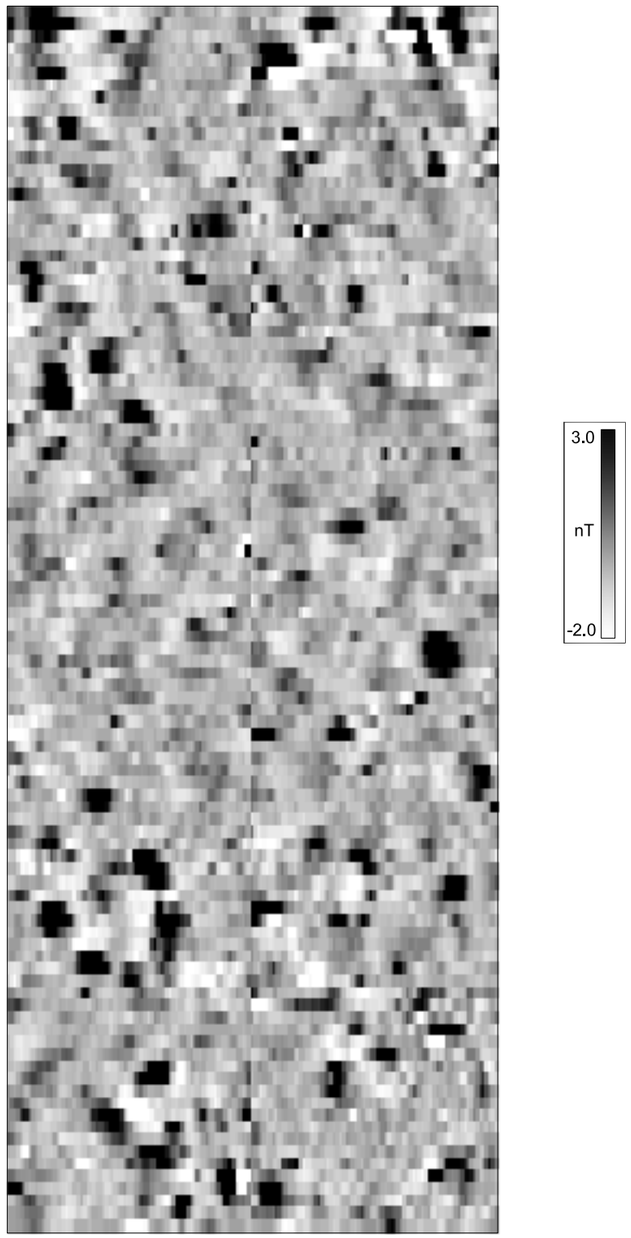
0 metres 20

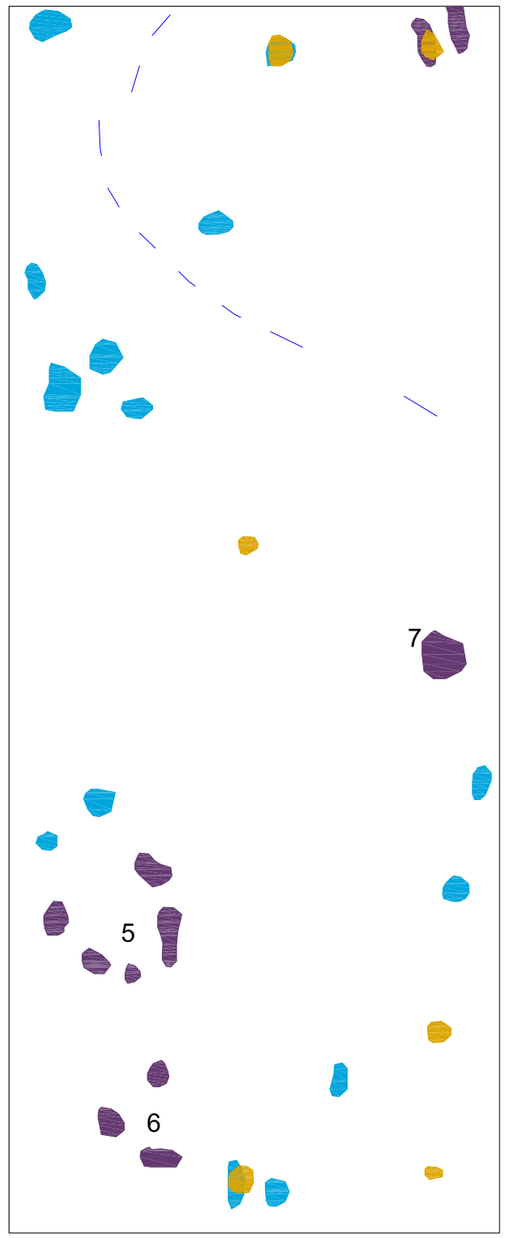
Client:	Project:	Title:		
Roughan & O'Donovan	GEOPHYSICAL SURVEY: N2 SLANE BYPASS COUNTY MEATH	ARCHIVE AREA 1A: INTERPRETATION DRAWING	J.M.Leigh surveys www.jmlsurveys.com	Scale @ A3: 1:500 Figure: A1.02 Licence No's.: 10 - R - 54 Issue Date: 28.10.2010

ARCHIVE PLOT
AREA 1B: XY-TRACE, GREYSCALE IMAGE & INTERPRETATION



15 nT





?Archaeology

?Archaeology/
?Natural response

Positive trend

Ferrous response

0 metres 20

Client: Roughan & O'Donovan

Project: GEOPHYSICAL SURVEY: N2 SLANE BYPASS COUNTY MEATH

Title: ARCHIVE PLOT AREA 1B: RAW DATA XY TRACE PLOT, GREYSCALE IMAGE & INTERPRETATION

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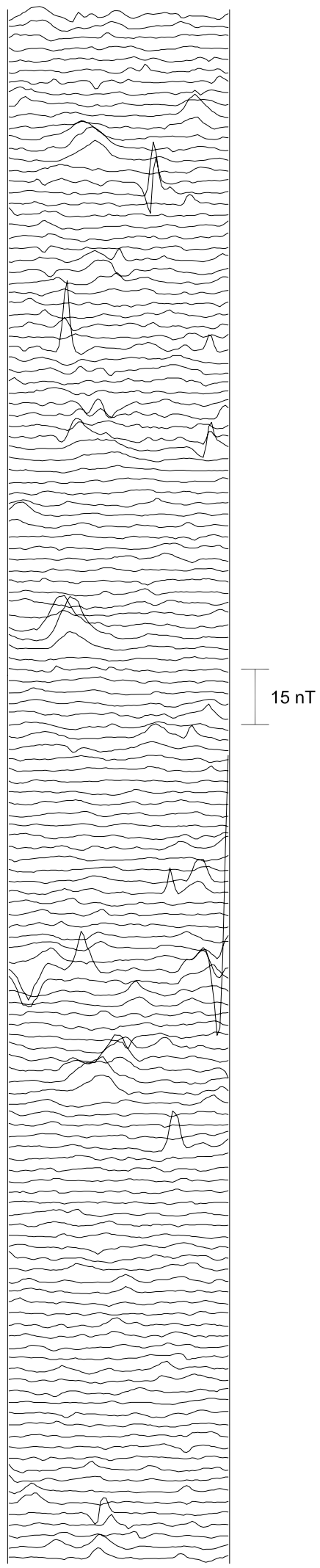
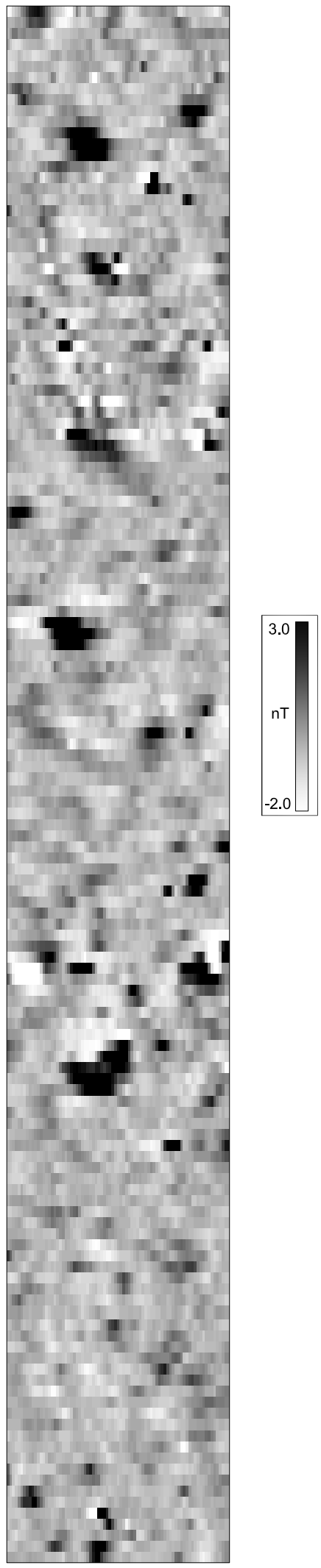
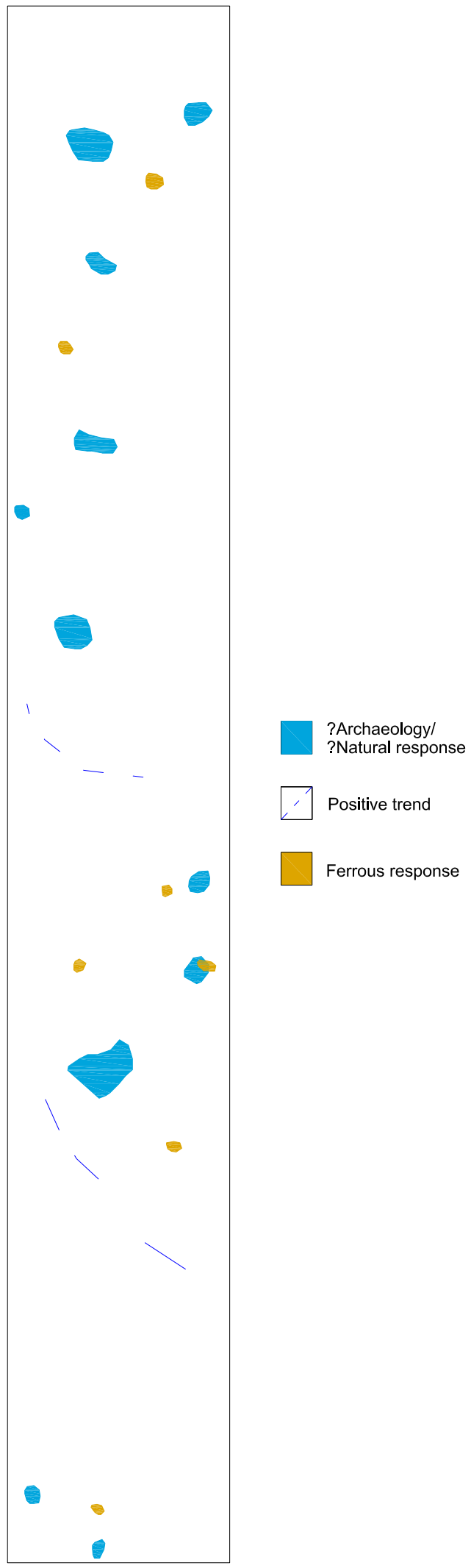
Scale @ A3:	1:500
Figure:	A1.03
Licence No.:	10 - R - 54
Issue Date:	28.10.2010

ARCHIVE
AREA 1C: XY TRACE PLOT, RAW DATA GREYSCALE IMAGE & INTERPRETATION



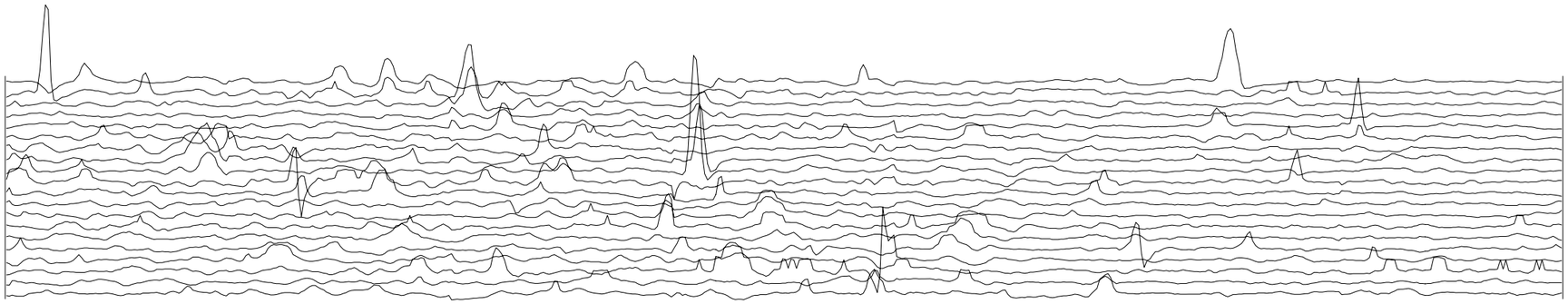




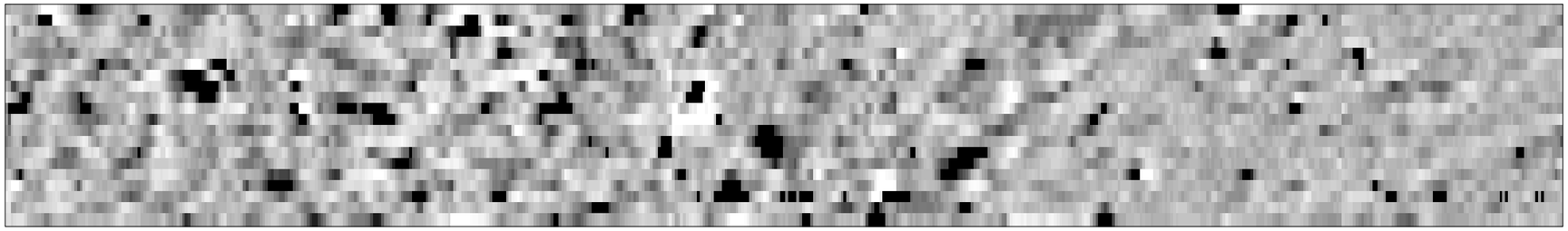
0 metres 20

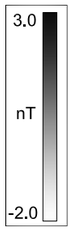
Client:	Project:	Title:		
Roughan & O'Donovan	GEOPHYSICAL SURVEY: N2 SLANE BYPASS COUNTY MEATH	ARCHIVE AREA 1C: XY-TRACE PLOT & RAW DATA GREYSCALE IMAGE	J.M.Leigh surveys www.jmlsurveys.com	Scale @ A3: 1:500 Figure: A1.04 Licence No: 10 - R - 54 Issue Date: 28.10.2010

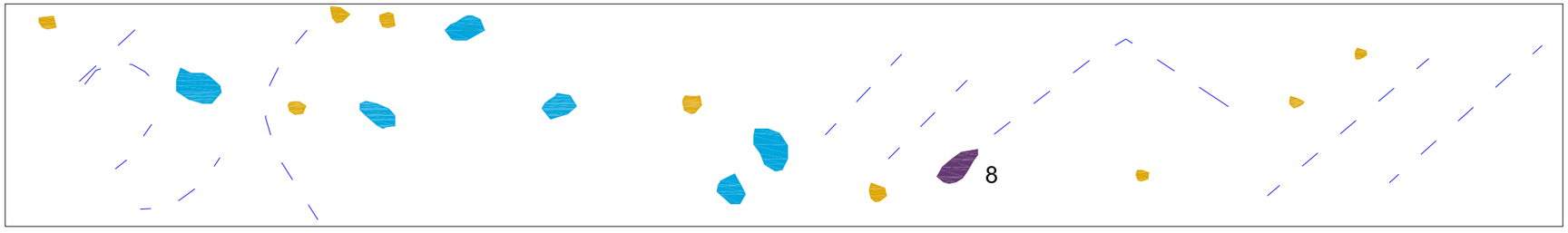
ARCHIVE PLOT
AREA 2A: XY-TRACE, GREYSCALE IMAGE & INTERPRETATION



15 nT







?Archaeology

?Archaeology/
?Natural response

Positive trend

Ferrous response

0 metres 20

Client: Roughan & O'Donovan

Project: GEOPHYSICAL SURVEY: N2 SLANE BYPASS COUNTY MEATH

Title: ARCHIVE PLOT AREA 2A: RAW DATA XY TRACE PLOT, GREYSCALE IMAGE & INTERPRETATION

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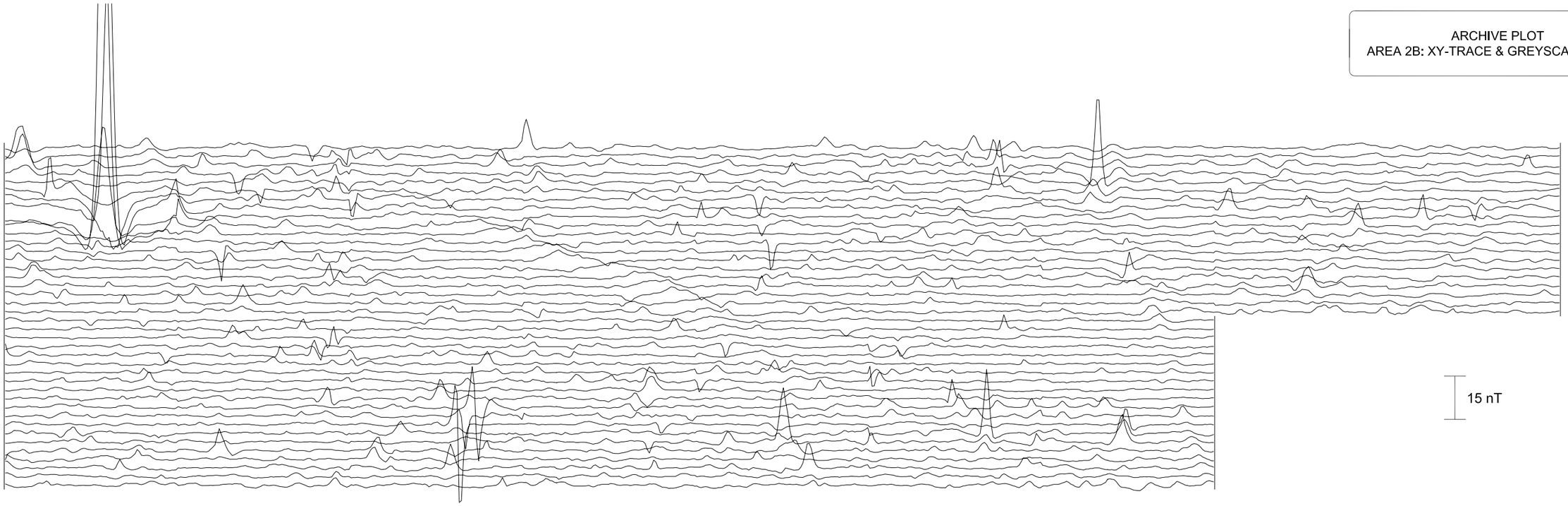
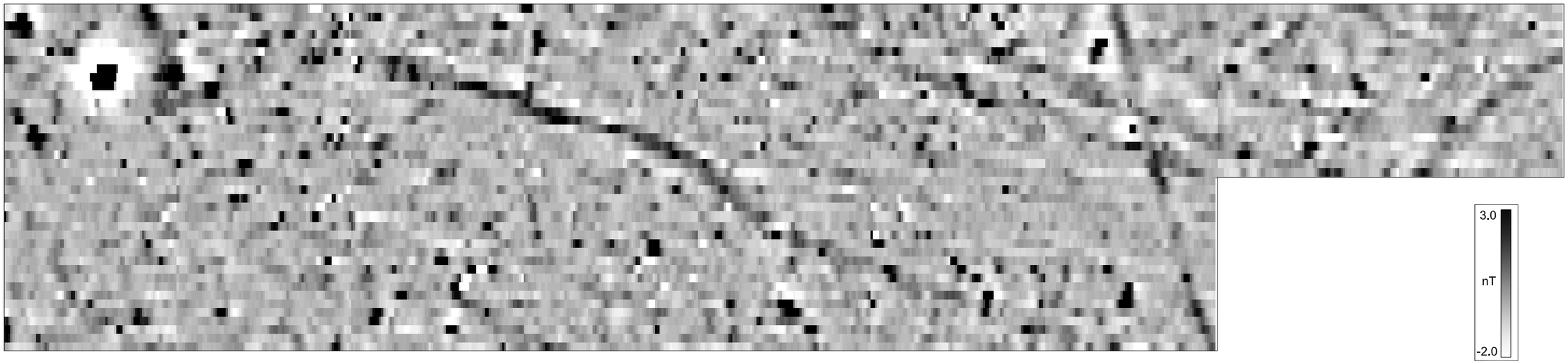
Scale @ A3:	1:500
Figure:	A1.05
Licence No.:	10 - R - 55
Issue Date:	28.10.2010

ARCHIVE PLOT
AREA 2B: XY-TRACE & GREYSCALE IMAGE





0 metres 20

Client: Roughan & O'Donovan

Project: GEOPHYSICAL SURVEY: N2 SLANE BYPASS COUNTY MEATH

Title: ARCHIVE PLOT AREA 2B: RAW DATA XY TRACE PLOT & GREYSCALE IMAGE

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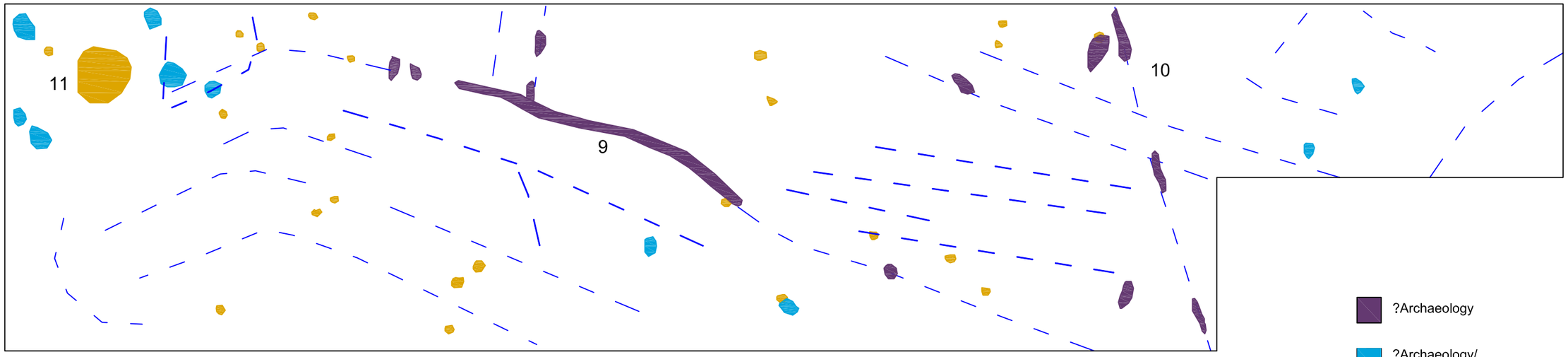
Scale @ A3:	1:500
Figure:	A1.06
Licence No.:	10 - R - 55
Issue Date:	28.10.2010

ARCHIVE PLOT
AREA 2B: INTERPRETATION



?Archaeology

?Archaeology/
?Natural response

Positive trend

Ferrous response

0 metres 20

Client: Roughan & O'Donovan

Project: GEOPHYSICAL SURVEY:
N2 SLANE BYPASS
COUNTY MEATH

Title: ARCHIVE PLOT
AREA 2B: INTERPRETATION

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Scale @ A3:	1:500
Figure:	A1.07
Licence No.:	10 - R - 55
Issue Date:	28.10.2010