

# GSB

PROSPECTION Ltd

**GEOPHYSICAL SURVEY REPORT  
2008/04**

**Survey of the Site of the  
Greater Gabbard Wind Farm Onshore Works,  
Sizewell Wents, Leiston, Suffolk.**



**Client:**



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*Specialising in Shallow and Archaeological Prospection*

**GSB Survey No. 08/04**

**Survey of the Site of the Greater Gabbard Wind Farm Onshore Works, Sizewell Wents, Leiston, Suffolk.**

<b>NGR</b>	TM 469 628
<b>Location</b>	Field bordered by Sizewell Wents Plantation and Sandy Lane on the north side of Sizewell Gap Road, Leiston.
<b>District / Parish</b>	Suffolk Coastal District / Leiston Parish
<b>Topography</b>	Northern end of the field is generally flat with moderate slope to south.
<b>Current land-use</b>	Agricultural; remains of a root crop.
<b>Soils</b>	Well drained sandy soil of the Newport 4 (551g) association ( <i>Soils of England and Wales. Sheet 4, Eastern England. Soil Survey of England and Wales. 1983</i> ).
<b>Geology</b>	Drift deposits: sand
<b>Archaeology</b>	Multi-period archaeological landscape: two suspected Bronze Age Barrows, an enclosure, field boundaries and trackways. Roman and medieval finds (SCCAS, 2007)
<b>Survey Methods</b>	Magnetic Gradiometer – detailed survey.

**Aims**

To locate and attempt to characterise any detectable archaeological remains within the survey area. The work forms part of a wider archaeological assessment being carried out by **Suffolk County Council Archaeological Service** on behalf of **Greater Gabbard Offshore Winds Ltd.**

**Summary of Results\***

Three potential archaeological anomalies have been detected: two linear responses that may represent former field boundaries and an isolated pit-like response. A number of weaker linear and curvilinear trends may also be of interest but none seem to correspond with the suspected barrows.

Two areas of increased magnetic disturbance have also been identified and although modern material may be the source of these responses an archaeological origin cannot be ruled out.

Strong ferrous anomalies due to surface features and linear trends corresponding to the deep ploughing ruts have detracted from the interpretation by potentially masking weaker archaeological trends if present.

**Project Information**

**Project Co-ordinator:** I. Wilkins BSc MSc  
**Project Assistants:** E. Collier and E. Wood.  
**Date of Fieldwork:** 28-29<sup>th</sup> January 2008  
**Date of Report:** 4<sup>th</sup> February 2008

**\*It is essential that this summary is read in conjunction with the detailed results of the survey.**

### Survey Specifications

#### Method

The survey grid was set out using tapes and tied in to the Ordnance Survey (OS) grid using a Trimble differential GPS. Three survey posts, provided by the client, form part of the survey grid and a geo-referenced digital plan is included on the Archive CD.

Technique	Traverse Separation	Reading Interval	Instrument	Survey Size
Magnetometer - Scanning (Appendix 1)	-	-	-	-
Magnetometer – Detailed (Appendix 1)	1.0m	0.25m	Bartington Grad601-2 Fluxgate Magnetometer	3-4ha
Resistance – Twin Probe (Appendix 1)	-	-	-	-
Ground Penetrating Radar (GPR) (Appendix 1)	-	-	-	-

#### Data Processing

	Magnetic	Resistance	GPR
Zero Mean Traverse	Yes	-	-
Step Correction	Yes	-	-
Interpolation	Yes	-	-
Filter	No	-	-

#### Presentation of Results

Report Figures (Printed & Archive CD): Location, data plots and interpretation diagrams on base map (Figures 1-3).

Reference Figures (Archive CD): Data plots at 1:500 – for reference and analysis (without smoothing or filtering). Areas have been subdivided for display at this scale. (See List of Figures).

Plot Formats: See Appendix 1: Technical Information, at end of report.

Photos of site: Included on Archive CD only.

#### General Considerations

Two pylons with approximately 20m square bases visually dominate the site. Both are towards the centre of the field and have resulted in very strong magnetic anomalies which effectively blanket any other responses for 10-20m around the pylon base. No data were collected immediately adjacent to or within the pylon base. The site was further complicated by a perimeter fence constructed from plastic coated metal (see archive photo's) which also produced a strong magnetic signature.

Part of the field contained a root crop at the time of the survey and the sandy soil was deeply ploughed and rutted in places. This made traversing at an even pace, whilst keeping the instrument steady, difficult. This may have introduced some noise and minor positional errors, which have been corrected for, where identified, within the data.

A metal borehole was located in the survey area, the position is shown in the interpretation diagram. This together with the other strong surface magnetic responses identified in this report will have masked any weaker archaeological anomalies, if present.

## Results of Survey

### 1. Magnetic Survey

- 1.1 A strong linear anomaly (A) is thought to indicate the line of a ditch or an old field boundary. It may relate to a second linear anomaly (B), which may also be a past field division, although together they could form part of an enclosure. However anomaly (B) is aligned with the current ploughing trends making interpretation more tentative.
- 1.2 A third potential archaeological anomaly (C) lies in the north of the site; this is a pit-like anomaly. Its isolated nature makes further interpretation difficult, although it does lie close to several weak trends.
- 1.3 A few linear and curvilinear trends are identified on the interpretation diagram. There is no clear relationship between these anomalies and the barrows listed in the Sites and Monuments Record (SCCAS, 2007). Strong ploughing trends, aligned with the current ploughing direction, are evident throughout the survey area and these further complicate the general interpretation of the site.
- 1.4 There are two areas identified with increased magnetic disturbance; both could be due to modern material although an archaeological origin should not be ruled out given the evidence of Roman and medieval pottery scatter within this field (SCCAS, 2007).
- 1.5 Two strong ferrous responses have been indicated in the interpretation diagram, which have not been matched to surface features. It is likely that they, together with the numerous isolated ferrous anomalies (visible as sharp spikes in the archived XY plots) are also modern in origin.

### 2. Conclusions

- 2.1 Strong ferrous responses due to surface features and modern ploughing trends have detracted from the interpretation of the results. However, potential archaeological anomalies include suspected field boundaries and a possible pit. Weaker linear and curvilinear trends may also be of interest but they do not directly correspond with suspected barrows.
- 2.2 Two areas of increased magnetic disturbance have also been identified and although modern material is likely to be the source of these responses an archaeological origin cannot be ruled out.

<b>List of Figures</b>
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<b>Report Figures</b>
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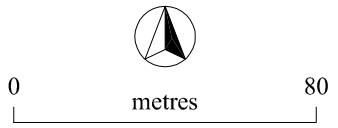
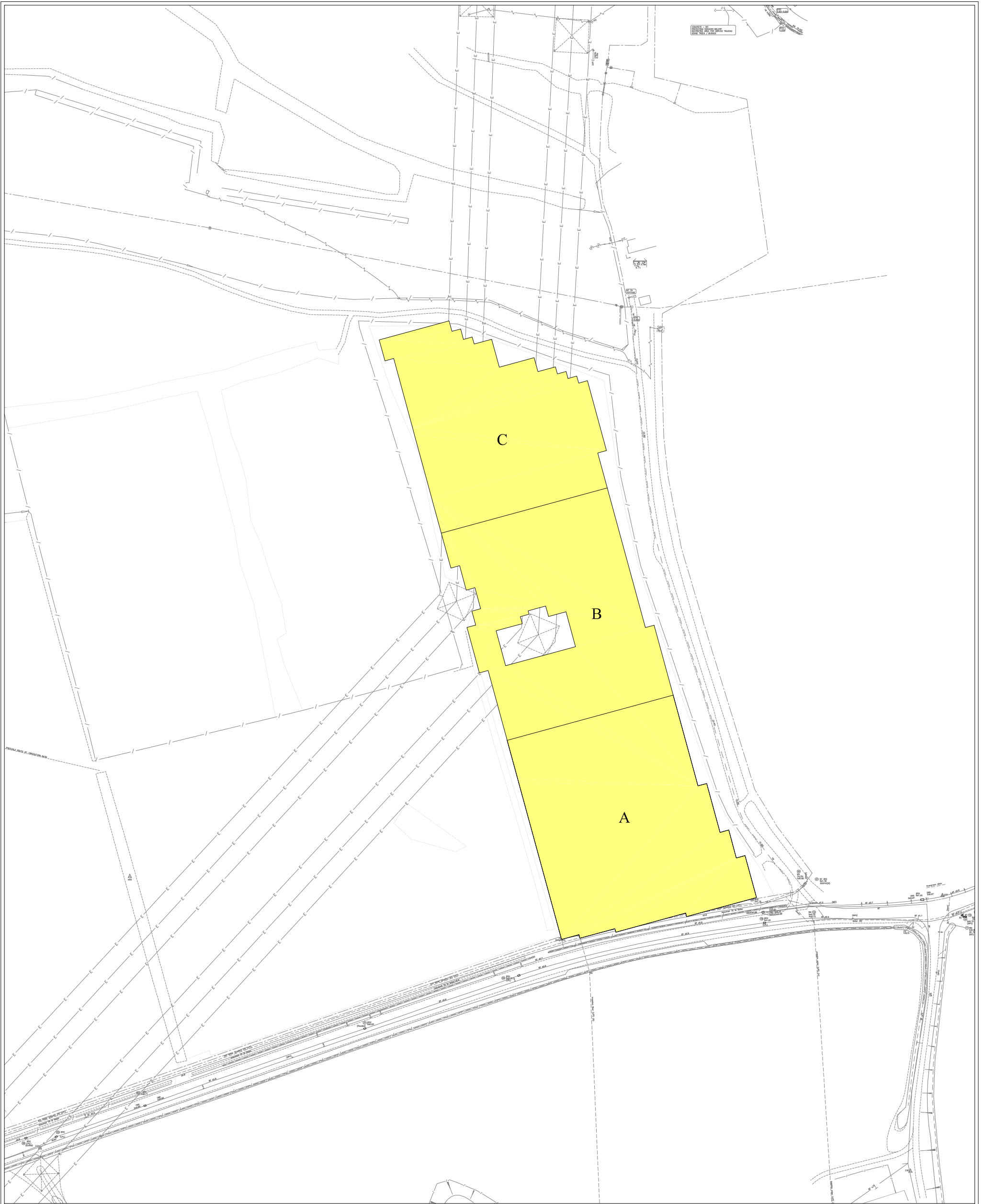
Figure 1	Location of Survey Areas	1:2000
Figure 2	Summary Greyscales	1:1250
Figure 3	Summary Interpretation	1:1250


<b>Reference Figures on CD</b>
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Figure A1	Area 1A: Greyscale Image	1: 500
Figure A2	Area 1A: Greyscale Image (no interpolation or filtering)	1: 500
Figure A3	Area 1A: XY Plot	1: 500
Figure A4	Area 1B: Greyscale Image	1: 500
Figure A5	Area 1B: Greyscale Image (no interpolation or filtering)	1: 500
Figure A6	Area 1B: XY Plot	1: 500
Figure A7	Area 1C: Greyscale Image	1: 500
Figure A8	Area 1C: Greyscale Image (no interpolation or filtering)	1: 500
Figure A9	Area 1C: XY Plot	1: 500

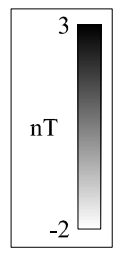
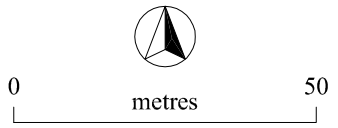
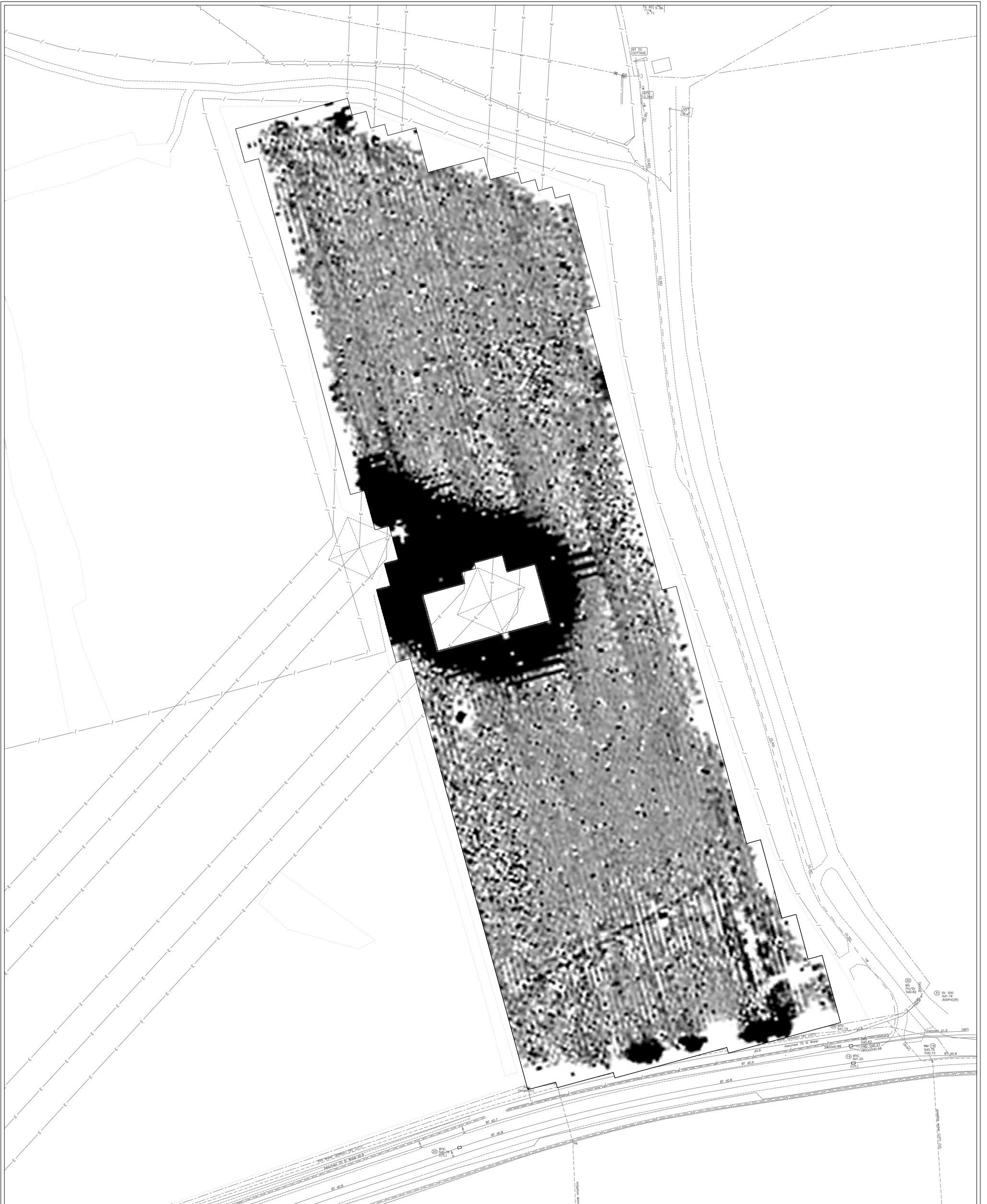
<b>References</b>
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- SCCAS, 2007. *Brief and Specifications for Non-intrusive Geophysical Survey; Land Adjacent Broom Covert and Sizewell Gap Road, Leiston, Suffolk*. Suffolk County Council Archaeological Service. August 2007.

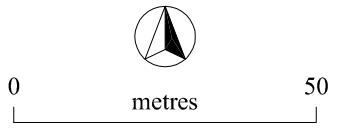
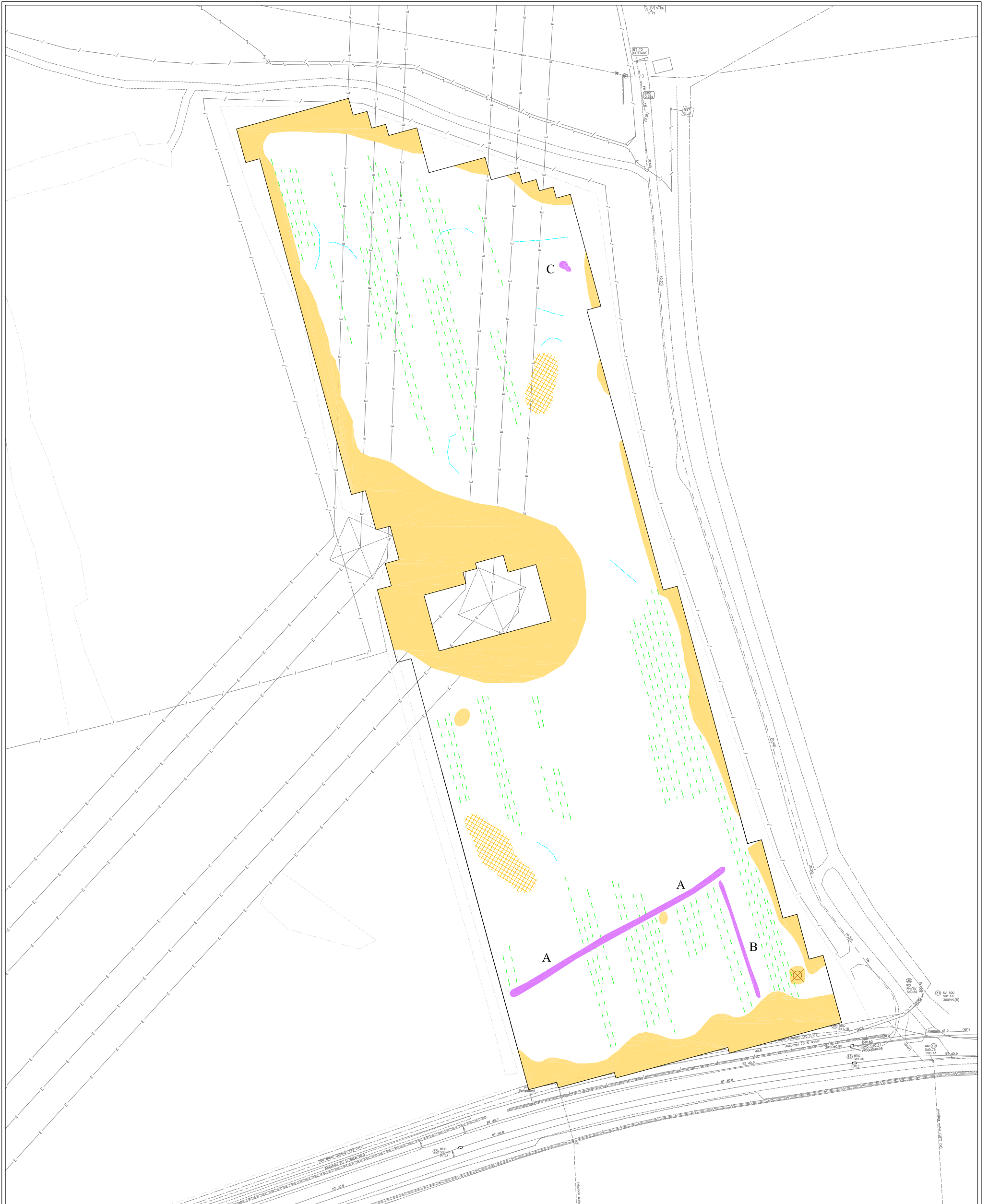








 Gradiometer Survey  
( Showing sub-divisions for archive plots)

<b>GSB PROSPECTION Ltd.</b>
2007/04 Greater Gabbard Wind Farm, Sizewell
Location Diagram
Reproduced from a digital map supplied by the client.
<b>Figure 1</b>



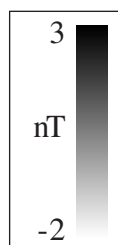
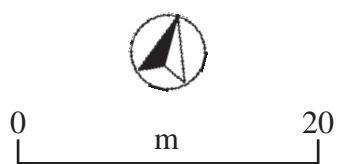
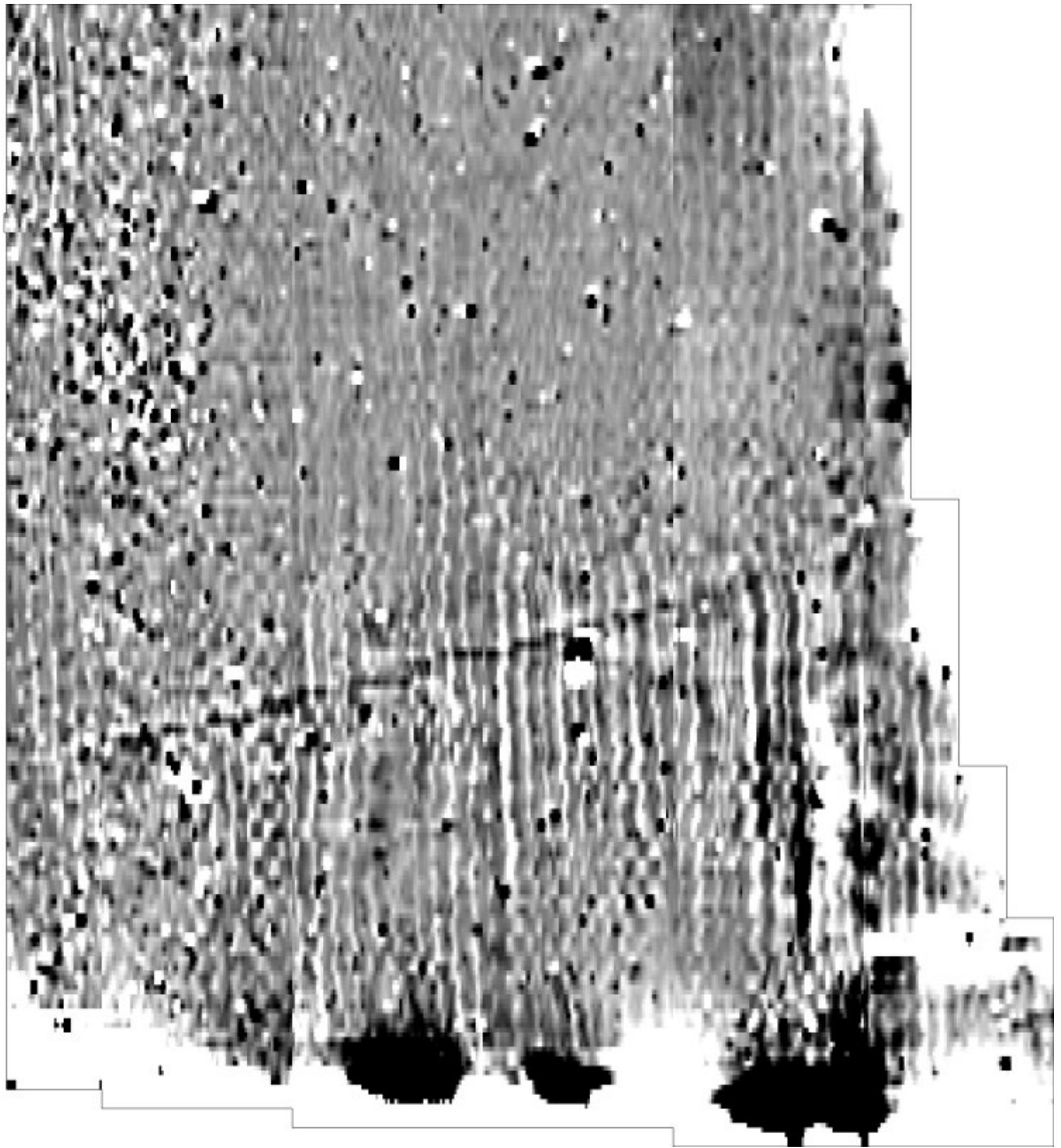
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2007/04 Greater Gabbard Wind Farm, Sizewell
Summary Greyscales
Reproduced from a digital map supplied by the client.
<b>Figure 2</b>



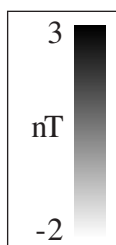
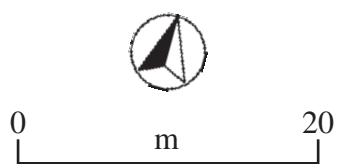
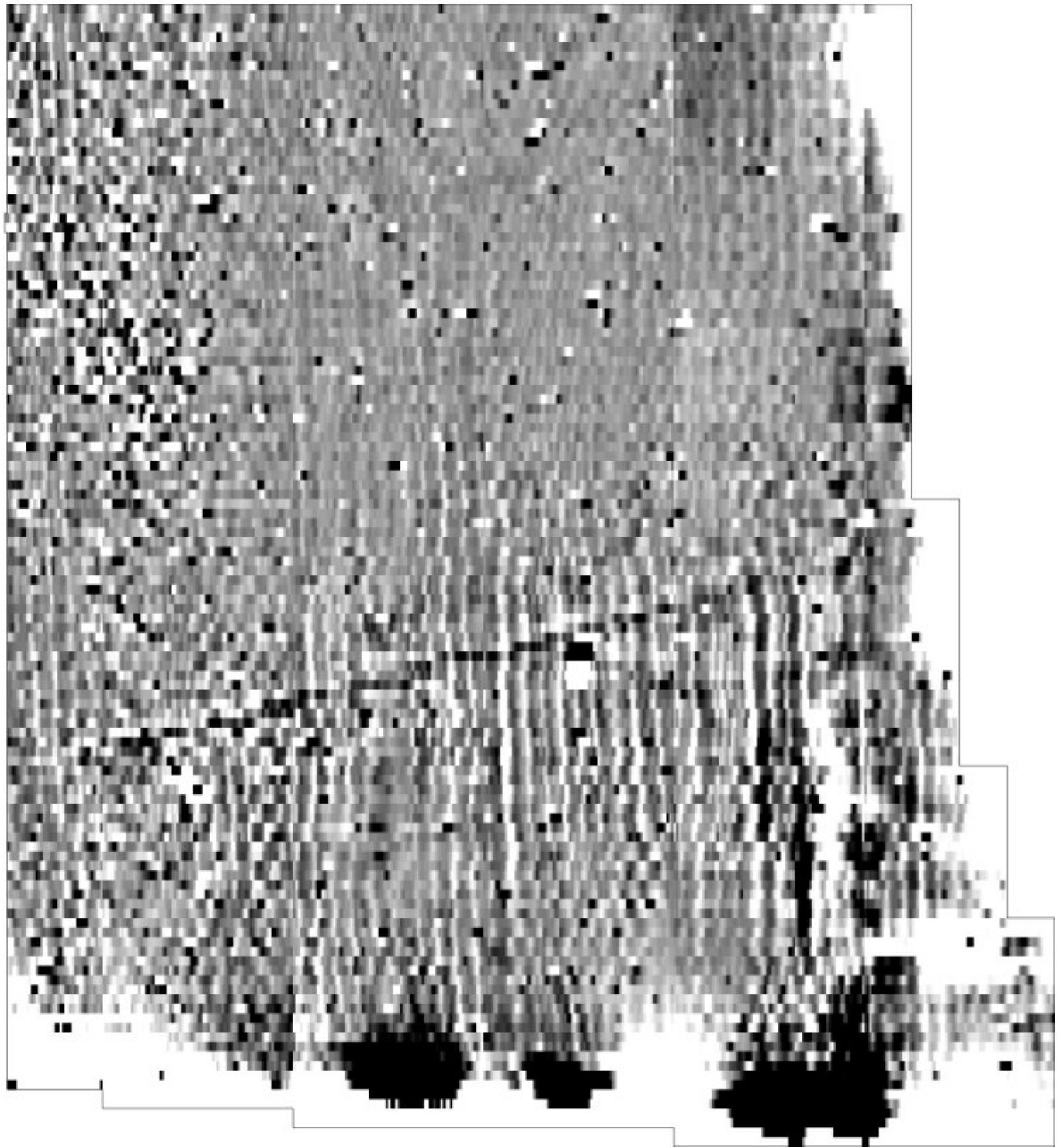
- |  |  |  |
|--|--|--|
|  ?Archaeology |  Ploughing            |  Borehole |
|  Trend        |  Magnetic Disturbance |  Ferrous  |

<b>GSB PROSPECTION Ltd.</b>
2007/04 Greater Gabbard Wind Farm, Sizewell
Summary Interpretation
Reproduced from a digital map supplied by the client.
<b>Figure 3</b>



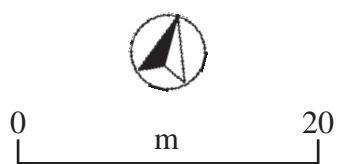
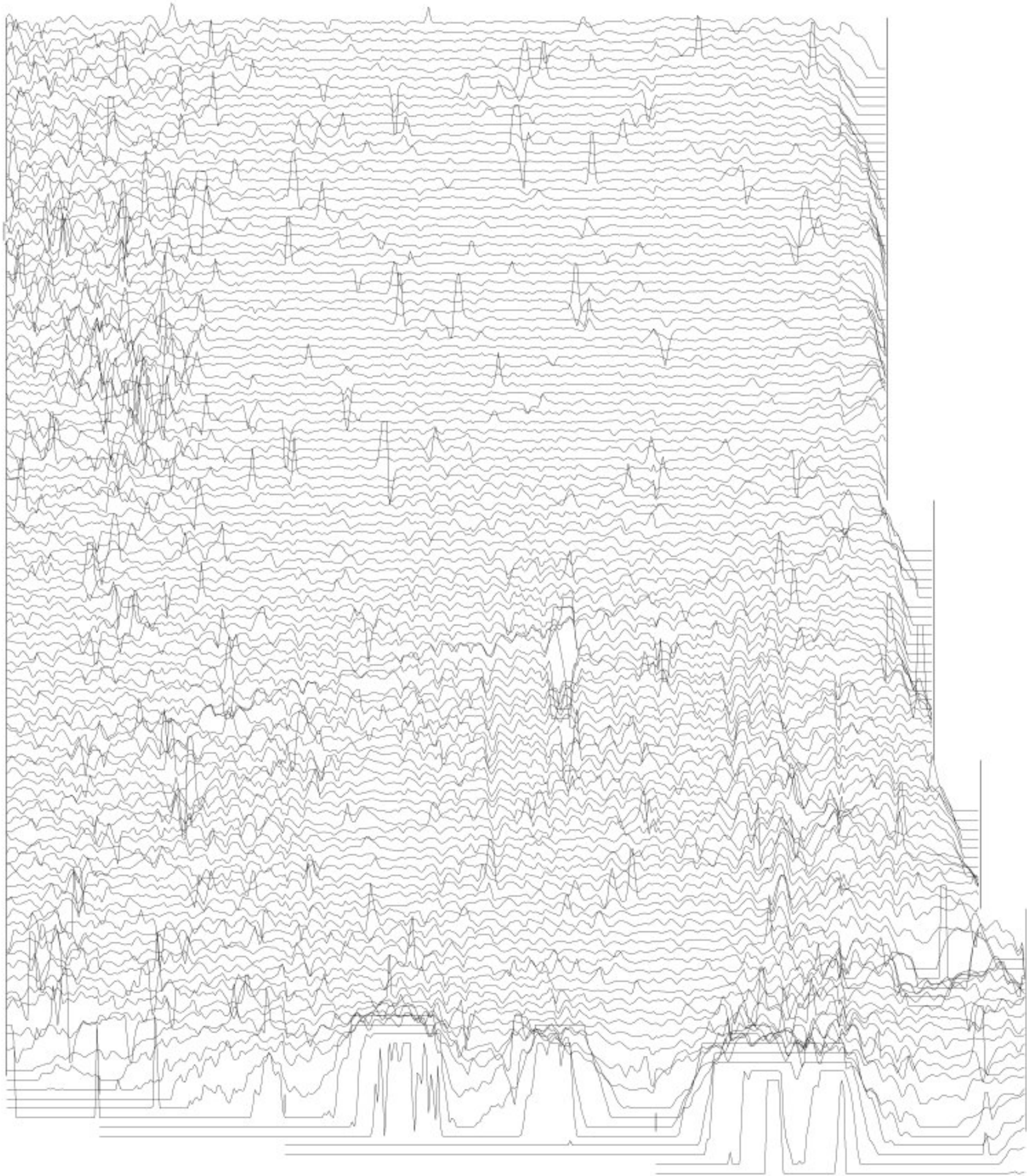


<b>GSB Prospection Ltd.</b>
2008/04 Greater Gabbard Wind Farm
Greyscale Image - Area 1A
<b>Figure A1</b>



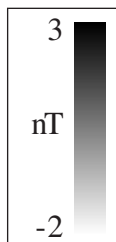
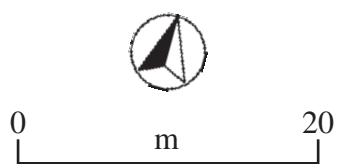
<b>GSB Prospection Ltd.</b>
2008/04 Greater Gabbard Wind Farm
Greyscale Image - Area 1A
<b>Figure A2</b>





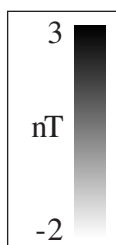
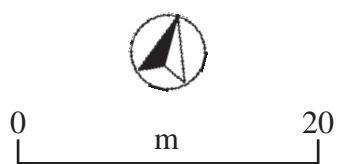
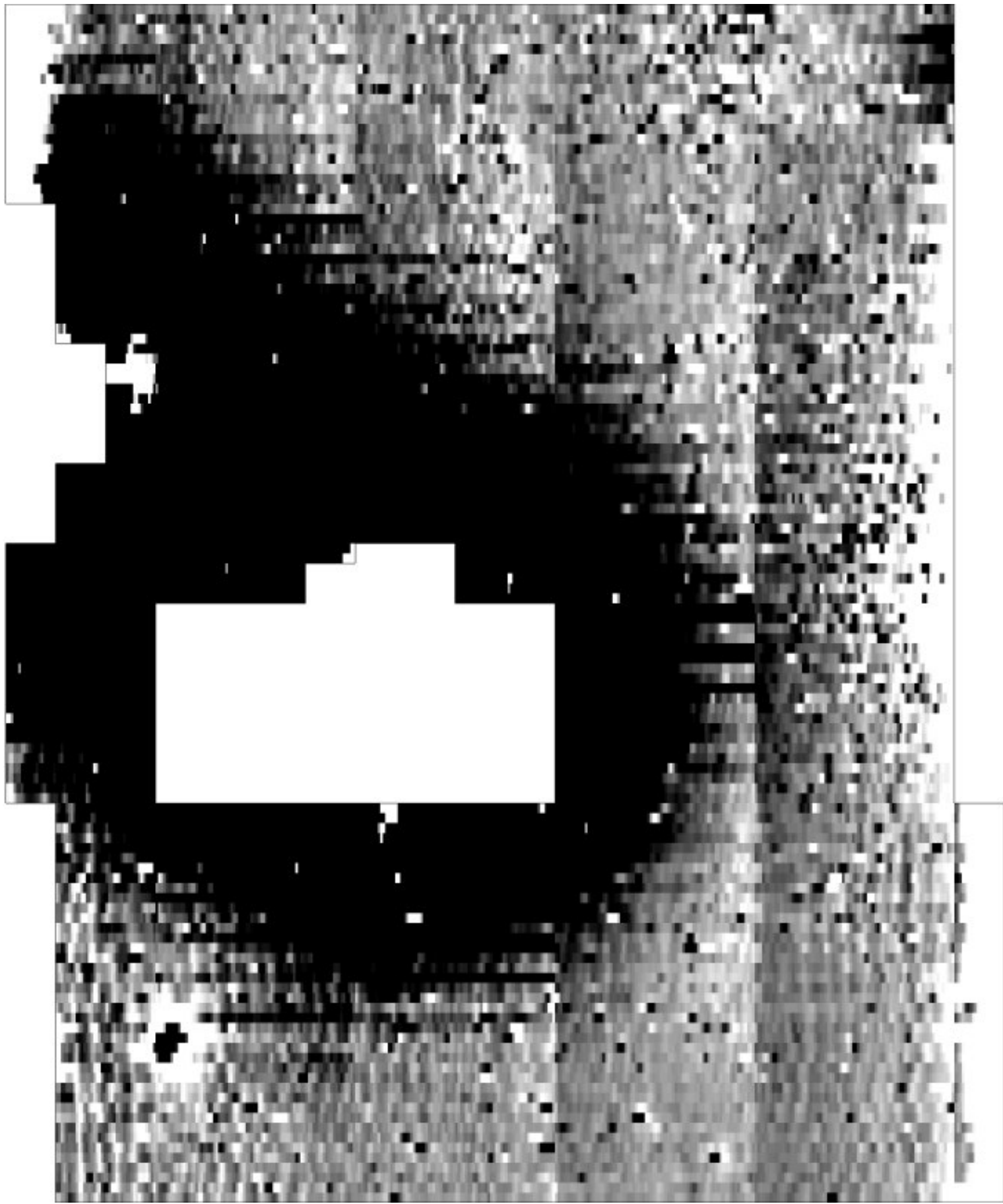
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<b>GSB Prospection Ltd.</b>
2008/04 Greater Gabbard Wind Farm
XY Plot - Area 1A
<b>Figure A3</b>

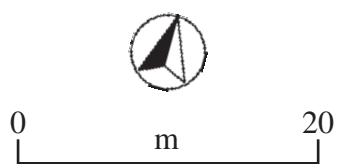
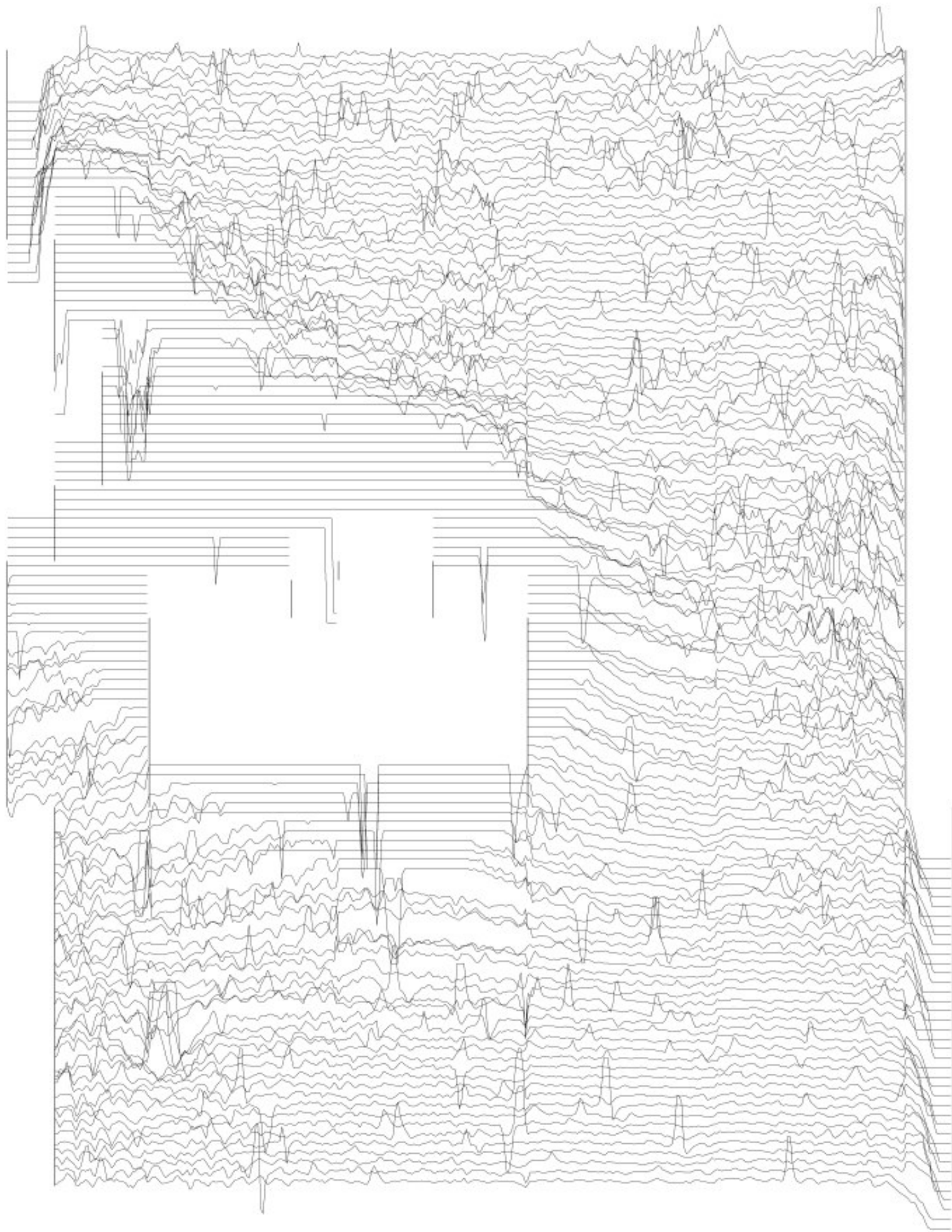


<b>GSB Prospection Ltd.</b>
2008/04 Greater Gabbard Wind Farm
Greyscale Image - Area 1B
<b>Figure A4</b>





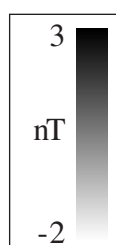
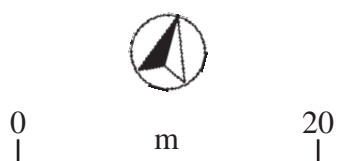
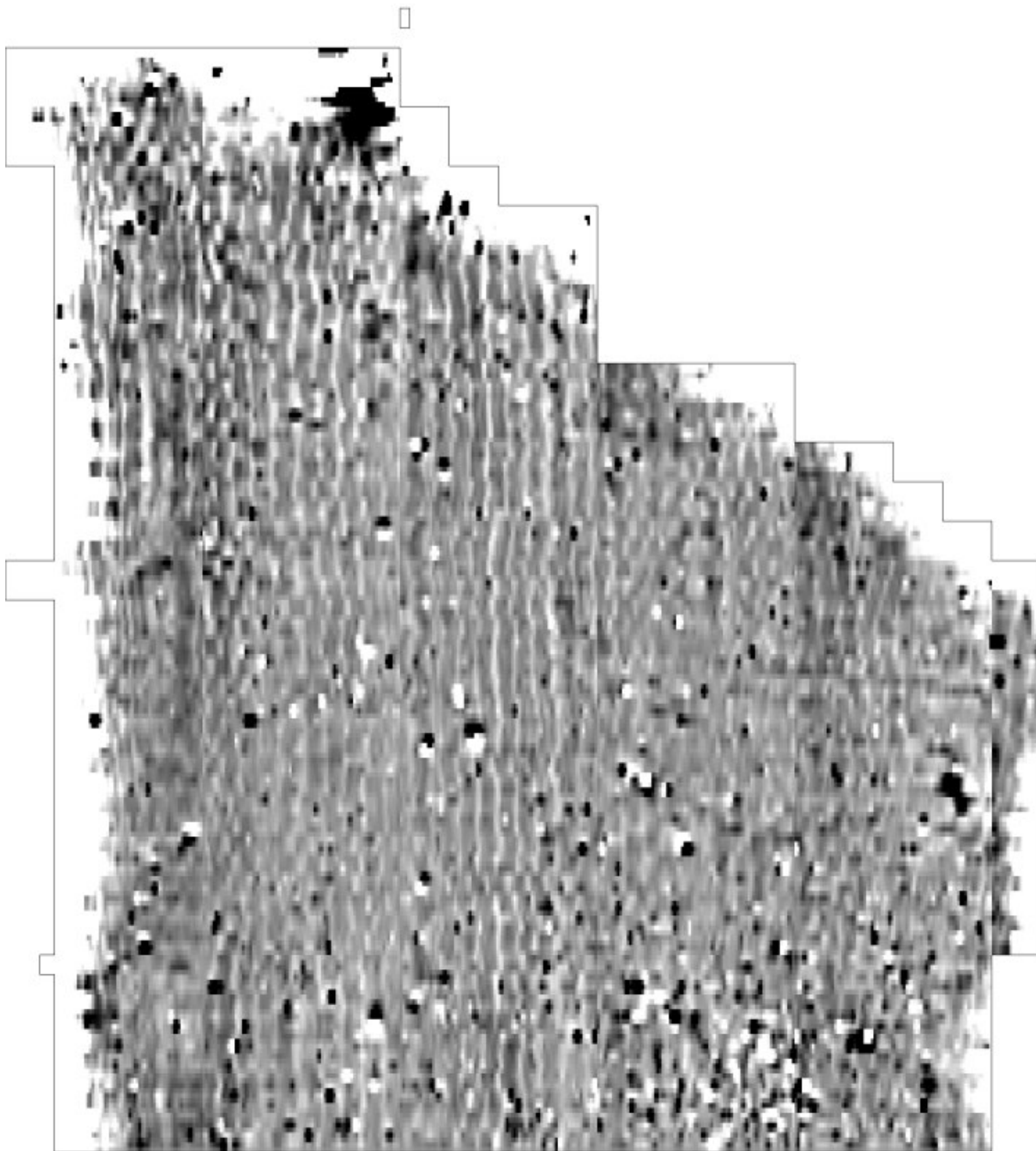
<b>GSB Prospection Ltd.</b>
2008/04 Greater Gabbard Wind Farm
Greyscale Image - Area 1B
<b>Figure A5</b>



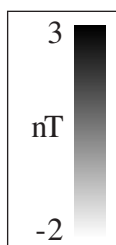
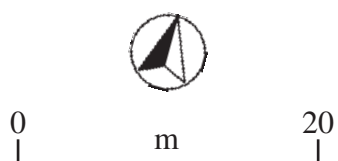
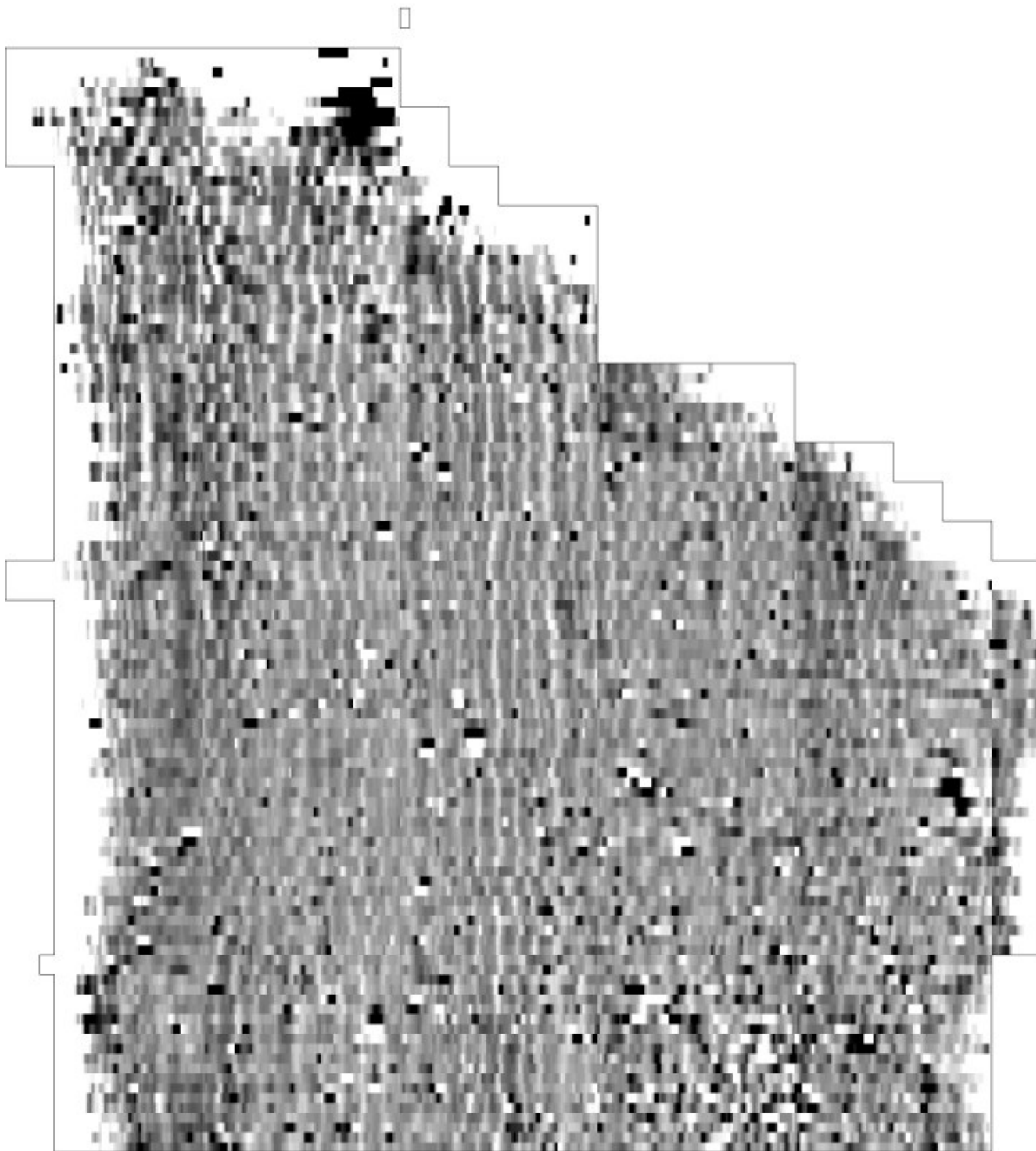
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<b>GSB Prospection Ltd.</b>
2008/04 Greater Gabbard Wind Farm
XY Plot - Area 1B
<b>Figure A6</b>



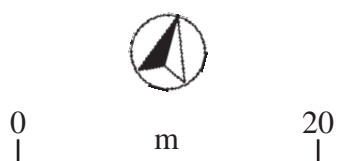
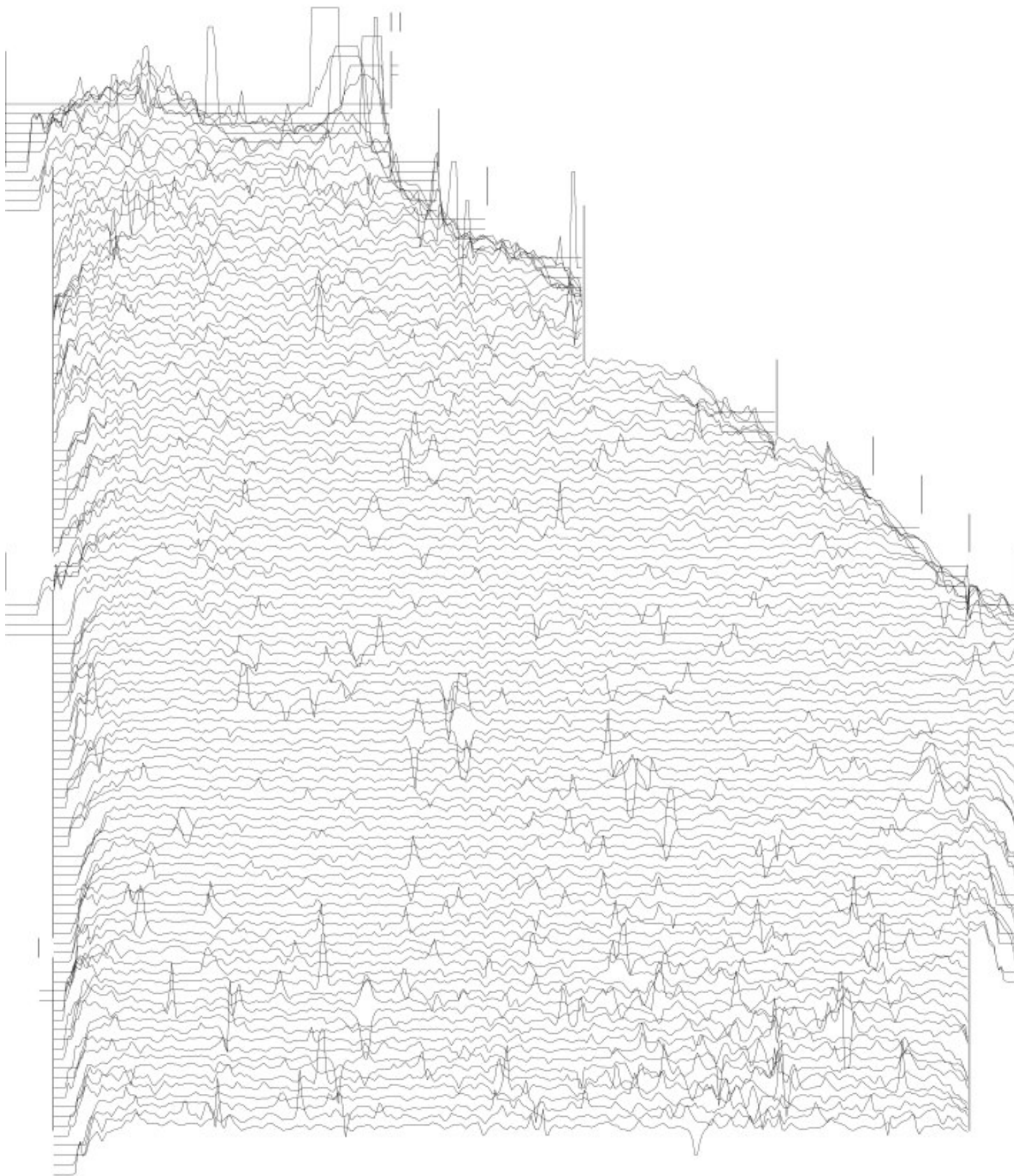


<b>GSB Prospection Ltd.</b>
2008/04 Greater Gabbard Wind Farm
Greyscale Image - Area 1C
<b>Figure A7</b>



<b>GSB Prospection Ltd.</b>
2008/04 Greater Gabbard Wind Farm
Greyscale Image - Area 1C
<b>Figure A8</b>





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2008/04 Greater Gabbard Wind Farm

XY Plot - Area 1C

**Figure A9**