

Geophysical Survey

**Ballymount
Co. Dublin**

Licence Ref. 02R029

By
John Nicholls
Margaret Gowen & Co. Ltd.

For

LRT

4th April 2002

Illustrations

List of Figures

| | | |
|----------|-------------------------|----------|
| Figure 1 | Site Location | 1: 50000 |
| Figure 2 | Survey Location Diagram | 1: 2000 |
| Figure 3 | Summary Greyscale | 1: 1000 |
| Figure 4 | Summary Interpretation | 1: 1000 |
| Figure 5 | XY Trace | 1: 500 |
| Figure 6 | Dot Density Plot | 1: 500 |
| Figure 7 | Interpretation | 1: 500 |

Executive Summary

**This information is intended only as a summary of the main section of the report*

Survey Objectives

Geophysical survey was undertaken on behalf of the LUAS Project Office in advance of a proposed routing of the LUAS scheme through part of the lands of Ballymount Castle, County Dublin. The survey objectives were to establish the location and intensity of any archaeological remains within an area of parkland situated at the western edge of excavations recently undertaken by John O'Neill of Margaret Gowen and Co. Ltd.

Survey Location, Soils and Geology

The site was located at Ballymount Castle NGR O090304 adjacent to the M50 Western Parkway road in the townland of Ballymount Great, Co. Dublin. Soils of the locality include grey brown podzolics and gleys overlying till of Irish Sea origin with limestone and shale.

Archaeological Background

The area of investigation extends throughout the site known as Ballymount Castle RMP 021:015 a suspected Iron Age, Mediaeval and Post Mediaeval occupation site. Margaret Gowen and Co. Ltd in advance of the routing of the rail line for the LUAS has recently carried out a fourth series of excavations. The first and second phase of excavations undertaken by Geraldine Stout in 1982 and Malachy Conway of Margaret Gowen & Co Ltd in 1997 revealed a series of mediaeval and post mediaeval features on site. A third excavation phase undertaken by John O'Neill of Margaret Gowen and Co. Ltd in 2000 focused on a number of deposits identified in 1997 but not excavated. These included a seventeenth century clay sub floor overlying the remains of a possible souterrain. Recent excavations undertaken in February 2002 during construction works required the diversion of a stream through part of an enclosure.

Summary of Results

The results of detailed gradiometer survey indicate the location and extent of a possible enclosure complex at the perimeter of monument RMP 021:015. A multitude of associated discrete archaeological pit, ditch and possible hearth type features are also apparent throughout the data and overall the responses indicate a continuation of settlement type response beyond the current edges of survey. Evidence of ridge and furrow cultivation/former ploughing is also visible throughout the results as are several broad concentrations of modern ferrous debris. The possibility that the latter may have obscured weaker responses of possible archaeological interest should not be dismissed.

1 Areas of Investigation

- 1.1 Geophysical survey was undertaken on behalf of the LUAS Project Office in advance of a proposed routing of the LUAS scheme through part of the lands of Ballymount Castle, County Dublin. The survey objectives were to establish the location and intensity of any archaeological remains within an area of parkland situated at the western edge of excavations recently undertaken by John O'Neill of Margaret Gowen and Co. Ltd.
- 1.2 The site was located at Ballymount Castle NGR O090304 adjacent to the M50 Western Parkway road in the townland of Ballymount Great, Co. Dublin. Soils of the locality include grey brown podzolics and gleys overlying till of Irish Sea origin with limestone and shale.
- 1.3 The area of investigation extends throughout the site known as Ballymount Castle RMP 021:015 a suspected Iron Age, Mediaeval and Post Mediaeval occupation site. Margaret Gowen and Co. Ltd in advance of the routing of the rail line for the LUAS has recently carried out a fourth series of excavations. The first and second phase of excavations undertaken by Geraldine Stout in 1982 and Malachy Conway of Margaret Gowen & Co Ltd in 1997 revealed a series of mediaeval and post mediaeval features on site. A third excavation phase undertaken by John O'Neill of Margaret Gowen and Co. Ltd in 2000 focused on a number of deposits identified in 1997 but not excavated. These included a seventeenth century clay sub floor overlying the remains of a possible souterrain. Recent excavations undertaken in February 2002 during construction works required the diversion of a stream through part of an enclosure.
- 1.4 Figure 1 shows the site location at a scale of 1:50,000. Figure 2 (1:2000) shows the area of current geophysical investigation.
- 1.5 The detailed survey areas were set out and tied in to local features in the landscape using tapes and a total station. Grid corners were left in situ to facilitate the relocation of each survey grid.

2 Data Display and Interpretation

- 2.1 Figures 3 and 4 display the results of the survey as a summary greyscale and digitised interpretation at a scale of 1:1000.
- 2.2 A series of XY traces, dot density plots and digitised interpretations included as Figures 5–7, display the results of the detailed gradiometer survey at a scale of 1:500.
- 2.3 These display formats are discussed in the attached document *Geophysical Services in Archaeological Evaluation*.

3 Ground Conditions and Further Information

- 3.1 Ground conditions were generally suitable throughout the area of investigation, which comprised one level area of open parkland.
- 3.2 Isolated ferrous-type responses were apparent throughout the gradiometer data. These anomalies are usually caused by the presence of modern ferrous debris within the topsoil and are not referred to in the text unless considered relevant.
- 3.3 Instrumentation specifications and survey methodology are discussed in the attached document *Geophysical Services in Archaeological Evaluation*.

4 Results of Detailed Survey

- 4.1 A linear ditch type response, A ($> +2nT$), approximately 40m in length and oriented north-east to south-west was recorded in the northern half of survey. Numerous associated broad pit type responses and short ditch lengths ($> + 2nT$) were also recorded adjacent to this feature, notably anomalies B and C. The extent of magnetic disturbance at the edge of B indicates some interference to instrumentation from a temporary metal fence at this edge of survey. A current footpath is also situated at this edge of survey.
- 4.2 A high level of noise was apparent throughout much of the southern half of survey. This was in part associated with a field boundary at the southern site edge and a scatter of modern debris at the base of the existing monument RMP 021:015.
- 4.3 Remains of a probable enclosure ditch (D) were identified at the perimeter of RMP 021:015. Numerous associated ditch and pit type responses (E) were also recorded in this location. The data indicates the continuation of these features beyond the current edges of survey.
- 4.4 One area of increased magnetic response, F, was recorded. Whilst this response lacks any clear archaeological type pattern it is deemed to be of interest.
- 4.5 The extent of disturbance at the edges of monument RMP 021:015, notably response G may have masked the location of a number of weaker responses of possible archaeological potential.
- 4.6 Further concentrations of ferrous type response occur throughout the data. The possibility that a number of these may be of interest should not be dismissed.
- 4.7 A series of linear responses, H ($\pm 1nT$), aligned north-west to south-east equate with remains of former ridge and furrow cultivation were identified. The disturbance associated with these responses has in part complicated interpretation of the data.
- 4.8 A broad curvilinear response at the northern survey edge corresponded with the location of an existing footpath.

5 Conclusion

- 5.1 A concentration of settlement type responses was identified. These comprise a complex of magnetically strong broad linear and curvilinear ditch type features, which indicate remains of several possible ditched enclosures, notably A and D. Adjacent to these numerous discrete pit and possible hearth type anomalies were also recorded. Further areas of archaeological potential are also indicated in the results. Overall, the results indicate a continuation of settlement activity beyond the current edges of survey.
- 5.2 A number of linear trends have also been recorded. These are at the limits of instrument detection and therefore interpretation remains uncertain. However, the possibility that some of these may be significant should not be dismissed.
- 5.3 Interpretation has in part been complicated by remains of former ridge and furrow cultivation and several concentrations of modern ferrous type response.

John Nicholls

April 4, 2002

Appendix 1

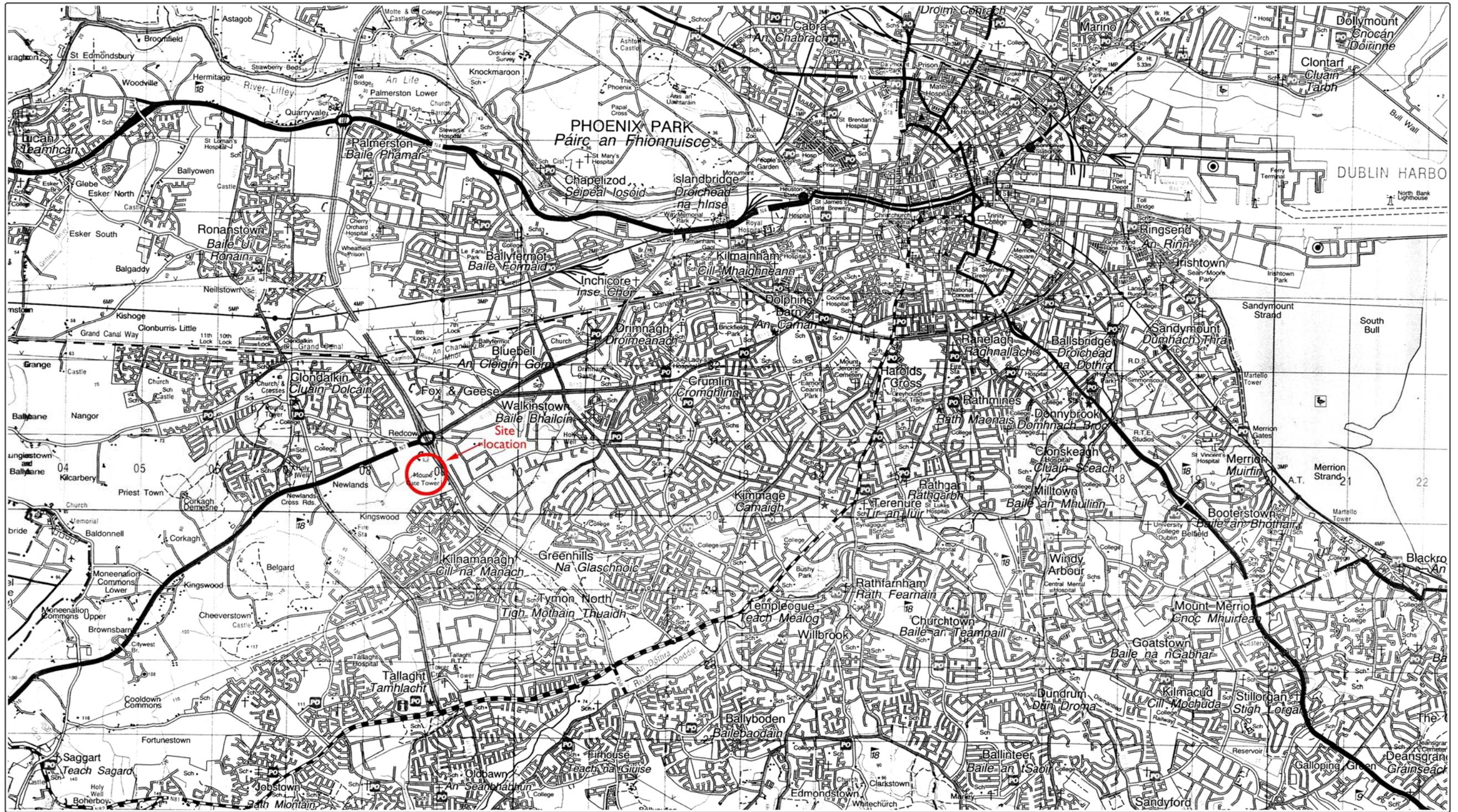
Bibliography

National Soil Survey of Ireland (1980) *General soil map second edition (1:575,000)*. An Foras Taluntais.

Conway, M (1998), *Archaeological Assessment and Excavations at Ballymount Great, Co. Dublin*. Margaret Gowen & Co. Ltd (unpublished).

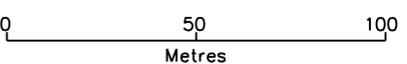
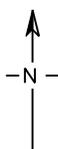
Ó Néill, J, (2001) *Preliminary Excavation Report, Ballymount Great, Dublin 22*. Margaret Gowen & Co. Ltd (unpublished).

Stout, G. 1982 *Preliminary Report of the Excavations at Ballymount Great, County Dublin, 1982*. Unpublished, OPW File no. F94/1645/1



Margaret Gowen & Co Ltd
Archaeological Consultants & Project Managers

Job Ballymount, Co. Dublin
 Ref. 02038
 Date 05.04.02
 Client LRT
 Scale 1:50,000
 Fig.1 Site location



Margaret Gowen & Co Ltd
Archaeological Consultants & Project Managers

2 Killiney View,
Albert Road Lower,
Glenageary,
Co. Dublin.

Tel: 01-2300433
087-256 4174
Fax: 01-2300865
Web site: www.mglarc.com
Email: archaeology@mglarc.com

CLIENT:
LRT

PROJECT:
BALLYMOUNT RIVER CULVERT

TITLE:
SURVEY LOCATION

DRAWING NUMBER:
FIGURE 2

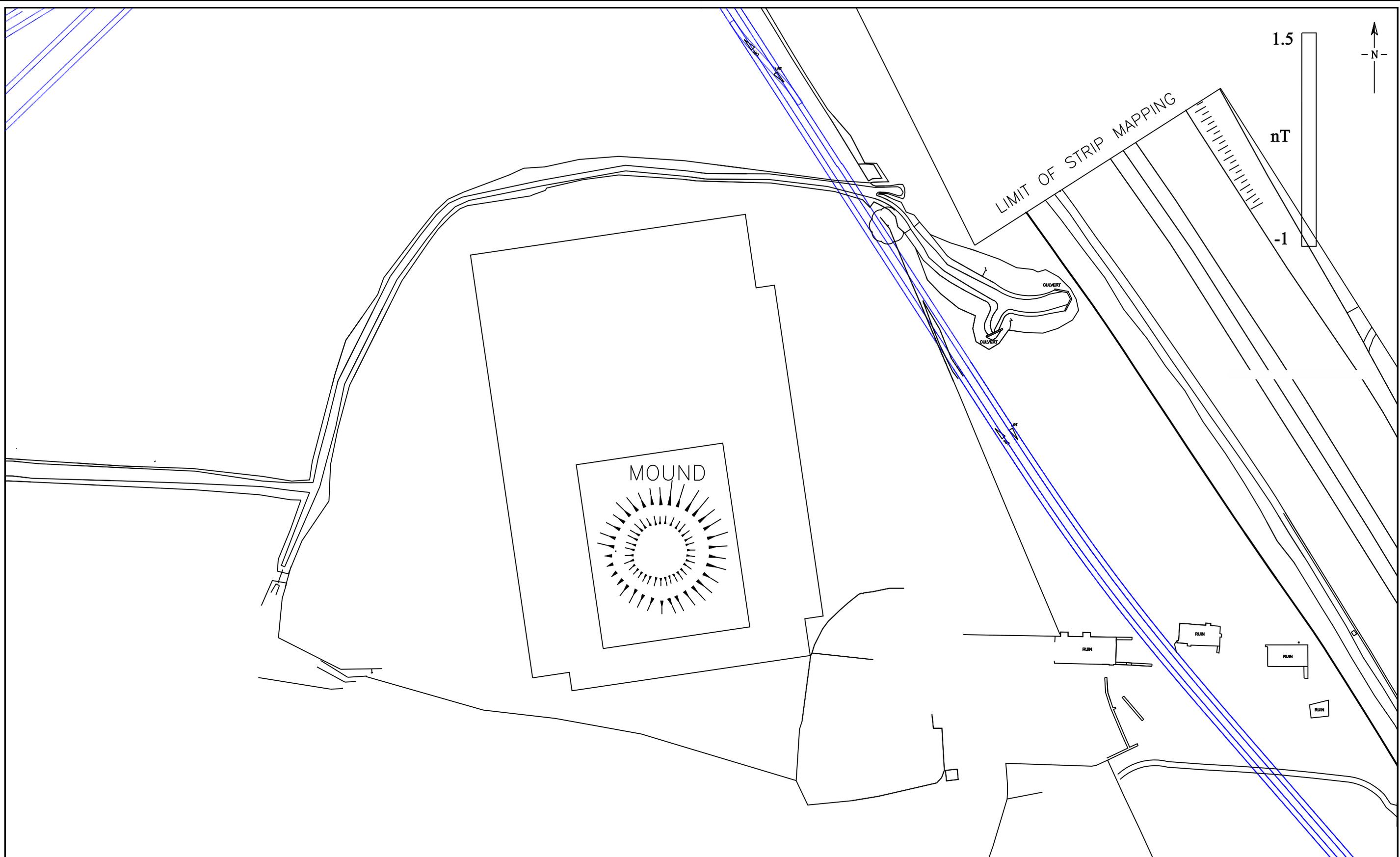
DATE:
25/03/2002

DRAWN BY:
N.RYAN

SCALE:
1:2000

CHECKED BY:
J.NICHOLLS

Notes:
Basemapping supplied by LRT



0 25 50
Metres



Margaret Gowen & Co Ltd
Archaeological Consultants & Project Managers

2 Killiney View,
Albert Road Lower,
Glenageary,
Co. Dublin.
Tel: 01-2300433
087-256 4174
Fax: 01-2300865
Web site: www.mglarc.com
Email: archaeology@mglarc.com

CLIENT:
LRT

PROJECT:
BALLYMOUNT RIVER CULVERT

TITLE:
SUMMARY GREYSCALE

DRAWING NUMBER:
FIGURE 3

JOB NUMBER:
02038

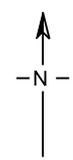
DATE:
02/04/2002

DRAWN BY:
N.RYAN

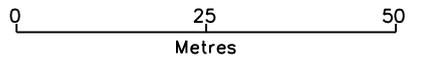
SCALE:
1:1000

CHECKED BY:
J.NICHOLLS

Notes:
Basemapping supplied by LRT



- ? Archaeology
- Footpath
- Trend
- Ferrous
- Area of increased magnetic response
- Ploughing/Ridge & Furrow



Margaret Gowen & Co Ltd
Archaeological Consultants & Project Managers

2 Killiney View,
Albert Road Lower,
Glenageary,
Co. Dublin.
Tel: 01-2300433
087-256 4174
Fax: 01-2300865
Web site: www.mglarc.com
Email: archaeology@mglarc.com

CLIENT:
LRT

PROJECT:
BALLYMOUNT RIVER CULVERT

TITLE:
SUMMARY INTERPRETATION

DRAWING NUMBER:
FIGURE 4

JOB NUMBER:
02038

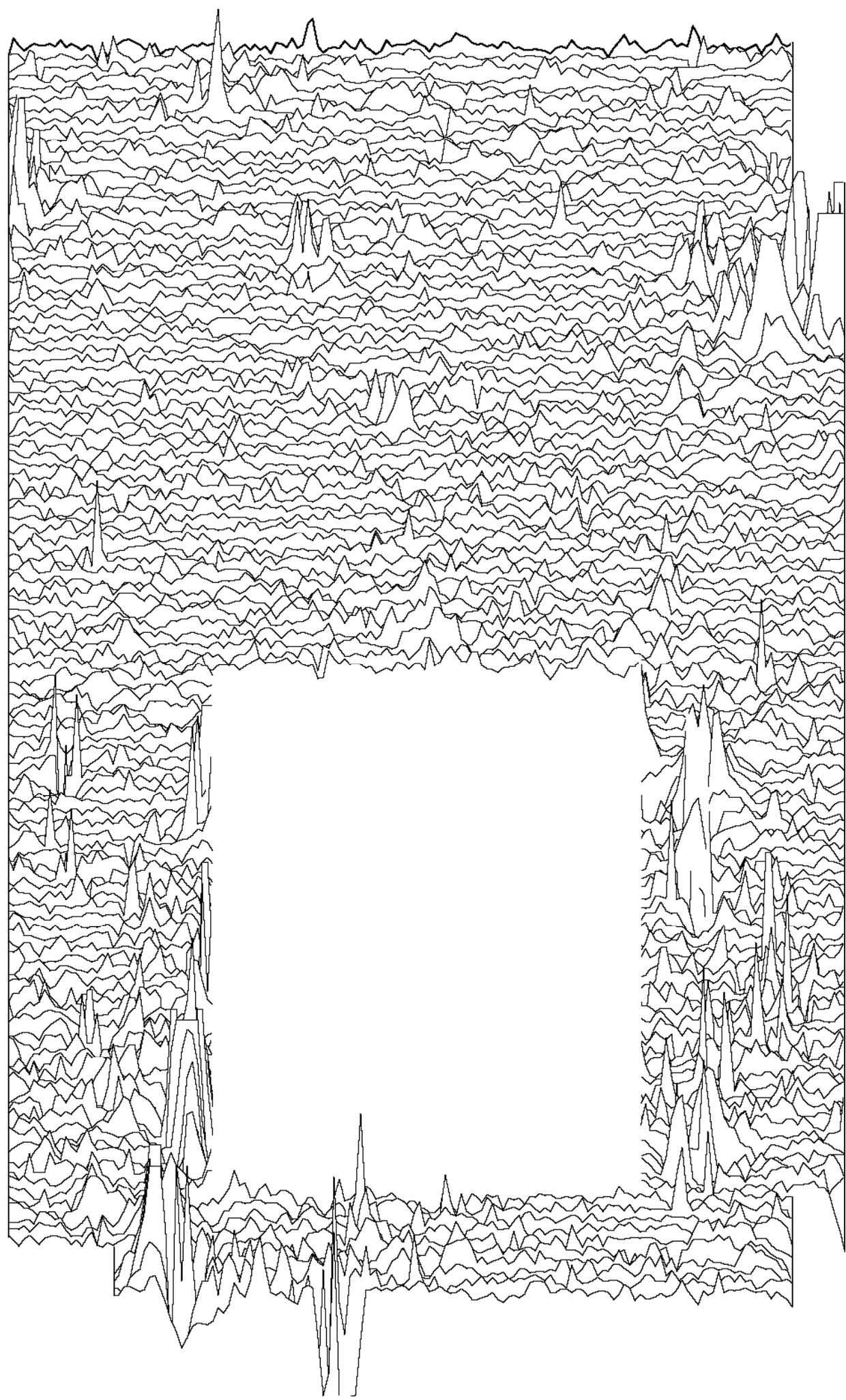
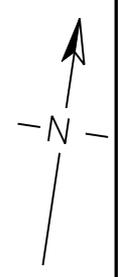
DATE:
02/04/2002

DRAWN BY:
N.RYAN

SCALE:
1:1000

CHECKED BY:
J.NICHOLLS

Notes:
Basemapping supplied by LRT



15 nT

0 25
Metres



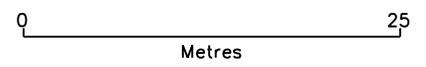
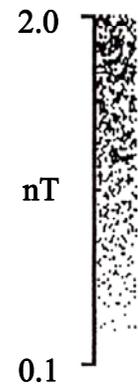
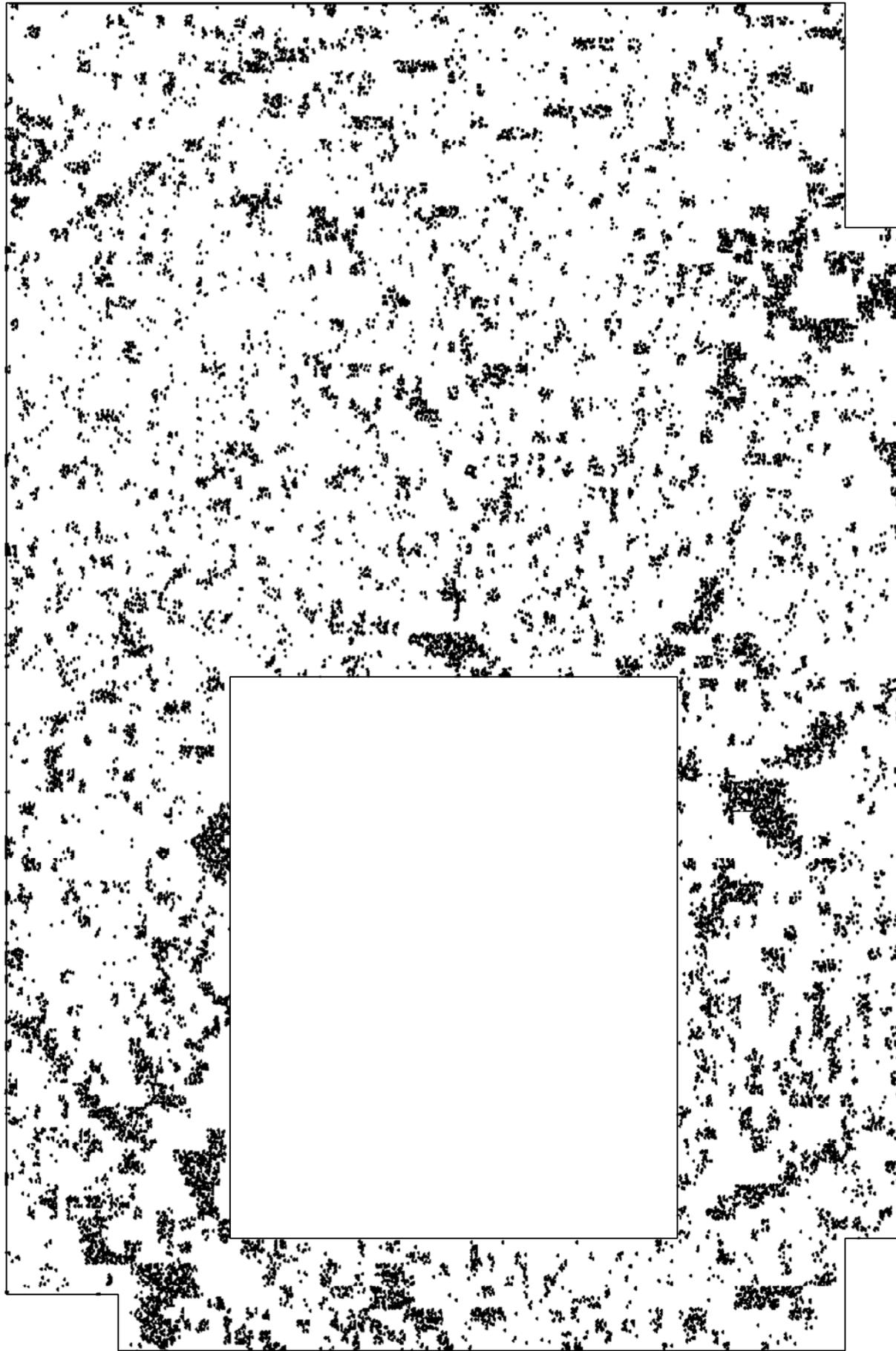
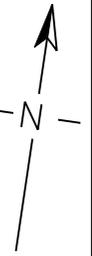
Margaret Gowen & Co Ltd
Archaeological Consultants & Project Managers

2 Killiney View,
Albert Road Lower,
Glenageary,
Co. Dublin.
Tel: 01-2300433
087-256 4174
Fax: 01-2300865
Web site: www.mglarc.com
Email: archaeology@mglarc.com

CLIENT: LRT
PROJECT: BALLYMOUNT RIVER CULVERT
TITLE: XY TRACE
DRAWING NAME: FIGURE 5

DATE: 02/04/2002
SCALE: 1:500
JOB NUMBER: 02038

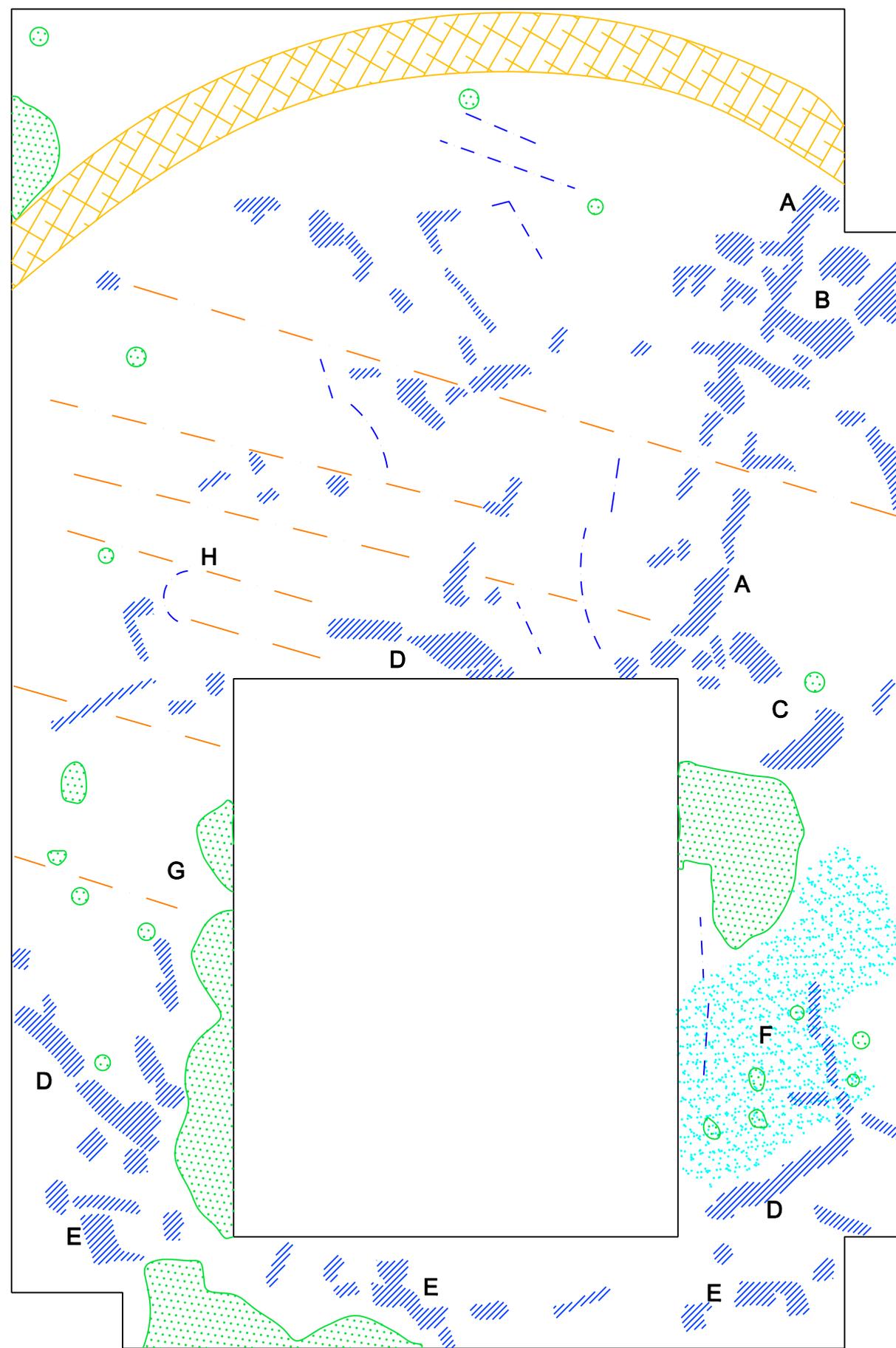
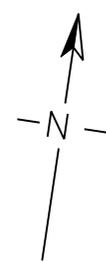
DRAWN BY: N.RYAN
CHECKED BY: J.NICHOLLS



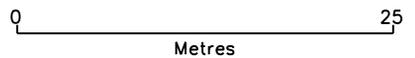
2 Killiney View,
Albert Road Lower,
Glenageary,
Co. Dublin.
Tel: 01-2300433
087-256 4174
Fax: 01-2300865
Web site: www.mglarc.com
Email: archaeology@mglarc.com

CLIENT: LRT
PROJECT: BALLYMOUNT RIVER CULVERT

TITLE: DOT DENSITY PLOT
DRAWING NAME: FIGURE 6
JOB NUMBER: 02038
DATE: 02/04/2002
SCALE: 1:500
DRAWN BY: N.RYAN
CHECKED BY: J.NICHOLLS



- ? Archaeology
- Footpath
- Trend
- Ferrous
- Area of increased magnetic response
- Ploughing/Ridge & Furrow



Margaret Gowen & Co Ltd
Archaeological Consultants & Project Managers

2 Killiney View,
Albert Road Lower,
Glenageary,
Co. Dublin.

Tel: 01-2300433
087-256 4174
Fax: 01-2300865
Web site: www.mglarc.com
Email: archaeology@mglarc.com

| | |
|----------|--------------------------|
| CLIENT: | LRT |
| PROJECT: | BALLYMOUNT RIVER CULVERT |

| | | |
|----------------------------------|----------------------|---------------------------|
| TITLE: SUMMARY INTERPRETATION | | DATE: 02/04/2002 |
| | | SCALE: 1:500 |
| DRAWING NAME: FIGURE 7 | JOB NUMBER: 02038 | DRAWN BY: N.RYAN |
| | | CHECKED BY: J.NICHOLLS |