Proposed Poulnabrone car parking site, Poulnabrone, Co. Clare

An archaeological test excavation targeted on geophysical anomalies at Poulnabrone, Co. Clare

for

Planning Section,
Clare County Council

05E1023
C0002

Graham Hull MIFA MIAI

(NGR 123700 200150)

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Job J05/20

24th September 2005

Summary

Site name: Proposed Poulnabrone car parking site, Poulnabrone, Co. Clare

Townland: Poulnabrone

Parish: Kilcorney

Barony: Burren

County: Clare

Client: Planning Section, Clare County Council

Landowner: Mr Thomas Byrnes, Lisdoonvarna, Co. Clare

Grid reference: 123700 200150

Naturally occurring geology: Clay over strongly karstified limestone

TVAS Ireland Job No: J05/20

DoEHLG reference Nos: 05E1023 (Nat. Mon. Consent No: C0002)

Licence Holder: Graham Hull

Report author: Graham Hull

Site activity: Test trenching

Date of fieldwork: 5th to 13th September 2005

Date of report: 24th September 2005

Summary of results: Nine hand-dug trial trenches were excavated in a field that it is proposed to develop as a car parking site for visitors to the nearby Poulnabrone portal tomb. The trenches were targeted on anomalies identified by an earlier programme of geophysical prospection. No archaeological features or deposits were found in the testing and it is certain that the geophysical anomalies are natural in origin. A small number of low quality lithics were recovered from the topsoil.

Monuments identified: None

Location and reference of archive: The primary records (written, drawn and photographic) are currently held at TVAS Ireland Ltd, Ahish, Ballinruan, Crusheen, Co. Clare.

Report edited/checked by: Kate Taylor ✓ 25.09.05

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by Graham Hull

Report J05/20a

Introduction

This report documents the results of an archaeological test excavation at the site of a proposed car parking site at Poulnabrone, Co. Clare (NGR 123700 200150) (Fig. 1).

The following Government publications set out many of the procedures relating to planning/development and archaeology:

Framework and Principles for the Protection of the Archaeological Heritage (DAHGI 1999a)

Policy and Guidelines on Archaeological Excavation (DAHGI 1999b)

Archaeology and Development: Guidelines for Good Practice for Developers (ICOMOS 2000)

Review of Archaeological Assessment and Monitoring Procedures in Ireland (Lambrick and Doyle 2000)

The National Monuments Acts 1930-2004 provide the legislative framework within which archaeological excavation can take place.

A summary of the findings of the test trenching will be submitted to *Excavations 2005*.

The development and planning background

Clare County Council has identified an area of reclaimed grassland that is less than 150m south of Poulnabrone portal tomb (CL009-034) as a potential location for a car park. At present, visitors to the monument are obliged to stop their motor vehicles on the narrow R480 road.

Archaeological geophysical prospection at the site of the proposed car park was contracted by the Office of Public Works to GeoArc Ltd and a report was prepared (McCarthy 2005).

Archaeological test trenching was then commissioned in order to test ('ground truth') the geophysics results. The test trenching was commissioned by Planning Section, Clare County Council on advice from Dr. Ann Lynch, Senior Archaeologist, National Monuments Section of the Department of the Environment, Heritage and Local Government (DoEHLG).

Location, topography and geology

The site of the potential car park is within a large pasture field and is bounded on the west by a drystone wall adjacent to the R480 (Fig. 2). The approximate area of the proposed carpark is 5000m².

The carparking site and the portal tomb are centrally located within the Burren, 7km south of the town of Ballyvaughan and 8km north-east of Kilfenora.

The Burren is characterised by karst limestone and bedrock frequently outcrops in the locality. Bare rock was not, however, visible at the surface of the proposed development site.

The observed geology in the test trenches was water-deposited clay overlying strongly karstified limestone. The erosional surface was characterised by predominantly solution features (hollows). The solid geology is a member of the Slievenaglashna formation from the Brigantian (Carboniferous) period (Maher pers. com.).

Typical levels across the field were in the region of 140m above Ordnance Datum.

Archaeological and historical background

The principle archaeological monument in the vicinity of the proposed carpark is the Poulnabrone portal tomb. The tomb was excavated and conserved in the mid 1980s. The tomb was erected in the Neolithic period (at c. 3200BC) and the disarticulated remains of 21 people and animals were found. Pottery, stone and bone tools and ornaments were also found in the chamber. The burial of a new born baby at the monument in the Early Bronze Age indicates a continuity of use of the monument. The cultural significance of the monument in the landscape continues to the present.

Many other archaeological monuments are also present in the immediate vicinity and these include ringforts, enclosures, *fulachta fiadh* and cairns. A stone enclosure (not noted on the SMR) is approx. 10m north-east of the area for the carpark.

There are no archaeological features, with surface expression, in the area for the proposed carpark.

Test trenching – Objectives and Methodology

A geophysical investigation (magnetometry and earth resistance) of the carpark site was commissioned by the OPW under DoEHLG licence number 05R048.

The geophysical investigation was undertaken by GeoArc Ltd (McCarthy 2005) in April 2005. The report on the investigation identified a number of anomalous features without surface expression. Some of these features were thought to have archaeological potential and the report recommended ground truthing (i.e. intrusive testing). The features identified include linear and curvilinear anomalies.

A specification for test trenching to ground truth the geophysical anomalies was drawn up by Dr Ann Lynch, Senior Archaeologist (NMS, DoEHLG). As well as being a Senior Archaeologist with NMS, Ann Lynch directed the archaeological excavations at Poulnabrone portal tomb in 1985 and 1988 (M235010).

The specification required the excavation, by hand, of 9 small test trenches targeted on the geophysical anomalies (see Figs 3 and 4). The specification further required that the trenches should be excavated to undisturbed boulder clay or bedrock.

The purpose of testing is to establish the presence/absence of archaeological deposits and features and where these exist, establish their nature and extent. It was not proposed that any such features or deposits be fully excavated (see PGAE 1999). Test trenching should be sufficient in scale, to be able to characterise the deposits within them without significantly compromising the effectiveness of any subsequent excavation (RAAMPI 2000). The nine test trenches have a combined area of 47m².

A consent to excavate test trenches was granted to Graham Hull by the National Monuments Section of the Department of the Environment, Heritage and Local Government, in consultation with the National Museum of Ireland, on behalf of the Minister for the Environment, Heritage and Local Government. The reference number is 05E1023. As the site lies close to a National Monument,

ministerial consent was requested and granted under Section 5 of the National Monuments (Amendment) Act 2004. The consent number is C0002.

The fieldwork was directed by Graham Hull and assisted by Lee Roy Krakowicz, Jamie Parra Rizo and Alan Smart and took place between the 5th and 13th of September 2005. The weather was mixed and some days were particularly wet. The trenches were however, cleaned and recorded on dry days.

The trenches were located on the ground by measuring off the survey points left in place by GeoArc and by establishing a site grid. The trenches had to be accurately located to test the geophysics results and this was achieved with a high degree of confidence.

The nine test trenches were excavated with hand-tools (shovel, spade, mattock, hoe, and trowel). Topsoil was removed and the trenches were excavated to the surface of the naturally occurring geology.

A full written, drawn and photographic record was then made in accordance with the written specification and the TVAS (Ireland) Ltd Recording Manual (First Edition). Copies of this manual have previously been submitted to the National Monuments Section and the National Museum of Ireland.

The spoil was visually scanned for finds.

The test trenches were all backfilled.

A monitoring visit was made during the fieldwork by Ann Lynch from the DOEHLG, Congella McGuire, Heritage Officer, Clare County Council and by Paddy Maher from the Burren Centre at Kilfenora. Mr Maher recorded the geology exposed in the test trenches for the Geological Survey of Ireland database and Mr Maher's geological terminology is used in this report.

Test trenching - Results (Figs 3 and 4 and Plates 1 to 8)

Nine test trenches were excavated. Detailed descriptions of these trenches are given in Appendix 1.

The trenches were between 3m and 9m long and all were 1m wide. Trench 8 was extended westwards in order to follow the limits of a deposit of clay.

The typical stratigraphy in the trenches was an irregular tussocky topsoil (between 0.1m and 0.2m thick), overlying a glacial till (between 0.1 and 0.3m thick) The till was a mid orangish brown fine clay with occasional small (0.05m diameter) rounded limestone pieces. Occasional reddish brown flecking was noted. Below the till, solution hollowed limestone gravel and bedrock was recorded. The hollows were filled with clayier mid orangish brown silt resulting from percolation into the voids.

No archaeological features or deposits were noted in any of the test trenches.

Finds

Seven small and low quality lithics were recovered from the topsoil of five trenches. Two of the pieces are flint and five are chert. None is a tool and none is retouched.

Trench No	Find No	Description
1	05E1023:1	Topsoil. Chert. Struck piece
1	05E1023:2	Topsoil. Chert. Struck piece
2	05E1023:3	Topsoil. Flint. Flake
6	05E1023:4	Topsoil. Flint. Debitage
6	05E1023:5	Topsoil. Flint cortex with struck edge
8	05E1023:6	Topsoil. Flint. Flake
9	05E1023:7	Topsoil. Chert. Struck piece

Samples

No soil samples were taken.

Discussion

The targeted test trenching at the proposed Poulnabrone car parking site did not locate archaeological features or deposits. The geophysical anomalies have been demonstrated to reflect geological rather than archaeological activity. The solution hollows found within the glacial till and the occasional outcropping of limestone bedrock or boulders can be shown, in most cases, to be coincident with the geophysics results.

The small number (seven) of struck chert pieces, while indicative of prehistoric human activity in the vicinity, is not of itself significant. It is very likely that a similar quantity of low quality lithics would be found if four archaeologists searched spoil from many other locations on the Burren and beyond.

Recommendations

1. Publication of a summary of the work in *Excavations 2005*.

2. Given the proximity of the portal tomb, archaeological monitoring at construction stage would be prudent. Unstratified artefacts may be present in the topsoil and unrecognised archaeological features (not picked up in either geophysical prospection or archaeological test trenches) may survive.

The opinions given in this archaeological test excavation report are made subject to approval by the National Monuments Section and the National Museum of Ireland.

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Graham Hull MIFA MIAI
TVAS Ireland Ltd
24th September 2005

References

DAHGI, 1999a, Framework and Principles for the Protection of the Archaeological Heritage, Department of Arts, Heritage, Gaeltacht and the Islands, Govt. of Ireland, Stationary Office, Dublin

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McCarthy, M, 2005, Poulnabrone Parking Site, Poulnabrone, Co. Clare, Report on Geophysical Investigation, 05R048, unpublished GeoArc Ltd report GA05/03, Oranmore, Co. Galway

PGAE, 1999, Policy and Guidelines on Archaeological Excavation, Department of Arts, Heritage, Gaeltacht and the Islands, Govt. of Ireland, 1999

Appendix 1: Trench descriptions

All trenches 1m wide

Trench No.	Length (m)	Description
1	3.20	Topsoil (0.1m thick – max), onto glacial till. Till (0.08m thick) is mid orangish brown fine clay with occasional small (0.05m dia) rounded limestone pieces. Occasional reddish brown flecking. Onto solution hollowed limestone gravel and bedrock Yellowish/greyish brown. The hollows have clayier mid orangish brown silt = percolation into hollows. Hollows max depth 0.7m
2	3.06	Topsoil (0.1/0.2m thick) onto glacial till. Till (0.2/0.3m thick. 0.4m thick at NE) composition as Tr1. Onto solution hollowed limestone gravel and bedrock as Tr 1.
3	9.00	Topsoil (0.2m thick) onto glacial till (0.1/0.3m thick) As Tr 1. Onto solution hollowed limestone gravel and bedrock as Tr 1.
4	5.30	Topsoil (0.15m thick) onto glacial till (0.05/0.1m thick). As Tr 1. Onto solution hollowed limestone gravel and bedrock as Tr 1.
5	5.15	Topsoil (0.1/0.15m thick onto glacial till (0.1m thick). As Tr 1. Onto solution hollowed limestone gravel and bedrock as Tr 1.
6	5.20	Topsoil (0.1m thick) onto glacial till (0.1m thick). As Tr 1. Onto solution hollowed limestone gravel and bedrock as Tr 1.
7	4.30	Topsoil (0.1/0.15m thick) onto glacial till (0.15m to 0.25m thick). As Tr 1. Onto solution hollowed limestone gravel and bedrock as Tr 1.
8	7.30	Topsoil (0.1/0.15m thick) onto glacial till (0.25/0.3m thick). Band of grey clay at S (0.8m wide, 0.01m thick). As Tr 1. Onto solution hollowed limestone gravel and bedrock as Tr 1.
9	8.00	Topsoil (0.15/0.2m thick) onto glacial till (0.15/0.2m thick). As Tr 1. Onto solution hollowed limestone gravel and bedrock as Tr 1.

Plate 1: Site prior to trenching. Looking north

Plate 2: Trench 8 under excavation. Looking north

Plate 3: Trench 4 fully excavated. Looking west. Scales 2m and 0.3m

Plate 4: Trench 7 fully excavated. Looking west. Scales 2m and 0.3m

Plate 5: Trench 2 fully excavated (detail). Looking south-east. Scale 0.3m

Plate 6: Trench 8 fully excavated with extended area. Looking east. Scale 2m

Plate 7: Trench 3 fully excavated. Trenches 8 and 9 in background. Looking east. Scale 2m

Plate 8: Trench 8 backfilled. Looking north. Scale 2m

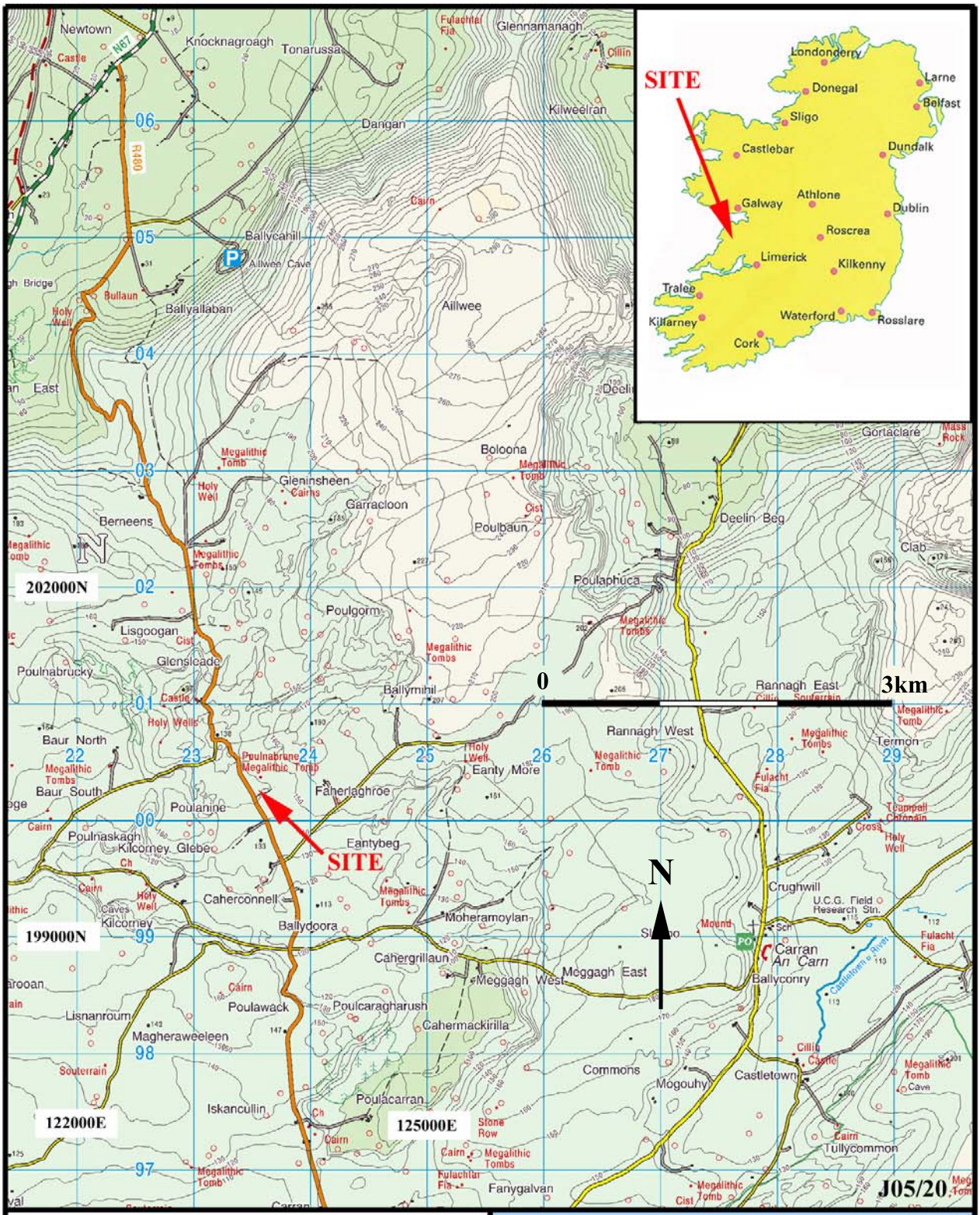

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Figure 1: Site location

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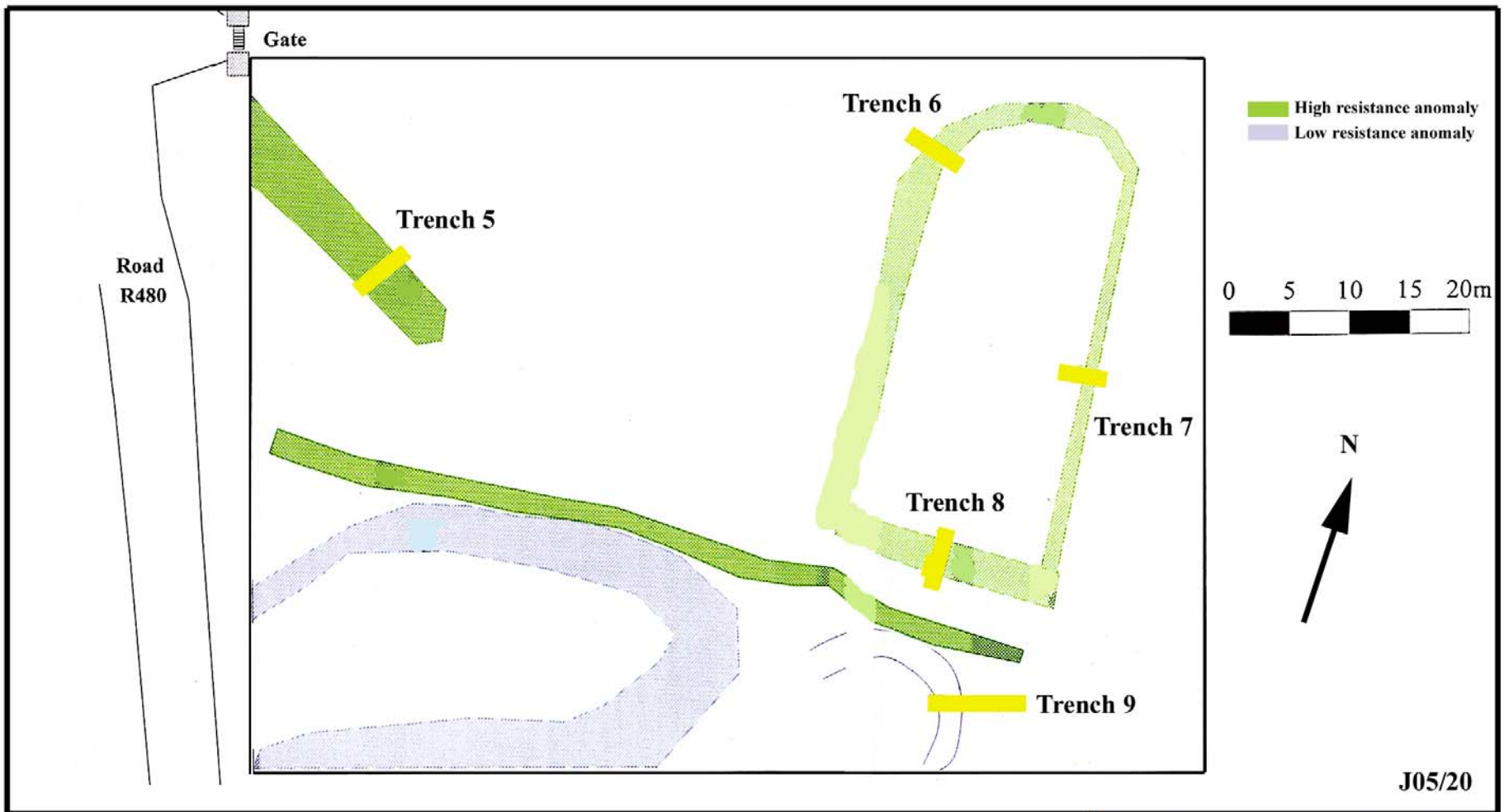

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Figure 3: Test trench locations and earth resistance results

Based on GeoArc Ltd geophysical interpretation map of earth resistance results (simplified)

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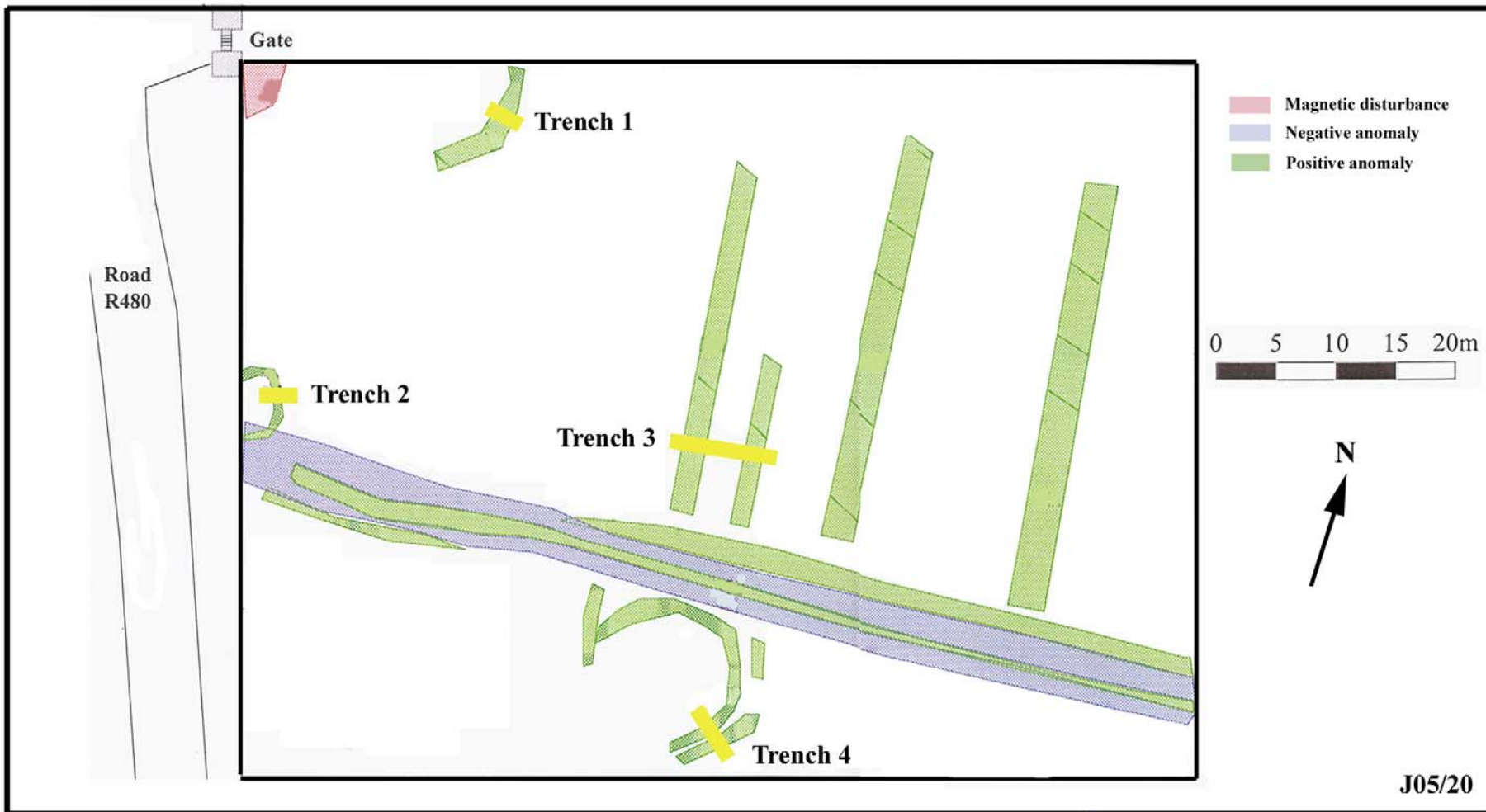

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Figure 4: Test trench locations and magnetic gradiometry results

Based on GeoArc Ltd geophysical interpretation map of magnetic gradiometry (simplified)

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