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**Marfield Quarry - Masham
North Yorkshire
Quarry Extension
PHASE 1**

Earthwork Survey

June 1999

MAP Archaeological Consultancy Ltd

**Marfield Quarry - Masham
North Yorkshire
Quarry Extension
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Earthwork Survey

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1. Introduction

Marfield Quarry is situated in the parish of Ellington High and Low, North Yorkshire, to the north-west of the town of Masham (SE 8277 2110 : Fig. 1). Phase I of the quarry extension is located to the north of the existing quarry (SE 8322 2109), approximately 0.9 kilometres south-east of Low Ellington village and covers an area of 5.4 hectares.

An evaluation of the quarry extension was commissioned by Redland Aggregates Ltd. This pre-planning evaluation was carried out between April 1995 and December 1996. The evaluation followed a staged approach which was composed of a number of different techniques. The initial stage of work was a Desktop Study of the proposed quarry extension area (Areas 1-14 : MAP 1995 - Fig. 2). Followed by Geophysical Survey (GSB 1995- Areas 6, 9, 12 & 1996 - Areas 8 & 13), Fieldwalking (MAP 1995i - Areas 6, 9, 12) and Trial and Sample Excavations in Areas 6, 9, 12 & 14 (MAP 1996 i-iv).

The extension to the present workings at Marfield Quarry is to be undertaken in five phases (Fig. 3). Phase 1 of the quarry extension is formerly Area 8 of the pre-planning evaluation.

A walkover of the Phase 1 area recorded the remains of two possible lynchets and a field boundary. It was recommended that these features were recorded by an earthwork survey prior to mineral extraction. The survey was undertaken by MAP Archaeological Consultancy Ltd in May 1999.

The geology is typical brown earths of the East Keswick Association formed over a parent of drift from Palaeozoic and Mesozoic sandstones and shales. Such soils are

usually well drained fine or coarse loams, sometimes with slowly permeable subsoils and subject to slight seasonal waterlogging (Mackney et al 1983).

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2. Site Description

The natural topography of the Phase 1 area is recorded as 108m AOD in the north rising to the highest point characterised by a ridge in the middle of the extraction zone of 116m AOD which runs parallel to the southern and northern boundaries (Fig. 4). To the south of the ridge the field slopes away toward the southern edge of the field at 103m AOD.

Dry stone walls form the boundaries of the field (Pl. 1). In places the walls had decayed considerably and in particular the southern and upper parts of the western boundary had been replaced by Hawthorn hedges that had colonised on the fallen stone (Pl. 2).

Access to the field is gained through gates at the south-western, western and south-eastern corners of the field. A trackway following the southern boundary of the field is visible running between the two southerly gates. The track passes to the north of a pond surrounded by scrub and small willows in the south-western corner of the field (Pl. 3). The path is bisected by another track (shown in the foreground of Plate 3) which passes east of the pond and runs north through the field to the break of slope on the ridge and the turns west to exit at a gate in the wall which forms the western field boundary.

The earthworks surveyed in the Phase 1 extraction zone consisted of three east-west aligned features and a curvilinear feature (Figs. 5 & 6).

3. Methodology

A detailed topographic survey of the area at a scale of 1:2500 was provided by the contractors, this showed the natural topography of the field, in contours at 1m intervals, as well as a series of spot heights. The field boundaries and major trees were also shown on the survey. The archaeological earthwork survey was intended to enhance the recorded detail of the man made features that overlay the natural topography and to confirm the location of features on the contractors survey.

The field was walked over to determine the character of the standing earthworks and the appropriate method of survey. The features consisted of sharp but relatively simple breaks of slope interrupting the natural contours of the field.

Where the north-south trackway bisected the field the slope had been truncated and eroded by the passage of vehicles and livestock. Care was taken that these areas were recorded in enough detail to illustrate the trackway's effect on the features.

The earthwork survey was carried out using a Total Station E.D.M. A local grid was adopted using a station set near the southern boundary wall. This station was given a nominal value of 1000East/1000North and a station level of 100m. The approximate true value of this level was derived from the spot heights supplied.

A series of points were recorded on the breaks of slope at the top and the bottom of the features and keyed into Ordnance Datum (grid references and spot heights). These points were taken and the data plotted using the points taken in the form of co-ordinates initially based on the local grid (Appendices 1 & 2). All the earthworks have been located on a plan at 1:500 scale (Fig. 5) but for ease of reference are produced within this report at a scale of 1:2500 (Figs. 6-8).

The data has been plotted on a CAD system and a hachured topographical earthwork survey produced. A profile through the earthworks was also produced (Fig. 9).

4. Results

The most prominent feature in the field was a linear bank of turf covering outcrops of loose natural cobbles and flat squared stones consistent with being the remains of an original dry stone field wall (Feature A : Figs. 5, 6 & 7). This bank extended for the full width of the field, approximately 230m with a break of 6m in the west where it was bisected by a farm track. Feature A was on an east-west alignment and was shown to cut across the natural slope (Fig. 8), with a height of 111m AOD in the west falling to 107m AOD in the east.

It had been colonised by Hawthorn which had been allowed to grow into mature trees of two or three metres in height (Pls. 4 & 5). A number of other mature trees existed in the hedgerow and a mature Ash stood at the end of this feature where it met the eastern boundary wall (Pl. 4).

The feature as a field boundary had clearly lapsed some time ago and at its western end has been reduced to a point where livestock could pass freely between the two parts of the field.

To the south, the natural slope of the hill was interrupted by a steep earthwork (Feature B - Figs. 5-7 : Pl. 6), surviving for 170m, this again cut across the natural contours (Fig. 8) from 108m AOD at its highest point to 103.5m AOD at its lowest. As with Features A and C a modern vehicular track (Feature D) had caused damage to a 8m wide section. It seems likely that this feature was a lynchet formed as a result of the cultivation of the steep slope.

A third steep break of slope occurred along the southern edge of the field (Feature C - Figs. 5-7). In contrast to Features A and B, Feature C appears to follow the line of the 104m AOD contour and was recorded in total for 130m. Like Features A and B it had been truncated by the north-south farm track (Feature D : Figs. 5-7).

Feature E represents a curvilinear feature which follows the curvature of the pond to the south (Figs. 5-7) and is partially obscured by a bank of rubble situated to the north of the pond (Feature F : Figs. 5-7 : Pl. 3).

Feature F is a relatively large shallow pond which at the time of the survey was heavily colonised by scrub and willow. This feature is located within the Phase 3 extraction zone.

5. Discussion

An appreciation of the topography can be essential in understanding the function of an earthwork. Feature A interpreted as a field boundary is a stone wall now colonised by Hawthorn. Cartographic evidence shows that this land division was not present in 1770 (Fig. 10) but was by 1801 (Fig. 11). An Ordnance Survey map of 1856 shows the division, but it is missing from a later map of 1930 (Fig. 12). Ordnance Survey maps of c. 1970, 1982 (Fig. 1) and 1990 all show the feature as a dashed line.

Feature B represents a lynchet. Lynchets are the result of terracing to enable difficult terrain to be brought into cultivation. This is usually as a direct response to economic pressures and the demand for more viable land. Aerial photographic evidence (Pl. 7 & Fig. 13) show that this type of archaeological feature is fairly common to the site's environs. Although the example recorded in the Phase 1 extraction zone is not as spectacular as those to the west on High Mains Whin.

Feature C follows a section of a Public Right of Way which provides access from the village of Low Ellington to the north-west to High Mains Farm to the north-east. Low Ellington is of pre-Conquest date and it has been recorded that a building has existed on or close to the site of High Mains Farm from the Fifteenth century (Cunliffe-Lister 1978, 55) thus suggesting that this trackway may have a much longer antiquity perhaps than at first considered.

In conclusion it is therefore likely that the earthworks recorded represent a lynchet and field boundary which has in recent years been poorly maintained and has decayed to a

point where it is now only a landscape feature. This reflects the decline in the importance of agriculture in the national economy and the adaptation of more marginal land to other uses such as quarrying.

6. Bibliography

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- MAP 1996iv Marfield Quarry, Masham, North Yorkshire. Archaeological Sample Excavations. Area 14.

APPENDIX 1

Survey Grid Points

Marfield Quarry Earthwork Survey
Data dumped from ChoiceCad Plot
Local Grid Origin 1000,1000

LYNCHET B_B_O_S

983.83,1014.5
958.81,1015.9
935.98,1023.1
908.03,1029.8
889,1034.4
879.59,1035.7

RELICT_BOUNDARY_TREE_LINE

1086.1,1033.7
1071.8,1038.6
1056.1,1042.1
1040.3,1043.6
1026.7,1044
1008.9,1046.4
995.54,1049.7
966.09,1054.5
953.25,1056.8
928.96,1063.8
908.72,1068.2
893.96,1070.6
888.28,1072.6

LYNCHET_T_B_O_S__TREELINE

893.67,1073.3
919.76,1069.3
935.03,1064.8
956.9,1059.7
981.29,1056.1
994.14,1055
1012,1052.2
1031.7,1050.6
1046.9,1049.4
1073.4,1044.6
1081.8,1042.6
1088.5,1040.1

T_B_O_S__OLD_BOUNDARY_BY_POND

870.74,1007.9

865.42,1014.3
856.51,1019.6
850.12,1022.3
832.48,1024.6
818.7,1025
802.7,1023.4

T_B_O_S__LYNCHET__2_W__OF_PATH

820.82,1046
841.36,1047
867.12,1045.7
878.54,1043.6
878.54,1043.6

B_B_O_S__LYNCHET__2_W__OF_PATH

876.17,1034
858.08,1039.1
840.94,1043.3
824.82,1046.6

T_B_O_S__LYNCHET__3_W__OF_PATH

885.53,1073.4
875.2,1074.7
866.55,1076.1

B_B_O_S__LYNCHET__3_W__OF_PATH

866.05,1073
875.56,1071.6
885.03,1072

FIELD_WALL_LINE_LYNCHET

972.16,1053.8
975.3,1053.4
981.73,1051.6
980.384,1004.937

Station A

1000.000,1000.000

FIELD_BOUNDARY

1084.8,1051.6
1089,1038.9
1090.7,1029.8

1096.7,1009.3
1098.4,1000.7
1096.9,999.91
1095.1,995.92
1068.6,996.84
986.35,999.15
973.2,1001
948.22,1004.2
900.56,1013.2
885.09,1015.7

T_B_O_S__OLD_BOUNDARY_BY_POND

965.88,1005.4
939.54,1009.2
893.83,1017.8
883.31,1019.4
876.3,1021.1
876.26,1024.2

T_B_O_S__OLD_BOUNDARY_BY_POND

872.67,1023.4
859.21,1025
837.45,1027.8

B_B_O_S__LYNCHET__2_W__OF_PATH

850.03,1024.8
859.85,1022.1

B_B_O_S__LYNCHET__2_W__OF_PATH

876.33,1024
878.29,1023
889.27,1021.7
903.01,1018.6
917.56,1015.7
932.73,1012.7
948.33,1009.3
975.86,1004.8

FIELD_BOUNDARY

885.22,1015.9
881,1013

FIELD_BOUNDARY

880.95,1013
876.77,1003.1
876.77,1003.1

Point? /

994.576 1189.241

APPENDIX 2

Ordnance Survey Co-ordinates

Marfield Quarry Earthwork Survey
Data dumped from ChoiceCad Plot
Ordnance Survey Grid
Rounded to whole metres by data dump

WOODED_AREA

- 20944,83070
- 20946,83095
- 20946,83096
- 20942,83109
- 20943,83109
- 20918,83115
- 20891,83110
- 20887,83101
- 20860,83089
- 20861,83090
- 20878,83069

LYNCHE_T_B_O_S_

- 21073,83085
- 21048,83090
- 21027,83100
- 21000,83111
- 20982,83118
- 20973,83121

RELICT_BOUNDARY_TREE_LINE

- 21177,83090
- 21163,83097
- 21148,83102
- 21133,83106
- 21119,83108
- 21102,83113
- 21089,83118
- 21075,83123
- 21061,83127
- 21049,83131
- 21026,83142
- 21006,83149
- 20992,83153
- 20986,83156

LYNCHE_T_B_O_S_TREELINE

- 20992,83156
- 21017,83148
- 21032,83142
- 21053,83134

21076,83127
21089,83124
21106,83119
21125,83114
21140,83111
21166,83102
21174,83099
21180,83096

T_B_O_S__OLD_BOUNDARY_BY_POND

20960,83095
20956,83102
20948,83108
20942,83112
20924,83116
20911,83119
20895,83120

T_BO_S__LYNCHET__2_W__OF_PATH

20916,83139
20936,83137
20962,83133
20973,83129
20973,83129

B_B_O_S__LYNCHET__2_W__OF_PATH

20969,83120
20952,83127
20935,83134
20920,83139

T_B_O_S__LYNCHET__3_W__OF_PATH

20984,83157
20974,83160
20965,83163

B_B_O_S__LYNCHET__3_W__OF_PATH

20965,83160
20974,83157
20983,83156

FIELD_WALL_LINE_LYNCHET__3

21068.133,83076.212
21068.133,83076.212

FIELD_WALL_LINE_LYNCHET__3

21086.859,83068.562
21086.859,83068.562

T_BO_S_LYNCHET_2_W_OF_PATH

20978,83129
20999,83119
21023,83109
21040,83104
21061,83095
21082,83085
21092,83084

FIELD_BOUNDARY

21178,83108
21180,83095
21181,83085
21184,83064
21184,83055
21183,83055
21180,83051
21154,83056
21073,83070
21060,83073
21036,83080
20990,83096
20975,83100

T_B_O_S_OLD_BOUNDARY_BY_POND

21054,83079
21028,83086
20984,83101
20974,83104
20967,83107
20968,83110
20964,83110
20951,83113
20930,83119

B_B_O_S_LYNCHET_2_W_OF_PATH

20942,83114
20951,83110
20968,83110
20970,83108
20980,83106
20993,83101
21007,83096
21022,83091
21037,83085
21064,83077

FIELD_BOUNDARY

20975,83100

20971,83098
20971,83098
20965,83089
20965,83089
20898,83035
20980,83042
20965,83089
20889,83122
20905,83166
20961,83161
21022,83350
21068,83332
21118,83300
21171,83291
21164,83252
21178,83108