Marfield Quarry
Masham
Phase 3 & 4
North Yorkshire
SE 2110 8277

Archaeological Watching Brief

Authorised by ……

Date:……

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Contents **Page**

Appendices

Figure List **Page**

Plate List **Page**

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North Yorkshire
Phase 3 & 4
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Archaeological Watching Brief

Non-Technical Summary

An Archaeological Watching Brief was undertaken by MAP Archaeological Consultancy Ltd in Phase 3 & 4 of Marfield Quarry, Masham, North Yorkshire during October 2007. The work involved monitoring the topsoil-stripping operations prior to the commencement of quarrying operations in Area 12.

Nine small pits of Early Neolithic date were identified during the Watching Brief, a number of which contained burnt material, hazelnuts, flint and pottery. Six Post-medieval features were recorded: Three post-medieval field drains and two previously-known kiln structures, which had only been partially excavated during the evaluation of Area 12 in 1999, were uncovered. An irregular linear feature is probably a post-medieval plough scar.

1. Introduction

1.1 An Archaeological Watching Brief was undertaken by MAP Archaeological Consultancy Ltd at Marfield Quarry, Masham, North Yorkshire, SE 8277 2110 (Fig. 1) from the 6th to the 10th October 2007. The work was undertaken on behalf of Lafarge Aggregates Ltd in order to fulfil a condition attached to Planning Application Consent for mineral extraction on land to the north-west of the existing quarry workings (Planning Ref: 500/32G/CMA).

1.2 The site code for the project was MAP 07-09-06.

1.3 All work was funded by Lafarge Aggregates Ltd.

1.4 All maps within this report have been reproduced from Ordnance Survey with the permission of the Controller of Her Majesty's Stationery Office, Crown Copyright, License No. AL 50453A.

2. Site Description

2.1 Marfield Quarry is situated in the parish of Ellington High and Low, North Yorkshire, to the north-west of the town of Masham, at (SE 8277 2110: Fig. 1). Phases 3 and 4 of the quarry extension are located to the north-west of the existing quarry workings, approximately 0.9km to the south of the village of Low Ellington (Fig. 2). At the time of the Watching Brief, the extension area had been in use as arable land. The topography of the extension area was on fairly flat ground, sloping slightly down hill to the eastern end of the area, with heights of between 106m AOD and 110m AOD.

3. Geology

3.1 The site is located on soils of the East Keswick Association. These consist of well-drained fine or coarse loams over a parent drift of Palaeozoic and Mesozoic sandstones and shales (Mackney 1984).

4. Archaeological Background

4.1 The current Watching Brief was part of an on-going programme of archaeological investigation within the boundaries of the quarry, which commenced in 1988 with a Watching Brief by WYAS. A pre-planning evaluation of the quarry extension was commissioned by Lafarge Redland Aggregates Ltd (now Lafarge Aggregates Ltd) and was undertaken between April 1995 and December 1996. The evaluation followed a staged format and consisted of a number of different techniques including a desktop study (Areas 1-14: MAP 1995i - Fig 2), geophysical survey (GSB 1995- Area 6, 9, 12 & 1996 - Areas 8 &13), fieldwalking (MAP 1995ii - Areas 6, 9, 12) and trial and sample excavations in Areas 6, 9, 12 & 14 (MAP 1997).

4.2 The most significant archaeological features identified within the quarry were located in Area 12. Here, four limekilns were excavated (MAP 1995 & 1996), after being identified by geophysical survey (GSB 1995 & 1996). The lime kilns dated from the late 17th to mid 18th centuries and were associated with the production of lime for agricultural improvement and building mortar. A rectangular burnt pit of 16th to 17th century date was also identified.

4.3 Two further kilns of mid to late 18th century date were identified in Phase 1 (Areas 6 and 8) in 1996 &1999.

4.4 A late 17th to 18th century lime kiln was also recorded in Phase 4 (Area 14) in 2005. On this occasion, the area monitored during the Watching Brief covered an area of approximately 3600m^2 which comprised the eastern end of Phase 3 and the north-eastern part of Phase 4 (formerly Areas 8, 12 & 14 of the pre-planning evaluation).

4.5 An Archaeological Watching Brief was undertaken by MAP Archaeological Consultancy Ltd during October 2006 (MAP 2006). The work involved monitoring topsoil-stripping operations in the area immediately to the east of the current Watching Brief area. Seven small pits were identified and excavated, some of which contained burnt material. Finds recovered were limited to a single flint flake.

5. Methodology

5.1 The current Watching Brief covered an area of approximately 3.96ha situated within Phases 3 and 4 of the quarry (Area 12).

5.2 The first stage of work was the stripping of the topsoil and subsoil. The exposed surface was then assessed for the presence of archaeological features. Where present a detailed plan was made of all of the features at an appropriate scale (1:20).

5.3 All of the overburden (including topsoil and subsoil) was removed using a back-acting 360° mechanical excavator, fitted with a toothless ditching bucket. All machine excavations were undertaken under full archaeological supervision, by C Morris. Archaeological hand excavation was undertaken by a team, comprising Charlie Morris, Nigel Cavanagh and Mark Stephens.

5.4 After removal of overburden, the excavation areas were hand-cleaned. Each archaeological feature or deposit was recorded on *pro-forma* Context Record Sheets (Appendix 1), according to guidelines laid down in the MAP Archaeological Consultancy Ltd Excavation Manual. Negative features were investigated via either half-section, total excavation or segment excavations. A total of thirty-seven contexts were recorded.

5.5 Artefacts recovered from the excavations consisted of five sherds of pottery, five flint flakes, six flint spalls, two blade fragments and a fragment of a Great Langdale – Group VI stone axe (Appendices 2, 6 & 7).

5.6 Modern overburden was recorded in section and by record only. All other archaeological deposits and features were recorded in plan at a scale of 1:20 on permatrace drafting film (Appendix 3). Sections of features and individual layers were drawn at a scale of 1:10 and included an Ordnance Survey Datum height. In total of twenty-nine drawings were archived.

5.7 A photographic record comprising of digital shots, black and white print and colour sides were made. A total of forty digital, twenty four slide exposures and twenty-four black and white negatives were taken. The photographic record of features and general area shots included a film register noting film number, shot number, location of shot, direction of the shot, and a brief description of the subject (Appendix 4).

5.8 A total of eleven environmental samples were taken (Appendix 5).

6. Results

6.1 Three phases of archaeological activity were recorded during the 2007 Archaeological Watching Brief.

6.2 Phase 1: Early Neolithic (c. 4400-3600 cal BC)

6.2.1 A total of nine small pits were identified distributed across the stripped area (Figs. 3,4,5 and 6).

6.2.2 Two small pits were located close to each other in the eastern part of the site (contexts 1003 and 1005). Pit 1003 was a 0.70m x 0.60m x 0.15m deep pit of sub-oval plan and shallow, concave profile (Pl. 1), whilst Pit 1005 was a very shallow (0.05m deep) sub-circular feature, with a diameter of 0.40m (Pl. 2). No finds were recovered from the silty clay fill of Pit 1005 (context 1004) but the silty clay fill of Pit 1003 (context 1002) contained two sherds of Grimston ware pottery Appendices 2 & 7), a flint blade (SF 5, Appendices 2 & 6) and a fragment of a Group VI polished stone axe originally from the Great Langdale axe factory (SF 6, Appendices 2 & 6).

6.2.2 A third feature was situated approximately 27m to the north-west of Pits 1003 and 1005 (Pit 1007, Pl. 3). Pit 1007 had a diameter of 0.65m and a deep-sided, bowl-shaped profile. The pit was 0.32m deep and was filled by silty clay (context 1006) with no associated finds.

6.2.3 An isolated pit was situated towards the centre of the stripped area (context 1009). Pit 1009 had a diameter of 0.74m, a depth of 0.22m and a shallow, concave profile with a single clayey silt fill (context 1008). Excavation of Pit 1009 produced no associated finds.

6.2.4 Situated 83m to the west of Pits 1005 and 1003 was Pits 1023 & 1028. These features were of a similar size and morphology, with sub-oval plans and moderate to steeply-sloping concave profiles (Pls. 4 and 5).

Pit 1023 measured 1.30m x 0.82m x 0.20m and Pit 1028 was slightly smaller measuring 0.96m x 0.80m x 0.22m. The silty clay fill of Pit 1023 (context 1022) contained two sherds of Grimston ware pottery (Appendices 2 & 7), along with quantities of ash, charcoal and well-preserved charred (Appendix 5). The silty clay fill of Pit 1028 (context 1027) also contained charcoal and hazelnut shells (Appendix 5) but no associated finds.

6.2.6 Two further pits (contexts 1017 and 1019) were located in the western part of the site and were spaced 1.40m apart. Pit 1017 was sub-circular in plan, with a diameter of 0.60m and a depth of 0.30m (Pl. 6). The feature had a steeply-sloping, bowl-shaped profile and was filled by silty clay (context 10106) which contained flecks of charcoal (Appendix 5).

6.2.7 Pit 1019 was of similar size and shape to Pit 1017 (Pl. 7). with a diameter of 0.60m and a depth of 0.18m, with a moderately-sloping, flat-based profile. The silty clay fill (context 1018) contained flacks of charcoal and a single flint flake (Appendices 2 & 6).

6.2.8 Pit 1025 encountered was located 88m to the north-west of Pitt 1023. Pit Cut 1025 had a diameter of 0.80m and was 0.30m deep, with a steeply-sloping stepped profile and flat base (Pl. 8). The 0.10m deep silty clay basal fill (context 1026) contained charcoal, grain, charred nutshells and flint flakes (Appendices 2, 5 & 6), whilst the similar upper fill (context 1024) contained considerable quantities of charred nutshells, a sherd of prehistoric pottery (Appendices 2 & 7) and further flakes of flint (Appendices 2 & 6).

6.3 Phase 2: Post-medieval (1530 – 1750 AD)

6.3.1 There are four features and two kilns in this phase (Figs. 3, 7 and 8).

6.3.2 A feature that appeared to be associated with Kiln 1 was an irregular linear feature (context 1021). Gully 1021 was a 3.10m long, 0.80m

wide, irregular in plan and shallow (0.08m deep) with a concave profile (Pl. 15). The fill of the feature (context 1020), consisted of burnt, heat-discoloured sandy gravel. The likeliest interpretation for Gully 1021 was that it represented a plough scar filled by burnt material dragged by the plough from nearby Kiln 1.

6.3.3 Segments were excavated across three long, prominent linear features, which ran across the site in a broad south-west to north-east alignment (contexts 1030, 1034 and 1036). Linear 1030 was 0.98m wide and 0.30m deep, with steeply-sloping sides and a concave base (Pl. 9). Linear 1034 had a similar profile, with a width of 0.94m and a depth of 0.30m, whilst Linear 1036 had a flat-bottomed U-shaped profile that was 0.65m wide and 0.24m deep (Pls. 10 and 11). The silty sand fills of all three features (contexts 1029, 1033 and 1035 respectively) were notable in that they contained densely-packed sub-rounded and sub-angular cobbles that had evidently been collected from the field.

6.3.4 Linears 1030, 1034 and 1036 represented soakaway field drains of post-medieval or later date.

6.4 Phase 2: Post-medieval Kilns (Pls. 12, 13 and 14)

6.4.1 In addition the stripping of Area 12 uncovered the remains of four sub-circular kilns, all of which had previously been identified via geophysical survey and had subsequently been excavated or partially excavated and recorded during the initial Archaeological Evaluation Excavation at Marfield Quarry (MAP 1997). Following consultation with the Senior Archaeologist NYCC and the English Heritage Regional Scientific Advisor, the opportunity was taken to partially re-excavate Kilns 1 and 3, both of which had not been fully excavated in 1997.

7. Summary and Discussion

7.1 Excavations in 2007, produced evidence for activity at the site from two specific periods - the early Neolithic (c. 4400-3600 cal BC) and the Post-medieval period (1530 - 1750).

7.2 A total of nine pits were encountered during the Watching Brief of which four produced an associated finds assemblage; flint and pottery from Pits 1003 and 1025, pottery from Pit 1023, flint from Pit 1019 and a flake from a stone axe in Pit 1003. . In addition the fills of pits 1003, 1005 and 1025 were rich in environmental data including hazelnut shells, mixed woodland charcoal and cereal grain.

7.3 The small assemblage of pottery recovered from the excavations was exclusively sherds of Grimston Ware of an early Neolithic date. Pottery was an innovation of the Neolithic period. The earliest ceramic associations for sites in Yorkshire, and Northern England, are of the Grimston style, which is generally represented by the fragmentary sherds of carinated bowls often associated with hazelnut shells and found in the backfills of small pits. These pit features are the most frequent non-monumental structures in the early Neolithic period. As illustrated by the Marfield pits their infilling contains a range of cultural material, sherds of pottery, flint tools and debitage, utilised stone and burnt material and emner wheat and hazelnuts. Analysis of the environmental data from similar features on the Caythorpe Gas Pipeline and at Marton-le-Moor and Nosterfield (Abramson 1996; & Tavener & Speed in prep) has also provided evidence of diet, including emner, hazelnuts and crab apples. Grimston ware pottery has also been found at Nosterfield (Vyner 1998).

7.4 The size, shape, fill, and location of the pits are variable and cannot always be reconciled with a primary storage function before their infilling with discarded domestic waste. The pit clusters have been interpreted as receptacles for communal ritual deposition, a tradition

which continues into the Middle Bronze Age (Thomas 1999 64-74). Excavations at West Heslerton where the apparent random distribution of the pits and, their lack of obvious association with other classes of feature and the ubiquitous presence of carbonised hazelnut shells led the excavator to conclude that the features may have served originally as storage pits for hazelnuts, which were broken into as and when required and then deliberately backfilled with domestic rubbish and waste ((Haughton & Powesland 1999, 25).

7.5 Although only a small fragment of a greenstone Group VI polished stone axe was found in Pit 1003 its recovery is significant. The Neolithic was the period when settlement replaced the hunter gather transitory way of life, and farming was developed on a very large scale. Clearance of the forest cover was necessary in order to plant crops and rear animals, so axes were a staple tool, not just for clearance but also for wood working timber for houses, boats and other structures. Greenstone was quarried or perhaps just collected from the scree slopes in the Langdale Valley on Harrison Stickle and Pike of Stickle The Langdale industry was just one of many which extracted hard stone for manufacture into polished axes but the greenstone polished axes have been found distributed across the British Isles. Most of the stone axe groups have distributions centred around their respective axe factories or presumed source areas. This is just what would be expected from a simple model of primitive trade. However, Groups, I and VI, are exceptional in having their distribution patterns centred several hundred kilometres from their source areas. As axes were primarily used for timber working and foraging a deliberate discard after use damage of a valued raw material is unlikely from evidence of reworking as represented by fragments and flakes struck off ground axes in pit fills and other contexts of all Neolithic periods. The stone axe flake found at Marfield is a welcome addition to our expending knowledge of the distribution of the Group VI series. An early Neolithic use in Yorkshire of the Group VI axes has also been illustrated by the Grimston style association fragments of ‘Cumbrian’ type axes found in

features on the Caythorpe Gas Pipeline (Abramson 1996, 65) and in the facade trench at Street House (Vyner 1984, 175). Macroscopic examination of the national stone axe assemblage has shown that some 25% of the Lake District sourced artefacts have been used in Yorkshire (Philips et al, 1988, 56) confirming an early involvement in widespread exchange networks (Bradley & Edmonds 1993).

7.6 Post-medieval activity in Area 12 was characterised by the four previously-excavated structures, which were archaeomagnetically dated to circa 1650 - 1740 (MAP 1997, 8) and interpreted as lime-burning kilns associated with agricultural improvement.

7.7 In addition, the three field drains recorded during the current Watching Brief (contexts 1030, 1034 and 1036) represented further attempts at agricultural improvements, particularly so given that their fills contains stones deliberately cleared from the plough soil. Although no dating material was recovered from the fills of these features, it is tempting to see them as complimentary and probably contemporary to the liming of the field, as evidenced by the construction of the kilns. A plough scar was also noted near Kiln 1.

8. Bibliography

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Vyner, B.	1984	The Excavation of a Neolithic Cairn at Street House, Loftus, Cleveland. Proceedings of the Prehistoric Society 50

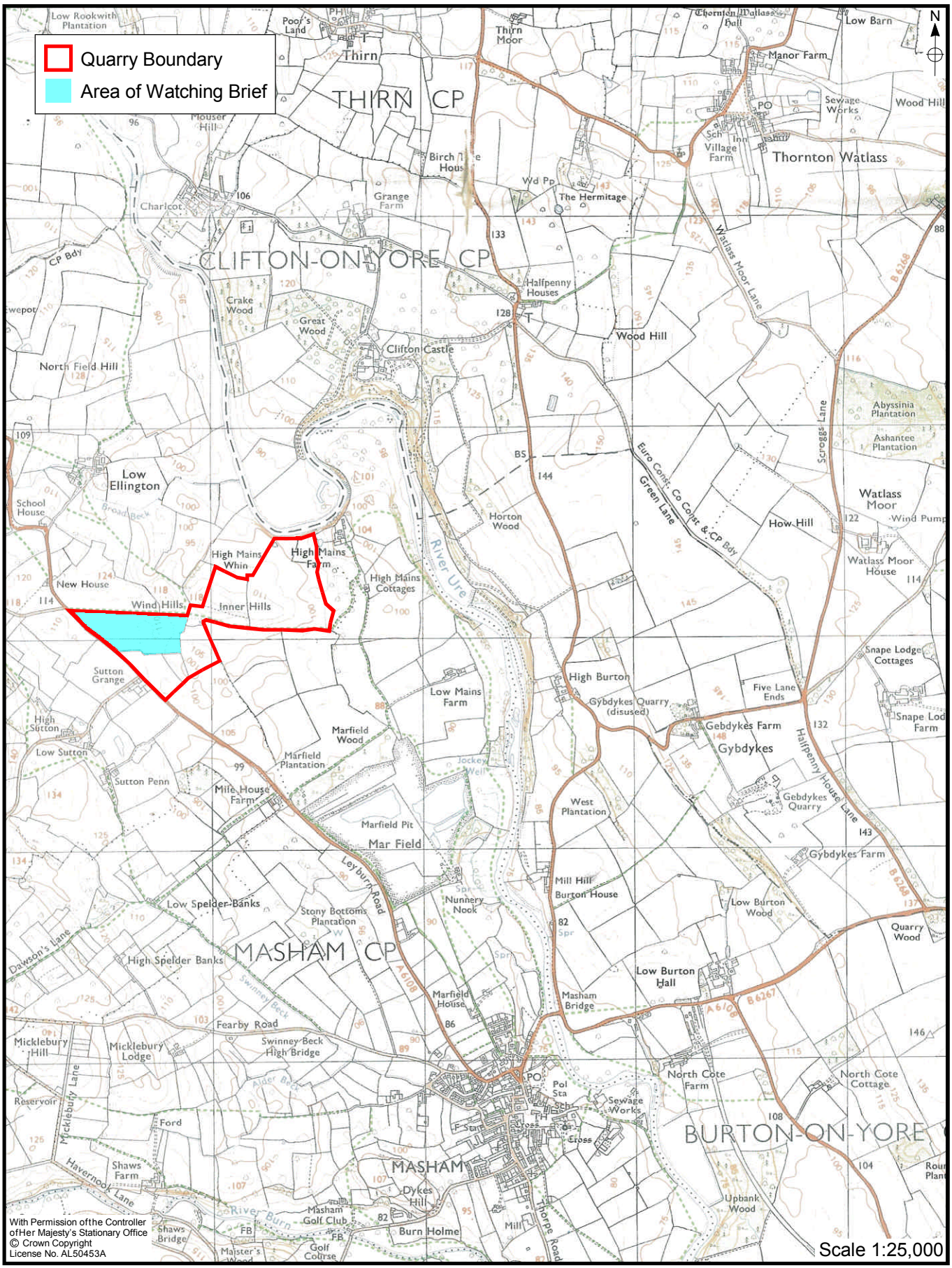

Figure 1. Site Location

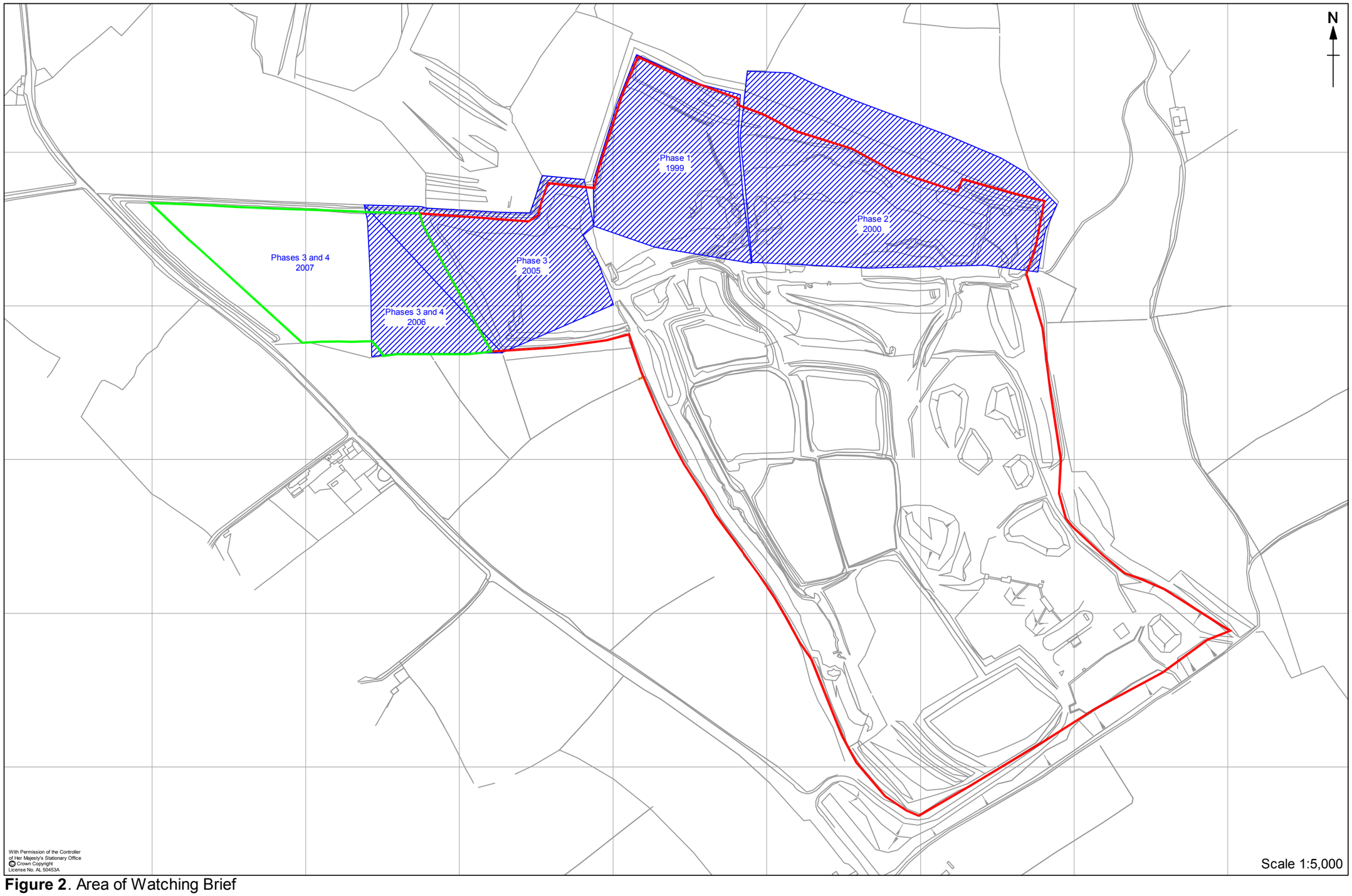

Figure 2. Area of Watching Brief

Figure 3. Plan of Archaeological Features.

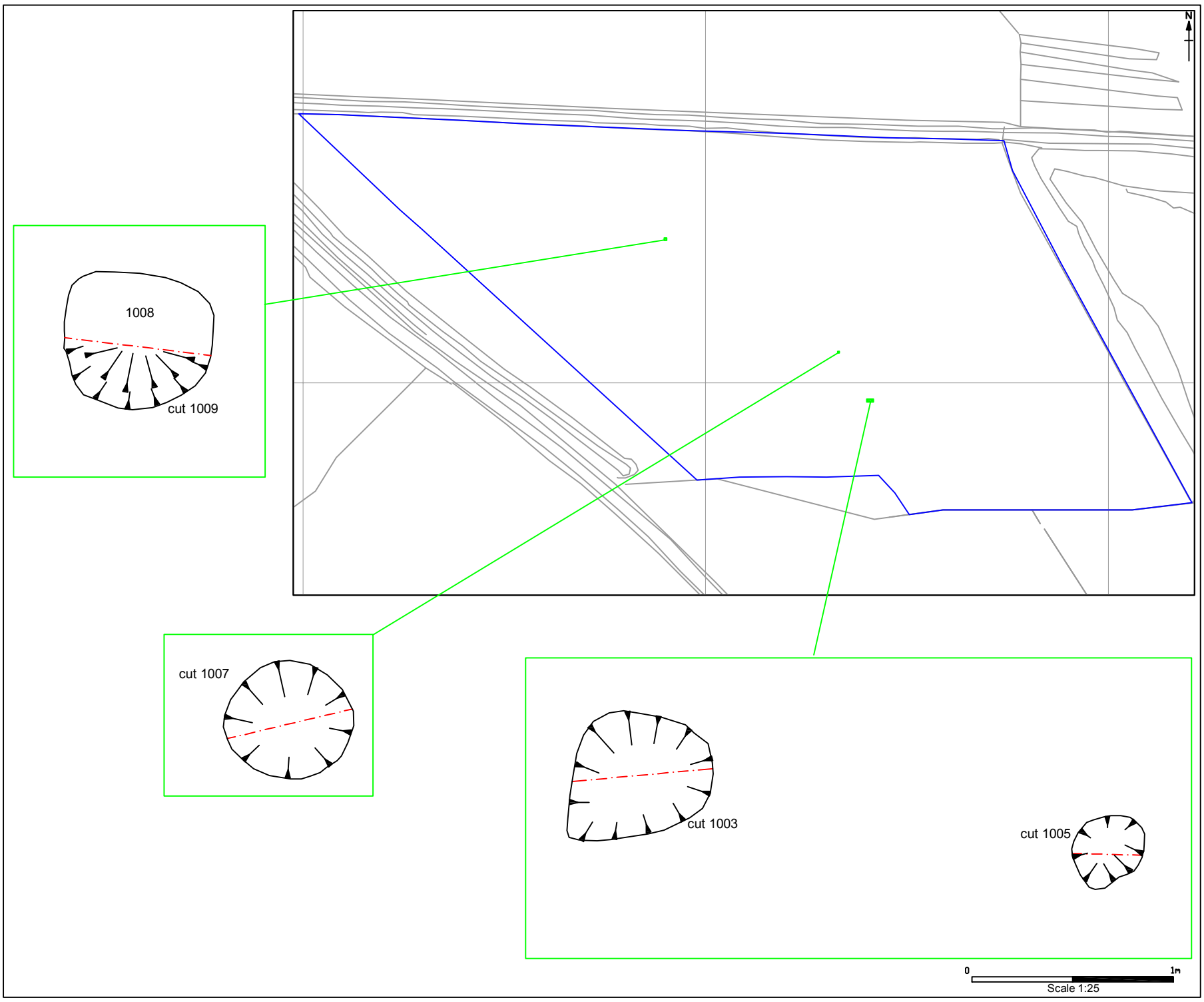

Figure 4. Phase 1 Features: Plan of Cuts 1003, 1005, 1007 and 1009.

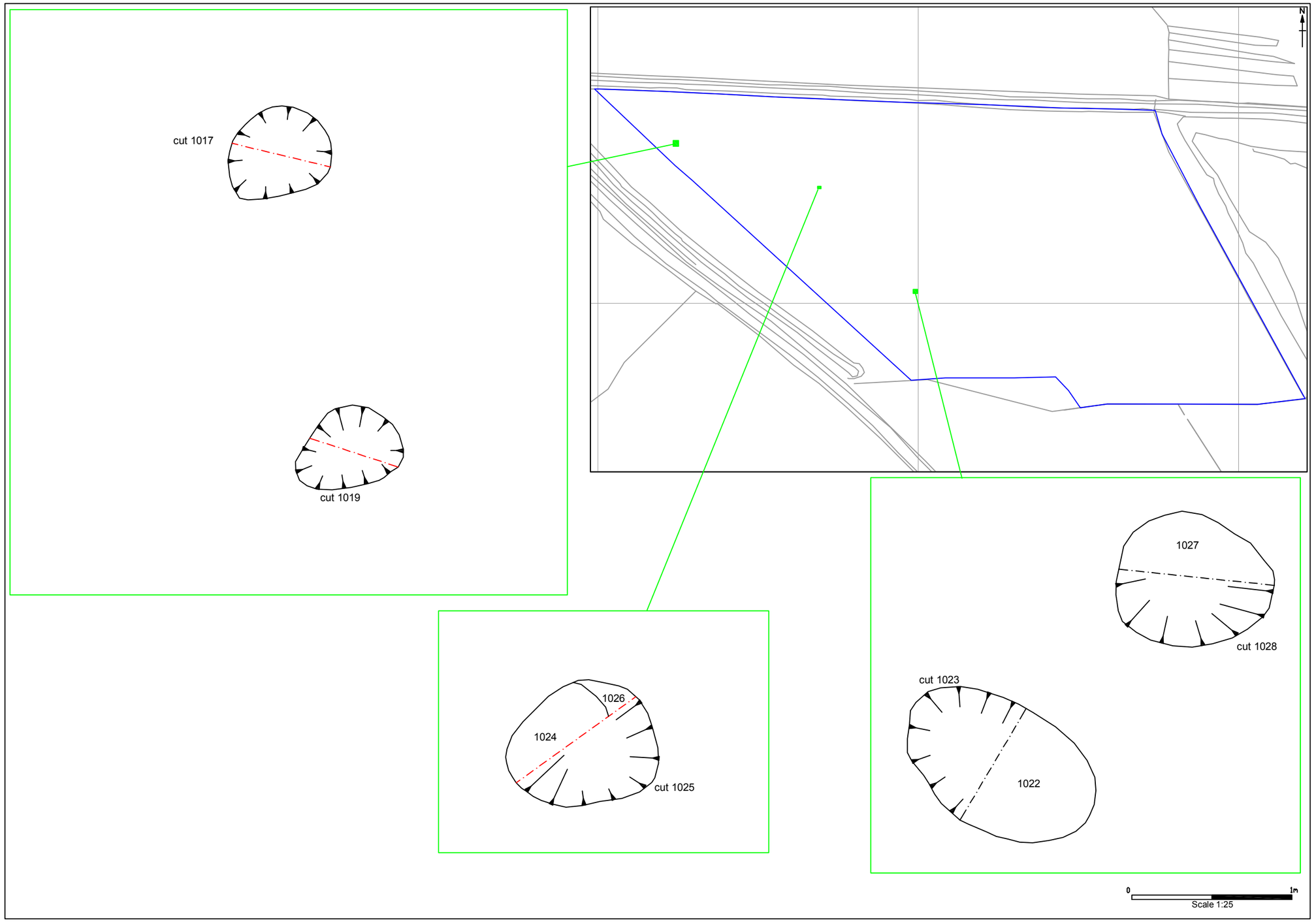

Figure 5. Phase 1 Features: Plan of Cuts 1017, 1019, 1023, 1025 and 1027.

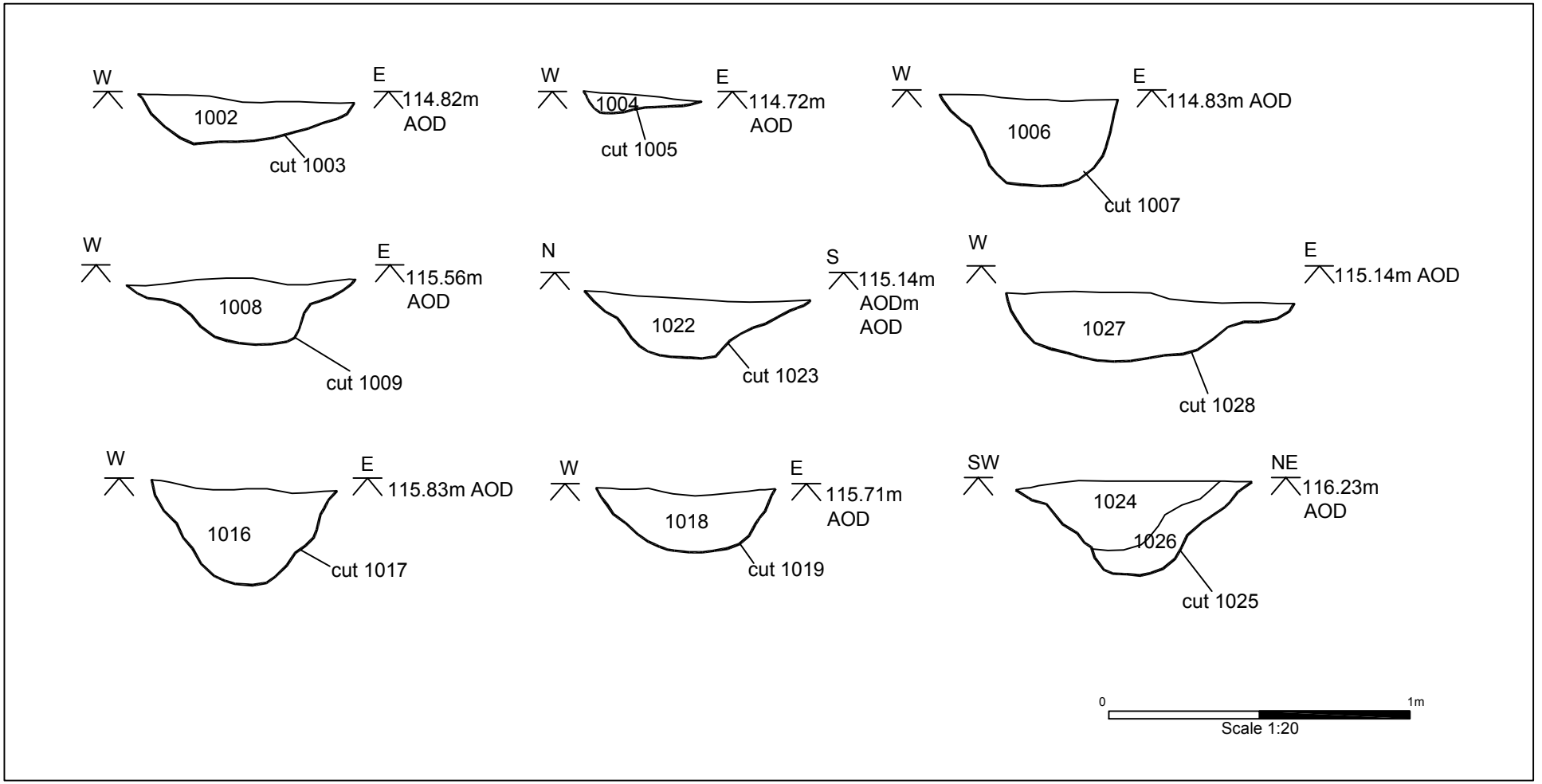

Figure 6. Phase 1 Sections.

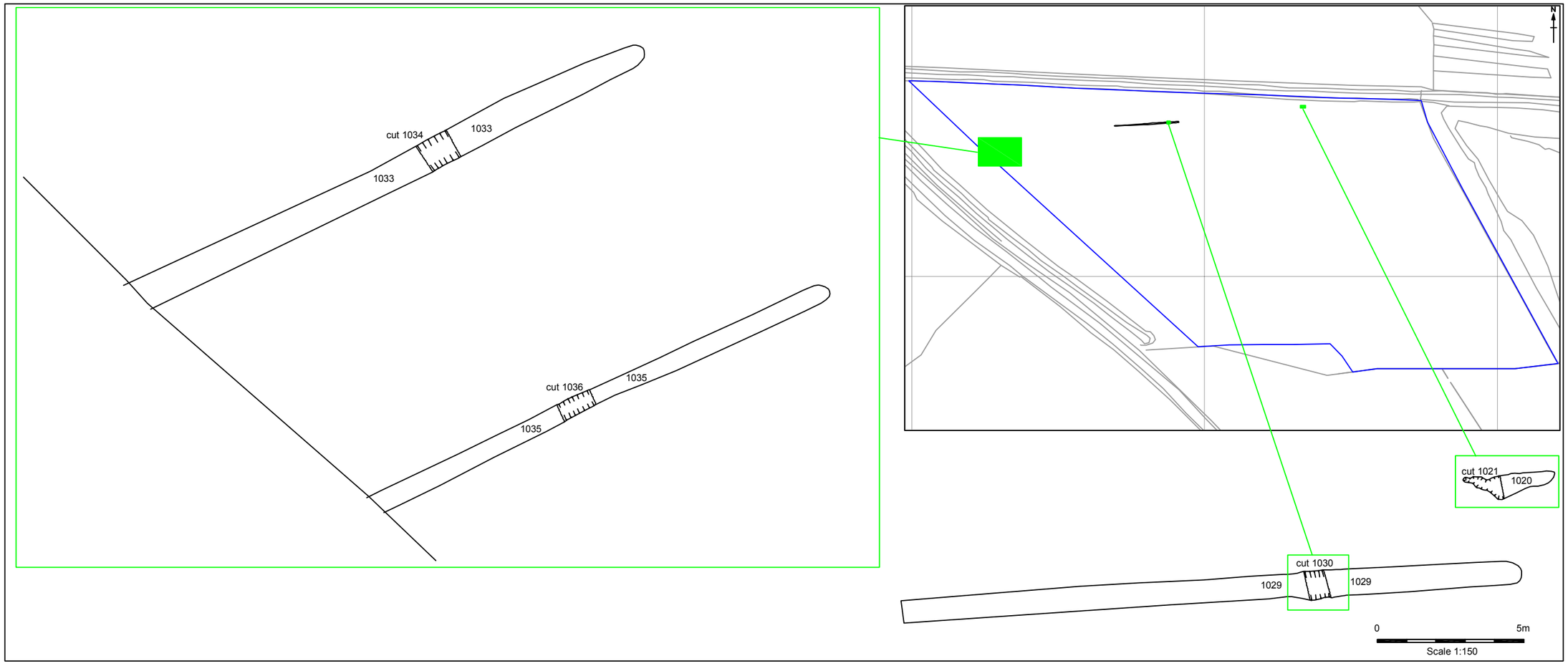

Figure 7. Phase 2 Features: Plan of Cuts 1021, 1030, 1034 and 1036.

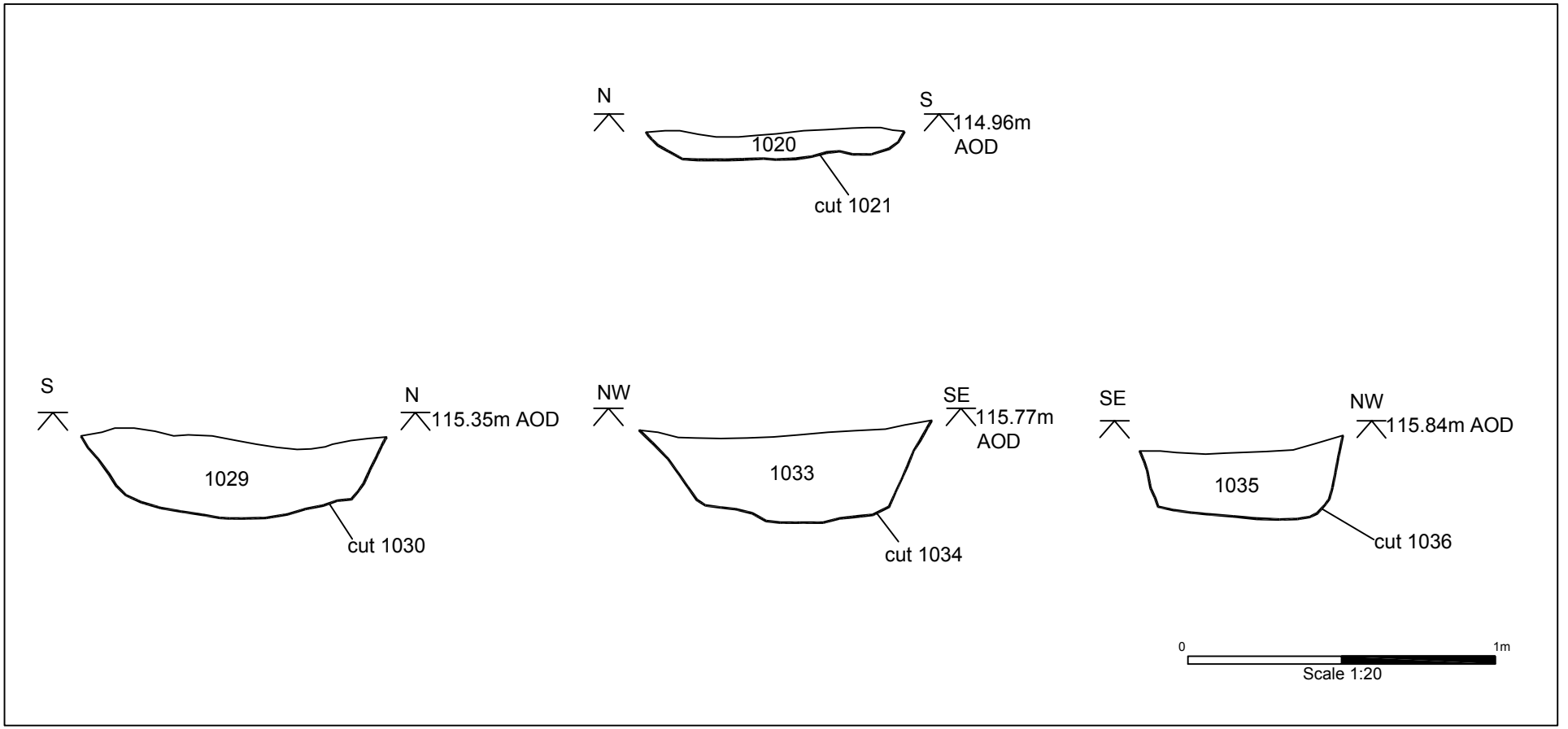

Figure 8. Phase 2 Sections.

Plate 1. Cut 1003. Facing North

Plate 2. Cut 1005. Facing North

Plate 3. Cut 1007. Facing North

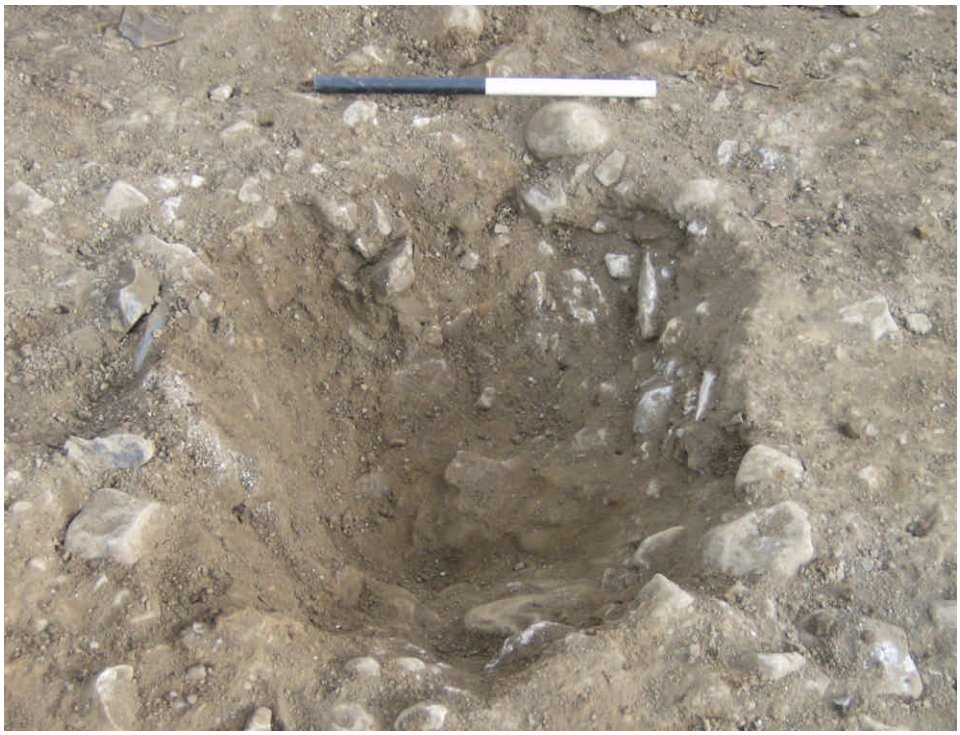

Plate 4. Cut 1023. Facing East

Plate 5. Cut 1028. Facing North

Plate 6. Cut 1017. Facing North

Plate 7. Cut 1019. Facing North West

Plate 8. Cut 1025. Facing West

Plate 9. Cut 1030. Facing West

Plate 10. Cut 1034. Facing North West

Plate 11. Cut 1036. Facing North East

Plate 12. Re-Excavation of Kiln 1. Facing West

Plate 13. Kiln 1. Facing North

Plate 14. Re-Excavation of Kiln 3. Facing North

Plate 15. Cut 1021. Facing East

APPENDIX 1

Context Listing

Marfield Quarry, Masham (Area 12 pt. 2) 07.09.06

Context	Description	
1000	Deposit;	10YR 4/4; clay loam, topsoil/ploughsoil
1001	Deposit;	7.5YR 4/2; slity clay, subsoil
1002	Deposit;	10YR 4/2; silty clay, fill of Cut 1003
1003	Cut;	Pit, filled by 1002
1004	Deposit;	10YR 4/2; silty clay, fill of Cut 1005
1005	Cut;	Pit, filled by 1004
1006	Deposit;	10YR 4/4; silty clay, fill of Cut 1007
1007	Cut;	Pit, filled by 1006
1008	Deposit;	10YR 4/2; silty clay, fill of Cut 1009
1009	Cut;	Pit, filled by 1008
1010	Cut;	Re-excavated segment of Evaluation Kiln 1
1011	Deposit	10yr 4/4; silty clay, burnt natural clay surrounding 1010
1012	Deposit;	10YR 4/2; silty clay, basal fill of Cut 1010
1013	Deposit;	10YR 4/4; silty gravel, secondary fill of Cut 1010
1014	Deposit;	5YR 3/3; silty clay, tertiary fill of Cut 1010
1015	Deposit;	7.5YR 4/2; silty clay, upper fill of Cut 1010
1016	Deposit;	10YR 4/2; silty clay, fill of Cut 1017
1017	Cut;	Pit, filled by 1016
1018	Deposit;	10YR 4/2; silty clay, fill of Cut 1019
1019	Cut;	Pit, filled by 1018
1020	Deposit;	5YR 3/3; sandy gravel, fill of Cut 1021
1021	Cut;	Gully, filled by 1018
1022	Deposit;	10YR 4/2; silty clay, fill of Cut 1023
1023	Cut;	Pit, filled by 1022
1024	Deposit;	10YR 4/4; ashy clay, upper fill of Cut 1025
1025	Cut;	Pit, filled by 1024, 1026
1026	Deposit;	10YR 4/2; silty clay, basal fill of Cut 1025
1027	Deposit;	10YR 4/2; silty clay, fill of Cut 1028
1028	Cut;	Pit, filled by 1027
1029	Deposit;	7.5YR 4/2; silty sand, fill of Cut 1029
1030	Cut;	Field drain segment, filled by 1028
1031	Deposit;	10YR 4/4; sandy clay, fill of Cut 1032
1032	Cut;	Linear feature segment, filled by 1031
1033	Deposit;	7.5YR 4/2; clay silt, fill of Cut 1034
1034	Cut;	Field drain segment, filled by 1033
1035	Deposit;	7.5YR 4/2; clay silt, fill of Cut 1036
1036	Cut;	Field drain segment, filled by 1035

APPENDIX 2

Marfield Quarry, Masham 07.09.06

Finds Catalogue

Context	SF No.	Type	Total	Description	Weight (g)	Spot Date
1002		Pottery	2	2 body sherds	27.18	Early Neolithic - Grimston ware
	6	Lithic	1	1 polished stone axe frag	0.19	Neolithic
	5	Flint	1	Blade fragment	1.6	Neolithic
1018	8	Flint	1	1 flake	0.52	Neolithic
1022		Pottery	2	2 body sherds	6.94	Early Neolithic - Grimston ware
1024		Pottery	1	1 rim sherd	5.58	Early Neolithic - Grimston ware
	9	Flint	1	1 flake	0.39	Neolithic
	1	Flint	1	1 flake	1.36	Neolithic
	2	Flint	1	1 flake	3.56	Neolithic
1026	7	Flint	6	6 spalls	0.97	Neolithic
	4	Flint	1	1 flake	0.63	Neolithic
	3	Flint	1	Blade fragment	2.4	Neolithic

APPENDIX 3

Drawing Archive Listing

Marfield Quarry Masham (Area 12 pt. 2) 07.09.06

Drawing No.	Scale	Type	Description
1	1:10	Section	South-facing section Cut 1005
2	1:10	Section	South-facing section Cut 1003
3	1:10	Section	South-facing section Cut 1007
4	1:20	Plan	Cuts 1003, 1005
5	1:20	Plan	Cut 1007
6	1:10	Section	South-facing section Cut 1009
7	1:20	Plan	Cut 1009
8	1:10	Section	South-facing section Cut 1010
9	1:10	Section	West-facing section Cut 1021
10	1:20	Plan	Cut 1021
11	1:10	Section	South-facing Evaluation Kiln 3
12	1:10	Section	South-facing section Cut 1017
13	1:10	Section	Southeast-facing section Cut 1019
14	1:20	Plan	Cuts 1017, 1019
15	1:10	Section	West-facing section Cut 1023
16	1:20	Plan	Cut 1023
17	1:10	Section	South-facing section Cut 1028
18	1:20	Plan	Cut 1028
19	1:10	Section	South-facing section Cut 1030
20	1:20	Plan	Cut 1030
21	1:10	Section	Southeast-facing section Cut 1025
22	1:20	Plan	Cut 1025
23	1:10	Section	Southeast-facing section Cut 1034
24	1:20	Plan	Cut 1034
25	1:20	Plan	Full excavation plan, Cuts 1017, 1019
26	1:20	Plan	Full excavation plan, Cuts 1003, 1005
27	1:20	Plan	Full excavation plan, Cut 1007
28	1:10	Section	Northeast-facing section Cut 1036
29	1:20	Plan	Cut 1036

APPENDIX 4

Photographic Archive Listing

Marfield Quarry, Masham (Area 12 pt. 2) 07.09.06

Film 1010: Colour Slide

Frame	Description	Scale	Facing
31	Kiln 1 (Cut 1010) re-excavated	1 x 1m	North-west
32	Cut 1003 1/2 section	1 x 0.5m	North
33	Cut 1003 1/2 section	1 x 0.5m	North
34	Cut 1005 1/2 section	1 x 0.5m	North
35	Cut 1005 1/2 section	1 x 0.5m	North
36	Cut 1007 1/2 section	1 x 0.5m	North
37	Cut 1007 1/2 section	1 x 0.5m	North

Film 1031: Colour Slide

Frame	Description	Scale	Facing
1	I.D shot	N/A	N/A
2	Cut 1009	1 x 0.3m	North
3	Cut 1009	1 x 0.3m	North
11	Cut 1034	1 x 0.5m	North-east
12	Cut 1034	1 x 0.5m	North-east
13	Cut 1017	1 x 0.5m	North-east
14	Cut 1017	1 x 0.5m	North-east
15	Cut 1019	1 x 0.5m	North-east
16	Cut 1019	1 x 0.5m	North-east
17	Cut 1003	1 x 0.5m	North
18	Cut 1003	1 x 0.5m	North
19	Cut 1005	1 x 0.5m	North
20	Cut 1005	1 x 0.5m	North
21	Cut 1036	1 x 0.5m	South-west
22	Cut 1036	1 x 0.5m	South-west
23	Cut 1007	1 x 0.5m	East
24	Cut 1007	1 x 0.5m	East

Film 1032: Monochrome

Frame	Description	Scale	Facing
1	I.D shot	N/A	N/A
2	Cut 1003 1/2 section	1 x 0.5m	North
3	Cut 1003 1/2 section	1 x 0.5m	North
4	Cut 1005 1/2 section	1 x 0.5m	North
5	Cut 1005 1/2 section	1 x 0.5m	North
6	Cut 1007 1/2 section	1 x 0.5m	North
7	Cut 1007 1/2 section	1 x 0.5m	North
8	Cut 1009	1 x 0.3m	North
9	Cut 1009	1 x 0.3m	North
10	Kiln 1 (Cut 1010) re-excavated	1 x 1m	North-west
19	Cut 1034	1 x 0.5m	North-east
20	Cut 1034	1 x 0.5m	North-east
21	Cut 1017	1 x 0.5m	North-east
22	Cut 1017	1 x 0.5m	North-east

23	Cut 1019	1 x 0.5m	North-east
24	Cut 1019	1 x 0.5m	North-east
25	Cut 1003	1 x 0.5m	North
26	Cut 1003	1 x 0.5m	North
27	Cut 1005	1 x 0.5m	North
28	Cut 1005	1 x 0.5m	North
29	Cut 1036	1 x 0.5m	South-west
30	Cut 1036	1 x 0.5m	South-west
31	Cut 1007	1 x 0.5m	East
32	Cut 1007	1 x 0.5m	East

Digital Camera

Frame	Description	Scale	Facing
1	Pre-ex view Cut 1025	1 x 0.5m	North
2	Cut 1017	1 x 0.5m	North-east
3	Cut 1019	1 x 0.5m	North-east
4	Cut 1007	1 x 0.5m	East
5	Cut 1003 1/2 section	1 x 0.5m	North
6	Cut 1005 1/2 section	1 x 0.5m	North
7	Cut 1010	1 x 1m	West
8	Cut 1010	1 x 1m	West
9	Cut 1034	1 x 0.5m	South-west
10	Cut 1021	1 x 0.5m	East
11	Cut 1021	1 x 0.5m	West
12	Cut 1030	1 x 0.5m	West
13	Cut 1030	1 x 0.5m	West
14	Cut 1025	1 x 0.5m	West
15	Cut 1036	1 x 0.5m	North-east
16	Kiln 1 (Cut 1010) re-excavated	1 x 1m	West
17	Cut 1017	1 x 0.5m	North
18	Cut 1023	1 x 0.5m	East
19	Deposit 1024	1 x 0.5m	East
20	Cut 1019	1 x 0.5m	North-west
21	Cut 1028	1 x 0.5m	North
22	Cut 1023	1 x 0.5m	West
23	Cut 1010	1 x 1m	North-east
24	Cut 1007	1 x 0.5m	North
25	Cut 1003	1 x 0.5m	North
26	Cut 1010	1 x 1m	West
27	Cut 1010	1 x 1m	North-east
28	Cut 1005	1 x 0.5m	North
29	Cut 1028	1 x 0.5m	North
30	Pre-excavation view of Kiln 3	1 x 1m	North
31	Pre-excavation view of Kiln 3	1 x 1m	South
32	Cut 1023	1 x 0.5m	East
33	Cut 1017	1 x 0.5m	North
34	Cut 1034	1 x 0.5m	North-east
35	Cut 1034	1 x 0.5m	North-east
36	Deposit 1024	1 x 0.5m	West
37	Cut 1028	1 x 0.5m	North
38	Post-excavation view of Kiln 3	1 x 1m	North
39	Cut 1023	1 x 0.5m	East
40	Cut 1023	1 x 0.5m	East

APPENDIX 5

Marfield Quarry, Masham, North Yorkshire (MAP 07-09-06)
Carbonised Plant Macrofossils and Charcoal
Diane Alldritt

1: Introduction

Nine environmental sample flots from excavations at Marfield Quarry, Masham, North Yorkshire were assessed for carbonised plant macrofossils and charcoal. In addition four unsorted bags of sample retent and one spot sample of charred material were also analysed for identifiable carbonised remains. Samples examined from context numbers above (1000) all originated from pit features in Area 12.

2: Methodology

Bulk environmental samples were processed by MAP using an Ankara style water flotation system (French 1971). All sample flots were dried prior to examination under a low powered binocular microscope. Sample retents were sorted by eye and any identifiable material extracted. The spot sample was washed into a >250 micron Endicott sieve, dried and subsequently examined under a microscope.

Charred plant remains were present in various amounts from <2.5ml to up to 120ml, with many samples producing large quantities of tea-leaf sized burnt detritus, mostly wood charcoal. Modern root fragments were present but extremely scarce in amounts up to 2.5ml only, indicating very little modern contamination. All identified plant remains including charcoal were removed and bagged separately by type.

Wood charcoal was examined using a high powered Vickers M10 metallurgical microscope at magnifications up to x200. The reference photographs of Schweingruber (1990) were consulted for charcoal identification. Plant nomenclature utilised in the text follows Stace (1997) for all vascular plants apart from cereals, which follow Zohary and Hopf (2000).

3: Results

Results are presented in table 1 and discussed below.

4: Discussion

4.1: Summary of Results

The fourteen assessment samples from Marfield Quarry produced overall a very nicely preserved assemblage of carbonised plant remains consisting of often quite large quantities of hazel nutshell and smaller amounts of cereal grain and weed seeds. Wood charcoal was also present and generally less well preserved than the other remains, although it was possible to identify oak, hazel and birch indicating the use of woodland areas for fuel and other resources. The pit feature samples from contexts above (1000) produced a greater range of plant remains and in a better state of preservation than the samples from the (100)+ contexts. The combination of large quantities of hazel nutshell fragments, oak charcoal and the presence of emmer wheat in some of the samples would suggest perhaps an early, possibly Prehistoric, date for the material in Area 12.

4.2.1: Sample 1 (1024) Upper Fill of Pit (1025)

Sample 1 (1024) produced a very nice assemblage of carbonised plant material including a small amount of cereal grain and weed seeds together with hazel nutshell and indeterminate wood charcoal. The cereal grain was identified as *Triticum dicoccum* (emmer) wheat and found in conjunction with typical weeds of agricultural or waste ground, including *Galium aparine* (cleavers) and *Fallopia convolvulus* (black bindweed). It is most likely that this material represents waste from cereal processing activity, and probably reflects agricultural practices occurring in the locality of Area 12. The cereal grain may possibly be an intrusive or later inclusion in the pit deposit, hence it would be interesting to date both cereal grain and hazel shell from this feature in order to check that they are contemporary.

Spot Sample (1024) taken from the same pit as above consisted of an abundant concentration of well preserved *Corylus avellana* (hazel) nutshells together with a single fragment of *Corylus* (hazel) wood charcoal. This material represents a cache of hazelnuts, perhaps roasted as a small ‘snack’, and would be highly suitable for radiocarbon dating.

4.2.2: Sample 2 (1026) Basal Fill of Pit (1025)

The basal deposit from pit (1025) contained less material than the upper fill, but a similar range of plant remains was recovered. The small flot from this sample consisted of almost entirely hazel nutshell, together with a single weed seed (*Galium aparine*) and a very small fragment of indeterminate wood charcoal. No cereal grain was recorded from this basal deposit.

4.2.3: Sample 3 (1022) Fill of Pit (1023)

This pit contained a similarly large cache of hazel nutshells to the previous samples. It also contained a single indeterminate cereal grain, perhaps hinting at arable agriculture in the area, although this fragment could equally be a trace or wind blown occurrence. Two pieces of *Corylus* (hazel) charcoal were present indicating the use of open woodland for fuel. Indeed the wood charcoal and hazelnut remains suggest the exploitation of wild woodland resources for both food and fuel.

4.2.4: Sample 4 (1027) Fill of Pit (1028)

Pit sample 4 (1027) produced an almost identical range of plant remains to pit fill (1022) with a single indeterminate cereal grain (again perhaps an accidental / wind blown inclusion), two pieces of hazel charcoal, but in this case a much smaller quantity of hazel nutshell being deposited.

4.2.5: Sample 6 (1016) Fill of Pit (1017)

This sample produced a large amount of indeterminate slivers of tea leaf sized wood charcoal, all very oak-like in appearance. Four larger fragments of charcoal from the sample were indeed identified as *Quercus* (oak) suggesting that this sample was probably entirely made up of oak. This material represents a woodland resource being used as fuel, perhaps in a fire-pit type setting.

4.2.6: Sample 7 (1018) Fill of Pit (1019)

As with (1016) this sample from pit fill (1018) contained oak charcoal only.

4.2.7: Sample 8 (1002) Fill of Pit (1003)

This sample was quite similar in constituents to that from (1024) although the plant remains were recovered in smaller amounts. Evidence for arable agriculture was trace in the form of *Triticum dicoccum* (emmer wheat) cereal grain with occasional indeterminate specimens suggesting possible wind blown intrusions. Hazel nutshells and indeterminate wood charcoal were also present.

4.2.8: Sample 9 (1006) Fill of Pit (1007)

Sample 9 (1006) consisted of entirely wood charcoal with *Quercus* (oak) and *Betula* (birch) both identified. These indicated the use of mixed deciduous woodland for fuel, probably with open lighter or scrub areas in the vicinity.

4.2.9: Sample 11 (1004) Fill of Pit (1005)

This sample contained a single fragment of hazel nutshell only. This may be a trace inclusion and reflect on activities occurring elsewhere in the area.

5: Conclusion

The environmental samples from Marfield Quarry produced a generally very nicely preserved assemblage of carbonised plant material with abundant fragments of hazel nutshell concentrated in pit fills (1024), (1026) and (1022). Pit fills (1002), (1004) and (1027) also produced nutshell, but in smaller amounts.

Wood charcoal was identified as oak, hazel and birch, indicating the exploitation of mixed deciduous woodland environments, with open lighter areas of forest present in the vicinity, primarily as a fuel resource, but also for gathering wild food resources such as hazel nuts. The combination of charcoal types together with the use of gathered nuts strongly indicated a Prehistoric, perhaps quite early, date for the site.

The presence of emmer wheat in samples (1002) and (1024) may also reflect a fairly early date for the remains. However, a note of caution should be taken as some of the cereal grain may represent later intrusions in the pit fills and not be contemporary with the nutshell and charcoal evidence. Radiocarbon dating would clarify this point.

Overall the samples have shown a very high potential for future sampling and excavation work to produce abundant and well preserved carbonised plant remains, including wood charcoal, within certain areas of the site.

References

French, D. H. 1971 An Experiment in Water Sieving. *Anatolian Studies 21* 59-64.

Schweingruber, F. H. 1990 *Anatomy of European Woods*. Paul Haupt Publishers Berne and Stuttgart.

Stace, C. 1997 *New Flora of the British Isles*. 2nd Edition Cambridge University Press.

Zohary, D. and Hopf, M. 2000 *Domestication of Plants in the Old World*. 3rd Edition Oxford University Press.

Table 1: Marfield Quarry, Masham, North Yorkshire: Carbonised Plant Remains, Charcoal and Other Material from Contexts (1002)-(1027):

Marfield Quarry, North Yorkshire	**Sample**	1	Spot	2	3	4	6	7	8	9	11
MAP 07-09-06	**Context**	1024	1024	1026	1022	1027	1016	1018	1002	1006	1004
(Area 12 pt.2)	**Feature**	Upper Pit (1025)	Pit (1025)	Basal Pit (1025)	Pit (1023)	Pit (1028)	Pit (1017)	Pit (1019)	Pit (1003)	Pit (1007)	Pit (1005)
	Total CV	10ml	30ml	2.5ml	15ml	5ml	40ml	120ml	50ml	60ml	10ml
	Modern	<2.5ml	N/a	0	2.5ml	<2.5ml	<2.5ml	<2.5ml	2.5ml	<2.5ml	0
Carbonised Cereal Grain	**Common Name**										
Triticum dicoccum	emmer wheat	3							1		
Indeterminate cereal grain (+embryo)		10			1	1			4		
Carbonised Wild Resources											
Corylus avellana nutshell	hazel nutshell	1 (0.03g)	132 (17.82g)	9 (0.24g)	60 (1.01g)	2 (<0.01g)			4 (0.07g)		1 (0.03g)
Malus sylvestris type pip	crab apple type pip	1									
Charcoal											
Quercus	oak						4 (0.35g)	1 (0.08g)		5 (1.72g)	
Corylus	hazel		1 (0.43g)		2 (0.02g)	2 (0.12g)					
Betula	birch									4 (1.07g)	
Indeterminate charcoal		3 (0.07g)		1 (<0.01g)					2 (0.10g)	6 (1.04g)	
Carbonised Weeds											
Fallopia convolvulus	black bindweed	2									
Rumex sp.	docks	1									
Galium aparine	cleavers	2		1							
Fabaceae (large)	pea Family	1									
Indeterminate weed		2									
Other Remains											
Non-marine mollusc shell		1			3						
Earthworm egg capsules											

APPENDIX 6

Lithic Assessment

Introduction

A total of fourteen pieces were submitted for assessment consisting of thirteen pieces of flint and a single spall of a polished stone axe. The assemblage was recovered by hand excavation from the fills of a number of pits (1003, 1019, 1023 & 1025).

Flint Catalogue

1. Primary flake. Cortex remnant 5YR 7/1

27.46mm x 16.89mm x 3.76mm

Weight 1.36gms

Context 1024 – fill of Pit 1025

2. Core rejuvenation flake. 7.5YR 2.5/1

32.16mm x 27.49mm x 4.03mm

Weight 3.56gms

Context 1024 – fill of Pit 1025

3. Blade fragment. Proximal snapped. Patinated. Partial secondary working on left and right laterals. 5YR 4/1

26.50mm x 20.11mm x 4.29mm

Weight 2.40gms

Context 1026 – fill of Pit 1025

4. Core rejuvenation flake. 5YR 8/1

21.93mm x 8.43mm x 2.44mm

Weight 0.63gms

Context 1026 – fill of Pit 1025

5. Blade. Snapped proximal. Patinated. No secondary retouch. 5YR 7/1

29.90mm x 10.97mm x 3.85mm

Weight 1.60gms

Context 1002 – fill of Pit 1003

6. Spall. ? stone axe derivation. 2.5YR 6/1

35.68mm x 20.38mm x 2.84mm

Weight 0.19gms

Context 1002 – fill of Pit 1003.

7. Spalls x 6. . 5YR 7/1

15.49mm x 8.83mm x 1.98mm

15.03mm x 7.73mm x 1.83mm

15.49mm x 10.74mm x 2.36mm

7.65mm x 5.40mm x 1.81mm

6.84mm x 7.50mm x 1.39mm

5.51mm x 4.85mm x 1.86mm

Weight 0.97gms

Context 1026 – fill of Pit 1025.

8. Flake. Primary. Cortex remnant. Patinated 5YR 5/1

25.34mm x 9.70mm x 2.04mm

Weight 0.52gms

Context 1018 – fill of Pit 1019

9. Flake. Core rejeuvenation flake. Percussion bulb. 5YR 3/1

18.64mm x 14.9mm x 1.70mm

Weight 0.39gms

Context 1024 – fill of Pit 1025

Summary

The assemblage was dominated by debitage, a ratio of 1 v 6. Only two tools were recovered, two damaged blades, both of which had been snapped.

Securely associated material was recovered from Pits 1003 and 1025. The pottery from these contexts was of the Grimston style and of an early Neolithic date (c. 4400-3600 cal BC). The levels of debitage to finished tools are consistent with similar finds from other pit clusters dated by pottery association to the early Neolithic. Whatever the chosen interpretation for the function of these pits ritual v waste disposal the associated assemblage remains constant – see section 7 of the main report for a more detailed consideration of excavated sites from this period.

Recommendations

The assemblage should be retained and deposited at the relevant museum with previously recovered lithic material from the quarry. No further work is recommended on the assemblage.

APPENDIX 7

East Riding Archaeological Research Trust
Registered Charity No. 1001551

Lafarge Quarry, Marfield 2007. THE PREHISTORIC POTTERY

AN ASSESSMENT FOR MAP ARCHAEOLOGICAL CONSULTANCY LTD

1. ASSESSMENT: Three groups of fragmentary pottery was received from the 2007 excavations at Lafarge Aggregates Quarry at Marfield, near Masham, North Yorkshire for an assessment.

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1.2: Condition

1.2:1. Group 1, Context 1002, Pit 1003: A fragmentary assemblage of two sherds, in hard dry condition. The fragments were small and had fractured edges with no evidence of exposure to weathering effects which would indicate their dumping into the pit soon after breakage. Voids created by dissolved organic grits are apparent on both faces with a higher incidence on the interior. Mica inclusions in fabric. No residue. Wall thickness 11.75mm. Very dark grey interior, exterior and core.

1.2:2 Group 2, Context 1022, Pit 1023: A fragmentary assemblage of two sherds, in hard dry condition. The fragments were small and had fractured edges with no evidence of exposure to weathering effects which would indicate their dumping into the pit soon after breakage. Small voids created by dissolved organic grits are apparent on both faces. No residue. Wall thickness 8.79mm. Buff interior, and exterior with black core.

1.2:3 Group 3, Context 1024, Pit 1025: A single plain rim sherd. Voids created by dissolved organic grits are apparent on both faces with a higher incidence on the interior. Mica inclusions in fabric. Wall thickness 7.14mm. Vessel diameter 27cm. Black exterior, interior and core.

1.3: Identification and Dating

1.3:1. Group 1 – 3 : Belong to a one or more carinated bowls of the Grimston Style. The rim from Group 3 suggests a calculated rim diameter of some 27 cm,. Of the sherds recovered the wall thickness varied from between 8.79mm to 11.75mm. The fabric character is that of the designated Grimston Style, a wide- spread ceramic tradition within the Early Neolithic Period and dating broadly to the 4th and 5th Millennium BC, based on a limited number of radiocarbon dates to c. 4400-3600 cal BC (Manby, Moorhouse and Ottaway 2003, 47).

1.4 Recommendations

1.4.1. This small assemblage requires no further work and should be deposited in the relevant museum. However the pottery associated with material suitable for radio-carbon dating, charcoal and hazelnut shells - Pits 1003, 1023 and 1025, should be submitted for dating.

T.G.Manby
29/11/2007