

**ST RICHARDS HOSPITAL,
CHICHESTER, WEST SUSSEX**

**NGR: SU 8790 0585
(Centred)**

**ARCHAEOLOGICAL EVALUATION
&
WATCHING BRIEF**

Report No. 507

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Quality Assurance

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Author R. King and D. King

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Approved A Hood

QA Checked T. Michaels

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CONTENTS

Summary

Glossary

- 1 INTRODUCTION
- 2 PROJECT BACKGROUND
- 3 AIMS
- 4 METHODOLOGY
- 5 RESULTS
- 6 PALAEOENVIRONMENTAL EVIDENCE
- 7 CONCLUSION
- 8 BIBLIOGRAPHY
- 9 ACKNOWLEDGEMENTS

- Appendix 1 Worked Flint
Appendix 2 Early Neolithic Pottery
Appendix 3 Roman Pottery
Appendix 4 Wood Charcoal

FIGURE LIST

- Figure 1: Site Location
Figure 2: Trench, Area and Feature Locations
Figure 3: Trenches 2, 3 & 4, Plans and Sections
Figure 4: Trenches 5 & 6, Plans and Sections
Figure 5: Trench 1 Extension, Plan and Sections
Figure 6: Trench 7 Extension, Plan and Sections
Figure 7: Watching Brief Trench Sections
Figure 8: Neolithic Pottery Illustrations

SUMMARY

This report presents the findings of an archaeological evaluation with subsequent mitigation works in the form of Area Strip and Watching Brief undertaken by Foundations Archaeology in April and June 2006 on land in the grounds of St Richards Hospital, Chichester, West Sussex (NGR: SU 8790 0585). The project was commissioned by Ben Stephenson of Waterman CPM on behalf of Persimmon Homes (South Coast) Ltd.

Planning permission (Application ref. CC/04/02815/FUL) has been granted for the construction of residential units with associated car parking and landscaping covering approximately one hectare. A planning condition requiring a programme of pre-determination archaeological evaluation was required by Chichester District Council in accordance with PPG16 (DoE 1990) and Policy BE3 of the Chichester Local Plan in advance of groundworks.

The project required the excavation of seven trenches, four measuring 50m x 2m and three measuring 30m x 2m.

Archaeological features were identified in two trenches, leading to the further excavation of two small open areas around Trenches 1 and 7. The excavation of these areas respectively defined an area of Neolithic pits and a small Roman enclosure.

A watching brief was subsequently carried out in the vicinity of the Roman enclosure in order to further define its extent and to record any damage to the feature caused by the groundworks for the new development.

GLOSSARY OF ARCHAEOLOGICAL TERMS AND ABBREVIATIONS

Archaeology

For the purpose of this project, archaeology is taken to mean the study of past human societies through their material remains from prehistoric times to the modern era. No rigid upper date limit has been set, but AD 1900 is used as a general cut-off point.

CBM

Ceramic Building Material.

Medieval

The period between the Norman Conquest (AD 1066) and *circa* AD 1500.

Natural

In archaeological terms this refers to the undisturbed natural geology of a site.

Neolithic

The period traditionally dated between 4000 and 2000 BC.

NGR

National Grid Reference from the Ordnance Survey Grid.

OD

Ordnance datum; used to express a given height above sea-level. (AOD Above Ordnance Datum).

OS

Ordnance Survey.

Post-Medieval

Period from *circa* AD 1500 onwards.

Prehistoric

For the purpose of this report Prehistoric is defined as being the period prior to the Roman invasion of AD43.

Roman

Period traditionally dated AD 43 to *circa* AD 410.

1 INTRODUCTION

- 1.1 This report presents the findings of an archaeological evaluation with subsequent mitigation works in the form of two small open area excavations and a watching brief undertaken by Foundations Archaeology in April and June 2006 on land in the grounds of St Richards Hospital, Chichester, West Sussex (NGR: SU 8790 0585). The project was commissioned by Ben Stephenson of Waterman CPM on behalf of Persimmon Homes (South Coast) Ltd.
- 1.2 Foundations Archaeology is certified to BS/EN/ISO 9001: 2000 for quality assurance in the provision of archaeological services. The company is a Registered Organisation with the Institute of Field Archaeologists and subscribes to that organisation's Code of Conduct. All relevant IFA Codes of Practice were adhered to throughout the course of the project.
- 1.3 This report constitutes the results of the archaeological works. The project was undertaken in accordance with the *Standard and Guidance for Archaeological Evaluations* issued by the Institute of Field Archaeologists (1994, revised 2001) and the written schemes of investigation prepared by Foundations Archaeology; *St Richards Hospital, Chichester: Archaeological Evaluation* (2005) and *St Richards Hospital, Chichester: Archaeological Mitigation* (2006).

2 PROJECT BACKGROUND

- 2.1 Planning permission (Application ref. CC/04/02815/FUL) has been granted for the construction of residential units with associated car parking and landscaping covering approximately one hectare. The site consists of rough ground in the south and a small area of hard standing, formerly a car park, in the north, all which formerly belonged to the hospital. The site is bounded on the west by the grounds of St Richards Hospital, to the east by Palmer's Field Avenue to the south by further rough ground and to the north by a bank, thought to be part of an Iron Age entrenchment system.
- 2.2 The study area has not been the subject of a desk-based assessment. Investigations nearby, however, indicated that there is the potential for Roman and Medieval remains within the site, as well as part of the possible Iron Age entrenchment system. The study area therefore contained the potential for significant archaeological features and deposits predominantly dating to the prehistoric, Roman and Medieval periods. A field evaluation involving the excavation of seven trenches was therefore requested by Chichester City Council.
- 2.3 During the evaluation phase of works probable prehistoric and Roman features were identified within Trenches 1 and 7 respectively. Following consultation with Chichester City Archaeologist James Kenny, these two trenches were extended. The western half of Trench 1 was extended 30m to the north and south and 20m to the west, creating an area of 600m² centred on the trench. The central part of Trench 7 centred on the ditch was extended to 15m in length and 10m in width, creating an area of 150m² (Figure 2).

- 2.4 Following completion of the evaluation stage, it was agreed at a site meeting with James Kenny and Andrew Crutchley of Waterman CPM on Friday 17th March 2006 that an additional phase of works should be carried out in the area of identified archaeology around Trench 7 in order to fully investigate the exposed features and any related archaeological remains. As a result, the area around Trench 7 was subject to a watching brief (Figures 2 and 7).
- 2.5 The study area therefore revealed archaeological features and deposits, predominantly associated with the prehistoric and Roman periods.

3 AIMS

- 3.1 The aims of the archaeological evaluation were to gather high quality data from the direct observation of archaeological deposits, in order to provide sufficient information to establish the nature, extent, preservation and potential of any surviving archaeological remains; as well as to make recommendations for management of the resource, including further archaeological works if necessary. In turn this would satisfy the planning condition attached to the permission.
- 3.2 These aims were achieved through pursuit of the following specific objectives:
- i) To define and identify the nature of archaeological deposits on site, and date these where possible;
 - ii) To attempt to characterise the nature of the archaeological sequence and recover as much information as possible about the spatial patterning of features present on the site;
 - iii) To recover a well dated stratigraphic sequence and recover coherent artefact, ecofact and environmental samples.

4 METHODOLOGY

- 4.1 **Evaluation.** The project required the excavation of seven trenches, four 50m x 1.8m trenches (Trenches 1-4) and three 30m x 1.8m trenches (Trenches 5-7). Trench locations are shown on Figure 2.
- 4.2 **Mitigation Works: Area Strip.** Two small open areas, Area A and Area B, around Trenches 1 and 7 were subsequently excavated. The area around Trench 1, Area A, was centred on the western half of Trench 1 and measured 30m x 20m. The area around Trench 7, Area B, was centred around the possible enclosure ditch and measured 15m x 10m (Figure 2).
- 4.3 Topsoil and non-significant overburden was removed to the top of archaeological deposits or natural, whichever was encountered first. This was achieved with the use of a mechanical excavator with a toothless grading bucket under constant archaeological supervision. Thereafter, the trenches were cleaned and all additional

excavation was conducted by hand. Spoil tips were scanned by eye and with a metal detector in order to locate unstratified artefactual evidence.

- 4.4 **Mitigation Works: Watching Brief.** The groundworks in the vicinity of Area B were subject to archaeological monitoring and recording. Strip foundation trenches for a total of four plots, comprising three dwellings and a double garage, were monitored (Figures 2 and 7). The trenches measured 0.90m in width and were on average 2m deep. The excavation was undertaken by a mechanical excavator fitted with a toothless grading bucket, working under constant archaeological supervision. It should be noted that, due to the depth of the excavations, there was little opportunity to observe the sides of the trenches as Health and Safety constraints prevented entrance into the trenches.
- 4.5 Spoil tips were scanned for unstratified finds across the entire study area.
- 4.6 Any significant archaeological deposits and/or features within the study area were to be manually cleaned, investigated and recorded in accordance with the Written Scheme of Investigation.
- 4.7 All excavation and recording work was undertaken in accordance with the Written Scheme of Investigation and the Foundations Archaeology Technical Manual 3: Excavation Manual.

5 RESULTS

Evaluation and Area Strip

- 5.1 Archaeological features were present in all trenches. Descriptions of all trenches follow.
- 5.2 **Trench 1** (50m x 1.9m) was aligned approximately east-west and was excavated onto the natural substrates, which comprised orange brown flint gravels. It was excavated to an average depth of 0.43m (22.41m OD) from the modern ground surface. The natural deposits were overlaid by (103) an interface with the natural, 0.02m thick. Layer (103) was overlain by subsoil (102), a mid brown soft, plastic clay with occasional small flint nodules, up to 0.21m thick. Subsoil (102) was overlain by topsoil (101), a dark brown soft, friable silt clay with occasional small, sub-angular flint nodules, up to 0.30m thick. A significant quantity of disturbance to the natural substrate was noted, however, which appeared to be of archaeological origin. Investigation subsequently showed all disturbance to derive from changes in the natural and from periglacial features.
- 5.3 **Area A** (30m x 20m) was excavated onto the natural substrates, which comprised orange brown flint gravels. It was excavated to an average depth of 0.40m (23.05m OD at the east side and 22.33m OD at the west side) from the modern ground surface. Stratigraphy was as Trench 1. A total of five features were present within this area (see Figure 5).

- 5.4 Feature [120] was a small, sub-circular pit measuring 1.0m in length, 0.80m in width and 0.30m in depth. It had fairly steep sloping sides and an irregular, flat base. It was filled with (121) a dark brown friable clay silt with frequent flint gravel inclusions and occasional flecks of charcoal. Artefactual evidence from the feature comprised a significant quantity of early Neolithic pottery and 57 struck and worked flints (see Appendices 1 and 2). This feature was subject to 100% excavation and was environmentally sampled at 50%.
- 5.5 Feature [122] was a small, sub-circular pit or scoop measuring 0.50m in diameter and 0.10m in depth. It had gently sloping sides and a flat base. It was filled with (123), a dark brown friable clay silt with frequent flint gravel inclusions and occasional to frequent flecks of charcoal. Artefactual evidence from the feature comprised a few sherds of early Neolithic pottery but no worked flints (see Appendix 1). This feature was subject to 100% excavation and was environmentally sampled at 50%.
- 5.6 Feature [124] was a small, sub-oval pit measuring 0.9m in length, 0.75m in width and 0.25m in depth. It had steep sloping sides and an irregular, flattened base. It was filled with (125), a dark brown friable clay silt with frequent flint gravel inclusions and occasional flecks of charcoal. Artefactual evidence from the feature comprised a significant quantity of early Neolithic pottery and 11 struck and worked flints (see Appendices 1 and 2). This feature was subject to 100% excavation and was environmentally sampled at 50%.
- 5.7 Feature [126] was a small, sub-circular pit measuring 0.4m in length, 0.35m in width and 0.20m in depth. It had steep sloping sides and a narrow base and was much disturbed by roots. It was filled with (127) a dark brown friable clay silt with frequent flint gravel inclusions. No artefactual evidence was present within the feature. It is possible this feature was a root bole. This feature was subject to 100% excavation and was environmentally sampled at 50%.
- 5.8 Feature [128] was a small, sub-circular pit measuring 1.10m in diameter and 0.30m in depth. It had fairly steep sloping sides and an irregular, flattened base. It was filled with (129), a dark brown friable clay silt with frequent flint gravel inclusions and occasional flecks of charcoal. Artefactual evidence from the feature comprised a significant quantity of early Neolithic pottery and 49 struck and worked flints (see Appendices 1 and 2). This feature was subject to 100% excavation and was environmentally sampled at 50%.
- 5.9 **Trench 2** (30m x 1.8m) was aligned approximately north northeast-south southwest and was excavated onto the natural substrates, which comprised yellow brown flint gravels. It was excavated to a depth of 0.61m (23.94m OD at the north end and 23.17m OD at the south end) from the modern ground surface. The natural deposits were overlaid by subsoil (202), flint gravels in a mid brown soft plastic silt clay matrix, up to 0.48m thick. Subsoil (202) was overlain by topsoil (201), flint gravels in a soft, friable dark brown friable silt clay matrix, 0.29m thick. Two linear features were present within this trench (see Figure 3).
- 5.10 Feature [205] was an east northeast-west southwest aligned shallow ditch, at least 2m in length, 0.45m in width and 0.18m in depth. It had 45° sloping sides and a rounded,

irregular base and was filled with (206) a mid brown friable silt clay with occasional small sub-angular flint nodules and a few charcoal fleck inclusions. A single fragment of Romano-British tile was recovered from the feature.

- 5.11 Feature [207] was an east-west aligned ditch, at least 2m in length, 1.10m in width and 0.28m in depth. It had a steeply sloping north side and a slightly stepped south side with a narrow, rounded base. It was filled with (208), a mid brown friable silt clay with occasional small sub-angular flint nodules and a few charcoal fleck inclusions. No artefactual evidence was recovered from this feature.
- 5.12 **Trench 3** (50m x 1.9m) was aligned approximately north northeast-south southwest and was excavated onto the natural substrates, which comprised yellow brown flint gravels. It was excavated to an average depth of 0.43m (24.33m OD at the north end and 23.34m OD at the south end) from the modern ground surface. The natural deposits were overlaid by subsoil (302), flint gravels with patches of mid brown friable silt clay, up to 0.27m thick, although only 0.06m thick at the northern end. Subsoil (302) was overlain by topsoil (301), a dark brown friable silt clay with flint gravels, up to 0.33m thick. One possible archaeological feature was present within this trench (see Figure 3).
- 5.13 Feature [306] comprised the edge of a possible pit or linear feature. It was sub-circular in plan and measured 0.93m in length, at least 0.40m in width and 0.36m in depth. It had a fairly steep, irregular southwest edge and a rounded, irregular base and was filled with (307), a mid brown plastic clay with flint gravels. Although the edges were well defined, there was no anthropomorphic material within it, therefore it is possible this was just a fissure in the natural, not a man-made feature.
- 5.14 **Trench 4** (50m x 1.8m) was aligned approximately northwest-southeast and was excavated onto the natural substrates, which comprised yellow brown flint gravels. It was excavated to an average depth of 0.50m (23.42m OD at the southeast end and 24.27m OD at the northwest end) from the modern ground surface. The natural deposits were overlaid by subsoil (402), flint gravels in a mid brown soft plastic silt clay matrix, up to 0.20m thick. Subsoil (402) was overlain by topsoil (401), a dark brown soft, friable silt clay with flint gravels, up to 0.25m thick. The topsoil was overlain by car park surface comprising a Terram layer covered with gravel and brick hardcore, up to 0.18m thick. One feature was present within this trench (see Figure 3).
- 5.15 Feature [404] was an east-west aligned ditch with steep sides and a narrow, rounded base. It measured at least 2.7m in length, 0.40m in width and 0.23m in depth and was filled with (405), a mid brown friable silt clay with flint gravels. No anthropomorphic material was present within the excavated section.
- 5.16 **Trench 5** (30m x 1.8m) was aligned approximately northeast-southwest and was excavated onto the natural substrates, which comprised a yellow brown flint gravels. It was excavated to an average depth of 0.50m (25.09m OD at the northeast end and 24.49m OD at the southwest end) from the modern ground surface. The natural deposits were overlaid by subsoil (502), flint gravels in a mid brown soft plastic silt clay matrix, up to 0.12m thick with a minimum depth of 0.02m. Subsoil (502) was overlain by topsoil (501), flint gravels in a soft, friable dark brown friable silt clay

matrix, up to 0.25m thick. Topsoil (501) was overlain by (503), a car park surface comprising a Terram layer covered with gravel and brick hardcore, up to 0.20m thick. A single possible feature was present within this trench (see Figure 4).

- 5.17 Feature [505] comprised an elongated sub-oval possible pit, 1.70m in length, at least 1.10m in width and 0.25m in depth. It had gently sloping edges and a wide, flattened base and was filled with (506), a dark brown friable clay silt with flint gravels and some root disturbance. No anthropomorphic material was present within the excavated section. It cut the subsoil layer.
- 5.18 **Trench 6** (30m x 1.8m) was aligned approximately east northeast-west southwest and was excavated onto the natural substrates, which comprised yellow brown flint gravels. It was excavated to an average depth of 0.51m (24.93m OD) from the modern ground surface. The natural deposits were overlain by subsoil (603), flint gravels in a mid brown soft plastic silt clay matrix, up to 0.22m thick. Subsoil (603) was overlain by topsoil (602), flint gravels in a soft, friable dark brown friable silt clay matrix, up to 0.31m thick. Topsoil (602) was overlain by (601), a car park surface comprising a Terram layer covered with gravel and brick hardcore, up to 0.25m thick; this layer was only present in the western half of the trench. Three archaeological features were present within this trench (see Figure 4).
- 5.19 Feature [604] was a northeast-southwest aligned ditch measuring at least 4.5m in length, 0.80m in width and 0.20m in depth. It had 45° sloping sides and a wide, rounded base and was filled with a dark brown friable silt clay with flint gravels. No anthropomorphic material was present within the excavated section.
- 5.20 Feature [606] was a northwest-southeast aligned ditch, at least 2.0m in length, at least 0.70m in width and 0.35m in depth. It had a steep southeast edge and a flat base and was filled with (607), a dark brown friable silt clay with flint gravels. No anthropomorphic material was present within the excavated section.
- 5.21 Feature [608] was a north northwest-south southeast aligned ditch, at least 1.9m in length, 1.66m in width and 0.68m in depth. It had steeply sloping edges and a narrow, rounded base and was filled with (609), a dark brown friable silt clay with frequent flint gravel inclusions. The excavated section contained 114 sherds of Roman pottery, probably dating to the second half of the 1st century AD and a burnt fragment of rotary quern stone. This ditch was equivalent to ditch [704] in Trench 7.
- 5.22 **Trench 7** (30m x 1.8m) was aligned approximately west northwest-east southeast and was excavated onto the natural substrates, which comprised yellow brown flint gravels. It was excavated to an average depth of 0.55m (25.45m OD) from the modern ground surface. The natural deposits were overlaid by subsoil (702), flint gravels in a mid brown soft plastic silt clay matrix, up to 0.26m thick. Subsoil (702) was overlain by topsoil (701), flint gravels in a soft, friable dark brown friable silt clay matrix, up to 0.27m thick. At the western end of the trench the topsoil (701) was overlain by (703), a car park surface comprising a Terram layer covered with gravel and brick hardcore, up to 0.17m thick. One archaeological feature was present within this trench (see Figure 6).

- 5.23 Feature [704] was a north northwest-south southeast aligned ditch, at least 1.9m in length, 1.58m in width and 0.60m in depth. It had steeply sloping edges and a narrow, pointed base and was filled with (705), a dark brown friable silt clay with frequent flint gravel inclusions. No artefactual evidence was present within the excavated section. This feature was equivalent to [608] in Trench 6.
- 5.24 **Area B** (15m x 10m) was aligned along the line of ditch [704] (see Figure 6) and was excavated onto the natural substrates, which comprised yellow brown flint gravels. It was excavated to an average depth of 0.53m (25.49m OD) from the modern ground surface. The stratigraphy was as in Trench 7. This area was further investigated to establish any relationship between the ditch and the suspected entrenchment to the north.
- 5.25 The area strip revealed [704] was a component of a sub-rectangular enclosure ditch which turned east within the area. A further section, [704]A, was excavated through the enclosure. It measured 1.91m in width and 0.82m in depth and had a 'V' shaped profile. Artefactual evidence from this section comprised 24 sherds of 2nd century Romano-British pottery. No further archaeological features were present inside or outside the enclosure.

Watching Brief (Figures 7 and 8)

- 5.26 The natural substrate was encountered at an average depth of 0.40m (25.19m OD) below the modern ground surface in all of the foundation trenches. The natural deposits were overlain by subsoil (002), flint gravels in a mid brown soft plastic silt clay matrix, up to 0.20m thick. Subsoil (002) was overlain by topsoil (001), flint gravels in a soft, friable dark brown friable silt clay matrix, up to 0.24m thick. No archaeological features were present within Foundations 2 and 3. A possible pit was present within Foundation 1. A continuation of the enclosure ditch seen in Trenches 6 and 7 during the evaluation was present within Foundation 4.
- 5.27 Feature [003] present in Foundation 4 appeared to be a continuation of the enclosure ditch [608][704]. It comprised a north northwest-south southeast aligned linear feature with steep sides and a wide flattened base, up to 1.5m in depth and 3.7m wide. It was filled with (004), a fill visually similar to (609) and (705). No artefactual evidence was present within the feature.
- 5.28 Feature [005] present in Foundation 1 comprised a possible sub-circular pit, 2.8m in width and 1.3m in depth. It had steeply sloping edges and an uneven base and was filled with (006), a mid brown silt clay with flint gravel inclusions. No artefactual evidence was present within the excavated sections.

6 PALAEOENVIRONMENTAL EVIDENCE

- 6.1 Palaeoenvironmental samples were taken from appropriate archaeological features in accordance with the Written Scheme of Investigation (Foundations, 2006). These are

currently being processed and the results of this work will be issued either as an addendum, or if they add sufficient evidence to warrant it, as part of a revised report.

| !

7 CONCLUSION

- 7.1 The archaeological works revealed archaeological deposits present in all evaluation trenches and in two building foundation plots observed during the watching brief.
- 7.2 Area A revealed five sub-circular features in a linear formation. Four of the features contained significant quantities of early Neolithic pottery and struck and worked flints (Appendices 1 and 2). The size and shape of the features suggested they were small tree throws, rather than anthropomorphic features and the arrangement of the features did not suggest an occupational use, despite the presence of the pottery. Other such scattered groups of features are known from the area (James Kenny pers com.) and similar groups of features are known from Black Patch Hill, Sussex, where scatters of shallow early Neolithic pits associated with flint mines have recently been re-interpreted as tree throws, into which occupational material associated with the flint mines became incorporated (Russell 2000 b). At Summerslade Down, Wiltshire a scatter of shallow pits of Neolithic date, but no other features, were found during pipe laying works (Rawlings 1995 p.39) and similar finds are known from elsewhere in the country. This pattern of shallow pits would appear to represent a relatively typical survival of Neolithic activity, where no obvious settlement features or overtly ritual monuments have been identified.
- 7.3 The finds assemblage from these features comprised worked flint and pottery of early Neolithic date as well as wood charcoal and a limited number of cereal grains. The flint predominantly comprised hammer flakes, often re-used as scrapers and blades and occasional deliberately formed tools, such as the arrowhead from context (121). The absence of cores suggests that the worked flint has been deposited in the pits from a nearby working area. The pottery is characteristic of bowl assemblages of mid-late 4th millennium date (c.3650-3350 cal BC). The environmental analysis indicated that, in keeping with other sites of the early Neolithic period, oak/ash/hazel wood was utilised for fuel. The range of species of wood present within the pits was in keeping with localised woodland clearance, as demonstrated elsewhere in Sussex, and that oak, hazel and hawthorn were widespread across the landscape in this region during the early Neolithic. Cereals, including emmer wheat and barley, found within the pit fills were consistent with evidence from other excavated sites of this period in Sussex.
- 7.4 An enclosure ditch of Romano-British date was present at the northern end of the site in the area of Trenches 6 and 7, Area B and the monitored strip foundation trenches. The enclosure appeared to be sub-rectangular and contained pottery of late 1st and 2nd AD. Two features, a possible pit and a possible ditch were present within the enclosure. These two features did not appear to be associated with one another and no dating evidence was present within the excavated sections. It is unclear whether they were associated with the enclosure ditch.
- 7.5 The pit and linear features present within the remaining trenches, Trenches 2, 3, 4, 5 and 6, may have represented the remains of a Romano-British field system. Only one

No!
too many
anthropomorphic,
too close
together &
no other!
& too regular!

of the features, [205] in Trench 2, contained dating evidence in the form of a fragment of Roman tile.

- 7.6 The results of the evaluation and watching brief have demonstrated a moderate archaeological survival, particularly for prehistoric activity, for the localised area around Trenches 4 and 5, and a low potential for the remainder of the site.
- 7.7 The site archive will be deposited with Chichester Museum within 1 year of completion of the project. A summary of the results will be published in an appropriate local journal. An OASIS form will be completed and submitted.

8 BIBLIOGRAPHY

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9 ACKNOWLEDGEMENTS

Foundations Archaeology would like to thank Ben Stephenson of Waterman CPM and James Kenny of Chichester City Council for their assistance with this project. Thanks are also due to Persimmon Homes (South Coast) Ltd for commissioning the works.

APPENDICES

APPENDIX 1

The worked flint by Ian Powlesland.

The flint submitted for analysis from Chichester comes from three contexts, all of which were shallow pits or scoops cut into the underlying gravel subsoil. The total amount of flint recovered is small, a total of 117 pieces, weighing 1.472 kgs. (see fig.1 below). The assemblage from each of the three pits has been analysed separately and together as a total assemblage and the results can be found in Appendix 1 (see below). Visual inspection of the assemblage showed that it was in a fairly fresh condition, with little evidence of patination, rolling or edge damage, that would indicate it was heavily disturbed. There is internal evidence within the assemblage to indicate that the flint is from several different episodes of flint working and that it has possibly been re-deposited from its original context.

Fig 1. Chichester, SRC.06, Total Assemblage.									
Context no.	Chips & chunks	Waste flakes	Complete flakes	Scrapers	Leaf Arrow h/d	Awl	Serrated flake	Utilised Flakes	Total
(121)	5	13	26	5	1	-	-	7	57
(125)	-	2	7	-	-	1	-	1	11
(129)	9	6	26	-	-	-	1	7	49
Totals.	14	21	59	5	1	1	1	15	117

The material utilised for flint working has been obtained from different sources, the surviving colour and cortex would suggest that surface deposits of small to medium sized nodules, rather than deep mined flint was being utilised. Overall these various types of flint occurred in fairly equal proportions between each of the features, although no obvious rejoins were noted. The assemblage is split between material derived from a clay with flints source and gravel/beach flint. By weight the predominant types are from clay with flint sources and this is reflected in the large size of many of the complete flakes. The gravel flint is from smaller nodules of a similar type and the size of the related flakes confirms this observation. Considering the location of the site on a gravel subsoil it is likely that all the nodules were collected from the local area or within the surrounding landscape. Burnt flint does not comprise a significant part of the assemblage (only 6% of the total assemblage) and is restricted to a few fragments of burnt nodule recovered from Contexts 121 & 129.

The debitage recovered displays a mix of flint working techniques that include both hard and soft hammer techniques of flint knapping. The lack of obvious cores or other debitage can be contrasted with the large numbers of flakes and blades recovered. This suggests that either the material has been deliberately collated or that the assemblage is from a utilisation site where flakes and flake tools were being used and maintained. The soft hammer flakes are generally smaller blade like flakes, with abraded platforms and feathered terminals, apparently derived from small gravel flint nodules. One bladelet was recovered from Context (129) that could be of Mesolithic date, but the attributes displayed by the rest of the soft hammer debitage would

suggest a date in the earlier Neolithic. This soft hammer debitage is predominantly fabricated from a dark grey flint that matches well with the large leaf arrowhead recovered from Context (121). The arrowhead has a broken tip, but is still over 46mm in length, with fine invasive retouch across both faces and is similar to Green's class 1c. (Green 1980). The serrated flake from Context (129) is fabricated from a similar dark grey gravel flint and is also probably of early Neolithic date.

The majority of the debitage is dominated by large hard hammer flakes, comprising elongated blade like flakes and longer proportional flakes, many of which are secondary flakes utilising a clay with flints source (see fig.2 below). Several of these large hard hammer flakes have evidence of edge damage/retouch along one or both lateral edges, that indicates that they have been used as simple knives or scrapers. These utilised flakes form the largest category of tool form identified, although distinguishing between deliberate retouch and edge damage created by use is often impossible. The ratio of secondary & tertiary flakes being utilised matches that of the remaining debitage and they have been recorded as a separate tool type in this analysis. Dating this type of simple flint tool is difficult and the mix of soft and hard hammer flakes represented indicates they could span the Neolithic and early Bronze Age. The remaining retouched tools comprise four end scrapers and one side scraper, manufactured on long or proportional hard hammer flakes, all were recovered from Context (121), along side the leaf arrowhead. They are retouched around their distal ends with abrupt or more commonly semi-abrupt retouch and all show some evidence of edge damage, indicating use prior to being discarded.

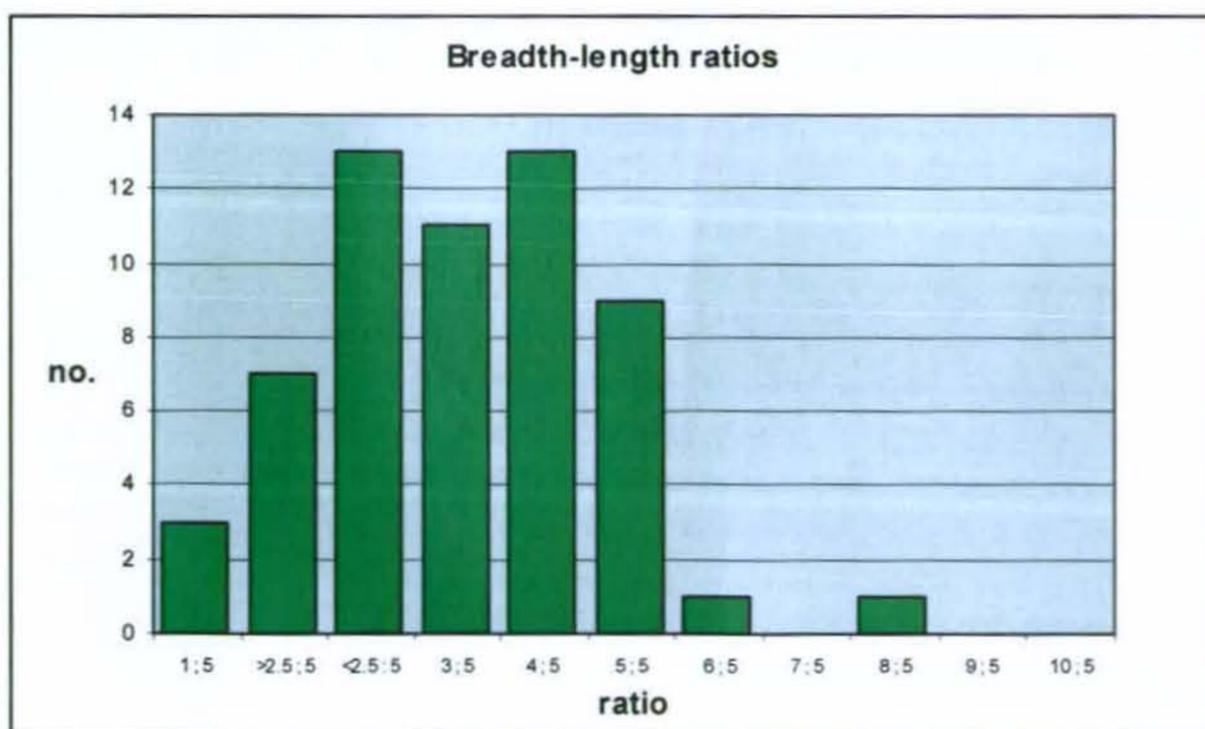


Fig.2, Breadth-length ratios for the total assemblage SRC.06.

The length – breadth attributes of the complete flakes and tools indicate they are probably of early Neolithic date, but end scrapers & utilised flakes are notoriously difficult to date and span the later prehistoric period. The crude end scraper fabricated on a secondary, proportional flake and the side scraper could be of later Neolithic date, but closer dating is not possible with such a small sample. The absence of large numbers of squat flakes or retouched pieces, such as barbed & tanged arrowheads or denticulates, shows that Bronze Age flint

work does not form part of this assemblage. The presence of large amounts of secondary/tertiary waste and retouched pieces without cores, chips or primary waste indicates that prepared cores or flakes were being selected on an ad hoc basis. Each pit has a similar mix of debitage and retouched material showing that the material was incorporated into these contexts from the same source.

Direct parallels for this assemblage and the pits in which it was found are not common within the published literature, but similar features are known. On the chalk downs of Sussex & Wiltshire, the occurrence of apparently random scatters of pits associated with occupational material of Neolithic date have been found at a number of sites. At Black Patch Hill, Sussex, excavations in the 1920's and more recently (Russell 2000 a), identified scatters of shallow pits associated with the flint mines that contained mixed deposits of early Neolithic material, including flint. These were originally interpreted as dwellings, but have recently been re-interpreted as tree throws, into which occupational material associated with the flint mines became incorporated (Russell 2000 b). At Summerslade Down, Wilts, a scatter of shallow pits of Neolithic date, but no other features, were found during pipe laying works (Rawlings 1995 p.39), similar to those at Chichester. Some of the flint work was associated with early Neolithic pottery and contained a mix of flaking techniques with hard hammer flakes predominant, but other than cores & utilised flakes, no other retouched pieces were recovered.

In the examples quoted above broad similarities with the features and assemblages from Chichester can be traced, although individually each site is different in detail. In terms of the flint assemblage the material from Chichester differs from that of the other examples in that it contains no cores, few chips, little burnt flint and few retouched pieces. At Summerslade Down, Wilts, burnt flint was abundant in every pit, but otherwise the debitage and flaking techniques were closely similar to that recovered from Chichester. This mix of soft and hard hammer techniques with large numbers of flakes rather than cores or retouched pieces indicates that the material was derived from an utilisation site, where prepared cores or flakes were being used for the maintenance and fabrication of tools. It is unclear from the assemblage alone if this material is directly derived from this activity or has been incorporated into the pit fills from a nearby occupation site as a secondary context. Overall the assemblage could span the Neolithic period, but a dating to the early Neolithic would be consistent with the internal evidence of the flint assemblage and the associated pottery.

Appendix.1, Flint classification tables.

2 SRC06, Chichester, Primary flint classification.				
	Number.	(% Burnt).	Weight (gm).	(% Burnt).
Context (121), northern section.				
Chips, chunks, etc.	4	(3)	233.1	(221.4)

Waste flakes.	7	-	71.1	-
Complete flakes.	15	-	138.8	-
Tools.	4	-	53.9	-
Total	30	(3)	496.9	(221.4)
Context (121), southern section.				
Chips, chunks, etc.	1	(1)	40.3	(40.3)
Waste flakes.	6	-	8.4	-
Complete flakes.	11	-	66.5	-
Tools.	9	-	211.8	-
Total	27	(1)	327	(40.3)
Context (125), northern section.				
Chips, chunks, etc.	-	-	-	-
Waste flakes.	-	-	-	-
Complete flakes.	3	-	11	-
Tools.	1	-	11.9	-
Total	4	-	22.9	-
Context (125), southern section.				
Chips, chunks, etc.	-	-	-	-
Waste flakes.	2	-	2.8	-
Complete flakes.	4	-	35.1	-
Tools.	1	-	5.5	-
Total	7	-	43.4	-
Context (129), northern section.				
Chips, chunks, etc.	1	(1)	25.2	(25.2)
Waste flakes.	2	-	19	-
Complete flakes.	14	-	63.8	-
Tools.	7	-	267.2	-
Total	24	(1)	375.2	(25.2)
Context (129), southern section.				
Chips, chunks, etc.	8	(2)	122.1	(71.7)
Waste flakes.	4	-	7.2	-
Complete flakes.	12	-	73.9	-
Tools.	1	-	3.8	-
Total	25	(2)	207	(71.7)

Final flint work Classification, SRC06, Context (121).

Primary Classification.

	Number.	(% Burnt).	Weight (gm).	(% Burnt).
Chips, chunks, etc.	5	(4)	273.4	(261.7)

Waste flakes.	13	-	79.5	-
Complete flakes.	26	-	205.3	-
Tools.	13	-	265.7	-
Total.	57	(4)	823.9	(261.7)

Secondary Classification.

	Number.	(%).	Weight (gm).	(%).
Complete Flakes.				
Primary Flakes	1	5%	36.9	18%
Secondary Flakes	16	60%	141.6	66%
Tertiary Flakes	9	35%	26.7	16%

Tools/retouched pieces.

End scrapers.	4	30%	158.5	62%
Side scrapers.	1	8%	16.4	6%
Utilised flakes.	7	54%	77.2	30%
Leaf arrowhead.	1	8%	5.8	2%
Awl/piercer.	-	-	-	-
Other.	-	-	-	-

Total Assemblage, Ratios and Percentages.

	Number		Weight	
	Ratio	Percentage	Ratio	Percentage
Tools to Complete Flakes	1:2.5	50%	1:4.1	83%
Scrapers to Tools	1:1.9	38%	1:3.5	71%
Cores to Tools	-	-	-	-
Scrapers to Total Assemblage	1:0.2	4%	1:1.1	20%
Tools to Total Assemblage	1:1.1	23%	1:1.6	31%
Burnt Flint to Total Assemblage	1:0.4	7%	1:1.6	32%

Display of Breadth-Length Ratio's.

	Ratio	No.	
	1 : 5	2	
	>2.5 : 5	4	
	<2.5 : 5	5	
	3 : 5	7	
	4 : 5	2	
	5 : 5	5	
	6 : 5	-	

Key to Length-Breadth Ratio's								7 : 5	-	
								8 : 5	1	
1 : 5	>2.5 : 5	<2.5 : 5	3 : 5	4 : 5	5 : 5	6 : 5	10 : 5	9 : 5	-	
Blades		Elongated Flakes	Proportional Flakes	Squat Flakes				10 : 5	-	

Final flint work Classification, SRC06, Context (125).				
Primary Classification.				
	Number.	(% Burnt).	Weight (gm).	(% Burnt).
Chips, chunks, etc.	-	-	-	-
Waste flakes.	2	-	2.8	-
Complete flakes.	7	-	46.1	-
Tools.	2	-	17.4	-
Total.	11	-	66.3	-
Secondary Classification.				
	Number.	(%).	Weight (gm).	(%).
Complete Flakes.				
Primary Flakes	-	-	-	-
Secondary Flakes	3	43%	30.9	67%
Tertiary Flakes	4	57%	14.9	33%
Tools/retouched pieces.				
End scrapers.	-	-	-	-
Side scrapers.	-	-	-	-
Utilised flakes.	1	50%	5.5	31%
Leaf arrowhead.	-	-	-	-
Awl/piercer.	1	50%	11.9	69%
Other.	-	-	-	-
Total Assemblage, Ratios and Percentages.				
	Number		Weight	
	Ratio	Percentage	Ratio	Percentage
Tools to Complete Flakes	1:1.3	25%	1:1.9	38%
Scrapers to Tools	-	-	-	-
Cores to Tools	-	-	-	-

Scrapers to Total Assemblage	-	-	-	-							
Tools to Total Assemblage	1:0.9	18%	1:1.3	26%							
Burnt Flint to Total Assemblage	-	-	-	-							
Display of Breadth-Length Ratio's.											
		Ratio	No.								
		1 : 5	-								
		>2.5 : 5	-								
		<2.5 : 5	1								
		3 : 5	2								
		4 : 5	3								
		5 : 5	1								
		6 : 5	-								
Key to Length-Breadth Ratio's		7 : 5	-								
		8 : 5	-								
1 : 5	>2.5 : 5	<2.5 : 5	3 : 5	4 : 5	5 : 5	6 : 5	10 : 5		9 : 5	-	
Blades	Elongated Flakes	Proportional Flakes	Squat Flakes						10 : 5	-	

Final flint work Classification, SRC06, Context (129).				
Primary Classification.				
	Number.	(% Burnt).	Weight (gm).	(% Burnt).
Chips, chunks, etc.	9	(3)	147.3	(96.9)
Waste flakes.	6	-	26.2	-
Complete flakes.	26	-	137.7	-
Tools.	8	-	271	-
Total.	49	(3)	582.2	(96.9)
Secondary Classification.				
	Number.	(%).	Weight (gm).	(%).
Complete Flakes.				
Primary Flakes	-	-	-	-
Secondary Flakes	16	62%	100.4	75%
Tertiary Flakes	10	38%	37.3	25%
Tools/retouched pieces.				

End scrapers.	-	-	-	-
Side scrapers.	-	-	-	-
Utilised flakes.	7	88%	267.2	98%
Serrated flake.	1	12%	3.8	2%
Awl/piercer.	-	-	-	-
Other.	-	-	-	-

Total Assemblage, Ratios and Percentages.

	Number		Weight	
	Ratio	Percentage	Ratio	Percentage
Tools to Complete Flakes	1:1.5	31%	1:2.5	50%
Scrapers to Tools	-	-	-	-
Cores to Tools	-	-	-	-
Scrapers to Total Assemblage	-	-	-	-
Tools to Total Assemblage	1:0.8	16%	1:2.3	47%
Burnt Flint to Total Assemblage	1:0.3	6%	1:0.8	17%

Display of Breadth-Length Ratio's.

								Ratio	No.	
								1 : 5	1	
								>2.5 : 5	3	
								<2.5 : 5	7	
								3 : 5	2	
								4 : 5	7	
								5 : 5	3	
								6 : 5	1	
Key to Length-Breadth Ratio's								7 : 5	-	
								8 : 5	2	
1 : 5	>2.5 : 5	<2.5 : 5	3 : 5	4 : 5	5 : 5	6 : 5	10 : 5	9 : 5	-	
Blades	Elongated Flakes		Proportional Flakes		Squat Flakes			10 : 5	-	

Final flint work Classification, SRC06, Total Assemblage.

Primary Classification.

	Number.	(% Burnt).	Weight (gm).	(% Burnt).
Chips, chunks, etc.	14	(7)	420.7	(358.6)

Waste flakes.	21	-	108.5	-
Complete flakes.	59	-	389.1	-
Tools.	23	-	554.1	-
Total.	117	(7)	1472.4	(358.6)

Secondary Classification.

	Number.	(%).	Weight (gm).	(%).
Complete Flakes.				
Primary Flakes	1	2%	36.9	9%
Secondary Flakes	35	59%	272.9	69%
Tertiary Flakes	23	39%	86.7	22%

Tools/retouched pieces.

End scrapers.	4	18%	158.5	30%
Side scrapers.	1	4%	16.4	4%
Utilised flakes.	15	66%	349.9	62%
Leaf arrowhead.	1	4%	5.8	1%
Awl/piercer.	1	4%	11.9	2%
Other.	1	4%	3.8	1%

Total Assemblage, Ratios and Percentages.

	Number		Weight	
	Ratio	Percentage	Ratio	Percentage
Tools to Complete Flakes	1:1.0	20%	1:3.6	72%
Scrapers to Tools	1:0.8	26%	1:1.7	33%
Cores to Tools	-	-	-	-
Scrapers to Total Assemblage	1:0.2	5%	1:0.6	12%
Tools to Total Assemblage	1:1.0	20%	1:1.9	37%
Burnt Flint to Total Assemblage	1:0.3	6%	1:1.2	24%

Display of Breadth-Length Ratio's.

	Ratio	No.	
	1 : 5	3	
	>2.5 : 5	7	
	<2.5 : 5	13	
	3 : 5	11	
	4 : 5	13	
	5 : 5	9	
	6 : 5	1	
Key to Length-Breadth Ratio's	7 : 5	-	

									8 : 5	1	
1 : 5	>2.5 : 5	<2.5 : 5	3 : 5	4 : 5	5 : 5	6 : 5	10 : 5		9 : 5	-	
Blades	Elongated Flakes	Proportional Flakes	Squat Flakes						10 : 5	-	

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APPENDIX 2

Early Neolithic pottery by Alistair Barclay

Introduction

Four pits (120, 122, 124 and 128) were excavated and produced a minimum of 15 vessels (206 sherds, 2740 g) (Table 1). Overall the assemblage can be described as belonging to the decorated bowl tradition of the early Neolithic (3650-3350 cal BC). The presence of relatively large sherds, some refitting and others related to the same vessel, indicate that the pottery was contemporaneous with the pits. No evidence for cross joins/related sherds between pits was observed. Other than a variation in the quantity of pottery (see Table 1), there is no significant difference in the character of the pottery between each individual pit group.

Table 1: breakdown of the assemblage by pit

Pit	Number of vessels	Sherd count	Sherd weight	Figure
(120) fill [121]	4	48	489 g	1-2
(122) fill [123]	1	9	54 g	3
(124) fill [125]	7	90	1441 g	4-9
(128) fill of [129]	3	59	756 g	10-12
Total	15	206	2740 g	

Methodology

The assemblage was analysed using a standard system developed for the recording of prehistoric pottery and in accordance with the guidelines of the PCRG (1992). The assemblage was quantified by sherd count (fresh breaks excluded where possible) and by weight (g). Featured sherds were noted and a selected record was made of decoration, surface treatment, diameter, fabric, firing colour, the presence of food residues and condition.

Fabric

The vessels were all made using a single flint-tempered fabric:

Hard fabric with rare to sparse ill-sorted angular flint (0.5-5 mm, occasionally larger) inclusions. Some sherds also contain sparse voids (up to 5 mm) from either burnt out organic or leached calcareous matter (Vessels 4 and 5). The use of angular flint to temper clay fabrics at this time is quite common in the south-east and lowland England (Drewett 1980, 27; Cleal 1995).

Style, form and decoration

Collectively the pottery can be accommodated within the Windmill Hill style of the decorated bowl tradition of the mid 4th millennium cal BC (c. 3650-3350 cal BC) that is generally distributed across Wessex and the Middle and Upper Thames Valley (see Smith

1974, 108 and fig 14). This pottery would be broadly contemporaneous with the assemblages recovered from causewayed enclosures (Barclay 2006). However, the assemblage lacks the decoration that is found on vessels at some of the enclosures sites in Sussex (eg Whitehawk and the Trundle- see Curwen 1936, 1931).

The assemblage is characterised by a series of mostly plain hemispherical bowls of neutral or closed form, deeper bowls and small bowls/cups (Fig. 8). Handling aids, in the form of ledge-like lugs one of which is perforated, were noted on three of the 15 vessels (Fig. 8: 4 and 8). Rim forms vary from simple (Fig. 8: 11-12) and everted (Fig.8: 5 and 10) to heavier rolled (Fig.8: 4) or expanded (Fig.8: 1-3 and 6) types. Only one rim (Fig.8: 10) carries decoration, which consists of oblique incised lines applied to the rim top. This type of decoration is common and can be found in most of the regional styles of Decorated Bowl. Bowl forms vary from heavy thick-walled vessels (Fig.8: 2, 4 and 5) to finer thin-walled pots (Fig.8: 9 and 11). The former are nearly always fired reddish-brown. One or possibly two cup-like vessels were recorded (Fig.8: 7 and 12). Six of the 15 vessels had deliberately smoothed surfaces. No evidence for cooking in the form of charred residues or sooting was observed. The near absence of decoration is typical for the type of context, as it has been noted that decorated vessels tend to occur in specific contexts such as causewayed enclosures (Barclay 2002, 88).

Illustrated catalogue

Early Neolithic

1. Pit 120, fill 121. Externally expanded rim sherd possibly from a straight-sided bowl of neutral form (24 g). Colour: ext. brown; core black; int. brown. Smoothed surfaces. Condition average-worn.
- 2 Pit 120, fill 121. Expanded rim from a hemispherical bowl of closed form with a ledge – shaped lug (54 g). Colour: ext. dark reddish brown; core black; int. reddish-brown. Condition average-worn.
- 3 Pit 122, fill 123. Semi-rolled rim from a bowl of neutral form (19 g). Colour: dark reddish-brown; core black; int. brown. Smoothed surfaces. Condition average-worn.
- 4 Pit 124, fill 125. Six sherds, some refitting from a large neutral bowl with a rolled rim and ledge-shaped handle (6 sherds, 246 g). Colour: ext. and int. light yellowish-brown; core dark grey. Smoothed exterior surface. Condition worn.
- 5 Pit 124, fill 125. Simple rounded rim from a bowl of slightly closed form (13 sherds, 200 g). Colour: ext. black to reddish-brown; core and int. black. Smoothed exterior surface. Condition worn.
- 6 Pit 124, fill 125. Externally expanded rim from a hemispherical bowl (31 g).Fabric. Colour: ext. and int. dark grey; core grey. Condition worn.
- 7 Pit 124, fill 125. Simple rounded rim from a small bowl or cup (15 g). Fabric F1/EN. Colour: ext. greyish-brown; core and int. dark grey. Condition worn.
- 8 Pit 124, fill 125. Lugged shoulder sherd (19 g). Colour: ext. greyish-brown to reddish-brown; core grey; int. greyish-brown to reddish-brown. Condition worn.
- 9 Pit 124, fill 125. Weak shouldered bowl of closed form (3 sherds, 49 g). Colour: ext. greyish-brown; core black; int. greyish-brown. Condition worn.
- 10 Pit 129, fill 128. Decorated hemispherical bowl (5 sherds, 173 g). Colour: ext. reddish-brown; core black; int. greyish-brown. Condition worn.
- 11 Pit 129, fill 128. Hemispherical bowl of slightly closed form (4 sherds, 56 g). Colour: ext.

and int. reddish-brown; core black. Condition worn.

12 Pit 128, fill 129. Small bowl or cup (15 g). Colour: ext. greyish-brown; core and int. black; Condition worn.

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APPENDIX 3

Roman Pottery by Dr Jane Timby

1 Introduction

The Roman sherds are in relatively good condition with moderately large, fresh sized pieces and with several examples of multiple sherds from some vessels.

Roman pottery was recovered from two contexts, 609 and 705, with a fragment of ceramic building material from a third. All three contexts are ditches.

At this stage no attempt has been made to identify local fabrics.

The assemblage was roughly sorted into fabrics and quantified by sherd count and weight. The resulting data is summarised in Table 1.

2 Description

In total some 138 sherds of Roman pottery was recovered weighing 3015 g, giving an average weight of 21.8 g.

Most of the pottery, some 114 sherds, came from ditch 609. This comprised a minimum of seven vessels, all local in origin. There was a mixture of handmade and wheel made technology.

Recognisable vessels include the greater part of a necked bowl in a black sandy micaceous ware with a red core. A hole had been drilled into the shoulder below the rim after firing; a storage jar in a handmade flint-tempered ware and two grey sandy wheelmade jars. One bodysherd, probably from a bowl, was decorated with a grey line lattice.

Accompanying the pottery was a burnt fragment of Greensand rotary quern.

The assemblage probably dates to the second part of the 1st century AD.

Ditch 705 produced 24 sherds from a single vessel, in this case a Dorset black burnished ware jar of 2nd century currency.

Ditch 206 produced one fragment of Romano-British flat tile.

3 Recommendations

This is a small group of pottery which probably does not merit further work in its own right. However if further archaeological work is to take place on the site it needs to be considered alongside additional material.

If publication is envisaged the fabrics will need putting into the local sequence and the assemblage compared with other assemblages from the immediate vicinity.

APPENDIX 4

Wood Charcoal by Ellen Simmons

Introduction

This report summarises the results of the identification and analysis of charred plant remains and wood charcoal recovered during excavations at St Richard's Hospital, Chichester. Bulk soil samples were analysed from the fills (121), (125) and (129) of three pits [120], [124] and [128] all containing a significant quantity of pottery dated to the Early Neolithic. The aims of this analysis were to provide information concerning the crop types present at the site, the types of woody plant material utilised for fuel, the nature of the local environment and any human interaction with that environment. An assessment had previously been carried out in accordance with English Heritage guidelines for environmental archaeology assessments (EH, 2002), on one additional sample from the site collected from context (707). This sample was not found to contain any identifiable plant material or wood charcoal in sufficient quantities of suitable size for further analysis.

Methods

The samples had been processed using a water separation machine for the recovery of charred plant material and wood charcoal. Floating material was collected in a 250 µm mesh, and the remaining heavy residue retained in a 1mm mesh. The flots and heavy residue were air dried. The samples were sorted in their entirety using a stereo-microscope (x7-x45). Identification of charred plant material was carried out to as high a taxonomic level as possible by comparison with material in the reference collections at the Department of Archaeology, University of Sheffield. This data is recorded in Table 2. Wood charcoal fragments greater than 2mm in size were fractured manually and the resultant anatomical features observed in transverse, radial and tangential planes using high power binocular reflected light (episcopic) microscopy (x 50, x 100 and x 400). Identification of wood charcoal was carried out to as high a taxonomic level as possible by comparison with material in the reference collections at the Department of Archaeology, University of Sheffield and various reference works (e.g. Schweingruber, 1990; Hather, 2000). A record was also made, where possible, of the ring curvature of the wood and details of the ligneous structure, in order for the part of the woody plant which had been burnt and the state of wood before charring, to be determined (Marguerie, & Hunot 2007). This data is recorded in Table 3.

Nomenclature follows (Stace, 1997). The abbreviation *cf.* means 'compares with' and denotes that a specimen most closely resembles that particular taxa more than any other. Charred plant material was stored in glass tubes or sealable plastic bags. Charcoal fragments were wrapped in aluminium foil and stored in sealable plastic bags.

Preservation

Some evidence of distortion, such as puffing, was exhibited by cereal grains and indicates that charring conditions were relatively poor. The majority of grains retained only fragments of epidermis or were lacking epidermis and identifiable by gross morphology only (*cf.* Hubbard and al Azm, 1990). The wood charcoal was moderately well preserved with degree 1 vitrification (low brilliance-refractiveness) (*cf.* Marguerie, & Hunot 2007) exhibited by 8% of fragments in context (121), 22% in context (125) and 17% in context (129). Degree 2 vitrification (strong brilliance) was exhibited by 22% of fragments in context (121), 21% of fragments in context (125) and 6% of fragments in context (129). None of the fragments exhibited degree 3 vitrification (total fusion – dense non-recognisable mass). Only 3% of

fragments in context (121), 7% of fragments in context (125) and 4% of fragments in context (129) were unidentifiable due to poor preservation.

Results

Carbonised plant remains, including cereal grains, were present in low densities. A single grain from pit fill (129) exhibited morphological characteristics which compared with emmer wheat (*Triticum cf. dicoccum*); while another single grain from pit fill (125) exhibited morphological characteristics which compared with barley (*cf. Hordeum* indet). A small number of other charred cereal grains could only be identified as wheat (*Triticum*) indet or cereal indet due to poor preservation. All three pit fills also contained small amounts of vesicular material and hazel nutshell fragments. The vesicular material is likely to represent fragmented cereal grains although lack any identifiable features so this cannot be confirmed. Also present in pit fill (129) was parenchyma (undifferentiated plant storage tissue) and possible charred Rosaceae fruit flesh.

The number of wood charcoal fragments of each taxa present in the three pit fills is listed below in Table 1. Due to the differing susceptibilities to fragmentation of different species however, fragment counts may be misleading in terms of the dominant species type utilised for fuel. The total weight of each species is therefore also included in the Table 1, although charcoal weights may also be misleading due to the differing density of different species and the effect on the weight of charcoal of differing charring conditions. In general, however, all three samples were dominated by oak (*Quercus* sp.) and hazel (*Corylus avellana* L.) charcoal followed by Pomoideae and then blackthorn/cherry (*Prunus* sp.). Pomoideae is a large sub-family of the Rosaceae, containing many species, although the native woody plant species most likely represented at this site would be hawthorn, apple, pear or rowan/whitebeam (*Crataegus*, *Malus*, *Pyrus* or *Sorbus*). Also present was ash (*Fraxinus excelsior* L.) in pit fills (125) and (129), elm (*Ulmus* sp.) in pit fill (121), ivy (*Hedera helix* L.) in pit fill (125), buckthorn (*Rhamnus cathartica* L.) and possible elderberry (*cf. Sambucus nigra* L.) in pit fill (129).

Sample number	2	3	4
Context number	121	125	129
Feature number	120	124	128
Period	Early Neolithic	Early Neolithic	Early Neolithic
<i>Quercus</i> sp. (oak)	24 (0.40g)	25 (0.46g)	43 (1.05g)
<i>Corylus avellana</i> L. (hazel)	18 (0.26g)	51 (0.92g)	29 (0.89g)
Pomoideae (hawthorn group)	10 (0.11g)	11 (0.19g)	15 (0.37g)
<i>Prunus</i> sp. (blackthorn / cherry)	5 (0.11g)	2 (0.03g)	2 (0.05g)
<i>Fraxinus excelsior</i> L. (ash)	0	3 (0.04g)	2 (0.03g)
<i>Ulmus</i> sp. (elm)	1 (0.01g)	0	0
<i>Hedera helix</i> L. (ivy)	0	1 (0.01g)	0
<i>Rhamnus cathartica</i> L. (buckthorn)	0	0	1 (0.01g)

Sample number	2	3	4
Context number	121	125	129
Feature number	120	124	128
Period	Early Neolithic	Early Neolithic	Early Neolithic
<i>cf. Sambucus nigra (cf. elderberry)</i>	0	0	4 (0.08g)
indeterminate	2 (0.02g)	7 (0.22g)	4 (0.11g)
Total no. of fragments	60 (0.91g)	100 (1.87g)	100 (2.49g)

Table 1 – total number and weight of charcoal fragments in grams (figure in brackets) in each sample by species.

Interpretation and discussion

The dominance of oak and hazel charcoal in the samples is likely to be due to a combination of their prevalence in the landscape, suitability as fuel woods and, in the case of oak, susceptibility to fragmentation. Oak, hazel and hawthorn charcoal are frequently represented in Neolithic contexts from the Sussex Downs, suggesting that these species were growing there (Drewett, 1988). Hazel, oak, ash and hawthorn group were present amongst charcoal recovered from Neolithic contexts at Bishopstone (Cartwright, 1977b), oak, hawthorn group and hazel were present at Offham (Cartwright, 1977a). Hazel, hawthorn and ash charcoal were present in a Neolithic pit dwelling excavated at New Barn Down (Curwen, 1934). Pollen evidence from river valley sites in Eastern Sussex indicate a local vegetation community in the Neolithic dominated by hazel, with lime, oak and ash woodland nearby (Scaife and Burrin, 1987). Pollen evidence from Greensand sites in Western Sussex such as Rackham (Dimbleby, 1975a), West Heath (Baigent, 1974) and Minstead (Dimbleby, 1975b) also indicate the presence of oak woodland and hazel thickets in the landscape during the Neolithic.

The presence of under wood or hedgerow type woody species in the Neolithic pit deposits from St Richard's Hospital, such as buckthorn, hawthorn group, blackthorn / cherry, and elderberry, suggest the utilisation of woodland margins, areas of more open woodland or woodland clearings. Hawthorn group was the most consistently reoccurring genus in wood charcoal samples from Neolithic deposits at Alfriston, interpreted as representative of possible woodland clearance (Cartwright and Harrison, 1975). Silt accumulations in valley fill deposits of the Ouse (Burrin and Scaife, 1984), Cuckmere (Scaife & Burrin, 1985) and eastern Rother Valleys (Scaife and Burrin, 1987), in the High Weald of East Sussex indicate significant woodland clearance during the Neolithic which resulted in sediment in wash to the valley bottoms. At Bishopstone (O'Connor, 1977) the molluscan evidence suggested increasing levels of woodland clearance throughout the Neolithic, and at Alfriston (Thomas, 1975) the environment was open for some time prior to the construction of the burial mound.

Woodland clearance would likely have been localised however with areas such as the High Weald remaining forested (Drewett, 1988). Small areas of woodland would likely have been kept clear or naturally cleared by wild grazing animals and utilised for seasonal camps (Drewett, 1988). Molluscan evidence from Offham (Thomas, 1977) suggested that the construction of the henge was carried out in a small woodland clearing which later

regenerated. Pollen analysis from the Vale of Brooks south of Lewes indicated woodland cover persisted until the Bronze Age (Thorley, 1971).

Where observable, the ring curvatures of the charcoal fragments recovered from St Richard's Hospital were largely weak to intermediate, with some fragments exhibiting strong ring curvature. This suggests that larger branches or trunks, as well as smaller branches and twigs were utilised for fuel. The presence of tyloses in a number of the oak and hazel charcoal fragments, also indicate the use of heartwood, (Marguerie, & Hunot 2007). Vitrification has been taken to indicate high temperature burning or the burning of green wood. Recent experimental work by McParland *et al* (2010) has, however, demonstrated that this is not the case and that vitrification is more likely due to a combination of pre and post depositional factors. A number of the charcoal fragments in all three samples also exhibited radial cracks. Radial cracks are common in wood species with large rays such as oak, are less common close to the pith and relate to the dampness of the wood and the temperature at which it is burnt (Marguerie, & Hunot, 2007). Radial cracks have also been shown to increase substantially where waterlogged wood is burnt (Prior and Alvin, 1986). The presence of fungal hyphae in many of the wood charcoal fragments furthermore indicates the use of dead or seasoned wood (Marguerie and Hunot, 2007).

Emmer wheat and barley are both typical crops of the Neolithic period in Britain (Grieg, 1991). Finds of charred cereals from early Neolithic contexts in Sussex are relatively rare however (Drewett, 1988) Both emmer wheat and six row barley were present in a Neolithic pit deposit at Bishopstone (Arthur, 1977).

Summary

The wood charcoal taxa present in Early Neolithic pit fills at St Richard's Hospital included oak, hazel, Pomoideae (hawthorn group), blackthorn / cherry, ash, elm, buckthorn and elderberry. This suggests the utilisation of oak / ash / hazel woodland for fuel as well as woodland margins, clearings or more open areas of scrubland. This range of species is consistent with molluscan and pollen evidence for localised woodland clearance in Sussex in the Early Neolithic and with charcoal and pollen evidence which suggest oak, hazel and hawthorn were widespread in the landscape East and West Sussex during the Neolithic. Aspects of the ligneous structure of some of the wood charcoal fragments examined suggests the use of dead or seasoned wood as well as damp or wet wood. Also indicated is the use of both large branches or tree trunks and smaller branches and twigs. Cereals present in the pit fills included emmer wheat and barley which is consistent with cereals found in Neolithic deposits at Bishopstone in East Sussex.

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St Richard's Hospital, Chichester: Archaeological Evaluation and Watching Brief

Table 2 – Carbonised plant remains

Sample Number:	2	3	4
Context Number:	121	125	129
Feature Number:	120	124	128
Context Type:	pit fill	pit fill	pit fill
Period:	Early Neolithic	Early Neolithic	Early Neolithic
Non seed material			
Vesicular material	1	10	24
Parenchyma (undifferentiated plant storage tissue)			2
cf. Rosaceae (rose family) fruit flesh			1
Hazel (<i>Corylus avellana</i> L.)			
nut shell (no. of fragments)	13	24	20
nut shell (grams)	0.162g	0.070g	0.215g
Crop material			
cf. Emmer wheat (<i>Triticum cf. dicoccum</i>)			
grains			1
Wheat (<i>Triticum</i> sp.)			
grains		1	2
cf. Barley (cf. <i>Hordeum</i> sp.)			
indet grains		1	
Cereal indet			
grains	3	3	2

St Richard's Hospital, Chichester: Archaeological Evaluation and Watching Brief

Table 3 - Wood charcoal

Sample Number: 002

Context Number: 121

Feature Number: 120

Period: Early Neolithic

Weight of Sample (grams): 0.91g

Fragment Number	Fragment Size	Species	Ring Curvature ^a	Vitrification ^b	Radial Cracks ^c	Tyloses ^c	Fungal Hyphae ^c	Pith ^c
1	4mm	<i>Quercus sp.</i>	1			1		
2	4mm	<i>cf. Quercus sp.</i>		2	1			
3	4mm	<i>Corylus avellana L.</i>	1					
4	4mm	<i>Prunus sp.</i>	1					
5	4mm	<i>Corylus avellana L.</i>	1	1	1			
6	4mm	Pomoideae	2					
7	4mm	<i>Prunus sp.</i>	2					
8	4mm	<i>Corylus avellana L.</i>	2					
9	4mm	<i>Corylus avellana L.</i>	3					
10	4mm	<i>Quercus sp.</i>		1	1			
11	4mm	<i>Corylus avellana L.</i>	2					
12	4mm	<i>Quercus sp.</i>		1				
13	4mm	<i>Quercus sp.</i>			1	1		
14	4mm	Pomoideae	2					
15	2mm	<i>Quercus sp.</i>		2	1			
16	2mm	<i>Quercus sp.</i>						
17	2mm	<i>cf. Quercus sp.</i>		2				
18	2mm	<i>Quercus sp.</i>		2				
19	2mm	<i>Quercus sp.</i>		2				
20	2mm	<i>cf. Quercus sp.</i>		2				
21	2mm	<i>Corylus avellana L.</i>						
22	2mm	<i>Prunus sp.</i>						
23	2mm	<i>Corylus avellana L.</i>				1		
24	2mm	<i>Quercus sp.</i>						
25	2mm	<i>Corylus avellana L.</i>					1	
26	2mm	<i>Corylus avellana L.</i>						
27	2mm	<i>Prunus sp.</i>						
28	2mm	<i>Corylus avellana L.</i>			1			
29	2mm	Pomoideae		2				
30	2mm	<i>cf. Quercus sp.</i>			1			
31	2mm	<i>Ulmus sp.</i>						
32	2mm	Pomoideae						
33	2mm	<i>cf. Quercus sp.</i>		2	1	1		
34	2mm	Pomoideae						
35	2mm	<i>cf. Corylus avellana</i>						
36	2mm	<i>cf. Corylus avellana</i>						1
37	2mm	Pomoideae		1				
38	2mm	<i>Quercus sp.</i>						
39	2mm	<i>Corylus avellana L.</i>						
40	2mm	indeterminate						1
41	2mm	<i>cf. Quercus sp.</i>						
42	2mm	Pomoideae						
43	2mm	<i>Corylus avellana L.</i>						
44	2mm	<i>Quercus sp.</i>						
45	2mm	<i>Corylus avellana L.</i>						
46	2mm	indeterminate		2				
47	2mm	Pomoideae		1				
48	2mm	<i>Quercus sp.</i>			1	1		
49	2mm	<i>Quercus sp.</i>		2				
50	2mm	Pomoideae						
51	2mm	<i>Quercus sp.</i>						
52	2mm	<i>Corylus avellana L.</i>						
53	2mm	<i>Corylus avellana L.</i>		2				
54	2mm	<i>Prunus sp.</i>						
55	2mm	<i>Quercus sp.</i>		2				
56	2mm	Pomoideae						
57	2mm	<i>cf. Corylus avellana</i>		2				
58	2mm	<i>Quercus sp.</i>						
59	2mm	<i>Quercus sp.</i>						

St Richard's Hospital, Chichester: Archaeological Evaluation and Watching Brief

Sample Number: 002

Context Number: 121

Feature Number: 120

Period: Early Neolithic

Weight of Sample (grams): 0.91g

Fragment Number	Fragment Size	Species	Ring Curvature ^a	Vitrification ^b	Radial Cracks ^c	Tyloses ^c	Fungal Hyphae ^c	Pith ^c
60	2mm	<i>Quercus sp.</i>						

^a 1 = low curve rings; 2 = intermediate curved rings; 3 = strong curve rings

^b 1 = low brilliance; 2 = strong brilliance; 3 = total fusion – dense, non-recognisable mass

^c 1 = yes

Table 4 – Wood charcoal

Sample Number: 003

Context Number: 125

Feature Number: 124

Period: Early Neolithic

Weight of Sample (grams): 1.87g

Fragment Number	Fragment Size	Species	Ring Curvature ^a	Vitrification ^b	Radial Cracks ^c	Tyloses ^c	Fungal Hyphae ^c	Pith ^c
1	4mm	<i>Corylus avellana L.</i>	2					
2	4mm	Pomoideae	3	1				
3	4mm	<i>Corylus avellana L.</i>	1	1		1		
4	4mm	<i>cf. Quercus sp.</i>		2	1			
5	4mm	<i>Corylus avellana L.</i>		1				
6	4mm	<i>Quercus sp.</i>		2		1		
7	4mm	<i>indeterminate</i>		2				
8	4mm	<i>Corylus avellana L.</i>	2	1	1			
9	4mm	<i>cf. Corylus avellana</i>	3					
10	4mm	<i>cf. Corylus avellana</i>		2				
11	4mm	<i>Corylus avellana L.</i>						
12	4mm	<i>indeterminate</i>						
13	4mm	Pomoideae	1	1				
14	4mm	<i>Corylus avellana L.</i>	2				1	
15	4mm	<i>cf. Corylus avellana</i>	2			1		
16	4mm	<i>cf. Quercus sp.</i>		2	1			
17	4mm	<i>Corylus avellana L.</i>	2					
18	4mm	<i>Corylus avellana L.</i>						
19	4mm	<i>Corylus avellana L.</i>		2	1			
20	4mm	<i>Corylus avellana L.</i>	2					
21	4mm	<i>Corylus avellana L.</i>	2					
22	4mm	<i>cf. Quercus sp.</i>		2				
23	4mm	<i>Corylus avellana L.</i>	2					
24	4mm	<i>cf. Quercus sp.</i>		2			1	
25	4mm	<i>Corylus avellana L.</i>	1					
26	4mm	<i>Corylus avellana L.</i>	3					
27	4mm	<i>Quercus sp.</i>	1					
28	4mm	<i>Fraxinus excelsior L.</i>	2	1				
29	4mm	<i>Fraxinus excelsior L.</i>				1	1	
30	4mm	<i>cf. Corylus avellana</i>	1		1			
31	4mm	<i>Corylus avellana L.</i>		2	1			
32	2mm	<i>Corylus avellana L.</i>						
33	2mm	<i>Corylus avellana L.</i>	1				1	
34	2mm	<i>Corylus avellana L.</i>		1				
35	2mm	Pomoideae	2	1				
36	2mm	<i>cf. Corylus avellana</i>						
37	2mm	<i>Corylus avellana L.</i>		2				
38	2mm	<i>Corylus avellana L.</i>		1				
39	2mm	<i>Corylus avellana L.</i>						
40	2mm	<i>cf. Quercus sp.</i>		2		1	1	
41	2mm	<i>Quercus sp.</i>		2	1			
42	2mm	<i>Corylus avellana L.</i>						
43	2mm	<i>Corylus avellana L.</i>						
44	2mm	<i>cf. Corylus avellana</i>		2	1			

St Richard's Hospital, Chichester: Archaeological Evaluation and Watching Brief

Sample Number: 003

Context Number: 125

Feature Number: 124

Period: Early Neolithic

Weight of Sample (grams): 1.87g

Fragment Number	Fragment Size	Species	Ring Curvature ^a	Vitrification ^b	Radial Cracks ^c	Tyloses ^c	Fungal Hyphae ^c	Pith ^c
45	2mm	Pomoideae		2				
46	2mm	Pomoideae						
47	2mm	Pomoideae		2				
48	2mm	<i>Corylus avellana</i> L.						
49	2mm	<i>Quercus</i> sp.		1		1		
50	2mm	<i>Prunus</i> sp.		1				
51	2mm	<i>Corylus avellana</i> L.	2					
52	2mm	<i>Corylus avellana</i> L.						
53	2mm	<i>Hedera helix</i> L.						
54	2mm	<i>Corylus avellana</i> L.						
55	2mm	<i>Quercus</i> sp.						
56	2mm	<i>Corylus avellana</i> L.		1	1			
57	2mm	indeterminate		2				
58	2mm	<i>Corylus avellana</i> L.		1				
59	2mm	cf. <i>Corylus avellana</i>						
60	2mm	<i>Quercus</i> sp.		1	1			
61	2mm	<i>Quercus</i> sp.						
62	2mm	<i>Corylus avellana</i> L.					1	
63	2mm	<i>Quercus</i> sp.						
64	2mm	Pomoideae						
65	2mm	cf. <i>Quercus</i> sp.			1			
66	2mm	<i>Corylus avellana</i> L.						
67	2mm	<i>Quercus</i> sp.		1	1		1	
68	2mm	<i>Quercus</i> sp.			1			
69	2mm	<i>Corylus avellana</i> L.			1			
70	2mm	Pomoideae						
71	2mm	Pomoideae						
72	2mm	Pomoideae		1				
73	2mm	<i>Quercus</i> sp.						
74	2mm	cf. <i>Corylus avellana</i>						
75	2mm	<i>Quercus</i> sp.		2	1			
76	2mm	indeterminate						
77	2mm	indeterminate		1	1			
78	2mm	cf. <i>Quercus</i> sp.						
79	2mm	<i>Corylus avellana</i> L.						
80	2mm	<i>Corylus avellana</i> L.		1				
81	2mm	cf. <i>Quercus</i> sp.		1				
82	2mm	<i>Corylus avellana</i> L.		2				
83	2mm	indeterminate						
84	2mm	<i>Quercus</i> sp.		1	1			
85	2mm	<i>Fraxinus excelsior</i> L.						
86	2mm	<i>Corylus avellana</i> L.		1				
87	2mm	<i>Corylus avellana</i> L.		1				
88	2mm	cf. <i>Quercus</i> sp.						
89	2mm	cf. <i>Corylus avellana</i>						
90	2mm	indeterminate		2				
91	2mm	<i>Corylus avellana</i> L.						
92	2mm	<i>Prunus</i> sp.						
93	2mm	cf. <i>Corylus avellana</i>		2				
94	2mm	<i>Quercus</i> sp.						
95	2mm	Pomoideae						
96	2mm	<i>Quercus</i> sp.		1				
97	2mm	<i>Corylus avellana</i> L.						
98	2mm	<i>Corylus avellana</i> L.						
99	2mm	<i>Quercus</i> sp.						
100	2mm	<i>Corylus avellana</i> L.		2				

^a 1 = low curve rings; 2 = intermediate curved rings; 3 = strong curve rings

^b 1 = low brilliance; 2 = strong brilliance; 3 = total fusion – dense, non-recognisable mass

^c 1 = yes

Table 5 – Wood charcoal

Sample Number: 004

Context Number: 129

Feature Number: 128

Period: Early Neolithic

Weight of Sample (grams): 2.59g

Fragment Number	Fragment Size	Species	Ring Curvature ^a	Vitrification ^b	Radial Cracks ^c	Tyloses ^c	Fungal Hyphae ^c	Pith ^c
1	4mm	<i>Corylus avellana</i> L.	3					
2	4mm	Pomoideae	3				1	
3	4mm	<i>Quercus</i> sp.		1				
4	4mm	<i>Corylus avellana</i> L.						
5	4mm	Pomoideae	2					
6	4mm	<i>Quercus</i> sp.				1		
7	4mm	<i>Corylus avellana</i> L.	3					
8	4mm	Pomoideae						
9	4mm	<i>Quercus</i> sp.				1		
10	4mm	<i>cf. Quercus</i> sp.		1		1		
11	4mm	<i>Quercus</i> sp.		1		1		
12	4mm	<i>Quercus</i> sp.		1		1		
13	4mm	<i>cf. Corylus avellana</i>	2					
14	4mm	<i>cf. Corylus avellana</i>						
15	4mm	<i>Quercus</i> sp.					1	
16	4mm	Pomoideae	2					
17	4mm	<i>Corylus avellana</i> L.	1	1				
18	4mm	<i>cf. Quercus</i> sp.				1		
19	4mm	<i>Quercus</i> sp.						
20	4mm	<i>Quercus</i> sp.						
21	4mm	<i>Quercus</i> sp.				1		
22	4mm	<i>Corylus avellana</i> L.				1		
23	4mm	<i>Prunus</i> sp.	2					
24	4mm	<i>cf. Quercus</i> sp.	1			1		
25	4mm	<i>cf. Quercus</i> sp.				1		
26	4mm	<i>Corylus avellana</i> L.			1			
27	4mm	<i>cf. Quercus</i> sp.				1		
28	4mm	<i>Corylus avellana</i> L.		1				
29	2mm	<i>cf. Quercus</i> sp.				1		
30	4mm	<i>cf. Corylus avellana</i>						
31	4mm	<i>indeterminate</i>						
32	4mm	<i>cf. Sambucus nigra</i>						
33	4mm	<i>Quercus</i> sp.						
34	4mm	<i>Fraxinus excelsior</i> L.			1			
35	4mm	Pomoideae	3					
36	4mm	Pomoideae						
37	4mm	<i>Quercus</i> sp.				1		
38	4mm	<i>cf. Corylus avellana</i>						
39	4mm	<i>Quercus</i> sp.		1		1		
40	4mm	<i>Quercus</i> sp.						
41	4mm	<i>indeterminate</i>						
42	4mm	<i>Quercus</i> sp.				1		
43	4mm	<i>cf. Sambucus nigra</i>						
44	4mm	Pomoideae						
45	4mm	<i>Quercus</i> sp.				1		
46	4mm	<i>Corylus avellana</i> L.						
47	4mm	<i>cf. Sambucus nigra</i>						
48	4mm	<i>Quercus</i> sp.						
49	4mm	<i>Quercus</i> sp.				1		
50	4mm	<i>cf. Quercus</i> sp.		2				
51	2mm	<i>Corylus avellana</i> L.						
52	2mm	Pomoideae						
53	2mm	Pomoideae						
54	2mm	<i>Fraxinus excelsior</i> L.						
55	2mm	<i>Corylus avellana</i> L.						
56	2mm	<i>Quercus</i> sp.						
57	2mm	<i>Quercus</i> sp.						
58	2mm	<i>Quercus</i> sp.						

St Richard's Hospital, Chichester: Archaeological Evaluation and Watching Brief

Sample Number: 004

Context Number: 129

Feature Number: 128

Period: Early Neolithic

Weight of Sample (grams): 2.59g

Fragment Number	Fragment Size	Species	Ring Curvature ^a	Vitrification ^b	Radial Cracks ^c	Tyloses ^c	Fungal Hyphae ^c	Pith ^c
59	2mm	Pomoideae						
60	2mm	<i>Quercus</i> sp.		1		1		
61	2mm	<i>indeterminate</i>		2		1		
62	2mm	<i>Corylus avellana</i> L.		1				
63	2mm	<i>cf. Corylus avellana</i>						
64	2mm	<i>Quercus</i> sp.				1		
65	2mm	<i>Quercus</i> sp.		1	1	1		
66	2mm	Pomoideae						
67	2mm	<i>Corylus avellana</i> L.			1			
68	2mm	<i>cf. Quercus</i> sp.		1		1		
69	2mm	<i>cf. Prunus</i> sp.						
70	2mm	<i>Corylus avellana</i> L.						
71	2mm	<i>Quercus</i> sp.				1		
72	2mm	<i>Quercus</i> sp.				1		
73	2mm	<i>Quercus</i> sp.				1		
74	2mm	<i>Quercus</i> sp.						
75	2mm	<i>cf. Corylus avellana</i>						
76	2mm	<i>indeterminate</i>		2				
77	2mm	<i>Quercus</i> sp.						
78	2mm	Pomoideae		1				
79	2mm	<i>cf. Corylus avellana</i>						
80	2mm	<i>Corylus avellana</i> L.						
81	2mm	<i>cf. Quercus</i> sp.		2				
82	2mm	<i>Corylus avellana</i> L.		1				
83	2mm	<i>Corylus avellana</i> L.						
84	2mm	Pomoideae		1				
		<i>Rhamnus cathartica</i> L.						
85	2mm							
86	2mm	<i>cf. Corylus avellana</i>						
87	2mm	<i>cf. Corylus avellana</i>						
88	2mm	<i>Quercus</i> sp.						
89	2mm	<i>Quercus</i> sp.		2				
90	2mm	<i>Quercus</i> sp.			1			
91	2mm	<i>Quercus</i> sp.		1				
92	2mm	<i>Corylus avellana</i> L.						
93	2mm	Pomoideae						
94	2mm	<i>Quercus</i> sp.		1		1		
95	2mm	<i>cf. Corylus avellana</i>						
96	2mm	<i>cf. Fagus sylvatica</i>						
97	2mm	Pomoideae		2				
98	2mm	<i>Quercus</i> sp.						
99	2mm	<i>Corylus avellana</i> L.		1				
100	2mm	<i>Corylus avellana</i> L.						

^a 1 = low curve rings; 2 = intermediate curved rings; 3 = strong curve rings

^b 1 = low brilliance; 2 = strong brilliance; 3 = total fusion – dense, non-recognisable mass

^c 1 = yes



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FIGURE 1: Site Location

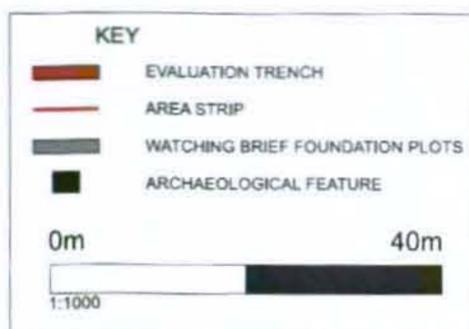
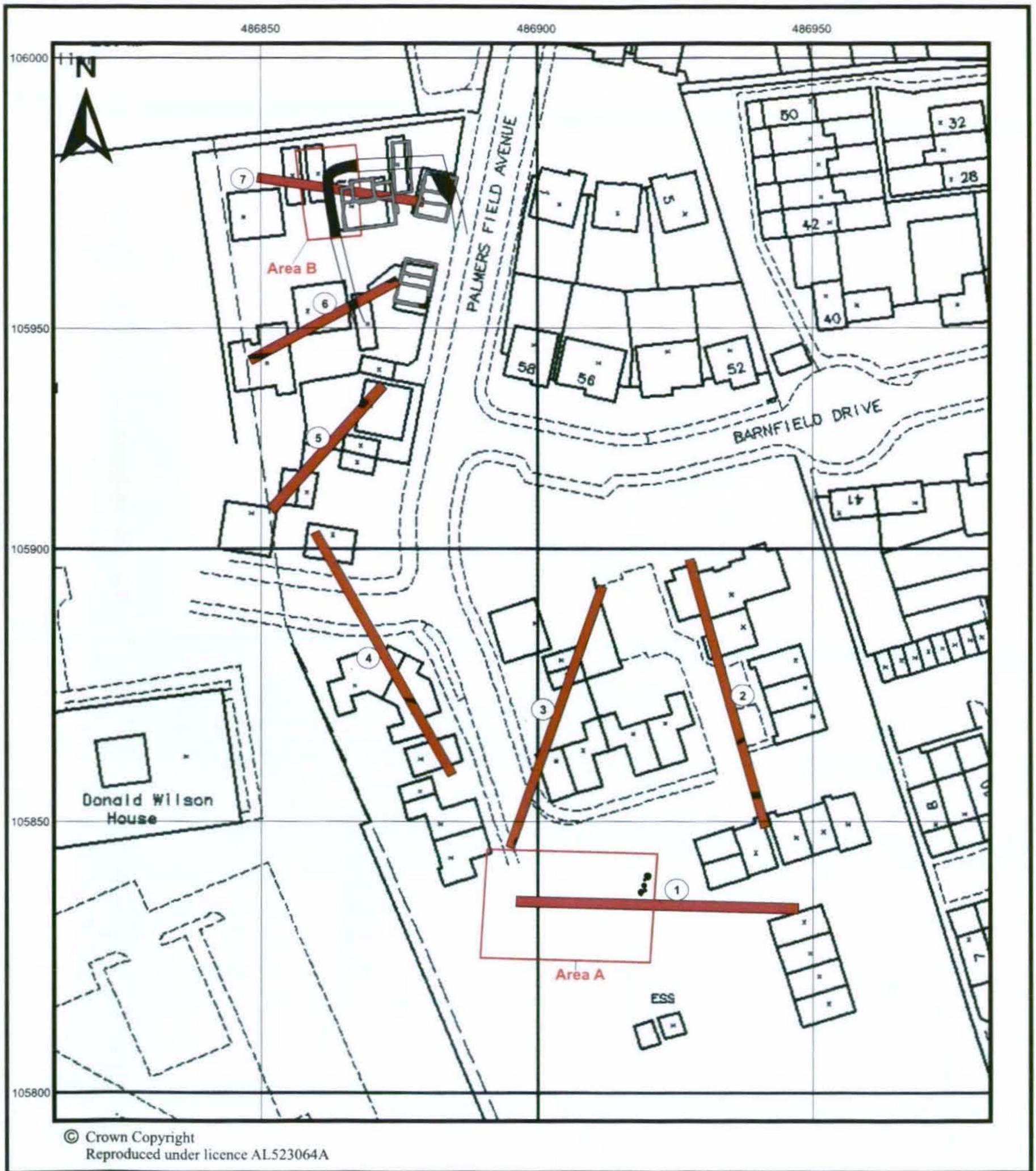


FIGURE 2: Trench, Area and Feature Locations

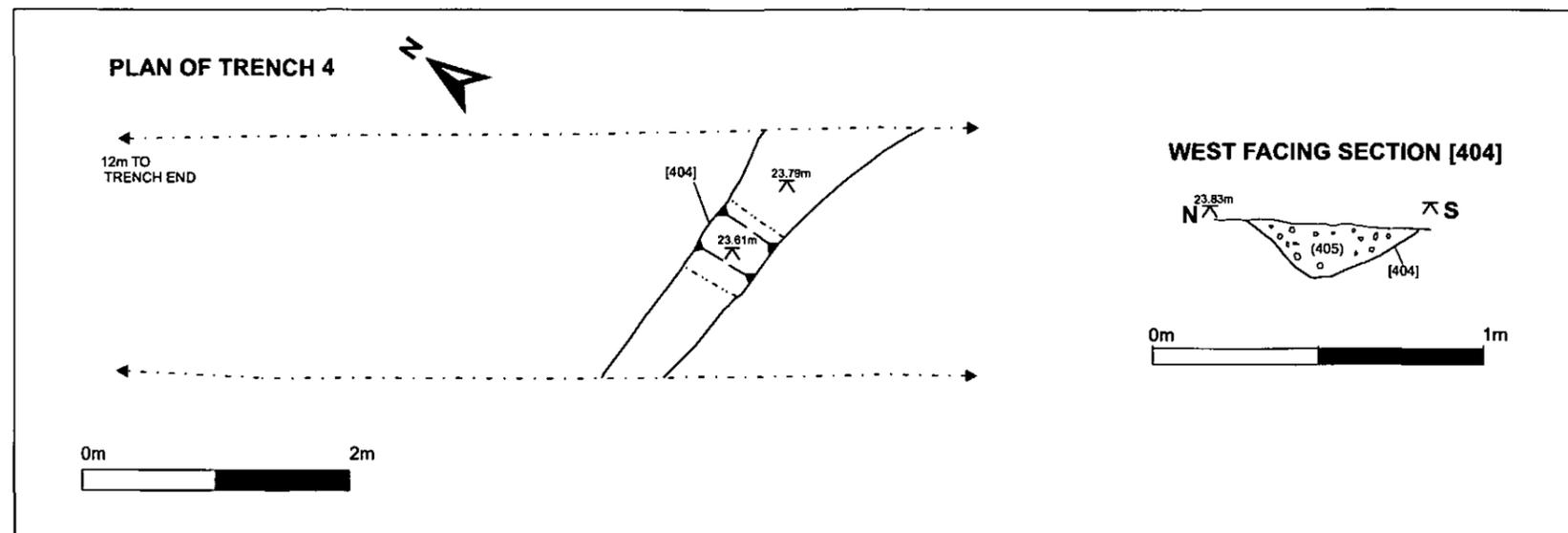
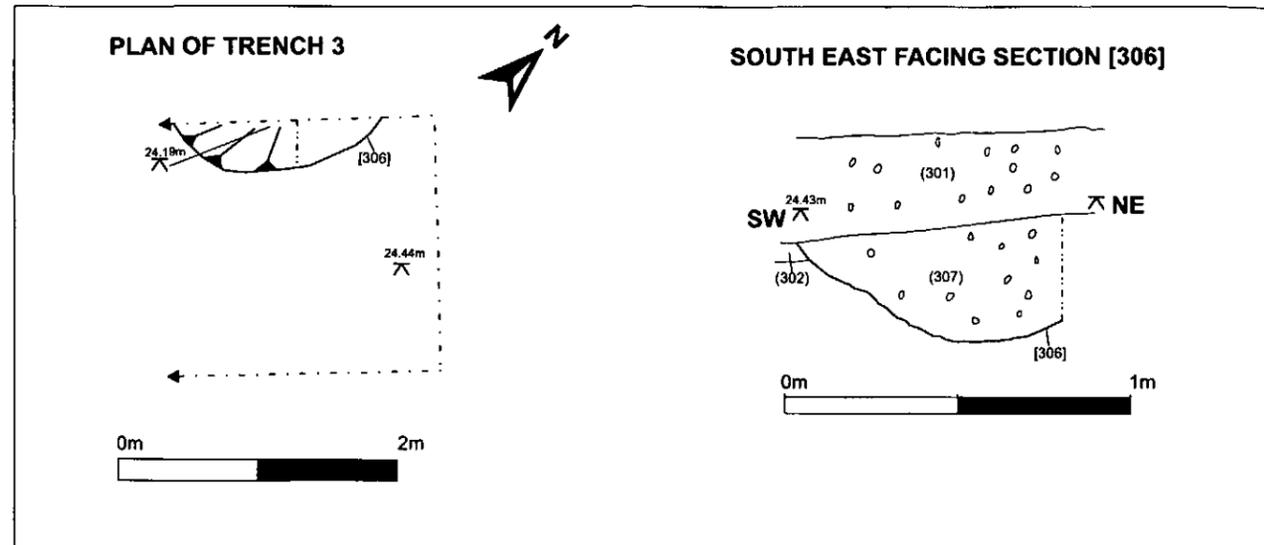
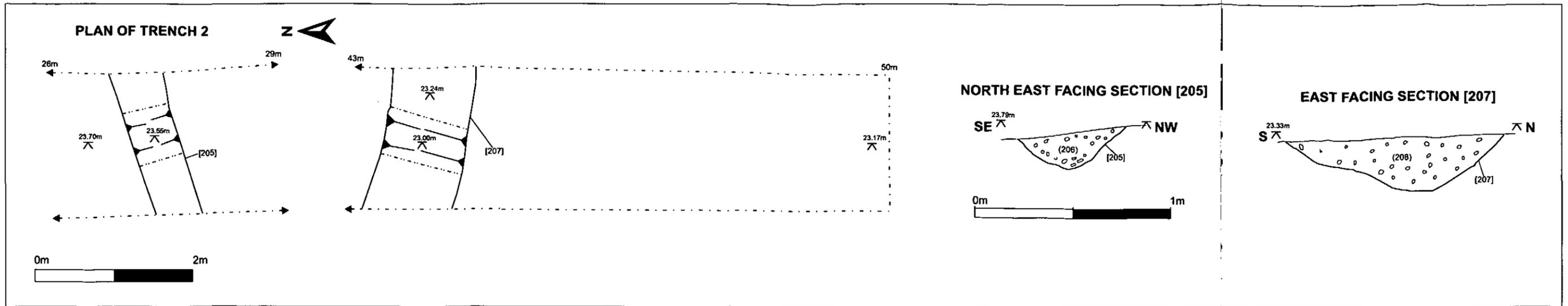


FIGURE 3: Trenches 2, 3 & 4, Plans and Sections

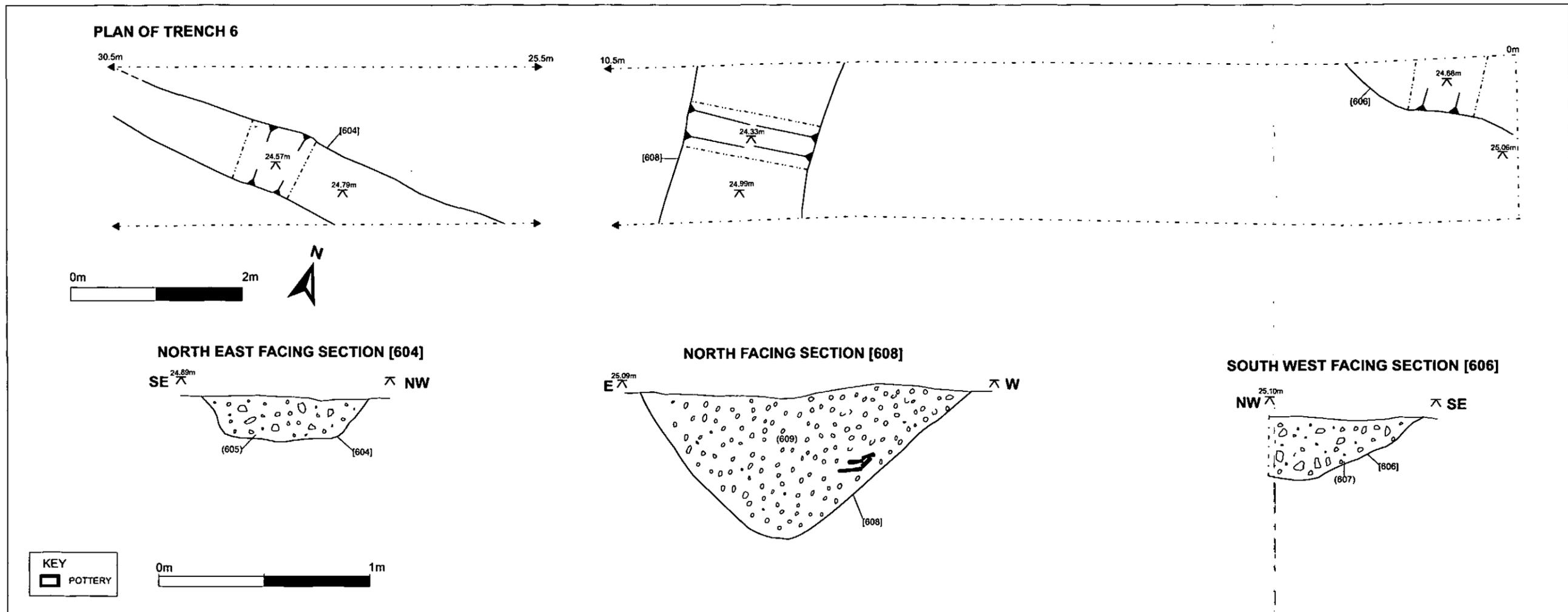
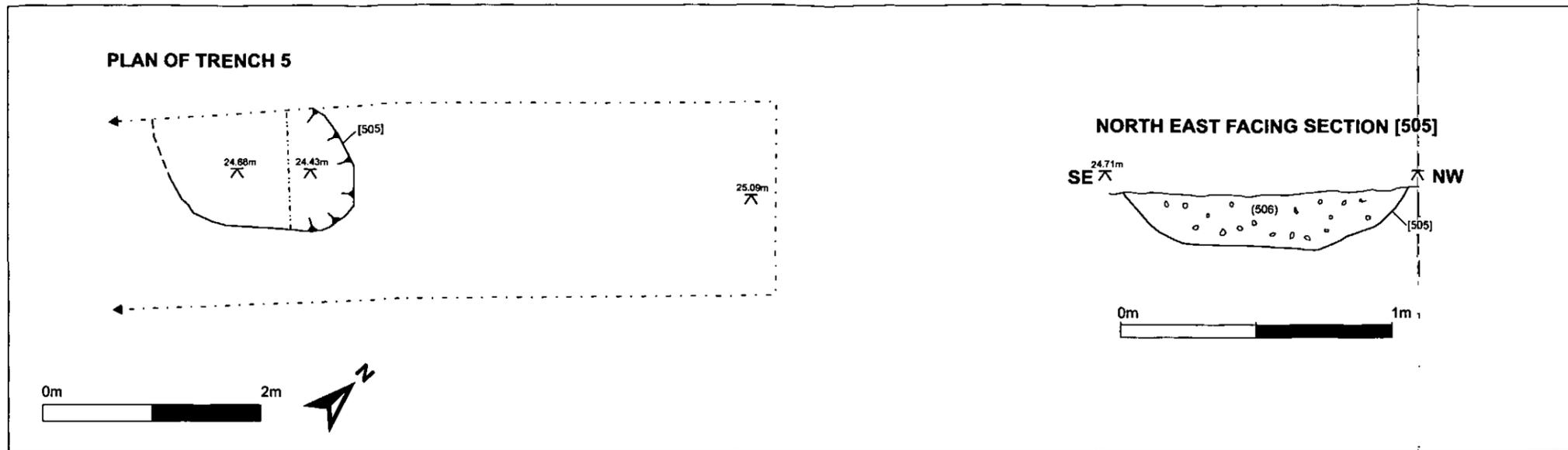


FIGURE 4: Trenches 5 & 6, Plans and Sections

**PLAN OF TRENCH 1 EXTENSION,
SHOWING [121], [122], [124], [126] & [128]**

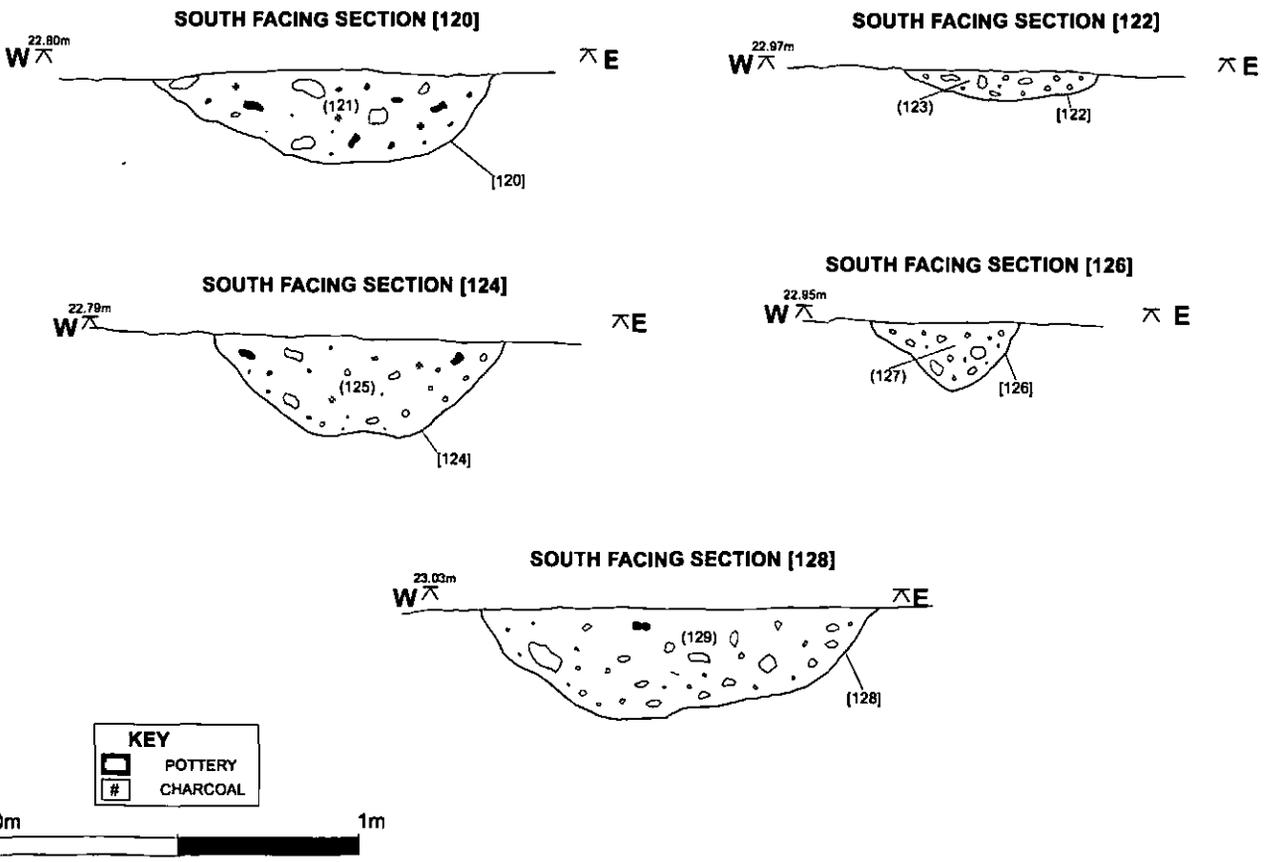
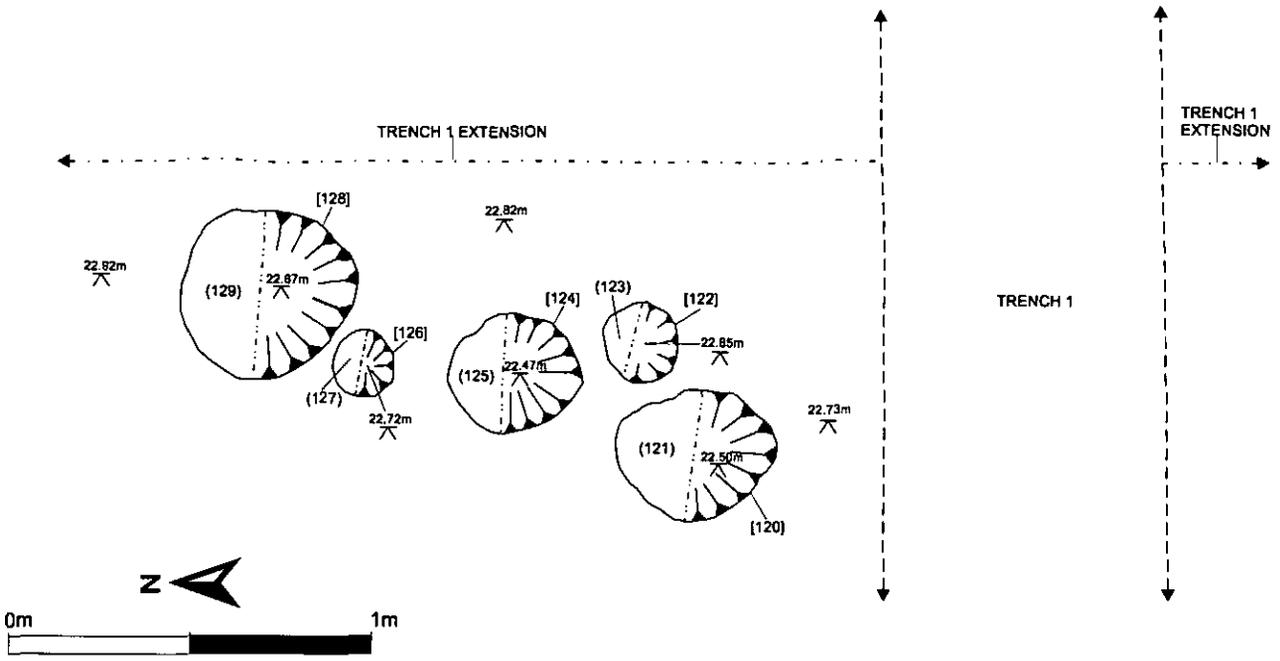


FIGURE 5: Trench 1 Extension, Plans and Sections

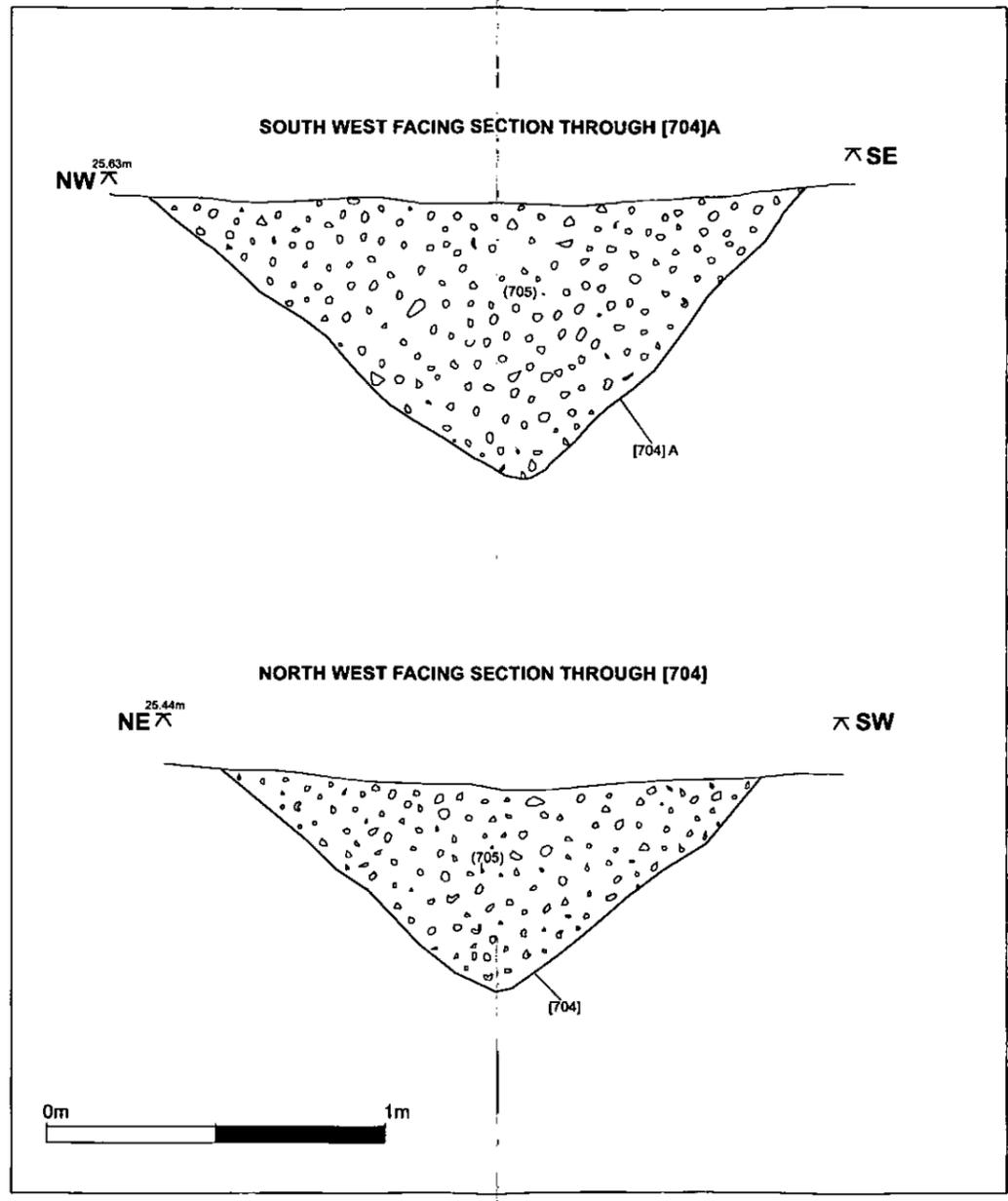
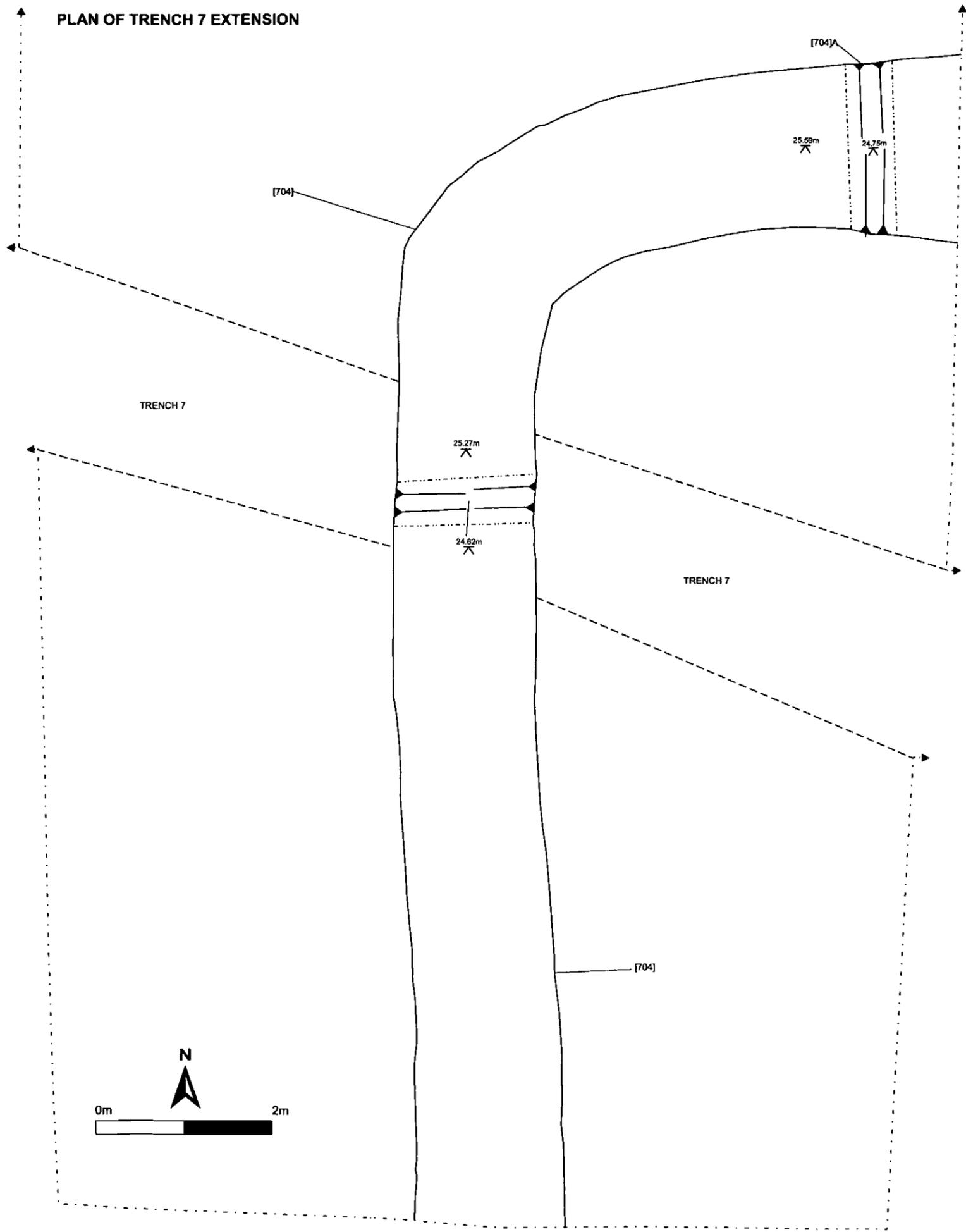
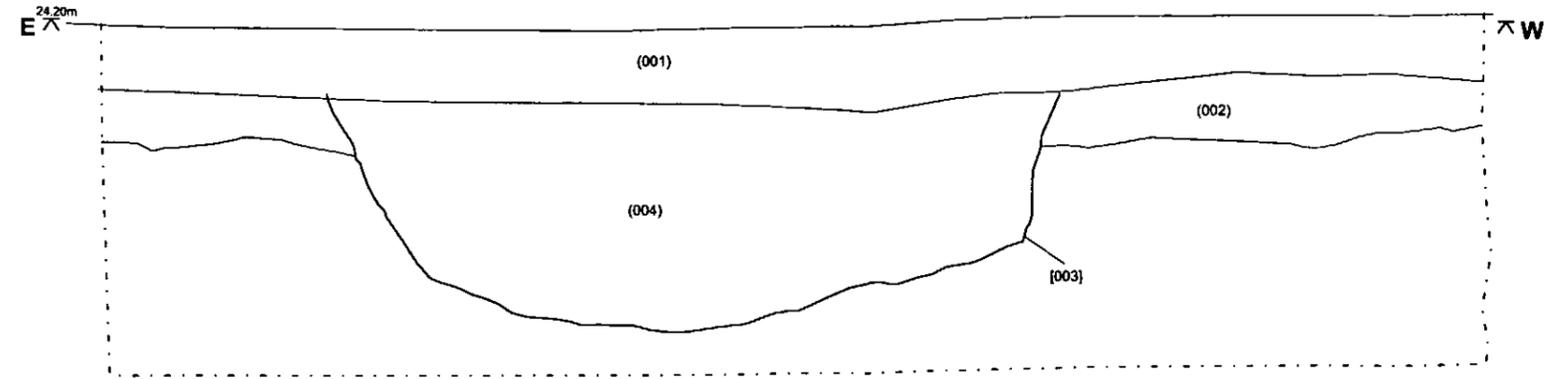
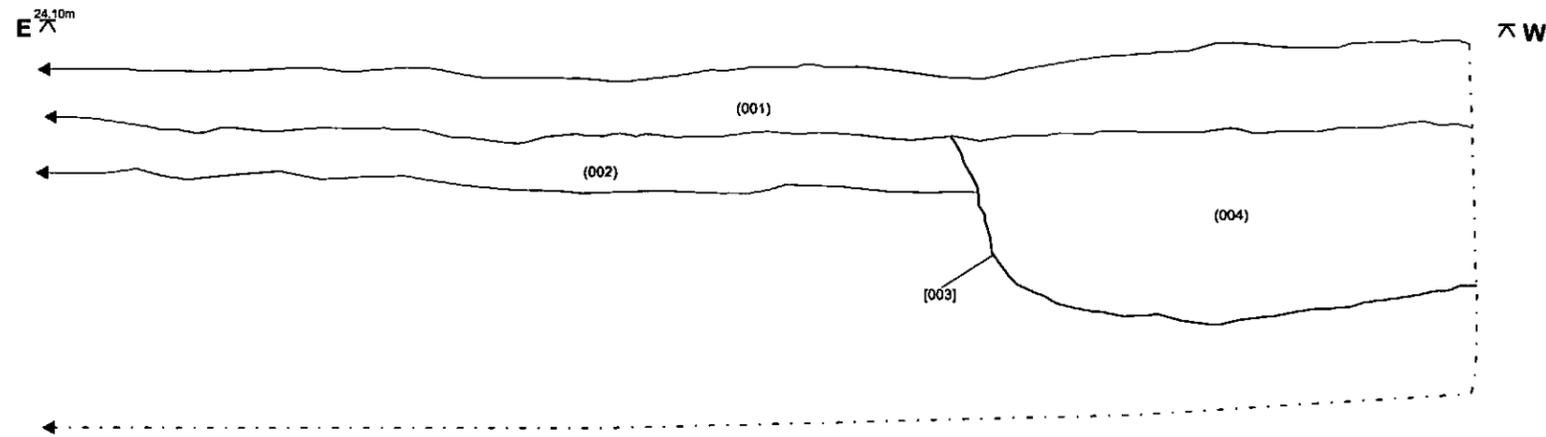


FIGURE 6: Trench 7 Extension, Plan and Sections

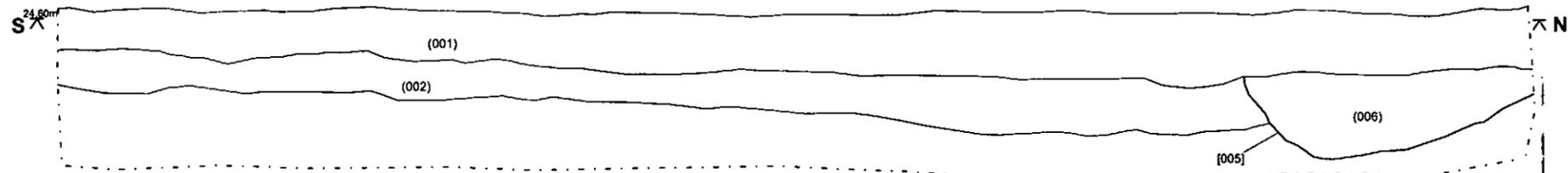
NORTH FACING SECTION TRENCH 1, FOUNDATION 4, SHOWING [003]



NORTH FACING SECTION TRENCH 5, FOUNDATION 4, SHOWING [005]



EAST FACING SECTION TRENCH 2, FOUNDATION 1, SHOWING [004]



SOUTH FACING SECTION TRENCH 3, FOUNDATION 1, SHOWING [004]

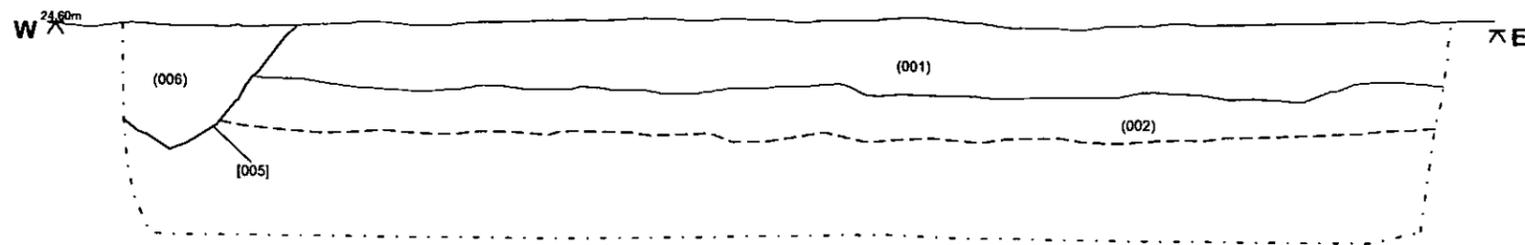


FIGURE 7: Foundations Trench Sections

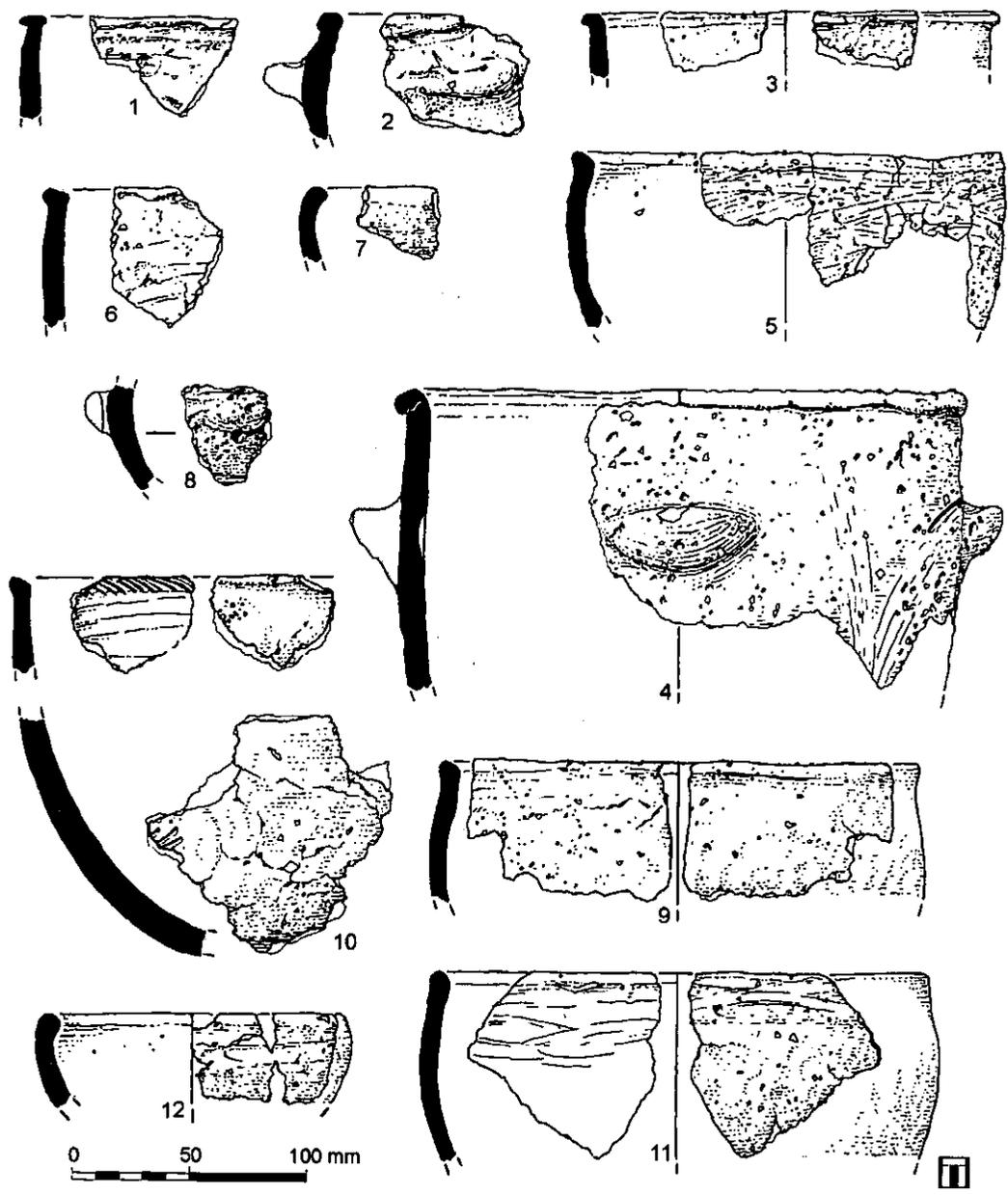


FIGURE 8: Early Neolithic Pottery Illustrations