



ARCHAEOLOGICAL
SERVICES
WYAS

**Bondgate and Gay Lane, Otley
West Yorkshire**

**Archaeological Excavation
and Watching Brief**

Assessment Report



January 2009

Report No.1897

CLIENT
RGCM Ltd

Bondgate and Gay Lane, Otley
West Yorkshire
Archaeological Excavation
and Watching Brief

Assessment Report

Summary

Archaeological excavation of two areas on land between Bondgate, Myers Croft and Gay Lane, Otley, revealed evidence of Romano-British activity consisting of a ditch and possibly gullies and stake holes, along with a possibly early post-medieval tannery, including timber-lined pits. Finds included Roman, medieval and post-medieval pottery and coins.



ARCHAEOLOGICAL
SERVICES
WYAS

Report Information

Client: RGCM Ltd
 Address: 4 York Place, Leeds, LS1 2DR
 Report Type: Archaeological excavation
 Location: Otley
 County: West Yorkshire
 Grid Reference: SE 2020 4526
 Period(s) of activity represented: Romano-British, post-medieval and modern
 Report Number: 1897
 Project Number: 3195
 Site Code: BGO 08
 Planning Application No.: 29/336/03/FU; 29187/99FU; 06/02247/FU and 06/02249/FU
 Museum Accession No.: -
 Date of fieldwork: January-February 2008 and March 2008
 Date of report: January 2009
 Project Management: Martin Lightfoot BA MA MIFA
 Fieldwork supervisor: David Williams BA
 Report and Illustrations: David Williams and Martin Lightfoot
 Ruth Leary (Roman pottery)
 Chris Cumberpatch (medieval and post-medieval pottery)
 Gail Hama (metal and glass)
 Jennifer Jones (Industrial residues)
 Diane Alldritt (botanical remains)
 Alexandra Schmidl, John Carrott and Alex Beacock (biological remains)
 Specialists: John Cruse (worked stone)
 Geoff Gaunt (lithology)
 Steve Allen (wood)
 Susan White (clay pipe)
 Jane Richardson (animal bone)
 Alan Vince and Kate Steane (CBM)
 Craig Barclay (Coins)
 Produced by: Archaeological Services WYAS, PO Box 30,
 Nepshaw Lane South, Morley, Leeds LS27 0UG
 Telephone: 0113 383 7500
 Email: admin@aswyas.com

Authorisation for
 distribution: -----

ISOQAR ISO 9001:2000

Certificate No. 125/93

© Archaeological Services WYAS

Contents

Report information	ii
Contents.....	iii
List of Figures	v
List of Plates.....	v
List of Tables	v
Acknowledgements	vi
1 Introduction.....	1
Site location and topography	1
Soils, geology and land-use	1
2 Archaeological and Historical Background.....	2
Prehistoric period.....	2
Romano-British period	2
Early medieval period.....	2
Medieval period	2
Post-medieval period	3
Modern period.....	3
Previous archaeological work.....	3
3 Project Aims	3
4 Methodology	4
5 Results	4
Area A.....	5
Area C.....	7
Area B: watching brief.....	11
6 Artefact Record.....	11
Roman pottery.....	12
Medieval and later pottery	15
Ceramic building material and plaster	17
Clay pipe	18
Stonework	19
Coins	20
Non-ferrous metal, ferrous metal and glass	20
Industrial residues	23
7 Environmental Record.....	23
Carbonised plant macrofossils and charcoal.....	23
Biological remains	25
Waterlogged wood	28
Animal bone.....	30
8 Discussion	31
Area A	31
Area C.....	32

9	Conclusions.....	32
	Area A	32
	Area C	33
	Statement of potential	33
	Recommendations for further work	34

Figures

Plates

Appendices

Appendix 1	Inventory of primary archive
Appendix 2	Context summaries and finds concordance
Appendix 3	Catalogue of medieval and later pottery from the excavation (ASWYAS)
Appendix 4	Catalogue of medieval and later pottery from the evaluation (YAT)
Appendix 5	Matrices for areas A and C
Appendix 6	Specification for an archaeological excavation
Appendix 7	Specification for an archaeological watching brief

Bibliography

List of Figures

- 1 Site location (1:50,000)
 - 2 Plan of development site and areas of archaeological investigation (1:1,000)
 - 3 Detailed plan showing archaeology within Area A (1:50)
 - 4 Area A sections (1:20)
 - 5 Detailed plan of Area C (1:50)
 - 6 Detailed plan of Area C upper deposits (1:50)
 - 7 Area C sections (1:20)
 - 8 Plan of timber lined pit within 1033 (1:20)
 - 9 Section 34 from Area C (1:20)
 - 10 CBM cross-section, width of field of view *c.* 3.4mm
 - 11 CBM cross-section, width of field of view *c.* 3.4mm
 - 12 Clay pipe illustrations (1:1)
- Cover 'The Tanner' by Jost Amman, 16th Century

List of Plates

- 1 Overhead view of Ditch 2062 and gullies 2057 and 2059, looking east
- 2 Gully 2067, looking northwest
- 3 An inundated Ditch 2062, looking north
- 4 Modern machine-cut feature (2047), looking north
- 5 Timber-lining (1031) in Sub-pit 1, looking west
- 6 Timber-lining (1047) in Sub-pit 6, looking north
- 7 Wall 1014, looking southwest
- 8 Stake holes 2022, 2024, 2026, 2028 and 2030, looking west
- 9 Working shot during the excavation of Area A, looking northeast
- 10 Watching brief during the demolition of the court building, Area B

List of Tables

- 1 Roman pottery catalogue
- 2 Catalogue of metal and glass
- 3 Carbonised and plant macrofossils and charcoal
- 4 Wood species identification
- 5 Animal bone fragments by context
- 6 Summary of specialist recommendations
- 7 Contexts with the potential for scientific dating

Acknowledgements

The excavation was carried out by Archaeological Services WYAS who were commissioned by RGCM Ltd. The project was managed by Martin Lightfoot and the excavation was supervised by Adrian Chadwick and Dave Williams assisted by Michael Vidler and Tom Weavill. The work was carried out according to specifications prepared by Andrea Burgess of West Yorkshire Archaeology Advisory Service, who along with Helen Gomersall monitored the project.

The post-excavation finds and environmental processing was supervised by Alison Morgan who coordinated post-excavation specialists. This report was prepared by Dave Williams, with contributions from Diane Alldritt, Alan Vince, Kate Steane, Ruth Leary, Chris Cumberpatch, Alexandra Schmidl, John Carrott, Alex Beacock, Jane Richardson, Craig Barclay, John Cruse, Geoff Gaunt, Gail Hama, Jennifer Jones, Susan White and Steve Allen. The author would also like to thank Paul Wood and Christine Dean from Otley museum who provided details of the medieval and post-medieval landscape of Otley, and Martin Lightfoot who edited this report.

1 Introduction

Archaeological Services WYAS (ASWYAS) were commissioned by RGCM Ltd to undertake archaeological excavations in two areas in advance of the construction of a Sainsbury's Supermarket, the development of which is covered by four planning applications (29/336/03/FU, 29/187/99FU, 06/02247/FU and 06/02249/FU). The excavation was carried out between 7 January and 11 February 2008 (Areas A and C) and a watching brief was undertaken on 17 and 25 of March 2008 (Area B). This document is an Assessment Report and incorporates specialist assessments of the finds from an evaluation of the site undertaken by York Archaeological Trust (YAT) and where relevant a synthesis of the results from that work (Finlayson 2004b).

Site location and topography

Otley is a small market town located on the River Wharfe. The town is situated in the rural centre of mid-Wharfedale. It is 19km northeast from the centre of Leeds and 16km southwest from Harrogate. Otley and Wharfedale Ward have nearly 24,500 people within its bounds (Office of National Statistics 2008).

The development area consists of an irregular block of land bounded by Myers Croft, Station Lane, Bondgate and Gay Lane, and is centred on grid reference SE 2020 4526 (Fig. 1). The excavations consisted of two areas; Area A, on land to the rear of Bondgate, along Myers Croft, and; Area C behind a group of terraced house on Gay Lane, (Fig. 2). A watching brief was also carried out during the demolition of the disused County Court building (Area B), the results of which are included below.

The ground rises through the development area from north to south from about 62.5m above Ordnance Datum (AOD) on Bondgate to about 65m AOD on Myers Croft. A small culverted stream runs north across the development area then under a demolished former tannery and warehouse building.

Soils, geology and land-use

The soils within the town of Otley are un-surveyed. However, the soils of the surrounding area consist of the Dunkeswick Association, described as 'a slowly permeable seasonally waterlogged fine loamy over clayey soils' (SSEW 1983, 711p), and the East Keswick 3 Association described as 'well drained fine and coarse loamy soils on steep slopes' (SSEW 198, 541y).

The underlying solid geology of the area consists of Addingham Edge Grit, a type of carboniferous millstone grit (BGS 2000) which rises immediately to the south of Otley, and forms a ridge stretching from Addingham to Harewood, known as the Chevin. The drift geology is made up of boulder clay and sandy-clay till with unsorted common pebbles and cobbles (BGS 2000).

At the time of the excavations, the development area was occupied by a variety of tenants and several buildings were still in use, including a modern brick built single-story building

used as a meat processing centre. Other buildings were used for light industry, as social centers, and the tarmac and concrete areas between these buildings was mostly used as car parking. The eastern part of the development area, adjacent to Gay Lane, consisted of uneven ground, overgrown vegetation and demolition rubble from a former four-story tannery and warehouse building (WYAAS 2007).

2 Archaeological and Historical Background

Sources for the following section consist primarily of a desk-based assessment of the site (Finlayson 2004a), an Archaeological Survey of the nearby Danefield Wood (Holbrey 2000), a description of the 'Otley Conservation Area' (WYAAS 2007) and the specifications prepared by WYAAS (Appendices 6 and 7). Additional sources are referenced where appropriate.

Prehistoric period

Activity from the Mesolithic period onwards has been recorded in the area, with Mesolithic and Neolithic flints recovered around the Warfe valley, adjacent uplands and on the hill slopes near Otley. A cup-and-ring marked rock was found in Otley and is listed as a scheduled monument (no. 29123), and cup-marked stones have been identified in the nearby Danefield Wood.

There is little evidence for Bronze Age activity in the area, though a burial possibly dating to this period was found in 1943. There is significantly more evidence for Iron Age settlement, particularly in Danefield Wood and in Otley itself, where numerous querns have been discovered dating to the Iron Age or Romano-British Period.

Romano-British period

A Roman road from Tadcaster passed to the south of the modern town (Margary 1973, Rd 729) and Roman settlements or military sites are known at Adel and Ilkley. Evidence from this period in Otley consists mostly of stray finds such as Roman coinage and fragments of pottery found at various locations in the town. The evaluation undertaken by YAT in 2004 produced a significant quantity of Roman pottery, tile and a coin (Finlayson 2004b).

Early medieval period

From about the 8th to the 14th century, Otley was part of a large ecclesiastical estate belonging to the Archbishop of York. A small amount of Anglo-Saxon pottery has been recovered in the vicinity, and an important group of stone crosses are in Otley Parish Church, dating to perhaps the early 8th century, which along with the early fabric of the building provide evidence for a monastic community here. The area between the church and the manor (modern Bondgate) may have become a trading centre, as was often the case near monastic settlement, though there is no archaeological evidence to confirm this.

Medieval period

In 1227 Otley was granted a yearly fair and a weekly market. A survey from 1307 shows development on previously open strip fields and burgage plots along Boroughgate and

Walkergate. The enclosure map of 1783 shows long narrow plots or ‘crofts’ extending from Bondgate and buildings fronting onto Gay Lane.

Post-medieval period

The economic base remained agricultural through much of the early post-medieval period, with tanners, curriers and other trades reliant on the cattle market supplying much of the employment in Otley. In the later period, Otley became a finishing centre for woollen, worsted and linen cloth. Cotton and woollen mills were established in Otley in the late 18th century, and linen dressers and weavers are known to have been working in the town from the beginning of that century.

Modern period

The pre-eminent industry in the town during the 19th century was the manufacture of printing presses, which employed up to 2000 people. Maps from the mid 19th century show the area adjacent to Bondgate occupied by several buildings, including a tannery, and that the layout of the crofts behind the buildings still existed, one being occupied by a ropewalk. The site continued to include a mixture of industrial and small-scale agricultural activity until the construction of Myers Croft in the mid 20th century. This opened up access to the rear of the crofts to new development, and by the 1960s the historic property divisions had largely been lost.

Previous archaeological work

Little archaeological work has been undertaken in Otley in recent years. In addition to the evaluation by YAT (Finlayson 2004b) only archaeological watching briefs recording post-medieval and modern remains have been undertaken within Otley (Rose 2007a and 2007b).

The works described in this report follow on from the archaeological evaluation undertaken by YAT in 2004 (Finlayson 2004b). This evaluation revealed significant archaeological remains to be present in two areas and led to archaeological conditions being attached to planning permission to mitigate the impact of the development.

3 Project Aims

The general aim of the excavation was to ‘...fully record, analyse and report all archaeological remains within the areas of interest prior to their destruction during the development of the site’. The specific aims were to:

- Obtain sufficient information to understand the nature of the Romano-British and 18th century activity on the site;
- Obtain dating and phasing information for all archaeological features, and;
- To understand and present the archaeological evidence in a local, regional or national context as appropriate (Appendix 6)

4 Methodology

All work was undertaken in accordance with specifications produced by West Yorkshire Archaeology Advisory Service (Appendices 6 and 7), recognised professional standards (IFA 2008a, 2008b, 2008c and 2008d) and ASWYAS site recording manual (2003). The area was stripped under constant archaeological supervision, by a 15-tonne 360° excavator fitted with a 1.5m-wide toothless ditching bucket. The topsoil and overburden were removed in level spits to the top of the first archaeological horizon or undisturbed natural. The resulting surface was cleaned manually and inspected for archaeological remains.

All archaeological features were then hand excavated. The discrete features were half-sectioned in the first instance and then fully excavated once sufficient information had been obtained and recorded.

In accordance with the ASWYAS site recording manual (ASWYAS 2003), a full written, drawn and photographic record was maintained during the course of the excavation. Hand-drawn plans were made of excavated features at a scale of 1:20 and 1:50 and sections drawn at a scale of 1:10 and 1:20 as appropriate. All sections and plans include spot heights related to the Ordnance Datum in metres correct to two decimal places. Temporary bench marks were established close to areas A and C from a benchmark located on the shop fronts of Bondgate, this was then checked by surveying back to the original bench mark and to a benchmark on the west side of All Saints Church. The excavation areas were surveyed and fixed in relation to nearby permanent structures and to the Ordnance Survey national grid.

A soil-sampling programme was undertaken for the identification and recovery of carbonised remains, vertebrate remains, molluscs and small artefactual material. Soil samples of up to 20 litres were taken from the fills of excavated features where appropriate. Bulk environmental samples were processed by ASWYAS using an Ankara style water flotation system (French 1971). The flots were dried in preparation for examination under a low-power binocular microscope.

The site archive contains all the information gathered during the excavation, and its contents are listed in Appendix 1. The archive is currently held in ASWYAS stores but will be deposited with Leeds Museums and Galleries in due course.

5 Results

The two areas excavated revealed very different archaeological remains. Archaeological remains in Area A consisted of a ditch, gullies, stake holes and some modern intrusions. Archaeological remains in Area C including tanning pits, cobbled surfaces and walls. The results below are described from the stratigraphically earliest to the latest. No archaeological remains were recorded during the watching brief on Area B. A summary of all contexts and a concordance of finds forms Appendix 2.

Area A

Area A (Fig. 2; Plate 9) was irregular in shape, approximately 13m wide by 27m long. Archaeological remains were confined to the northern portion of the site and consisted of a ditch, two gullies, five stake holes in the northwest corner of the area, and a large discrete modern feature running through the north-eastern part of the area (Fig. 3; Plate 4).

Ditch 2062

This ditch had an uneven base (Fig. 4, S.18), and was 0.59m deep. The ditch was only partially evident in plan and the full profile was not visible (Plate 1), though it appeared to be orientated roughly east to west. Excavation revealed that it had two fills. The upper fill, bluish-grey sandy clay (2060) contained three sherds of Dressel 20 Amphora, dated to between the mid 1st to 3rd century AD. The primary fill (2061) contained very abraded samian crumbs and fragment of a Romano-British quern stone. Stratigraphically this ditch was the earliest archaeological feature in Area A.

Gully 2059/2067

Ditch 2062 was truncated by a narrow gully (2059/2067), approximately 0.90m in width and 0.32m deep (Fig. 4, S.18). The primary fill of the gully consisted of dark bluish-grey silty clay (2066/2058), but contained no finds. The secondary fill consisted of light greyish-blue silty clay (2065), containing a single abraded Dressel 20 amphora fragment dated to the mid 1st to 3rd century AD. This gully terminated 4.5m from the north-western corner of the site (Plate 2).

Gully 2057/2064

Gully 2059/2067 was re-cut by a shallower gully (2057/2064), between 0.15 and 0.30m deep (Fig. 4, S.19), containing a single fill (2056/2063). No finds were recovered.

Both these gullies were orientated northwest to southeast; the pottery within both gullies may have been residual and come from the ditch which the gullies intersect or drained into (2062).

Stake holes

A cluster of five stake holes (2022, 2024, 2026, 2028 and 2030) were recorded in the northwest of Area A (Fig. 3; Plate 8). They had a diameter of between 0.05 and 0.09m and a depth of between 0.10m and 0.26m. Three of the stake holes cut the upper fill (2056/2063) of a gully (2057/2064). The base of the stake holes ranged from 63.56m AOD to 63.71m AOD, and only two, at the southern end of the group shared a similar orientation of their base (2024 and 2026). This cluster of stake holes is very similar to those found in the 2004 YAT evaluation of this area, and as such may be part of the same group. The stake holes recorded by YAT were 3m to the south, had a diameter of between 0.05 and 0.12m and a depth of between 0.09m and 0.13m, and though unfortunately the level of their bases related to the ordnance datum were not recorded. It is suggested that one of the stake holes is stratigraphically earlier than the stream bed (YAT 6035, ASWYAS 2053 / 2055), though it is not clear which stake hole is meant from the description and the plan (YAT 2004b, fig. 3)

appears to contradict this interpretation. The excavation shows that the stake holes are later than Gully 2057/2064 and are sealed by Layer 2002. This suggests that they may be early post-medieval, medieval or earlier. Closer dating is not possible as no finds were recovered from any of the stake holes during the evaluation or excavation.

Layer 2002

Sealing all pre-modern archaeological remains on Area A was a thick layer of sandy clay (2002); it was 0.50m thick at the northern end of the area and 0.25m thick to the south. This layer contained pottery dating to between the late 11th and early 15th centuries, suggesting that perhaps this subsoil developed over time, becoming homogenised, due to agricultural activity.

Stream bed 2053 and 2055

Located within Layer 2002, and cutting the natural boulder clay, was a concentration of stony material within a sandy clay matrix (2052 and 2054). The deposit excavated was very irregular and shows no signs of being within a regular 'cut' feature (Fig. 4, S.14). The 2004 YAT evaluation misinterpreted this feature as '...the base of part of a road or path...' (Finlayson 2004b). Once a large area around this feature had been stripped and cleaned, it became apparent that this putative path was nothing more than the base of a small stream. Meandering streams, such as Callhead Beck are visible on maps in the Bondgate area (Wood 1999, 18-19). The exact location and course of a stream before they were surveyed and mapped can be difficult to determine. According to Wood '...becks were subject to many diversions for agricultural, domestic and industrial purpose' (Wood 1999, 34). It seems likely, therefore, that these deposits are the remains of a stream running through this area eroding through the subsoil and plough-soil; leaving only the cobbles which are common within the natural drift geological layer on the site (see Section 1). However, the presence of finds from the evaluation is more problematic (Finlayson 2004b); on closer inspection the pottery was heavily abraded and as such could have been washed through the stream out of an archaeological deposit.

Modern remains

Other features consisted of large modern trench with vertical sides (2050). The feature was very regular and quite clearly machine-cut (Plate 4). This feature was partially hand excavated down to a depth of 0.50m to confirm this interpretation. However, in order to reach the base of the feature and determine if it sealed earlier archaeological remains, a machine was required to excavate out the rest of the fill (2051); the feature bottomed out at 2.05m and produced only 20th-century finds including an oil barrel. The fill was heavily mixed and appeared to be entirely backfill. This trench truncated a shallow pit (2047), 0.19m deep and 2.47m wide and containing two fills (2048 and 2049), both of which consisted of a coarse sandy material, producing modern finds including a pipe bowl and two fragments of yellow-glazed courseware dating to the 19th century. Both these features cut the post-medieval subsoil (2002) and were sealed by modern hardcore (2001) and the irregular tarmac surface ubiquitous across the area (2000).

Area C

Area C was located behind numbers 11-23 Gay Lane and directly north of the demolished rubble of a four-story tannery and warehouse that once stood on the site. The area was irregular in shape, approximately 15m by 9m (Fig. 2.).

This area contained a number of clay-lined pits, associated with the process of tanning leather (Fig. 5). There were three large rectangular pits cut through the natural boulder clay and orientated northwest to southeast and lined with heavy clay (1033, 1034 and 1035). Cut into this clay were eight subsidiary pits, one of which was circular (Sub-pit 1), the remaining were sub-rectangular, or sub-square in plan. Later walls were also recorded which crossed the middle of Area C and appeared to related to the terraced houses along Bondgate, constructed in the 18th century.

The upper modern layers, such as tarmac, builder's rubble and made ground were machined away and recorded in section against the edges of excavation. Unstratified finds recovered during machining were assigned to contexts 1000 and 1070. Most of the finds resulting from machining dated to the 18th or 19th century, though there was also the occasional earlier find (see Section 6).

Pits 1004 and 1006

The stratigraphically earliest archaeological features in Area C were two pits at the eastern end of the area (1004 and 1006). They were sealed beneath the subsoil layer that the other features in this area were cut into (1022). Pit 1006 was 0.65m in diameter and 0.23m deep and contained an abundance of large cobbles (1005), some of which were burnt; charcoal flecks were also concentrated towards the centre of the pit. Pit 1004 was 0.55m in diameter and 0.10m deep and contained a burnt stone (1003). Neither pit contained any datable finds, though their stratigraphic position suggests they are likely to date to the post-medieval period or earlier.

Tanning pits

The three large oblong, pits (1033, 1034 and 1035) were cut into the subsoil (1022) and backfilled with clay, presumably to keep the sub-pits watertight. It is likely that all three large pits extended beneath the demolished former tannery to the immediate south of the area, though this was not proved by excavation as additional stripping to the south showed this area to be very heavily disturbed. Eight sub-pits were recorded and each is described below (Fig. 5).

Pit 1033

Pit 1033 was 2.50m wide and 0.80m deep and filled by a thick, mottled yellow-blue clay (1032) into which a circular pit (Sub-pit 1) had been cut (Fig. 7, S. 27).

Sub-pit 1

The sub-pit had apparently been cut (1103) into the clay then lined with timber identified as oak (1031). The pit was 1.76m in diameter and 0.70m deep (Fig. 7, S.27). Planks were recorded and lifted from the base and though the timber on the base was all that survived, impressions of timber were observed on the sides of the pit caused by barrel staves (Fig. 8). Overlying the timber was dark purple-black clay containing an abundance of organic material (1030). A sherd of 13th to late 14th-century pottery and a sherd of 18th-century pottery were recovered from this fill. Fills 1030 and 1029 which overlay it formed a mound within the pit which may have been the remnants of tanning prior to its abandonment. These deposits were overlain by grey-brown silty clay (1028), with small platy grey stones, probably a deliberate backfill which contained three sherds of 18th to 19th-century pottery.

Pit 1034

This was a large 'inverted L-shaped' pit, between 2 and 4m wide and 0.95m deep, filled by a mottled yellow-blue clay lining (1040), cut into the subsoil (1022). The lining was present along the base of the cut and along the side, except for the southern end, where the clay was very thin on the sides and missing in places, suggesting slumping of material into the pit (Fig. 7, S. 33 and S.27). Five sub-pits were cut into this pit (2, 3, 4, 5 and 6) which were sealed by a layer (1001) containing a coin dating to 1733.

Sub-pit 2

Sub-pit 2 was roughly rectangular and 1.80m in width and presumably continued to the south, though further stripping showed it to have been truncated by a modern disturbance full of hydrocarbon contamination, probably from a modern pipe running to the now demolished 19th-century tannery and warehouse building to the south. The pit was approximately 0.70m deep and contained a single mixed fill (1057), consisting of a mid to dark brownish-green gritty clay with abundant small platy gravel. The inclusions within this deposit were similar to the local river gravels and probably represent deliberate backfilling.

Sub-pit 4

This pit was 2.00m long, 1.20m wide and 0.70m deep. It was partially excavated during the YAT evaluation and was mistakenly identified as a well. Excavation revealed the extent of the pit and the fills within the clay lining. A total of five fills were recorded within this sub-pit. The primary fill consisted of grey-brown silty clay (1039), this was overlain by three fills which appeared to be backfill (1038, 1037 and 1036), there also seemed to be a small band of purple gritty material (1008) which also overlay some cobbles (1009).

Sub-pits 3, 5 and 6

The three remaining pits were very similar; all were sub-square just over 1m² in area, though the full extent of pits 5 and 6 were not recorded as they ran into the northern baulk of the excavation area (Fig. 5). Each pit was lined with wooden planks, (1044, 1046 and 1063). The timber lining (1046) within Pit 6 was the best preserved (Plate 6), though it was very thin and

impossible to lift, planks were also recorded on their side forming a box-like lining (Fig 9). The other pits contained deposits which included decayed or very fragmentary wood probably also linings. Each pit then contained a mottled grey-brown clay deposit, (1045, 1060 and 1048), the similarity between these deposits may suggest a functional similarity, or that they were backfilled at the same time. A compact lime-like material (1049) was recorded above the wooden layer in Sub-pit 5, possibly an accumulation resulting from one of the processes of tanning. Pottery dating to the late 15th to early 16th century was recovered from Pit 3 (1044), and late medieval pottery was recovered from Sub-pit 5 (1060), though this may be residual, incorporated into the backfill.

Pit 1035

This was of similar construction to the other two large pits, was lined with thick mottled yellow-blue clay (1017), was probably rectangular, and continued to the west and south (Fig. 7, S. 33). This pit was truncated to the south by a large modern feature full of diesel and hydrocarbons (see above). It contained two sub-pits (7 and 8). Neither pit was fully revealed in plan, though both were approximately 1m deep. No finds were recovered from either of these sub-pits.

Sub-pit 7

There was no evidence that Sub-pit 7 was timber lined, though it did contain a waterlogged deposit at its base which contained wood fragments and bark chippings (1056). The presence of these suggests the pit may have been a 'layaway pit', used in the actual tanning process. Above this deposit was an off-white gritty lime deposit with orange staining (1055). It is possible that this deposit was produced from lime used to clean off the hair and fat from the skins. Additional deposits then accumulated above and the pit was evidently backfilled once out of use (1053, 1054, 1071 and 1051). All the upper fills contained similar inclusions of small platy stones, very similar to local river gravels. Within the west-facing section of the pit, in the clay lining (1017), a deposit was observed which looked like a post-pipe or rotted wood (1067).

Sub-pit 8

This pit was quite irregular compared to the other pits and it contained no in-situ deposits only deliberate backfill (1066).

Despite the fact that there were few datable finds from these pits, it is likely that they are roughly contemporary as they are all of similar construction and there is no inter-cutting. Their stratigraphic position seems to indicate that they probably date to the post-medieval period or earlier, with a coin dating to 1733 recovered from a sealing layer (1001) and most of the pottery recovered from the pits being post-medieval. The small amount of medieval pottery recovered from the pits themselves may be residual, though the presence of medieval pottery does indicate activity during this period in this area and the possibility of tanning originating on or near the site during this period cannot be excluded.

Cobbled Surfaces 1009 and 1023

Cobbled surfaces made up of fairly small tightly-packed cobbles appeared to be contemporary with the tanning pits, as they did not appear in any place to have been cut by any of the large pits (Fig 6). Despite the cobbles being partly removed during the 2004 YAT evaluation, it was still clear that they respected the tanning pits and may have served as a walkway or working area between the pits. This would have allowed access to the pits along their whole length. The cobbles were bedded on a layer of yellow-brown sand, which did not contain any finds. The bedding layer of sand was directly over a subsoil layer (1022).

To the east, a small patch of fairly small cobbles tightly pack together was recorded. This was also bedded on sand (1010) and seemed to be the remnant of a cobbled walkway between the eastern and central pits.

Wall 1012

The cut (1042) for Wall 1012 ran east to west through the upper fills of Sub-pit 4 (1039) and truncated pits 1047 and 1062 (Fig. 6). The wall was poorly made of sandstone and grit stone blocks approximately 0.40m x 0.40m x 0.35m with some blocks slightly larger, only two or three courses of stone remained *in situ*. Around the wall was light-brown silty clay, the backfill of the construction trench (1041). Within the north-western portion of the area, other pieces of masonry which may have been debris from this wall were also recorded (1011).

Wall 1014

The last structural element in this area was a wall running north to south (Fig. 6; Plate 7). This consisted of a 'u-shaped' foundation cut with a flat base (1027), the eastern side of which flared out from the wall becoming wider at the base. There were four courses of grit-stone blocks remaining *in situ*. The upper courses had been mortared together with a white gritty mortar; the lower courses appeared to be un-bonded, though there may have been mortar present which has since degraded and eroded away. The backfill (1026) was subtly darker brown than the natural subsoil, making it difficult to see. The wall butted against and incorporated part of Wall 1012 and continued beyond the excavation area further north and south. Other walls are still standing towards the west of the area and this wall may have enclosed a yard attached to the back of the terraced houses along Bondgate.

Contemporary with the wall (1014) was a layer of white gritty lime material (1001) above all the large tanning pits and, visible right across the site. Upon this was laid a cobbled surface made up of large, loosely spaced, rounded cobbles varying in size from 0.10m to 0.25m (1024). A coin was recovered from this layer which dated to 1733 (King George II) along with pottery dating to the 18th century, provide a possible *terminus post quem* for the cobbled surface. Both Layer 1001 and the cobbles abutted Wall 1014 and may have been contemporary. This cobbled surface may have originally overlain all of the tanning pits, possibly forming a yard surface.

Upper deposits within Area C consisted of various levelling layers. Most notable among these deposits was a large deposit which covered the area in most places (1002) and which

produced both late 11th to 13th century pottery and late 18th to 19th century pottery. The layers above this consisted of bedding layers, thin tarmac layers, heavily mixed made-ground and hard standing, forming a surface used as a car park (1018 and 1019).

Area B: watching brief

An archaeological watching brief was carried out during the demolition of the County Court building on 17 and 25 March 2008 (Fig. 2, Area B). An archaeological presence was maintained while the concrete slab of the building was removed. Directly under the concrete slab were layers of rubble and hardcore (Plate 10). These deposits were left *in situ* as the development plan for this area would entail the construction of a road over them and no further disturbance.

6 Artefact Record

Finds recovered from the excavations consisted of pottery, animal bone, ceramic building material (CBM), clay pipe, and preserved wood. The finds from the 2004 YAT evaluation were also sent to specialists and assessments are incorporated into this report. The finds from the YAT evaluation are related as far as possible to the subsequent ASWYAS excavation. The pottery from the evaluation and excavation was similar and of a similar date range broadly supporting the stratigraphic interpretation of the site (Appendix 5).

Finds recovered during the evaluation are allocated context numbers between 6000 and 6092 for Area A, and 7001 and 7040 for Area C.

The pottery finds recovered from Area A from the evaluation fall into five contexts, these can be matched up with contexts from the excavations as follows:

6001 = 2000 (car park surface); no finds were recovered from this context during the excavation; however, some abraded Roman pottery was recovered from the evaluation.

6008 = 2049 (modern feature); the evaluation produced mid 19th to 20th-century pottery. The excavation produced 19th-century pottery.

6010 / 6086 = 2002 (garden soil); the evaluation produced a range of material dating from the 11th to the early 17th century. The excavation produced some abraded Roman Grey ware as well as 11th to 13th and 13th to 15th-century pottery.

6087 / 6087 = 2052 / 2054 (Stream bed) this produced both abraded Nene Valley colour-coated ware dating from the late 3rd to 4th century, as well as some later medieval pottery.

Within Area C the only evaluation context which can be matched to any excavation context is 7017 which corresponds to the upper fill (1028) of a tanning pit (1033). The evaluation pottery ranged in date from the 15th to the 19th century; while the pottery from the excavation dated from the 18th to the 19th century. Lower fills of the tanning pit however, produced some coarse sandy ware, dating from the early 13th to the late 14th century.

Roman pottery

by Ruth S. Leary

Thirty-seven sherds of Romano-British pottery (515g) were recovered. Several groups of sherds were in a fragmentary and abraded condition (2003, 2061, and 6087). No instances of repair, re-use or burnt accretions were noted. The catalogue appears as Table 1 below.

Three tiny crumbs of samian (2061) cannot be precisely dated by the author but fall within the importation of samian from the mid 1st to 3rd century AD. One small sherd (12g) of Baetican Dressel 20 olive-oil amphora (Peacock and Williams, 1986, Class 25) came from Context 2065 and a further three body sherds, probably of a different Dressel 20 amphora, came from Context 2060. This globular-shaped amphora is the most common amphora imported into Roman Britain (Williams and Peacock, 1983). They were made specifically for transportation by sea of the olive oil produced by the many estates in the valley of the River Guadalquivir and its tributaries in the southern Spanish Roman province of *Baetica*, in at least 150 different centres (Ponsich 1974, 1979, 1991; Remesal, 1986; Peacock and Williams, 1986, Class 25). The globular Dressel 20 form was made over a long period, beginning in the reign of Augustus and lasting until shortly after the middle of the 3rd century A.D. Baetican olive oil was still exported after this date, though on a reduced scale and in a smaller, thinner-walled version of Dressel 20 known as Dressel 23 (Carreras and Williams, 2003). The rim form suggests a date range in the second half of the 2nd century AD (Peacock and Williams, 1986 fig. 65, no. 25).

Two sherds (both 4g.) of medium, quartz-tempered grey ware, not dissimilar to South Yorkshire ware from the kilns near Doncaster, came from Context 2003. One was from a BB1 type jar with acute lattice burnish of the mid to late 2nd century and the other a basal sherd was not closely datable but belonged to the mid 2nd to mid 4th century.

A further sherd in a medium, quartz-tempered BB1-type ware with brown margins (6010) may be from the South Yorkshire kilns but is not typical of the BB1 wares and BB1-type wares from that kiln group in colour and the angularity of the inclusions and is more likely to come from another local kiln source. This sherd was from the base of a BB1 type bowl or dish, with intersecting burnished arcs on the bottom and traces of linear burnishing inside the base. Such decoration was found on bowls and dishes made from the early 2nd to the 4th century.

Another dish, with a plain rim, was found in a pale grey fabric with very pale margins and moderate, sub-angular and angular quartz and is also unlike South Yorkshire grey wares and is more likely to be a local product. Again this form was current from the early 2nd to the 4th century at York and most common in the late 2nd to early 3rd century (Monaghan 1997, type DD1).

Context 6087 contained sherds from two Nene Valley beakers. One of these was represented by 20 sherds from the rim, body and base. The base was complete with the bottom half of the body. The lower part of the body had a rouletted zone, above which the girth was decorated

with under-slip scroll decoration. This was mistakenly identified as a 2nd-century Hunt cup-type beaker (Mainman 2004), but three rim sherds indicated a long-necked beaker with beaded rim of the late 3rd to 4th century (Perrin 1999, 96-7). One of the rim sherds had a slightly different coloured coating and may represent a second beaker of similar form and date. However variations in surface colour may also result from the position of the beaker within the kiln during firing. The beaker form dated from the late 3rd century and declined after the middle of the 4th century. The second beaker was only represented by basal and small lower body sherds. The small base suggests these came from a vessel of similar type and date.

The vessel types present may range in date from as early as the early 2nd century until at least the end of the 3rd century or the first half of the 4th century, with a shorter date span in the 3rd century or first half of the 4th century possible.

This small group includes pottery from a wide range of sources and includes high quality traded wares from Spain, Gaul and the Nene Valley, suggesting a settlement of significant status. The forms present include specialist containers such as amphora for olive oil, as well as high quality beakers with elaborate scroll decoration. There was a high proportion of table wares such as bowls, dishes and beakers with only one cooking jar which supports the impression of a relatively affluent settlement, an impression confirmed by the presence of Roman brick and tile from the site, including a fragment of *tegula* (Section 6).

Recommendations

Given the stratigraphic position of the samian scraps of pottery, it is recommended that they be submitted to a samian specialist who may be able to give a more precise date range. In view of the small amount of data pertaining to Roman settlement at Otley, for which only very limited evidence exists, the publication of a brief note in a County Journal would be useful.

Table 1: Roman pottery catalogue

Site	Context	Ware	Fabric	No.	Weight (g)	Abrasion	Part	Form description	Vessel type	Rim diameter	Rim %	Spot date	Decoration
BGO 08	2061	Samian	Samian	3	0.1	Very abraded	Crumbs	-	-	-	-	M1-M3	-
BGO 08	2065	Amphora Dressel 20	DR20	1	11.8	Abraded	Undiagnostic body sherd	Dressel 20	Amphora	-	-	M1-3	-
BGO 08	2060	Amphora Dressel 20	DR20	3	311.3	Abraded	Undiagnostic body sherd	Dressel 20	Amphora	-	-	M1-3	-
BGO 08	2003=2002	Grey ware	GRB1	1	3.7	Slightly abraded	Body sherd	BB1 type jar with acute lattice burnish	Jar	-	-	M-1 2nd	-
BGO 08	2003	Grey ware	GRB1	1	3.9	Very abraded	Body sherd	?plain base	Jar	-	-	M2+	-
YORAT 2003.7	6001	Light grey with grey core and pale grey margins with moderate, medium, sub-angular and angular quartz. Not S. Yorkshire product, probably local grey ware	GRB1	1	15.4	Abraded	Profile sherd	Plain-rim dish, rather curved walled as Monaghan 1997 type DD, 120-C4th	Dish	22	2	120-4Cth	-
YORAT 2003.7	6010	BB1 type ware with reddish brown margins. Moderate, well-sorted, medium, sub-angular and sub-rounded quartz. Probably local Yorkshire BB1 copy, rather than from S Yorkshire kilns	BBT1	1	50.7	Abraded	Basal sherd	Unchamfered base	Bowl/dish	-	-	120+	Burnished with intersecting linear burnish outside base and linear burnish inside base
YORAT 2003.7	6087	Nene Valley colour-coated ware	NV2	7	25	Very abraded	Base and lower body sherds	Beaker with small base, possibly same form as below	Beaker	-	-	L3-4	-
YORAT 2003.7	6087	Nene Valley colour-coated ware	NV2	19	92.9	Abraded	Rim, body and complete base sherds	Long-necked globular scroll beaker	Beaker	6	35	L3-4	Line of dash rouletting along bottom of body with under-slip scroll decoration en barbotine around girth
Total				37	514.8						37		

Medieval and later pottery

by Chris Cumberpatch

Introduction

The BGO08 assemblage consisted of 68 sherds of pottery weighing 2001g and represented a maximum of 63 vessels. The YORAT03-7 assemblage consisted of 120 sherds weighing 1863g and represented a maximum of 116 vessels. The data are summarised in Appendices 3 and 4 which form an integral part of this section.

Excavation (BGO08)

The earliest medieval pottery was identified in Area A (2002) and consisted of two sherds of *Hillam-type ware* and a sherd of *Gritty ware* dating to the period between the later 11th and early 13th centuries (Cumberpatch 2002). These sherds were accompanied by three sherds of an Oxidised Sandy ware of unknown type, but which was probably slightly later in date than the gritty wares.

The pottery from Area C was generally later in date than that from Area A but did include one sherd of a local Gritty ware in Context 1002 which was probably of a similar date to the Hillam type and Gritty wares from Area A. Other medieval pottery was limited to sherds of *Late Medieval Sandy ware*, probably examples of later Humberwares (1000 and 1044) and sherds of *Coarse Sandy ware* (1000 and 1030). In spite of the name, the Late medieval Sandy wares continue into the post-medieval period and these examples may be as late in date as the 16th century. The larger sherd (1044) was of particular note as it appeared to be from a globular vessel with some evidence of burning internally. The precise form of the vessel was not clear, but it did not appear to be a curfew. Two small sherds of medieval pottery were also present (1060; Sample 10).

The presence of pottery spanning the medieval period, albeit in small quantities, implies activity on or close to the site throughout this period, though the nature of this activity is unclear.

Seventeenth century pottery appeared to be absent from the assemblage, but 18th-century wares formed a substantial part of the total. Formal tablewares were represented by the sherds of *White Salt Glazed Stonewares* (WSGSW) and *Tin Glazed Earthenware* from the unstratified contexts in Area C. Contemporary vernacular tablewares were represented by *Late Blackware* sherds (1000 and unstratified) and by sherds of *Slipware* (1001). A number of sherds of the utilitarian wares probably also date to this period (as indicated in Appendix 3) but the dating of these wares is far less accurate than that of the tablewares, largely as a result of a lack of research, and in most cases the date range is broader than is desirable. *Brown Glazed Coarseware* (BGCW), *Yellow Glazed Coarseware* (YGCW) and *Unglazed Red Earthenware* (URE) belong to this category.

Later 18th and 19th-century wares are represented by a variety of tablewares, including *Edged ware*, *Cane Coloured ware* (plain and slip banded), transfer printed *Bone China*,

Whiteware (plain and transfer printed) and *Colour Glazed ware* (1000). Among the bone china sherds were cross-context joining sherds linking contexts 1000 and 1070. The plate involved bore the Two Temples pattern while a sherd of transfer printed Whiteware (1000) bore the almost equally popular Albion design. Another transfer printed sherd (bearing an unidentifiable design) from the same context carried part of a mid 19th-century registration mark dating the sherd to between 1847 and 1867 (although deposition could have been at any time since these two decades).

Regarding the composition of the assemblage, it is too small for any significant or far-reaching conclusions to be drawn, but a number of points can be highlighted. The assemblage included a number of sherds of Yellow Glazed Coarseware (2049, 1000 and 1070) in addition to the commoner Brown Glazed Coarsewares. The reason for the distinction between these wares is unclear though generally speaking the white slipped wares are commoner on rural sites than on urban ones from where they are often entirely absent. A sherd of a late variant, termed *Mottled Yellow Glazed Coarseware* was present (1000).

The presence of White Salt Glazed Stoneware and Tin Glazed Earthenware, in the absence of Creamwares and Pearlwares is unusual and may have implications for the use of the site in the latter part of the 18th century and the early years of the 19th century. Although the presence of mid to later 19th-century Whitewares and other refined earthenwares implies that this hiatus, if such it was, was short-lived. The condition of the White Salt Glazed Stoneware is good (in contrast to the highly abraded nature of other sherds from the site), implying that the later deposits had seen relatively little reworking prior to excavation.

YAT Evaluation

The details of the pottery assemblage from the YAT evaluation (YORAT03-7) are summarised in Appendix 4. The broad outlines of the assemblage are similar to those from the excavation (BGO08), though there are inevitable differences in detail.

The earliest medieval ware was represented by the *Hillam type wares* (4000, 6010, 6088 and 7006), but other wares, though not identified to specific ware types, may be of a similarly early date e.g. *Coarse Sandy wares* (6001 and 6010) and *Soft Orange Sandy ware* (7006). Other medieval wares appeared to be somewhat later in date (Appendix 4), but some caution has to be exercised, particularly as many of the sherds were only identified to generic type rather than to specific ware types.

Later medieval to early post-medieval pottery was represented by the *Cistercian ware* (6010, 6086, 7017) and probably by some of the unidentified medieval sherds mentioned above. Seventeenth-century wares included the *Blackware* and *Coarse Blackware* (7006, 7017, 7015) and most probably the *Type 1 slipware* and *Redware* (7006, 7015). As with the excavation assemblage, 18th and early 19th-century wares were well represented with *Creamware* and *Pearlware* (plain, transfer printed and slip decorated) both present (4000, 4013, 4018 and 7017), *Edged ware* (7017), *Inlaid Slipware* (4011) and *Colour Glazed ware* (7006). The representation of vernacular tablewares in the form of *Late Blackware*, *Mottled*

ware (1006, 3006, 4000, 4017, 6001, 6008, 7017) and probably some of the *Coarse Blackwares* mentioned above was somewhat broader than in the excavation assemblage. With the exception of one later sherd, it also appeared that the *Brown Salt Glazed Stonewares (BSGSW)* were also of 18th century date (3006, 4000 and 4023). The utilitarian ware categories, *Brown Glazed Coarseware (BGCW)* and *Brown Glazed Fineware (BGFW)* were less easy to date but 18th-century wares are included among them.

Nineteenth-century wares consisted predominantly of *Whiteware*, both plain and transfer printed, with very small numbers of other types including *Lustre ware* (1003), *Sponged ware* (7017), *Late Mottled ware* (7017) and *Stoneware* (4000 and 6008).

Broadly speaking, the evaluation assemblage resembles that from the excavation in terms of the range of wares present and the indication of long-lived activity on the site.

Conclusion

Although small in size, the pottery assemblages from Bondgate, Otley are of interest because of their diverse nature and the long period of activity represented by the constituent parts.

Ceramic building material and plaster

by Alan Vince and Kate Steane

Roman ceramic building material

A fragment of *tegula* of Roman date was recovered (6022). The tile has been slipped on all original surfaces with a dark red slip, suggesting that the tilers were attempting to produce darker coloured tiles than the available clay would allow. The clay was examined at x20 magnification and contains sparse well-rounded grains of fine-grained sandstones, some with dark red cement (Fig. 10) and others with little visible cement, and angular ironstone fragments, some showing signs of bedding. The groundmass is a pink colour with few visible inclusions and contains sparse lenses of white-firing clay (Fig. 11). The *tegula* itself has one surviving flange and a corner cut out.

Two other fragments (2052) are probably also of Roman date, since they have a similar fabric, but their form cannot be determined.

Post-medieval and modern ceramic building material

Three fragments of brick, probably of post-medieval or later date, were recovered (1028). One of these, 106mm wide and 48mm thick, has straw impressions on the base, a feature of late medieval and early post-medieval bricks.

Three fragments of refined white ware glazed wall tiles were recovered (6001). These are probably of later 19th or 20th century date.

A small fragment of field drain (2051) is probably of mid 19th century or later date.

Modern plaster

A single fragment of plaster was recovered. It appears to be of modern date, to judge by its condition.

Further work

The collection includes three probable fragments of Roman date, the remainder is probably recent. The only object which would repay further study is the tegula fragment (6022). The tile should be drawn, to record the flange profile and the cut-out type and the fabric should be characterised using thin section and chemical analysis, since the characteristics of the fabric by eye appear to point to a Coal Measures source for the clay whereas Otley itself is located on the earlier Namurian strata, the Millstone Grit.

Retention

The Roman CBM fragments should be retained but if their context suggests a modern date, then the remaining material should be discarded since it is not worth studying recent CBM unless it can be given a clear social and chronological context.

Clay pipe

by Susan White

The clay tobacco pipes discussed in this report were recovered from Bondgate, Otley during two phases of work; an evaluation by York Archaeological Trust (YORAT 20043.7), and an excavation by Archaeological Services WYAS (BGO08).

A total of 13 clay tobacco pipe fragments were recovered in total and comprised two bowls and 11 plain stems. No mouthpieces were recovered.

All of the stem fragments are plain 19th-century types. The two bowls are also 19th-century types and would almost certainly have been short-stemmed 'cutty' types from *c.* 1850 or later.

The first bowl (2049), *c.* 1870-1900, is a spur form with a bark-effect design on the lower part of the bowl (Fig. 12, pipe 1). The upper part is plain with the exception of a broad leaf on the seam facing the smoker. It is possibly that a similar motif would have appeared on the seam away from the smoker, but this is now missing. The interior of the bowl cavity has traces of an internal bowl cross.

Internal bowl crosses, or marks, are formed by a cut or a mark on the end of the stopper that was used to form the bowl cavity during the manufacturing process. In his study of bowl crosses found in pipes from London, Jarzembowski suggested that one of the purposes of these marks was to prevent the stopper from sticking when pressed into the bowl (1985, 394). In Jung (2003) an account is given of the manufacturing process employed by the pipe maker Gordon Pollock of Manchester. When describing the stopper, Gordon Pollock refers to 'roughing up scars' on the tip of the stopper which were produced by 'firm taps of a crisp heavy steel file' (Jung 2003, 11). The account presented by Jung goes on to explain that these

‘scars’ were to help prevent the walls of the pipe being sucked in when the stopper was removed, and the internal bowl crosses may well have served the same function. The example in the bowl from Bondgate appears to take the form of a large six-pointed star.

The second bowl (6001), *c.* 1870-1920, is a heavy Irish bowl with the stamped lettering DUBLIN on the bowl facing the smoker, with moulded milling round the rim (Fig. 12, pipe 2). Irish-style bowls and motifs were common in the 19th century and can be found countrywide. The particular large and heavy bowl form associated with this Irish style was favoured by navvies or other manual workers (Flood 1976, 19). Many of the Irish-style bowls bore marks with an Irish theme such as DUBLIN or O’BRIEN, and often included a fictitious address, e.g. MAYO ST. Such marks may well have been intended to make the pipes more appealing to the Irish immigrant workers (Taylor and Gault 1979, 292). These bowls were not only made in Ireland but also by many of the English and Scottish firms, making it almost impossible to tell where they come from.

Catalogue

- 1 Spur bowl *c.* 1870-1900; large internal bowl cross; not burnished; rim cut but not milled; stem bore 5/64". Bark effect on lower half of the bowl with a plain upper part and a broad leaf on the seam facing the smoker (Fig. 12), *BGO08; Context 2049*
- 2 Heavy Irish style spur bowl *c.* 1870-1920; no internal bowl cross; not burnished; rim cut with moulded milling; stem bore 4/64". Lettering DUBLIN in an oval facing the smoker (Fig. 12), *YORAT 2003.7; Context 6001; SF No. 1*

Stonework

by R. John Cruse with lithology by Geoff Gaunt

Disc Quern (2061)

Approximately 30% fragment, broken radially. The broad, upper surface has slightly uneven contours. It is neatly dressed with a small point, *c.* 5mm diameter, leaving 1-2mm depressions. The profile of its edge is uneven, varying from vertical, to undercut at the handle hole and curving inwards. The slightly convex hopper and edges are similarly dressed to the upper surface. The grinding surface is flat and well used. Disc hand querns are common finds from Romano-British sites. The use of probably local Mill Stone Grit and the uneven edge profile would be consistent with local manufacture. The pecked surface dressing, the significant height, the lateral handle and the flat grinding surface, all reflect a continuation of Late Iron Age beehive quern manufacturing traditions, with minimal pick-up of any of the other main features or imported lava disc querns.

Lithology

Pale grey: fine to mainly medium and slightly coarse grained, with mainly sub-angular grains, moderately sorted, fairly well compacted. Upper Carboniferous, almost certainly Millstone Grit (though lower Coal Measures cannot be excluded).

Coins

by C. P. Barclay

A total of three coins were recovered from the evaluation and excavation. These were dated:

AE Sestertius; C2nd AD?

Illegible

Corroded; probably C2nd-3rd AD loss

YORAT 2003.7; Context 6022; sf 12

AR sterling penny; Richard II; 1377-99

London mint

Obv.) Facing bust

Rev.) long cross, pellets in angles

Corroded; moderate wear; late C14th-late C15th loss

YORAT 2003.7; Context 6086; sf 18

AE Halfpenny; George II; 1733

Obv.) Bust left

Rev.) Britannia seated left

Moderate/heavy wear; probably late C18th loss

BGO08; Context 1001; sf 1

Non-ferrous metal, ferrous metal and glass

by Gail Hama

A total of 26 objects were submitted for assessment from an evaluation undertaken by York Archaeological Trust (Finlayson 2004) and from an excavation carried out on the site by Archaeological Services WYAS. The majority of objects (20) came from the evaluation.

The assemblage is divided according to material type as follows: 4 copper alloy, 1 lead alloy, 12 iron and 9 glass. This assessment report summarises the assemblage and provides a statement of potential in order to meet the requirements of MAP 2 (EH 1991).

Recommendations for further work, retention and discard are based on the intrinsic interest of the finds themselves and the site synopsis.

All the finds were visually examined, quantified and measured. The iron finds were identified and measured from x-rays alone. The finds are catalogued in Table 2 below.

Table 2: Catalogue of metal and glass

RF no.	Context	Material	Object	Description	Dimensions/weight (g)
1	2002	Cu alloy	Obj.	Highly corroded fragment in several pieces, one fragment plano-convex and hollow	-
2a	6008	Fe	Strip	Incomplete at both ends, slightly tapering	L 60mm; W 3.5mm; Th. 2.5mm
2b	6008	Fe	Nail	Complete, head same width as shank	L 45mm; W 3mm max
5	1048	?Fe	Wire	Incomplete, round sectioned wire	L 15mm; D 0.9mm
6	6008	Cu alloy	Obj.	Sheet cylinder of cu alloy, possibly wrapped around a central cylinder of the same material. Highly corroded	L 20mm; D 22mm
6	6008	Fe	Obj.	Sub-triangular fragment of Fe (No x-ray and duplicated RF number)	L 50mm; W 39mm; Th. 9mm
7	6008	Fe	Nail	Complete nail, flat head - detail obscured by corrosion products	L40mm; W of head 9mm; W of shank 3mm
8	6000	Glass	Bottle	Blue/green ?condiment bottle, shoulder and neck missing	D 36mm. Weight 80g
11	8000	Cu alloy	Disc	Blank disc	D 28mm; Th. 2mm
13	7006	Pb alloy	Frag.	Folded strip of sheet lead	L 23mm; W 10mm; Th. 2mm
14	7006	Cu alloy	Frag.	Highly corroded fragment of slightly curved sheet cu alloy	L 10; W 10mm; Th. 1.6mm
15	7006	Glass	Frag.	3 x thin flat sherds, ?window glass, with surface iridescence	Weight 3g
16	7006	Fe	Fitting	Incomplete strap fitting	L 105mm; W 20mm
17	7006	Fe	Nail	Nail, head bent over at right angles to the shank, complete	L 30mm; W 4mm
19	7006	Fe	Obj.	Two pieces recorded, now in several fragments	-
20	7017	Glass	Bottle	2 x pale green bottle glass body sherds	Weight 14g
21	7007	Glass	Bottle	Opaque thick walled body sherd, dark green/black	Weight 13g
23	4000	Glass	Bottle	Green body sherd with heavy surface iridescence	Weight 17g
-	1000	Glass	Frag.	Cobalt blue, pressed glass fragment, slightly curved	Weight 37g
-	1002	Fe	Strip	Narrow strip of iron, two pieces	L 34; W 8mm; Th. 4mm
-	2051	Fe	Screw/nail	1 x dome-headed screw with long shank; 1 x ?nail shank	L 98mm; W of shank 8mm; D of head 20mm. L 85mm; w of shank 6mm

Context numbers 1000-3000 are from the ASWYAS excavation while context numbers 6000-8000 are from the YAT evaluation.

Non-ferrous objects

A total of five objects were retrieved from four contexts and all were allocated recorded find numbers. The overall condition of the finds is poor with RF 1 being highly corroded and in several pieces. None of the finds are diagnostic and consist of miscellaneous strips (RF 13), fittings (RF 6 and 14), and a blank disc (RF 11). All have a modern appearance, though RF 1, is from a late 11th to 15th-century layer, but cannot be identified due to its condition.

Ferrous objects

Twelve iron finds came from five contexts; four items were not given recorded find numbers. Four finds (RF 5 and those from contexts 1002 and 2051) came from the 2008 excavation carried out by ASWYAS. RF 5 is from the fill of a timber-lined pit (1047), but has no diagnostic features to give any dating evidence. The screw from context 2051 is modern and the strip from context 1002 has no diagnostic characteristics.

The finds from the YAT evaluation include a strap fitting (RF 16) and three nails. The nails have different forms but are all timber nails: RF 2b has a head the same width as its shank; RF 7 is a flat-headed nail and RF 17 has an integral flat-rectangular head at right angles to the shank. The latter is a hand-forged nail of a type commonly found from contexts dating to the 14th to 16th century at sites for example in Beverley, East Yorkshire (Goodall 1996, 153; fig. 80). The remainder are strips (RF 2a) and fragments (RFs 6 and 19).

Glass objects

All nine of the glass items date to the 19th or early 20th century. Only one find (RF 8) is near complete, consisting of the base and body of a condiment or sauce bottle, typical of the late 19th century. The green glass sherds (RFs 20, 21 and 23) are likely to have derived from 19th to 20th-century wine bottles. A cobalt-blue sherd of decorative pressed glass came from a machining layer in Area C (1000) and is of 19th century or later date.

Discussion

Up until the end of the 18th century the town of Otley had retained much of its historic core (Wood 1999, 1). However, the 19th century was a time of urban redevelopment stimulated by the Otley printer's engineering industry (*Ibid*). Where dating is possible the majority of finds are from the 19th century. Although there were medieval tofts and crofts to the south of Bondgate itself, it is unlikely that any of the finds date to this period. Only one item (RF 17) has a possible date range between the 14th and 16th centuries. The crofts and tofts were truncated by the building of the railway station in the 19th century: the finds assemblage as a whole is more likely to relate to this period of activity and later.

Statement of potential and recommendations

No further work is required on the assemblage and the finds can be discarded

Industrial residues

by Jennifer Jones

Eleven pieces of industrial residue from two stratified contexts with a total weight of 1034.6g were examined visually and under x16 magnification, and classified by morphology, density, colour and vesicularity. The aim of the assessment was to characterise the residues and identify the type of industrial processes from which they originated. Category criteria are based on the English Heritage Centre for Archaeology Guidelines on *Archaeometallurgy* (Bayley *et al.* 2001).

Context 6008, SF 6 (10 pieces)

Four pieces of tar/bitumen mixed with small stones, each with one flattened surface. These resemble pieces of tarmacadam road surface (357g).

Three irregularly shaped pieces of tar/bitumen, with partly flowed surfaces (36g).

Three irregularly shaped pieces of cinder/fuel ash, mixed with iron and sulphur rich material, iron corrosion products, small stones and fragments of tar/bitumen (109g).

Context 6086, SF 22 (1 piece)

A single large sub-circular piece of ironworking slag, 112mm in diameter and up to 47mm thick. The interior is dense and very dark coloured, with some vesicularity. Parts of the surface show evidence of drip accumulation. This is probably a piece of particularly dense smithing slag (533g).

Discussion

The piece of ironworking slag (6068) shows that some smithing was taking place in the vicinity, but the very small quantity of material recovered suggests that this did not have great economic importance at the site. The pieces of cinder/fuel ash (6008) cannot be associated with a particular industrial process, and may be the products of a domestic hearth or conflagration.

Recommendations

No further work is recommended.

7 Environmental Record

Carbonised plant macrofossils and charcoal

by Diane Alldritt

A total of six environmental sample flots and one retent taken from excavations at Bondgate, Otley (BGO 08) were assessed for the presence of carbonised plant material including charcoal. Included in the samples were a single flot and retent originating from an evaluation undertaken by YAT (YORAT 2003.7) at the same site.

Results

Samples from the excavation (BGO08) produced very few charred plant remains. Two samples contained <2.5ml, while the remaining three were barren of carbonised material. The single sample from the evaluation (2003.7) was slightly richer with 17.5ml of burnt detritus, but the majority of this was found to be coal or clinker fragments. Both contained a small amount of modern plant material, mostly roots, with up to 10ml present. Occasional fairly modern-looking (non-carbonised) seeds were recovered, although there was a possibility some of these may have been preserved by waterlogging given the resilient types recorded.

All charcoal suitable for identification 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. However, the charcoal was poorly preserved and could not be identified. Plant nomenclature utilised in the text follows Stace (1997) for all vascular plants apart from cereals, which follow Zohary and Hopf (2000).

Results are provided in Table 3 and are discussed below.

Table 3: Carbonised and plant macrofossils and charcoal

Bondgate, Otley BGO'08	Sample	1	2	5	7	10	1
and YORAT 2003.7	Context	2058	2061	1048	1044	1060	6018
	Total CV	<2.5ml	<2.5ml	0	0	0	17.5ml
	Modern	2.5ml	10ml	10ml	5ml	2.5ml	<2.5ml
Charcoal	Common Name						
Indeterminate							2 (0.15g)
Other Remains							
Non-marine mollusc shell				20+		5+	
Modern (non-carbonised) seeds					20+	10+	5+
Coal / Clinker							15ml

Discussion

The six samples contained no identifiable plant remains or charcoal. Occasional non-marine mollusc shells were visible in samples 5 (1048) and 10 (1060) and may be suitable for identification by an appropriate specialist.

Non-carbonised seeds were recovered from samples 7 (1044) and 10 (1060), mainly *Sambucus nigra* (elder) type, and occasional *Rubus* sp. (brambles) may possibly have been preserved by waterlogging, or could be fairly modern. Sample 7 (1044) was the most likely candidate for waterlogged preservation, containing a small number of very tiny fragments of wood in the flot in addition to the seed types already mentioned.

Sample 1 (6018) contained carbonised vesicular material, which upon closer examination was found to be mainly coal and clinker / coke-like fragments. Two fragments of charcoal were removed from the retent of this sample but unfortunately could not be identified due to poor preservation and degradation caused by iron panning.

Conclusion

The samples from Bondgate, Otley, were mostly barren of any carbonised material, and provided little information about the economy or environment of the site. The small amount of wood charcoal recovered was not identifiable.

No further identification work is required on the plant material from the samples. The non-marine mollusc shells may prove more informative from an environmental point of view. Overall the samples were poor and show a low potential for future sampling work to produce any well preserved carbonised plant remains.

Biological remains

by Alexandra Schmidl, John Carrott and Alex Beacock

Two sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992) were submitted for an assessment of their bioarchaeological potential. The samples were collected from two large clay-lined pits designated as 'eastern' (1033) and 'western' (1035), with associated sub-pits, thought to be of post-medieval date and used for tanning.

Identifiable biological remains were on the whole, rather thinly distributed within the investigated deposits. Both samples yielded washovers which were predominantly of very decayed wood, but one (1056), also contained small assemblages of invertebrates and of other plant remains; the latter dominated by remains of wild taxa growing on waste ground, in hedgerow and in wet places, and probably reflecting the vegetation nearby. The insect remains were consistent with the habitats implied by the plants but, could not provide any additional information for the interpretation of the fill or feature. No evidence of human food remains and/or waste from human activities such as crop processing was recorded.

Methodology

The sediment samples were inspected in the laboratory and their lithologies recorded, using a standard *pro forma*, prior to processing, following the procedures of Kenward *et al.* for the recovery of plant and invertebrate macrofossils (1980). The samples were disaggregated in water before processing and their volumes recorded in a waterlogged state.

Plant and invertebrate remains in the processed sub-sample fractions (residues and washovers) were recorded by 'scanning' using a low-power microscope, identifiable taxa and other biological and artefactual components being listed on paper. Both of the washovers and one of the residues contained appreciable quantities of waterlogged remains and were examined wet. The second residue was primarily mineral in nature and was dried and weighed prior to recording.

During recording, the presence of biological remains suitable for submission for radiocarbon dating was considered.

Nomenclature for plant species follows Stace (1997) and insects follow Kloet and Hincks (1964-77).

Results

The results are presented in context number order. Archaeological information provided by the excavator is presented in square brackets. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets) after the sample numbers.

Context 1030 [upper organic fill of the eastern pit; ?post-medieval – contained early 13th-late 14th century and 18th-century pottery]

Sample 3/T (3 kg/3 litres sieved to 300 microns with washover; approximately 3 litres of unprocessed sediment remain)

Just moist, varicoloured (but largely mid to dark greenish and reddish grey/grey-brown), crumbly (working soft and somewhat plastic), slightly ?humic, clay silt, with a minor matrix component of light to mid blueish-grey (occasionally greenish-grey with mid to dark orange flecks), stiff (working plastic), clay. Fairly large fragments of rotted wood were common and there was evidently some modern contamination from diesel oil.

The fairly large washover (~200 ml) was mostly of undisaggregated sediment lumps and decayed wood fragments, with some sand, a few modern rootlets, and a little coal and charcoal (both to 5 mm). The fragments of wood showed a high degree of degradation such that even the larger fragments (to 100 mm, diameter to 75 mm) could not be identified more closely than as deciduous wood. Some of the larger wood pieces had been worked, as cut marks could be seen on their surfaces. There was also a single waterlogged seed of elder (*Sambucus nigra* L.) but this was quite probably a modern contaminant.

The small residue (dry weight 0.222 kg) consisted of stones (to 44 mm), sand and further wood fragments (to 97 mm; ~200 ml – separated and kept wet).

Context 1056 [basal fill of sub-pit 7 forming part of the western pit; ?post-medieval]

Sample 9/T (3 kg/3 litres sieved to 300 microns with washover; approximately 2 litres of unprocessed sediment remain).

Moist, mid to dark brown to mid to dark grey (in patches), with reddish-brown clasts throughout and occasional patches of very light grey (possibly lime/denuded mortar), unconsolidated to slightly sticky (working soft and sticky), slightly sandy slightly clay silt. Charcoal flecks and wood/bark ‘chips’ were present and ?mortar/lime (including some very large lumps to 100 mm) was abundant in the sample.

The large washover (~750 ml) consisted of decayed wood fragments (to 30 mm), together with some bark, traces of ferro-magnetic material (to 5 mm) and sand. There were also small assemblages of identifiable plant and invertebrate remains. Overall, this component of the plant assemblage was dominated by a small number of decayed waterlogged seeds and fruits of wild species. The identifiable remains were principally of plants of waste ground and hedges (e.g. blackberry/raspberry – *Rubus fruticosus* L. agg./*R. idaeus* L., common nettle –

Urtica dioica L., elder – *Sambucus nigra* L., nipplewort – *Lapsana communis* L., violet – *Viola*). In addition, other wild plant species, including blinks (*Montia fontana* L. ssp. *chondrosperma* (Fenzl) Walters), bristle club-rush (*Isolepis setacea* (L.) R. Br.), meadow/creeping buttercup (*Ranunculus acris* L./*R. repens* L.) and cinquefoil (*Potentilla*) were represented, all of which are typically found in damp/wet ground in locations such as around water-filled ditches and ponds or in marshy fields.

This sample also yielded quite a large quantity of invertebrate remains. Some of these almost certainly represented modern intrusions into the context (i.e. earthworm capsules) but others, namely the adult beetle remains, were probably contemporary with the deposit's formation. In general, the preservation of the insect remains was rather poor, with most showing a moderate degree of chemical erosion but severe fragmentation. There were occasional more complete sclerites which included a few elytra and pronota of *Helophorus* sp. (indicative of waterside locations) and also a few elytra representing at least two different species of staphylinid.

The large residue (~1.5 litres) was mostly organic detritus, consisting mainly of woody debris (to 20 mm, some fragments retaining bark) and ?mortar/lime (to 100 mm; not separated), with some brick/tile (to 10 mm; not separated) and sand.

Discussion and statement of potential

Identifiable biological remains were on the whole rather thinly distributed within the investigated deposits. Both samples yielded washovers which were predominantly of very decayed wood but one of the deposits, Context 1056 (the basal fill of sub pit 7), also contained a small assemblage of other plant remains; the latter was dominated by remains of wild taxa growing on waste ground, in hedgerow and in wet places, and probably reflected the vegetation nearby. No evidence of human food remains and/or waste from human activities such as crop processing was recorded.

Context 1056 also gave a small assemblage of rather poorly preserved beetle remains which were consistent with the habitats implied by the plants but, could not provide any additional information for the interpretation of the fill or feature.

The pits may well have been involved in leather-production, and botanical assemblages dominated by waterlogged wood and bark would certainly be consistent with this, but other evidence for tanning, such as the beetle *Trox scaber* (Linnaeus) for example, was not noted (see Hall and Kenward 2003). However, this may be a result of the relatively poor preservation of the insect remains and a more detailed investigation (of Context 1056) could perhaps detect less readily identifiable macrofossils such as small but diagnostic fragments of adult sclerites or larval remains; *Trox* larvae have now been recognized in a sample from early medieval Viborg, Denmark, in which bark was abundant (Kenward 2005).

Overall, it seems likely that much of the organic material from these deposits did derive from tanning waste and, as such, it is of some interest as there are few documented examples of

tanning pit fills with tanning materials still within them – often the deposits within probable former tanning pits are backfills of general rubbish dumped after the pit goes out of use.

Waterlogged wood and seeds and fruits could provide material for radiocarbon dating, via accelerator mass spectrometry (AMS), if required.

Recommendations

Further study of the plant remains would be of only limited value, but a more detailed investigation of the insect remains from Context 1056 may provide additional supporting evidence for tanning and perhaps also regarding aspects of the local environment and vegetation. However, this would only be worthwhile if the dating of the deposit could be refined – this might be attempted via radiocarbon dating if no other evidence were available but if, as suspected, the feature is of relatively recent date the results may be inconclusive.

If further study is undertaken then all of the remaining sediment from this deposit should be processed and paraffin flotation should be employed to separate the invertebrate remains from the more substantial plant component and so facilitate their recording and identification.

Retention and disposal

All of the current material should be retained for the present.

Waterlogged wood

by Steven J. Allen

This report aims to meet the requirements of MAP2, Phase 3, Assessment of Potential for Analysis, (EH 1991). The work carried out has been the cleaning and examination of the objects submitted and an assessment of their condition. An evaluation of the potential for further investigation is included, with recommendations for long term stabilisation.

Five pieces of waterlogged wood were delivered to the Wet Wood Laboratory wet packed, one double bagged in self seal finds bags, the remainder wrapped in a bundle with large finds bags joined with plastic tags, laid on a modern plank and wrapped around with film wrap. Each object was removed from its packaging, washed under cold running water to remove adhering burial deposits and returned to its packaging after examination, and species identification (Table 4).

Condition

The wood has been preserved through burial in a waterlogged anoxic environment. It appears that these conditions were maintained in all contexts in which the material survived up to the time of excavation. Some surface damage and erosion suggests that these contexts are fairly near to the upper limit of the permanent water table and similar objects may be vulnerable to damage while buried.

Listing

Wood species identifications follow Schweingruber (1982). Roman numerals in brackets are not part of the original numbering, which was by context alone, but is used here to distinguish pieces for the purpose of this report. All dimensions are in millimetres.

Table 4. Wood species identification

Identification	Description	Species identification
Area C, Context 1031 (i)	Radially faced board. Both ends broken, not refitting to (ii), (iii) or (iv). Five peg holes in edges, two damaged and empty in badly damaged edge, 250 apart, three with truncated in situ pegs in the other, 320 and 240 apart. Abraded surfaces. In six refitting sections. 1.027m l, 179 w, 17 th. Holes 08 dia.	All elements Quercus spp.
Area C, Context 1031 (ii)	Radially faced board. Both ends broken, not refitting to (i), (iii) or (iv). Five peg holes in edges, two with truncated in situ pegs in one edge, 240 apart. Two with truncated in situ pegs, 240 apart and one damaged and empty 200 from neighbouring peg hole in the other edge. Abraded surfaces. In three refitting sections. 1.204m l, 218 w, 20 th. Holes 08 dia.	All elements Quercus spp.
Area C, Context 1031 (iii)	Radially faced board. Both ends broken, not refitting to (i), (ii) or (iv). Two peg holes in least damaged edge 240 apart. Abraded surfaces. In two refitting sections. 848 l, 184 w, 17 th. Holes 08 dia.	All elements Quercus spp.
Area C, Context 1031 (iv)	Radially faced board. Both ends broken, not refitting to (i), (ii) or (iii). Four peg holes in edges, two with truncated in situ pegs in one edge, 300 apart, two with truncated in situ pegs in the other, 205 apart. Abraded surfaces. 544 l, 100 w, 15 th. Holes 08 dia.	All elements Quercus spp.
Area C, Context 1046	Section of tangentially faced board. Both ends and edges badly damaged and eroded. Faces abraded. Very soft and fragile. In four refitting fragments. 386 l, 82 w, 29 th.	Quercus spp.

Quercus spp. Oaks. Sub species not determinable

Discussion

The wood from this project is all structural material rather than small finds. Little can be said about board 1046 as this is in very poor condition and has no worked features beyond the fact of its conversion.

The board fragments from Context 1031 are more informative. The wood packed up on a modern board could be separated into four distinct boards. Their ends are broken but none can be refitted end to end with the others. Each board though has blind holes around 8mm in diameter and 55mm deep cut into one or both edges. These house pegs, truncated or broken off flush with the edge of the board. Their spacing is not regular, but it would appear that these pegs were used to fix one board edge to edge with a neighbouring board. It is difficult to speculate which boards joined which. Such joints are found in boards which need to be held firmly together, such as cask heads, tables or doors. Given that boards can be held together by battens nailed or pegged across their faces, the method implies that the composite board was carefully fitted.

It is suggested that these boards formed the base of a pit associated with leather tanning. This would be an entirely suitable use for this type of material as the tight fitting, in association

with the observed clay layer, would help keep the base of the pit watertight and free of battens which might make emptying out the pit during use more difficult. It is indicated that 'barrel staves' were used to line the sides of this pit; it may be observed that the staves concerned may actually have been purpose made for the lining. It is difficult to line a rectangular plan pit with the tapering staves from a cask but there is no reason why parallel-sided staves should not have been rebated to house the edges of the boards discussed here.

The edge pegging and the conversion used suggests a medieval or later date, but at present the material cannot be directly dated. The conversion would allow each to be sampled for dendrochronology- although no sapwood appears to be present; there should be enough rings to allow the approximate dating of each board, should that be desired.

Recommendations for further work

No further examination of the boards is required beyond a record drawing as below. A woodworking technology report would essentially be a rewrite of the contents of this assessment report and would only be necessary if further information on the provenance and character of the boards came to light.

A scale drawing of the boards at 1:10 is recommended as a record of the peg distribution and may be used for archive or publication. Given the fragility of the objects it would also be useful in working out how each board fitted to its neighbours.

If the wood is from a particularly interesting structure it would be worth retaining. This would require stabilisation treatment.

Animal bone

by Jane Richardson

In total, 48 animal bones and one oyster shell were identified, modern and unstratified material was subsequently excluded. As a result, only 40 bones are considered here (Table 5). Those from Area C relate to possible tanning pits, while the bones excavated by YAT (6000 and 7000 numbers) relate to later medieval activity (based on date ranges given in Appendix 4).

Methodology

Bones were identified to taxa wherever possible, though lower-order categories were also used (e.g. sheep/goat, cattle-sized). As the assemblage was small, all fragments were recorded, although identification of diagnostic element zones (easily identifiable and non-reproducible) was also made (Table 5).

Bone condition, erosion, fragment size and fresh breaks were recorded in order to assess bone preservation, while gnawing, burning and butchery marks were sought to determine bone treatment. Given the small and fragmented nature of the assemblage, the recovery of biometrical data was not attempted. No useable age data were available and no pathological bones were noted.

Results

The assemblage is of questionable relevance due to its small size and fragmented nature. The low number of bones identified as diagnostic zones (15) is a reflection of this fragmentation.

Nevertheless, of the cattle bones associated with the tanning pits, most are horncores or metapodials and are likely to be waste products from the tanning industry. The only butchered bone, a cattle horncore from pit 1047, was probably marked during the skin's removal. As horncores and skull fragments also dominated the later deposits from Area C (7006, 7007), it is likely that residual tanning waste was incorporated into subsequent layers.

Recommendations

The animal bone assemblage, predominantly a product of the tanning industry, is too small to warrant further analysis.

Table 5. Animal bone fragments by context (number of zones are in parentheses)

Area	Context	Cattle	Cattle-sized	Horse	Sheep	Sheep/goat	Sheep-sized	Dog	Frog/toad
C	1030		10			1			
C	1044	(1) 1			(1) 1				
C	1048	(3) 3	1					(3) 3	
C	1060								(2) 2
A	6086						(1) 1		
C	7006	(3) 4	2	(1) 1					
C	7007		10						

8 Discussion

The excavation areas were very different in character, Area A predominantly produced evidence for Roman activity and Area C produced evidence of post-medieval tanning and some later walls and cobbled surfaces. It is not possible to make generalisations about the development area as a whole and each area is discussed separately below.

Area A

Although the Roman ditch (2062) in Area A was fairly substantial, little may be said of its function as it was only partially revealed in plan by the excavation. However, it is possible that this ditch marks the edge of activity concentrated to the north, as no archaeological remains were discovered on the southern portion of the site. The two phases of gully (2059 and 2067) which truncate the ditch may have been cut to facilitate local drainage and opportunistically utilised the partially open ditch. The stake holes are undated, but post-date gullies 2067 and 2059 and together with the stake holes recorded in the evaluation, may have formed a fence line or some temporary structure (Fig. 3; *cf.* Finlayson 2004b, fig. 3).

The linear feature (2055) interpreted as a Roman path in the evaluation, though containing some Roman pottery, is clearly a stream bed. Numerous streams would have run through this area eroding the subsoil, disturbing archaeological deposits and exposing stones and cobbles

along their course. Such streams were eventually diverted, often culverted and used for domestic or industrial purposes. The now demolished tannery building on Gay Lane has a stone-lined culvert, the stream running through it may originally have been the one which ran through Area A.

Area C

The evidence in this area pointed to well organised tanning activity having taken place, with a number of deep regular cut pits. Tanning pits could be rectangular or circular, though and could be lined with wood, brick or stone, (Gomersall 2000, 140). It is interesting that both rectangular and circular pits were represented on the site, possibly reflecting different functions, rather than a change of practice over time as all the pits appear to be at least near contemporary, with cobbled walkways between them showing no stratigraphic overlap with the pits they connected. Although the pottery evidence was very mixed and included residual and possibly intrusive sherds. It is possible that the pits were in use possibly as early as the 16th century, and may not have been backfilled until the 18th century prior to the construction of the terraced houses along Bondgate, when they were sealed beneath a cobbled yard. The pits were probably disturbed during the 19th century with the construction of the tannery building and warehouse since demolished to the south.

Even if a small tannery, there was likely to have been many other associated pits in this area. The pits would have performed a number of functions associated with the tanning process, including cleaning and preparation of the hides as well as the actual tanning itself. The environmental evidence indicates that Sub-pit 1 may have been a tanning pit with the remains of bark recovered in situ. Pits 2 to 4 may have been where the hides were soaked in an alkaline solution; a process know variously as ‘mastering,’ ‘bating’ or ‘puering’, or were soaked in an acidic solution containing barley, rye or ash bark, a process know as ‘raising or ‘drenching’ (Shaw 1987).

Pits 3, 5, 6 and 7 may have been where hides were washed, with lime removed from skins and accumulating at the base of the pit. Both the bioarchaeological and faunal remains support the use of the pits for tanning or associated activity.

9 Conclusions

The excavation showed that archaeological remains of Roman and post-medieval date exist in the area and are preserved at depth, surviving even beneath heavily disturbed ground. The tanning pits in Area C in particular show that organic remains may be preserved at a depth of *c.* 63m AOD and below. The results of the excavations in both areas are significant for the interpretation of two distinct and important periods in the history of the town of Otley.

Area A

Prior to the excavation and evaluation described in this report there was very little evidence of Roman activity in Otley, though little archaeological investigation has taken place in the town. Therefore the discovery of a Roman ditch during the course of this project is of some

importance and it may be expected that archaeological remains of this period exist in the area, particularly to the north, and probably in other parts of the town. The pottery evidence suggests a period of activity between the 2nd and 4th centuries, though the scale of Romano-British settlement is entirely unknown, this may be elucidated through future excavation. The pottery evidence points to a settlement of some status with a number of fine and imported wares represented.

Area C

This area produced clear evidence for tanning on the site, though whether the pits represented out door courtyard working or a covered tannery building is uncertain. Although later walls (1012 and 1014) were recorded these do not appear to relate to the tannery and are more likely associated with 18th-century housing. No buildings or pits were identified to correspond with a tannery around the pits from the 1st edition ordnance survey map (1851) or the Otley Enclosure Map (1783), though this does not necessarily mean that tanning did not continue on the site into this period, it is perhaps more likely that this area was abandoned and tanning continued elsewhere. It may have been that the pits extended beneath the now demolished building to the south, or that the pits are associated with a tannery to the west, marked on the 1851 Ordnance Survey Map. Indeed four tanneries are marked on the 1851 map in the immediate area of the site, and it might be expected that this area, on the periphery of this market town and with available water sources was attractive to tanners from a fairly early period. It is likely that the tanning pits date to the post-medieval period, but that does not mean that tanning did not originate earlier in this area. Although by the end of the 19th century, tanning appears to have declined in the town, with other industries, such as textiles and printing-press manufacture gaining prominence, tanning appears to have continued in the area with the large rectangular building to the south of Area C a former tannery, though this would have been a more industrialised chemical process, not requiring large numbers of pits or vats. In more recent times the tannery was used as a warehouse and was demolished after two serious fires in 2003. The slaughterhouse to the west, which was still operating while the excavation was taking place, provides a tentative link with tanning and leather working which stretches hundreds of years into the past.

Statement of potential

Centred on Leeds West Yorkshire was a national centre of tanning during the 19th century (Gomersall 2000), and as little work has been done on this subject regionally and nationally, this subject is of some significance and is a research priority identified in a recent research agenda for West Yorkshire (Gomersall 2005). That tanning pits survived at depth on the site and that some wood and bark was preserved in the base of some of the pits indicates that further pits may survive in the area, or in areas marked as tanneries on the 1851 Ordnance Survey Map. Similarly significant Romano-British features such as deep ditches may also survive in the area, particularly to the north of Area A. The potential for further archaeological remains existing on the site and the immediate area, albeit in discrete pockets is therefore quite high.

The potential for further work on the pottery assemblage and most of the other finds categories is limited, though some further work on the samian, tegula and insect remains is suggested and might prove productive (Table 6). Several contexts have the potential for radiocarbon or dendrochronological dating (Table 7). However, for Area A, only one context (6086) from the YAT evaluation produced material suitable for radiocarbon dating and this was from a thick subsoil layer. For Area C the contexts producing suitable organic material also produced pottery, much of which it is indicated may be residual or intrusive, and though waterlogged wood and wood debris were recovered from sub-pits 1 and 7, this was oak, a long-lived species which neither radiocarbon or dendrochronology would confidently date with any more precision than the pottery and relative dating provided by the stratigraphic position of the pits.

Recommendations for further work

Recommendations for further work on the finds materials are confined to a few individual items (Table 6). Further desk-based research could be undertaken on the history of tanning on the site if this is considered appropriate and likely to put the archaeological remains in Area C in further context. Should a further watching brief be undertaken on the development area, then the results should be incorporated with the final client report.

Table 6: Summary of specialist recommendations

Material	Recommendations
Roman pottery	The 'samian crumbs' (2061) be submitted to a samian specialist to refine dating
Medieval and post-medieval pottery	No further work recommended
CBM	The tegula fragment (6022) be drawn type and the fabric characterised using thin section and chemical analysis
Clay pipe	No further work recommended
Metal and glass	No further work recommended
Industrial residues	No further work recommended
Carbonised plants and microfossils	No further work recommended
Worked stone	No further work recommended
Coins	No further work recommended
Insects and plants	A more detailed investigation of the insect remains (1056)
Wood	A scale drawing of the boards at 1:10
Animal bone	No further work recommended

Table 7: Contexts with the potential for scientific dating

Area	Context	Feature	Material	Other finds
A	6086	Layer	Bone	Roman medieval and pos-medieval pot
C	1030	Fill of Pit 1033	Bone	Medieval and post-medieval pot
	1044	Fill of Sub-pit 3	Bone	Late medieval / post-medieval pot
	1048	Fill of Sub-pit 6	Bone	-
	1060	Fill of Sub-pit 5	Bone	Late medieval pot
	7006	Layer	Bone	Post-medieval pot
	7007	Layer	Bone	Post-medieval pot
	1056	Fill of Sub-pit 7	Seeds / wood debris	-
	1031	Timber lining of Sub-pit 1	Waterlogged wood – C14 or dendrochronology	-

Recommendations for further reporting

It is proposed that a final client report be produced incorporating comments and further work agreed with WYAAS. A summary note will be published in an appropriate journal.

Figures

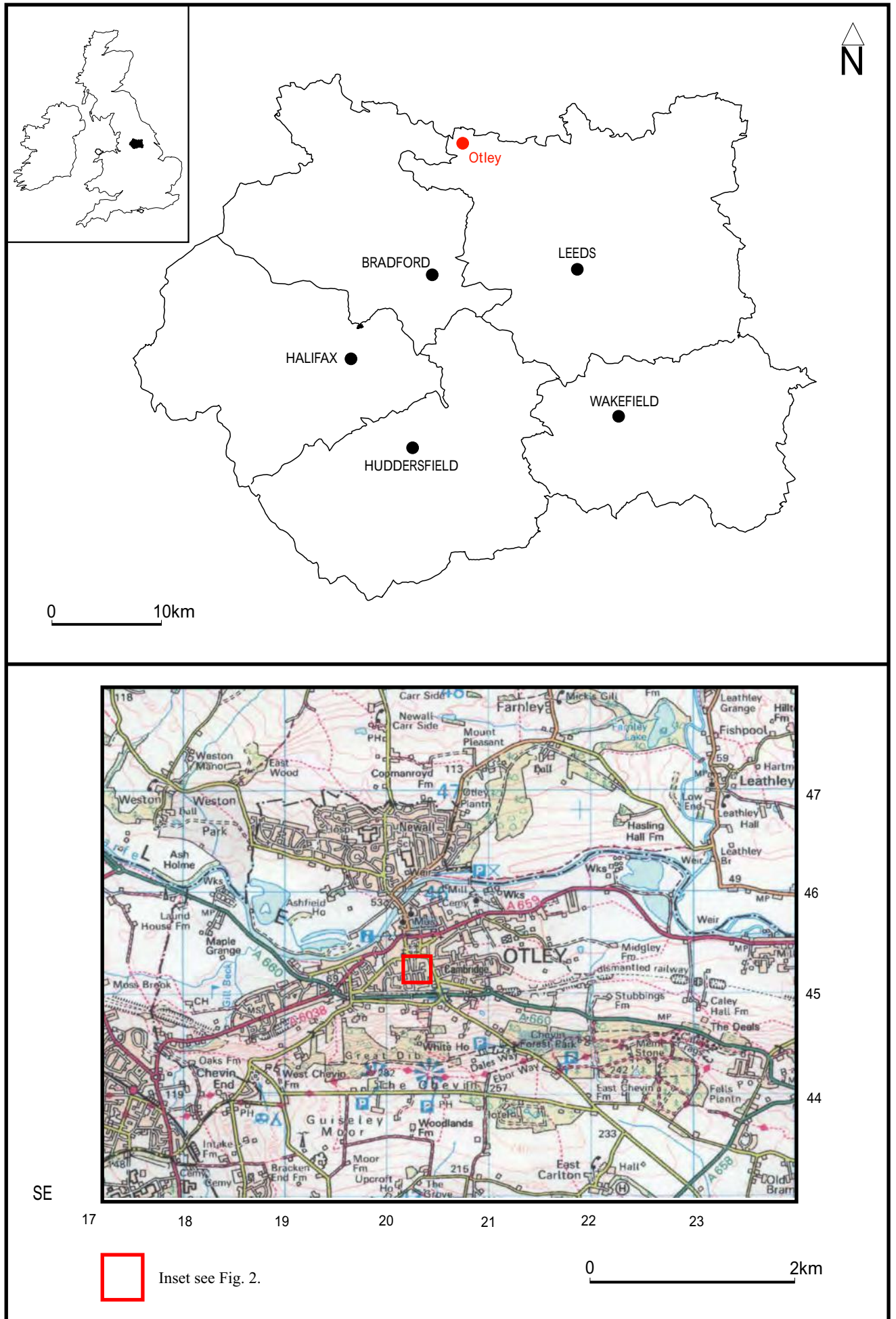


Fig. 1. Site location

Reproduced with the permission of the controller of Her Majesty's Stationery Office © Crown Copyright. Archaeological Services WYAS: licence LA076406, 2008.

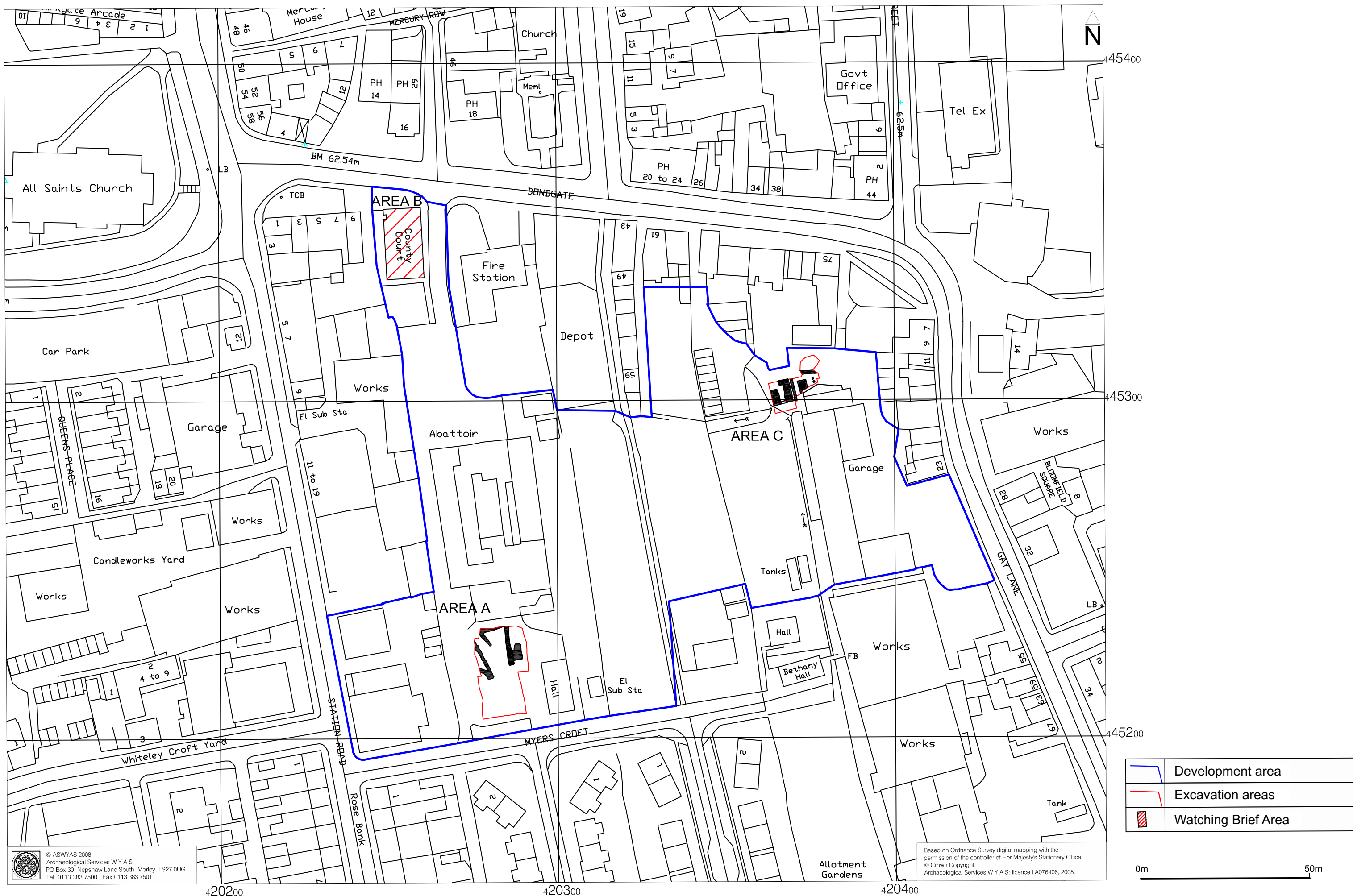


Fig. 2. Plan of development site and areas of archaeological investigation (1:1000 at A3)

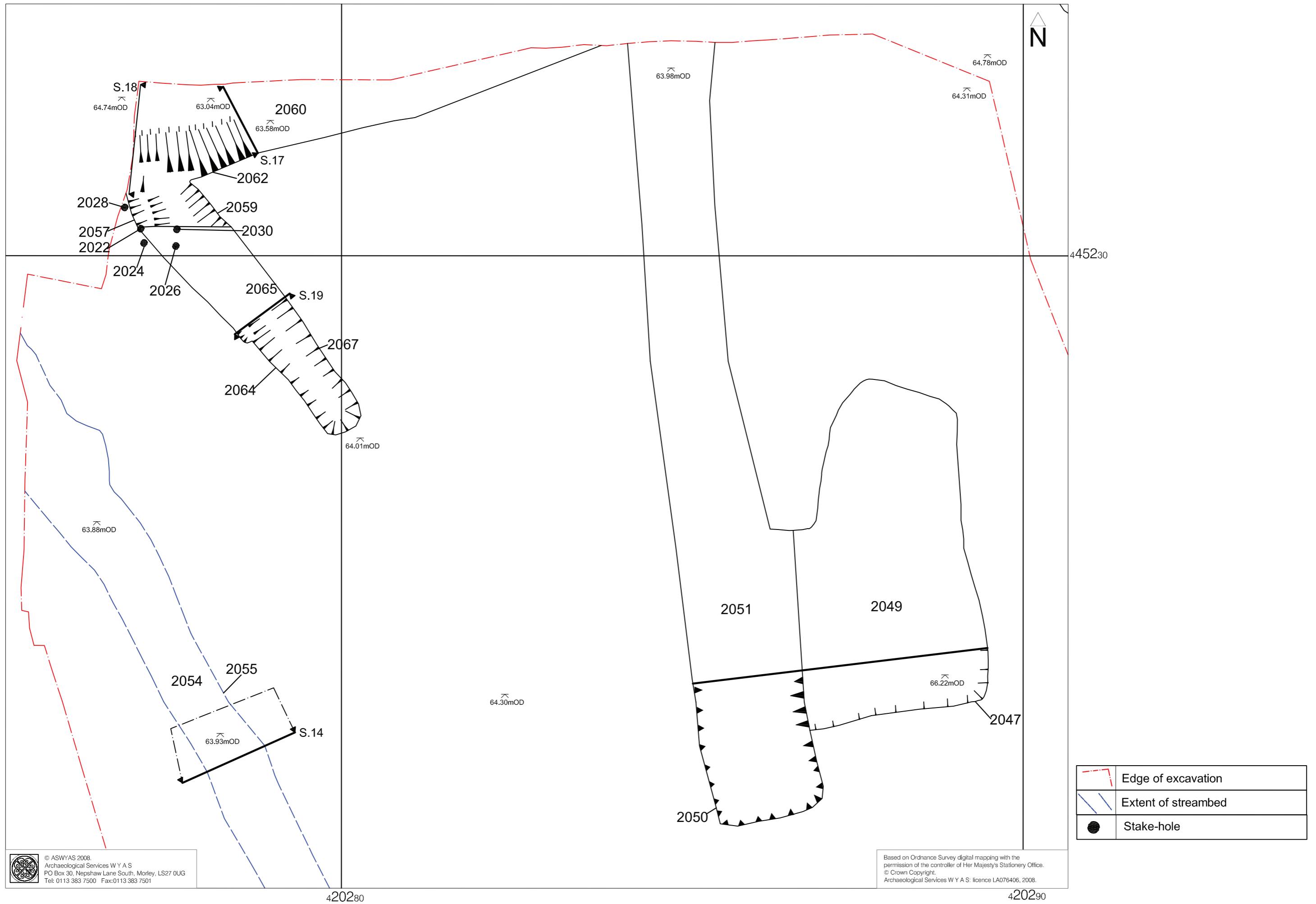
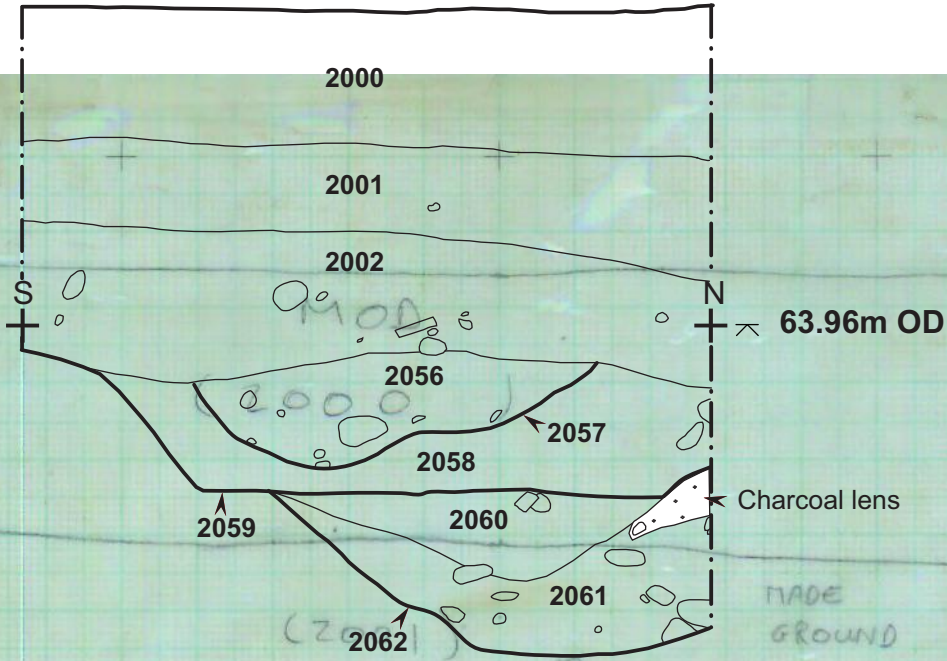


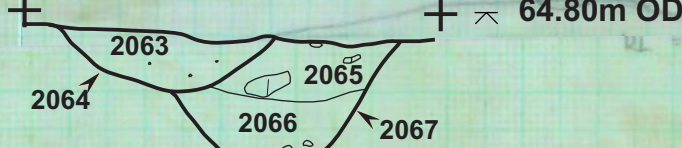
Fig. 3. Detailed Plan showing archaeology within Area A (1:50 at A3)

0m 2.5m

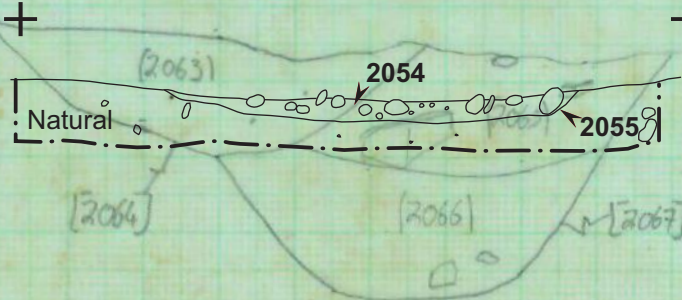
S.18



S.19
SW

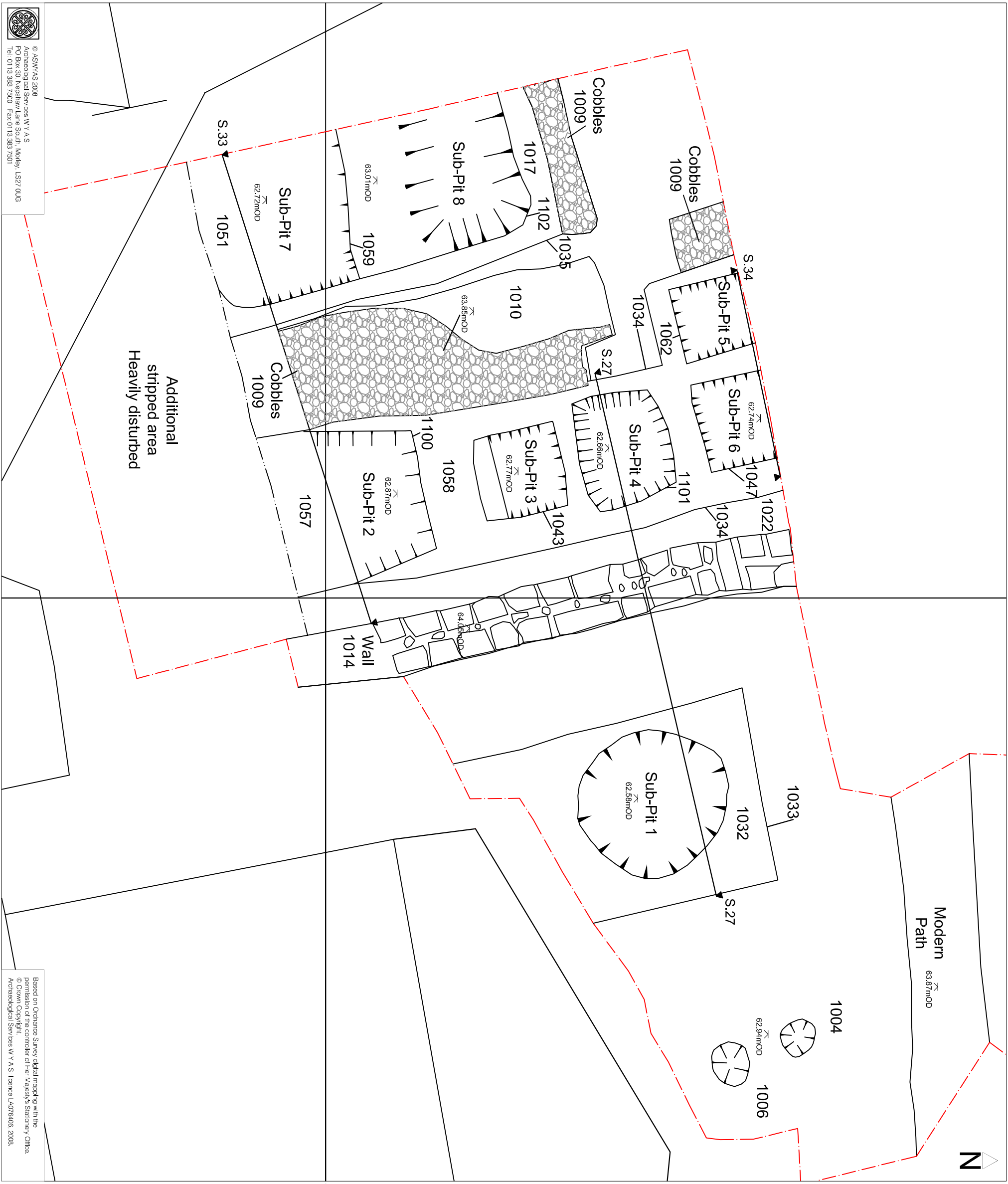


S.14
W



E
64.29m OD

008-AREA A
 S → Section through Cellar (2064) (2067)
 1:10
 DW
 25/18
 Drawing no 019
 TBM A 64.80
 BS 1.79
 IN 66.59
 FS 2.74
 RL 63.85



© ASW/AS 2008
 Archaeological Services W.V.A.S.
 P.O. Box 350, Regent Lane South, Midley, LS27 0UG
 Tel: 0113 383 7500 Fax: 0113 383 7501

Based on Ordnance Survey digital mapping with the permission of the controller of Her Majesty's Stationery Office. © Crown Copyright. Archaeological Services W.V.A.S. Licence LA079406, 2008.

	Edge of excavation
	Cobbles



Fig. 5. Detailed plan of Area C (1:50 at A3)

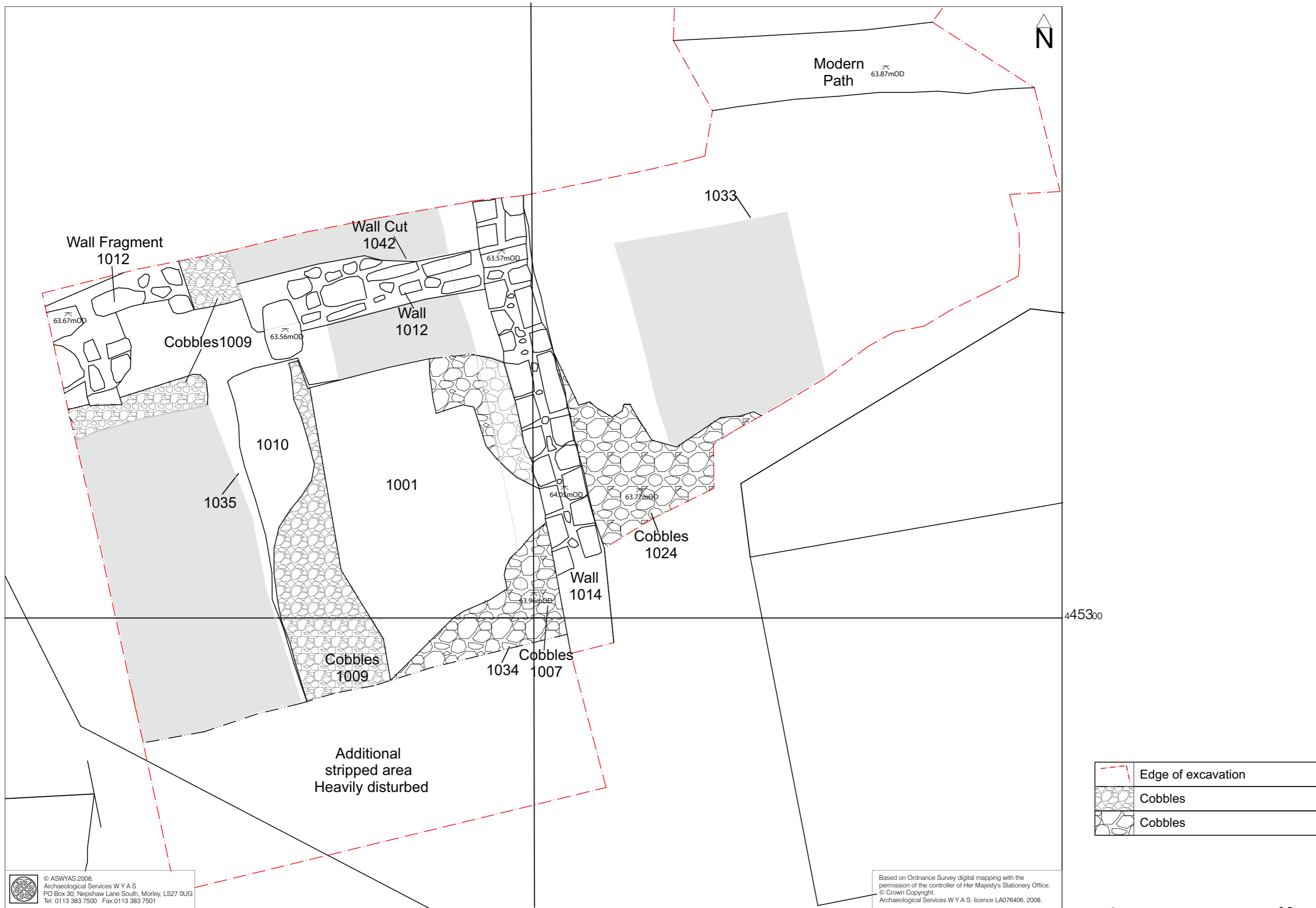
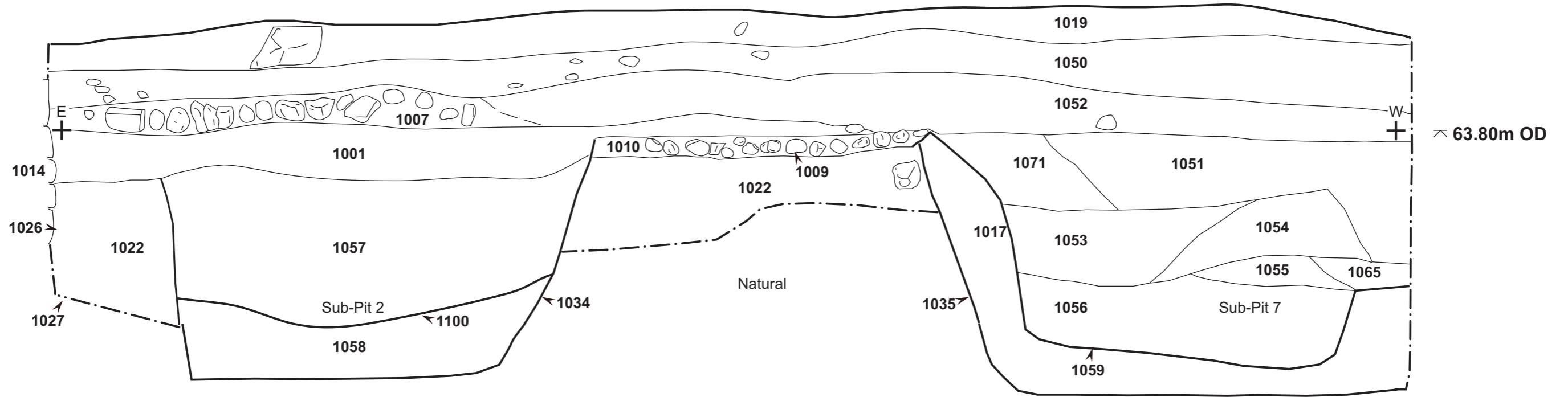


Fig. 6. Detailed plan of Area C, upper deposits (1:50 at A3)

S.33



S.27

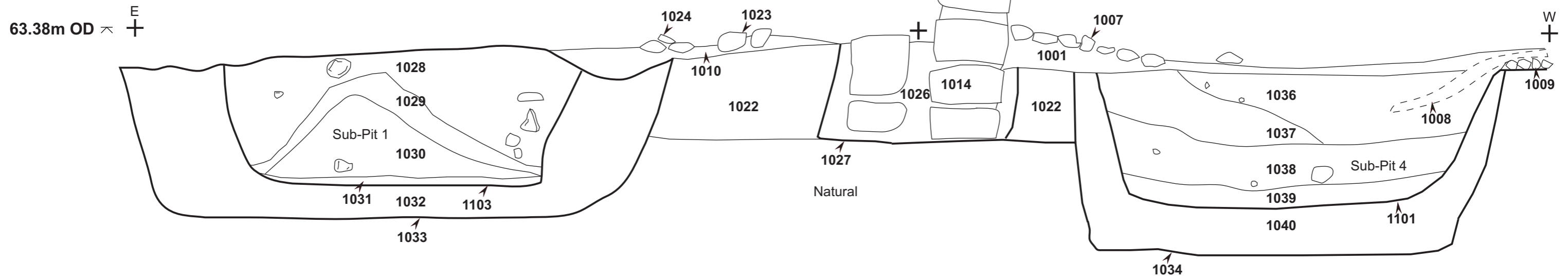
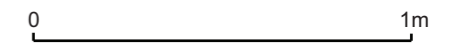


Fig. 7. Area C sections. (1:20)



W
+

E
+

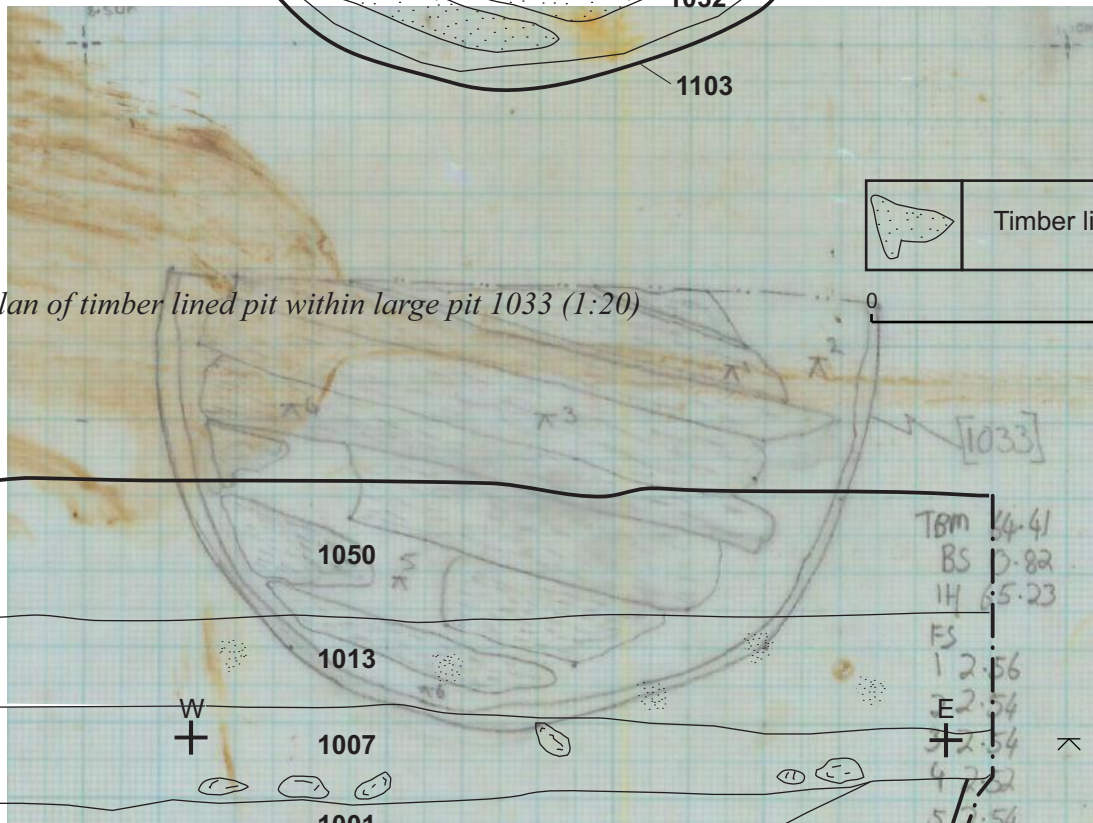
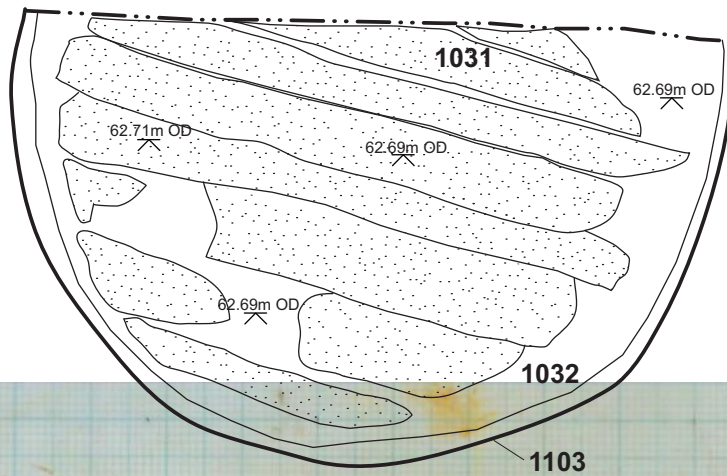


Fig. 8. Plan of timber lined pit within large pit 1033 (1:20)

S.34

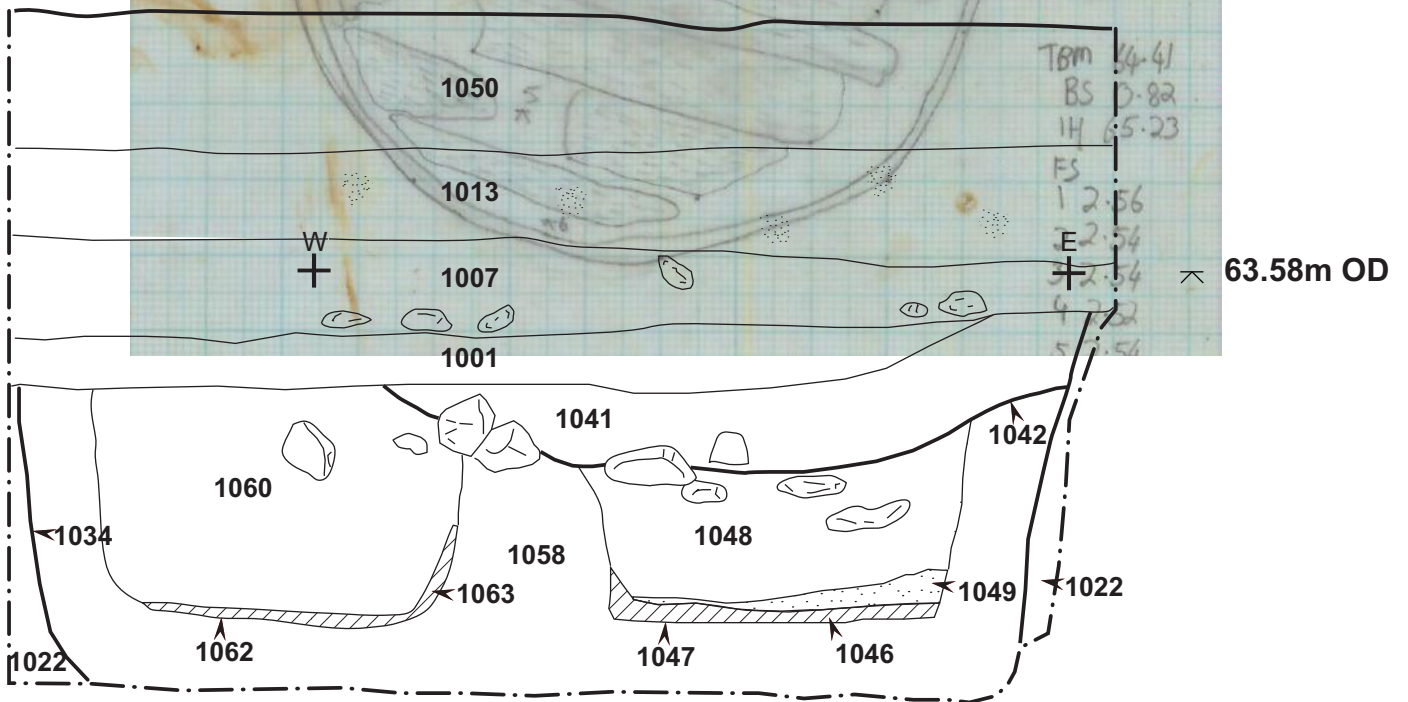


Fig. 9. Section 34 from Area C (1:20)

0 1m

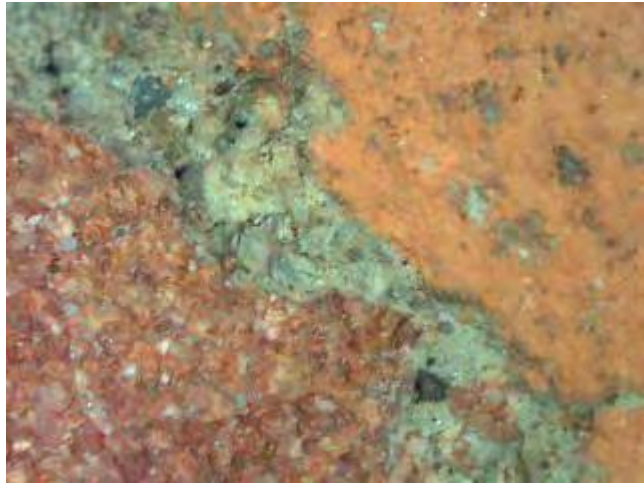


Fig. 10. width of field of view c.3.4mm



Fig. 11. width of field of view c.3.4mm

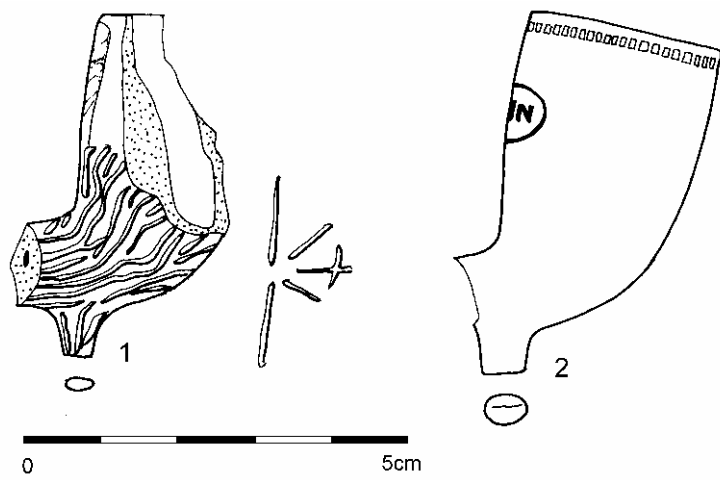


Fig. 12. Clay pipe illustrations 1:1 by Susan White

Plates



Plate 1: Overhead view of Ditch 2062 and gullies 2057 and 2059, looking east, note stake holes bottom right



Plate 2: Gully 2067, looking northwest



Plate 3: An inundated Ditch 2062 looking north



Plate 4: Modern machine- cut feature (2047), looking north



Plate 5: Timber-lining (1031) in Sub-pit 1, looking west



Plate 6: Timber-lining (1047) in Sub-pit 6, looking north



Plate 7: Wall 1014, looking southwest



Plate 8: Stake holes 2022, 2024, 2026, 2028 and 2030, looking west



Plate 9: Working shot during the excavation of Area A, looking northeast



Plate 10: Watching brief during the demolition of the court building, Area B,

Appendix 1: Inventory of primary archive

Phase	File No	Description	Quantity
Excavation	File no.1	Context register sheets	7
		Drawing register sheets	2
		Drawing sheet number record	1
		Small find register	1
		Sample register sheets	1
		Digital photograph register sheets (download number 0300)	2
		Photograph register sheets	5
		Colour negative strips Film N° 8357 and 8359	1
		B&W negative strips Film N° 8356, 8358 and 8371	1
		Finds and samples record (Form B)	4
		Level Sheets	13
		Daily site recording form	22
		Excavation	File no. 2
Excavation	File no. 3	Permatrace Sheets	28
Excavation	File no. 4	Specification for an archaeological excavation	1
		Specification for an archaeological watching brief	1
		Risk assessment	1
		Service plans	4
		Geotechnical information	1
Evaluation	File no. 5	Context records	258
		Plans	31
		Section drawings	13
		Context register	1
		Matrices	11
		Finds register	1
		Sample record	1
Photographic archive list	1		

Appendix 2:

Context summaries and finds concordance

Area A

Context	Description	 Finds and Ecofacts	Dating
2000	Modern tarmac/gravel surface		
2001	Black ashy material part of made ground from coal waste and other semi-industrial waste.		
2002	Mid brown silty clay with abundance of cobbles. Agricultural build up / sub soil.	Medieval / post-medieval pot x 7; Cu Alloy object x 1 (Small Find 1);	L C11th – C15th
2003	Fill of 2004, same as 2002	Grey ware x 2	M C1st to M C2nd
2004	Slight natural depression, filled by 2003 (same as 2002)		
2005-2020	VOID		
2021	Black silty clay, fill of Stake hole 2022		
2022	Circular V shaped cut of stake hole 0.16m deep, 0.08m long and 0.05m wide, filled by 2021		
2023	Black silty clay fill of Stake hole 2024		
2024	Oval V shaped cut of stake hole 0.26m deep, 0.09m long and 0.06m wide, filled by 2023		
2025	Black silty clay fill of Stake hole 2026		
2026	Oval V shaped cut of stake hole 0.20m deep, 0.06m long and 0.05m wide, filled by 2025		
2027	Black silty clay fill of Stake hole 2028		
2028	Sub-circular V shaped cut of stake hole 0.10m deep, 0.05m diameter, filled by 2027		
2029	Black silty clay fill of Stake hole 2030		
2030	Sub-circular V shaped cut of stake hole 0.20m deep, 0.05 diameter, filled by 2029		
2031-2046	VOID		
2047	Sub-rectangular / irregular shallow bowl shaped cut of a modern feature		
2048	Light blue grey coarse sandy clay, primary fill of 2047		
2049	Black coarse gritty, clinker material. Fill of 2047 possible coal waste.	Modern pot x 2; Animal Bone x? Clay pipe x 2 (bowl and stem)	C19th
2050	Steep sided cut with vertical sides cut by a machine, 2.05m deep and 1.73m across		
2051	Mottled grey and orange silty clay with frequent large stone inclusions. Deliberate back fill of trench cut.	CBM(field drain) x 1; Fe objects x 2, oil barrel	Modern
2052	Variable; dark orange brown to grey brown. Contains large amounts of rounded cobbles and flat tabular sandstone fragments. Forms gravely stream bed	Roman CBM x 2	RB (?)
2053	Cut of stream bed		
2054	Mottled of orange and greys gravely clay with frequent rounded cobble and sub-rounded cobble. Forms stream bed		

Context	Description	Finds and Ecofacts	Dating
2055	Cut/interface of stream bed		
2056	Mid blue grey sandy clay single fill of later gully. Same as 2064		
2057	U shaped linear cut 0.29m deep with concave sides and uneven base.		
2058	Mottled light blue gray / orangey brown sandy clay with occasional sandstone fragment. Single fill of earlier gully	GBA Sample 1	
2059	U shaped cut 0.35m deep with straight sides and flat base. Same as 2067		
2060	Mottled light blue gray / light brown sandy clay, secondary fill of Ditch 2062	Quern stone; Dressel 20 Amphora x 3	M C1- C2 AD
2061	Mottled light blue gray / orangey brown sandy clay. Primary fill of Ditch 2062	GBA Sample; Samian crumbs x 3; RB Disc Quern	M C1st to M C3rd AD
2062	U shaped linear cut 0.59m deep with un-even base		
2063	Light greyish brown sandy clay single fill of gully 2064 same as 2056		
2064	U shaped linear cut 0.29m deep with concave sides and uneven base. Terminus end of ditch.		
2065	Light greyish blue silty clay, secondary fill of gully terminus 2067	Dressel 20 Amphora x1	M C1st to C3rd AD
2066	Dark blue grey silty clay, primary fill of gully terminus 2067		
2067	U shaped cut 0.35m deep with straight sides and flat base. Same as 2059		

Area C

Context	Description	Finds and ecofacts	Dating
1000	Machining Context same as 1070, visible in all sections	Post-med pot x 30; CBM x ?; 1 clay pipe stem,	C18th – C19th
1001	Off white gritty mortar deposit located across site	Cu Alloy coin d. 1733 x 1 (SF 2); Post-med pot x 2	C18th
1002	Mid-grey brown sandy clay deposit 5m by 10m by 0.45m.	Med pot x 1 and post-med pot x 1; Fe object x	LC11th to C13th / LC18th – C19th
1003	Light grey sandy clay fill of pit 1004	Burnt stone	
1004	Shallow circular pit cut 0.55m in diameter and 0.10m deep, filled by 1003		
1005	Reddish grey sandy clay, with occasional flecks of charcoal fill of pit 1006	Burnt stone and bone, Deposit heavily contaminated after heavy rain	
1006	Circular cut of pit 0.65m in diameter and 0.23m deep, filled by 1005		
1007	Cobbled surface made of large rounded cobbles (0.20x0.30x0.15m) bedded on deposit 1001		+ 1733 (see 1001)
1008	Mixed purple-white gritty mortar deposit,		

Context	Description	Finds and ecofacts	Dating
	visible over 1009 and within 1034		
1009	Compact layer of cobbles (0.10x0.05x0.10m) possibly some kind of walk-way between pits 1033 and 1034, above layer 1010		
1010	Yellow-brown sand 0.15m thick, bedding layer of cobbles 1009 and 1023		
1011	Single square grit-stone block (0.65x0.45x0.30m) possibly tumble from wall 1012		
1012	E-W orientated wall, mixed grit-stone and occasional sandstone block (0.40x0.35x0.30m), with some larger blocks (0.64x0.40x0.35m). Does not continues beyond excavation area		
1013	Dark brown sandy silt. Upper levels of made ground found across site, machined out		
1014	N-S orientated grit-stone wall continues beyond the excavation area. blocks 0.40x0.40x0.30m to 0.65x0.40x0.30m in size		
1015	Mid to dark brownish-grey gravelly clay, fill of 1035 (Same as 1051)		
1016	Cut same as 1035		
1017	Mottled yellow-orange blue clay, very firm and compacted with occasional cobbles, clay lining of pit 1035		
1018	Mixed stone layer part of upper layer of car park		
1019	Dark purple, thin layer of tarmac		
1020	Thin layer of rusty stones; modern deposit		
1021	Grey-brown silt clay, with mixed orange patches		
1022	Light grey brown silty clay subsoil sealing pits 1004 and 1006		
1023	Cobbled surface made up of closely spaced cobbles, same as 1009		
1024	Large cobbles on east side of wall 1014, same as 1007		
1025	NOT ALLOCATED		
1026	Dark brown silty clay fill of construction cut 1027		
1027	Cut of foundation trench for wall 1014. very steep sided with a flat base, filled by 1027		
1028	Grey brown silty clay 1.80m in length 1.80m in width and 0.50m thick. Upper fill of pit 1033 sealed by 1029	Post-med pot x 3; CBM x 3	C18th – C19th
1029	Blue-grey clay with occasional cobble sealing 1028		
1030	Black mixed clay very firm, organic deposit in base of pit 1033	Med pot x 1; post-med pot x 1; Animal bone x 11 GBA Sample 3	EC13th – LC14th / C18th
1031	Black timber lining of barrel shape pit with	Wood Sample 4	

Context	Description	Findings and ecofacts	Dating
	extensive timber lining pit 1033		
1032	Mottled yellow-orange blue clay with occasional medium sized cobble, clay lining of pit 1033.		
1033	Cut of large tanning pit filled by 1028 and 1030, lined with clay (1032) and wood (1030)		
1034	Cut of central large pit, lined with clay (1040), 0.95m deep		
1035	Cut of large clay-lined pit at western end of Area C		
1036	Grey brown silty clay with charcoal and mortar inclusions and occasional cobbles		
1037	Brownish-orange silty clay with frequent charcoal and mortar fragments and occasional cobbles, upper fill of 1101 (Sub-pit 4)		
1038	Light grey silty clay, fill of pit 1101 (Sub-pit 4)		
1039	Grey brown silty clay, lower fill of pit 1101 (Sub-pit 4)		
1040	Mottled yellow orange blue clay lining of pit 1034		
1041	Light brownish grey silty clay fill of construction cut (1042) for wall 1012		
1042	Cut of wall 1012 foundation trench filled by 1041		
1043	Cut of square timber-lined pit within clay lining of pit 1034 (Sub-pit 3), filled by 1044 and 1045		
1044	Grey-orange silty clay, lower fill of 1043 (sub-pit 3)	Post-med pot x 2; Animal Bone x 2; GBA 7 (brambles and Elder)	LC15th – C16th
1045	Mottled grey, brown clay with orange sandstone fragments, secondary fill of 1043 (Sub-pit 3)		
1046	Timber lining of pit 1047 (Sub-pit 6)	Timber Sample 11	
1047	Cut of square pit, steep-sided profile with flat base 0.92x0.98x0.50m (Sub pit 6)		
1048	Light grey with orange flacks, silty clay, secondary fill of square pit 1047 (Sub-pit 6)	Animal bone x 5; Horn x 2; GBA 5	
1049	Powdery compact lime forming a thin layer across the base of timber lining 1046 of pit 1047 (Sub-pit 6)		
1050	Modern stone layer, same as 1018		
1051	Mid to dark brownish-grey gravelly clay, fill of 1059(sub-pit 7)		
1052	Grey brown clayey silt, contains frequent cobbles same as 1013 and 1064		
1053	Greyish-yellow silty clay, frequent stone inclusions small platy gravel similar to 1051, fill of pit 1059 (sub-pit 7)		
1054	Grey-green stony clay, mainly contains		

Context	Description	Finds and ecofacts	Dating
	fragments of cobbles and grit-stone, fill of pit 1059 (sub-pit 7)		
1055	Cream gritty lime deposit sealing 1056 and 1066	GBA Sample 8	
1056	Very dark brown organic layer with wood chips, fill of 1059 (Sub-pit 7)	GBA Sample 9	
1057	Mid to dark brownish green, gritty clay abundant grey small platy gravel fill of 1100 (Sub-pit 2)		
1058	Mottled yellow-orange blue clay with occasional cobbles, lining of pit 1034		
1059	Roughly square cut of pit with flat base within 1035 (Sub-pit 7)		
1060	Light grey with orange flecks, silty clay with occasional stone fragment 0.10m thick, fill of pit 1062 (Sub-pit 5)	Med pot x 2; Animal Bone x 2; GBA Sample 10	Med / L med
1061	VOID		
1062	Cut of pit, steep sided, with a flat base (Sub-pit 5), filled by 1063 and 1060		
1063	Dark timber lining of pit 1062 (Sub pit 5)		
1064	Grey brown clayey silt with frequent cobbles same as 1013 and 1052		
1065	Creamy gritty-clay mixed with brown clay, possibly lime layer		
1066	Mixed purple-white gritty mortar deposit, fill of Pit 1002 (Sub pit 8)		
1067	Light yellow brown clay with occasional sandstone pebbles soil outline of possible timber structure within pit		
1068	Backfill of geotechnical pit 1069		
1069	Cut of geotechnical pit filled by 1068		
1070	Machining context same as 1000	Post-med pot x 7	LC18th – C19th
1071	Fill of Pit 1059 (Sub-pit 7)		
1100	Cut of Sub-pit 2		
1101	Cut of Sub-pit 4		
1102	Cut of Sub-pit 8		
1103	Cut of Sub-pit 1		

Appendix 3:

Catalogue of medieval and later pottery from the excavation (ASWYAS)

Area	Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Comments
A	2002	Gritty ware	1	3	1	BS	Hollow ware	U/Dec	LC11th - EC13th	Possible black deposit ext
A	2002	Hillam type ware	1	21	1	Rim	Jar/cooking pot	U/Dec	LC11th - EC13th	Sooted ext
A	2002	Hillam type ware	1	11	1	BS	Hollow ware	U/Dec	LC11th - EC13th	Reduced ext, buff int; quartz and non-crystalline red grit
A	2002	Oxidised Sandy ware	3	37	2	BS	U/ID	U/Dec	?Medieval	Bright orange sandy fabric containing abundant fine quartz; heavily abraded
A	2002	Oxidised Sandy ware	1	4	1	BS	Hollow ware	Patchy green glaze ext	C13th - C15th	?Humberware type
A	2049	YGCW	2	37	2	BS	Bowl/pancheon	White slip int	C19th	
C	1000	BGCW	1	72	1	Rim	Pancheon	Brown glaze int	C18th - EC19th	Slightly overhanging rim; streaky red fabric
C	1000	BGCW	1	67	1	Rim	Pancheon	Brown glaze int	C18th - EC19th	Slightly overhanging rim; streaky red fabric
C	1000	BGCW	1	15	1	BS	Hollow ware	Brown glaze int & partially ext	C18th - EC19th	Streaky fabric
C	1000	BGCW	2	62	2	BS	Hollow ware	Brown glaze int only	LC18th - C19th	
C	1000	BGCW	1	49	1	Handle	Jar	Shiny brown glaze	LC18th - C19th	Lateral handle
C	1000	BGFW	2	37	1	BS	Hollow ware	Shiny brown glaze int & ext	LC18th - C19th	
C	1000	BGFW	1	23	1	Rim	Bowl	Shiny brown glaze int & ext	LC18th - C19th	Clubbed rim
C	1000	BSGSW	1	21	1	Rim	Jar	U/Dec	LC18th - C19th	Lid seated jar rim
C	1000	BSGSW	1	13	1	BS	Hollow ware	Incised lines ext	LC18th - C19th	
C	1000	BSGSW	1	31	1	Ring foot base	Bowl	Ridges above footed base	LC18th - C19th	
C	1000	BSGSW	1	30	1	Base	Bowl	Footed base	LC18th - C19th	
C	1000	Coarse Sandy ware	1	12	1	BS	Hollow ware	U/Dec	Late Medieval	Abraded; quartz tempered, reduced throughout with oxidised ext margin
C	1000	Colour Glazed ware	1	12	1	Rim	Bowl	Brown mottled	LC18th - C19th	Sharply everted rim; white body

Area	Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Comments
								glaze int & ext		
C	1000	Edged ware	1	6	1	Rim	Soup plate	Wavy edge with low relief moulding and blue paint	c.1810 - c.1830	
C	1000	Late Blackware	1	19	1	Base	Hollow ware	Black glaze int	C18th	Footed base
C	1000	Late Blackware	1	7	1	Base	Hollow ware	Black glaze int & partially ext	C18th	
C	1000	Late Medieval Sandy ware	1	8	1	BS	Hollow ware	Green glaze ext, thin patchy brown glaze int	LC15th - C16th	Flaked and abraded
C	1000	Mottled YGCW	1	15	1	BS	Bowl	White slip int with brown mottling on red body	C19th	
C	1000	Slip Banded CC ware	1	3	1	BS	Hollow ware	Thin white slip lines ext	C19th	
C	1000	Slip Banded CC ware	1	23	1	Rim	Bowl	Blue band below rim and thin white slip lines on body	C19th	
C	1000	TP Whiteware	1	8	1	BS	Flatware	Unidentified design int	1847 - 1867	Part of registration mark on underside
C	1000	TP Whiteware	1	4	1	Rim	Plate	Albion	M - LC19th	Part of illegible makers mark on underside
C	1000	Whiteware	2	10	2	BS	Hollow ware	Dark blue hand painted floral design ext	M - LC19th	
C	1000	Whiteware	1	3	1	BS	Hollow ware	U/Dec	M - LC19th	
C	1000	YGCW	1	72	1	Rim	Pancheon	White slip under clear glaze int; red band on top of rim	LC18th - C19th	
C	1000	YGCW	1	32	1	Rim	Dish/plate	Thin white slip int under clear glaze	LC18th - C19th	
C	1000	YGCW	1	17	1	BS	Pancheon	Thin white slip int under clear glaze	LC18th - C19th	

Area	Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Comments
C	1001	Slipware	2	15	2	BS	Hollow ware	Red slip ext with a pattern of irregular white blobs	C18th	
C	1002	Gritty ware	1	33	1	Rim	Hollow ware	Slightly everted rim with internal bevel	LC11th - C13th	Reduced core with dull orange int & ext margins; poorly sorted quartz grit
C	1002	Unglazed Red Earthenware	1	10	1	Rim	Hollow ware	U/Dec	LC18th - C19th	Folded rim
C	1028	BGCW	2	27	1	Handle	Jar	Brown glaze int & ext	C18th - C19th	Lateral handle; chipped and flaked
C	1028	BGCW	1	10	1	BS	Hollow ware	Brown glaze int & ext	C18th - C19th	
C	1030	Coarse Late Blackware	1	121	1	BS	Hollow ware	Patchy black glaze int & ext with scar ext	C18th	
C	1030	Coarse Sandy ware	1	65	1	Rod handle	Jug	Traces of green glaze ext	EC13th - LC14th	Reduced throughout with abundant angular quartz grit
C	1044	Late Medieval Sandy ware	1	96	1	BS & handle stump	Hollow ware	Green glaze ext only	LC15th - C16th	Partially reduced int, probably secondarily burnt; Late Humberware type
C	1044	Late Medieval Sandy ware	1	17	1	Base	Hollow ware	Spots of glaze on underside	LC15th - C16th	Stacking scar on underside; probably a Late Humberware
C	1060	Coarse Sandy ware	1	2	1	BS	Hollow ware	U/Dec	Medieval	Sample 10
C	1060	Oxidised Sandy ware	1	3	1	BS	Hollow ware	U/Dec	Late Medieval	Sample 10
C	1070	BGCW	2	481	2	Base	Pancheon	Brown glaze int	LC18th - C19th	Some use-wear on underside
C	1070	Cane Coloured ware	1	27	1	Flat base	Pie dish	U/Dec	C19th	
C	1070	YGCW	1	141	1	BS	Pancheon	White slip int with clear glaze	LC18th - C19th	Traces of white slip ext
C	1000&1070	TP Bone China	3	72	1	Profile	Plate	Two Temples	C19th	
C	U/S	BGFW	2	12	2	BS	Hollow ware	Brown glaze ext	C18th	
C	U/S	Late Blackware type	1	4	1	BS	Hollow ware	Dark glaze int & partially ext	C18th	

Area	Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Comments
C	U/S	Tin Glazed Earthenware	1	12	1	Rim	Plate	Pale blue glaze with hand painted blue design int	C17th - MC18th	Flaked int
C	U/S	WSGSW	1	27	1	Base	Flatware	U/Dec	<i>c.</i> 1720 - <i>c.</i> 1780	
C	U/S	WSGSW	1	12	1	BS	Hollow ware	U/Dec	<i>c.</i> 1720 - <i>c.</i> 1780	
C	U/S	WSGSW	1	7	1	Rim	Plate	Bead and reel moulded rim	<i>c.</i> 1720 - <i>c.</i> 1780	
C	U/S	WSGSW	1	4	1	Rim	Plate	Moulded feather edge	<i>c.</i> 1720 - <i>c.</i> 1780	
C	U/S	WSGSW	1	19	1	BS	Plate	Moulded seed or barley border	<i>c.</i> 1720 - <i>c.</i> 1780	
		Total	68	2001	63					

Appendix 4:

**Catalogue of medieval and later pottery
from the evaluation (YAT)**

Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Comments
1003	Lustre ware	1	1	1	BS	Hollow ware	Relief banded sherd with a green and red-lustre bands ext	C19th	
1006	Coarse Sandy ware	1	12	1	Base	Hollow ware	U/Dec	C13th - C15th	
1006	Late Blackware	1	5	1	BS	Hollow ware	Black glaze int & partially ext	C18th	
3006	BSGSW	1	3	1	Rim	Hollow ware	Rouletted band below rim	C18th	
3006	Late Blackware	1	8	1	BS	Hollow ware	Black glaze int & partially ext	C18th	
4000	BSGSW	2	76	1	Rim	Bowl	Pairs of impressed lines ext	C18th	Sharply everted rim
4000	BSGSW	1	27	1	Flat base	Hollow ware	U/Dec	C19th -EC19th	Firing shadow on underside
4000	Creamware	1	104	1	Ring foot base	Bowl	U/Dec	c.1740 - c.1820	Large bowl, round ring foot base
4000	Creamware	1	35	1	Ring foot base	Bowl	U/Dec	c.1740 - c.1820	Bowl with angular ring foot base
4000	Creamware	1	5	1	Ring foot base	?Bowl	U/Dec	c.1740 - c.1820	Bowl with rounded ring foot base
4000	Creamware	1	7	1	Flat base	?Pie dish	U/Dec	c.1740 - c.1820	
4000	Creamware	1	6	1	BS	Hollow ware	U/Dec	c.1740 - c.1820	
4000	Fine Redware	1	57	1	Ring foot base	Bowl	White slip int & ext with unslipped ring foot base	LC18th - EC19th	Bowl with angular ring foot base
4000	Hillam type ware	1	22	1	Rim	Jar/CP	U/Dec	LC11th - EC13th	Profiled rim with external groove
4000	Late Blackware	2	32	2	BS	Hollow ware	Black glaze int & ext	C18th	
4000	Late Blackware	1	9	1	BS & handle	Porringer	Black glaze int & partially ext	C18th	
4000	Late Blackware	1	40	1	Base	Hollow ware	Footed base; black glaze int only	C18th	Use-wear on base
4000	Late Blackware	1	13	1	BS	Hollow ware	Black glaze int & partially ext	C18th	
4000	Mottled ware	1	5	1	Rim	Hollow ware	Dark mottled glaze int & ext	C18th	Slightly everted rim
4000	TP Pearlware	1	12	1	Rim & handle	Cup	Blue printed floral frieze int, u/id design with trees & gothic building ext	c.1780 - c.1840	
4000	TP Pearlware	1	11	1	Rim	Bowl	Wavy rim with floral frieze int & U/ID rural scene ext	c.1780 - c.1840	

Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Comments
4000	TP Pearlware	1	2	1	Base	Flatware	Chinese landscape int	c.1780 - c.1840	
4011	Inlaid slipware	1	5	1	Rim	Bowl	Elaborate engine-turned slipware with black, blue and red-brown inlaid slip patterns	c.1790 - c.1840	Possibly a Pearlware
4013	BGCW	1	172	1	Base	Pancheon	Brown glaze int	LC18th - C19th	Thin walled pancheon, use-wear on base
4013	BGCW	1	34	1	BS	Pancheon	Brown glaze int	LC18th - C19th	
4013	Creamware	1	21	1	Flat base & BS	Bowl/pie dish	U/Dec	c.1740 - c.1820	
4013	Creamware	1	13	1	BS	Hollow ware	U/Dec	c.1740 - c.1820	
4013	Late Blackware	1	10	1	BS	Hollow ware	Rilled profile	C18th	
4013	Pearlware	1	8	1	Footring base	Plate	U/Dec	c.1780 - c.1840	
4013	Pearlware	1	21	1	Flat base	Pie dish	U/Dec	c.1780 - c.1840	
4013	TP Pearlware	1	2	1	BS	Hollow ware	Unidentified TP design ext	c.1780 - c.1840	
4013	URE	1	48	1	BS	Hollow ware	Slight rilling int & ext	LC18th - C19th	
4017	Late Blackware	1	18	1	BS	Hollow ware	Black glaze int & partially ext	C18th	
4017	TP Pearlware	1	7	1	Rim	Hollow ware	Wavy rim with narrow blurred frieze int & U/ID rural frieze with sheep in a field ext	c.1780 - c.1840	Slightly everted rim
4018	Pearlware	1	10	1	Rim	Cup/bowl	Hand painted stylised floral (line and dot) design	c.1780 - c.1840	Seems to be a copy of hand painted Chinese porcelain
4023	BGCW	1	272	1	Base	Pancheon	Brown glaze int	C18th - C19th	Use-wear on underside
4023	BSGSW	1	4	1	BS	Hollow ware	U/Dec	C18th	
6000	Coarse Sandy ware	1	6	1	BS	Hollow ware	Impressed or rouletted marks ext; friable flakey glaze ext	LC11th - EC13th	Probably splash glazed; angular quartz & fine rounded black grit in cross-section
6001	?TP Pearlware	1	24	1	Footring base	Plate	U/ID Transfer printed design int	LC18th - EC19th	Very heavily crazed and discoloured; tripod scars int & ext
6001	BGCW	1	15	1	BS	Hollow ware	Brown glaze int	C18th - C19th	Pot disc

Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Comments
6001	Coarse Sandy ware	1	22	1	Base	Hollow ware	Traces of glaze int, possibly splashed glaze	LC11th - C13th?	Abundant angular quartz grit in a soft oxidised body; some burning ext
6001	Mottled ware	1	7	1	Handle	Hollow ware	Mottled glaze int & ext	C18th	
6001	TP Pearlware	1	1	1	BS	Hollow ware	U/ID transfer printed design ext; probably a Chinese landscape	c.1780 - c.1840	
6001	URE	1	2	1	BS	Hollow ware	U/Dec	LC18th - C19th	
6001	Whiteware	1	3	1	BS	Flatware	U/Dec	C19th	Crazed and discoloured
6008	Cane Coloured ware	1	5	1	Rim	Bowl	Relief moulded cable pattern ext, white glaze int on a cane coloured body	LC19th - EC20th	
6008	Late Blackware	1	2	1	BS	Hollow ware	Black glaze int & partially ext	C18th	
6008	Sewer pipe	2	11	2	BS	Hollow ware	Salt glazed	c.1850+	
6008	Sewer pipe	2	3	2	Flakes	Pipe	Salt glazed surfaces	1850+	Sample No. 6
6008	Stoneware	1	9	1	BS	Bottle	Green stoneware	M - LC19th	
6008	TP Whiteware	1	4	1	Rim	Plate	Unidentified geometric border with unusual angular dendritic design; Flow Blue	c.1840	
6008	TP Whiteware	1	2	1	Rim	Cup/bowl	?Wild Rose	M - LC19th	
6008	TP Whiteware	1	1	1	BS	Flatware	Unidentified TP design int	M - LC19th	
6008	TP Whiteware	1	1	1	Rim	Hollow ware	Black Greek Key design int	M - LC19th	
6010	Buff Sandy ware	1	8	1	BS	Hollow ware	U/Dec	Medieval	Soft, buff sandy fabric with quartz grit
6010	C17th Coarseware	1	3	1	BS	Dish/bowl	Clear glaze int	C17th	Sooted ext
6010	Cistercian ware	1	2	1	BS	Hollow ware	Brown glaze int & ext	c.1450 - c.1600	
6010	Coarse Sandy ware	1	31	1	BS	Hollow ware	U/Dec	C13th - C15th	
6010	Hillam type ware	1	1	1	BS	Hollow ware	U/Dec	LC11th - C13th	Thin walled sherd
6010	Limestone tempered ware	1	4	1	BS	Hollow ware	U/Dec	Medieval	Soft oxidised orange fabric with quartz grit and prominent white limestone grit

Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Comments
6010	Micaceous Sandy ware	1	12	1	BS	Hollow ware	U/Dec	LC11th - C13th	Resembles Hillam type ware but with occasional fine muscovite in a buff body
6010	Reduced Sandy ware	1	15	1	BS	Hollow ware	Green glaze ext with patchy green glaze int	C13th - C15th	Quartz grit with black grit and occasional white non-crystalline inclusions
6010	Oxidised Sandy ware	1	6	1	BS	Hollow ware	U/Dec	Medieval	Fine, very soft oxidised fabric - surfaces missing; see also cxt 2002 Area A
6086	Cistercian ware	1	2	1	Handle	Cup/tyg	U/Dec	c.1450 - c.1600	
6086	Cistercian ware	1	2	1	Rim	Cup/tyg	U/Dec	c.1450 - c.1600	
6086	Cistercian ware	1	3	1	BS	Cup/tyg	Applied pipeclay disc ext	c.1450 - c.1600	
6086	Cistercian ware	2	1	2	BS	Hollow ware	U/Dec	c.1450 - c.1600	Orange fabric
6086	Gritty ware	3	11	3	BS	Hollow ware	U/Dec	LC11th - C14th	Thin walled quartz tempered wares
6086	Oxidised Sandy ware	1	42	1	Base	Hollow ware	U/Dec	C13th - C15th	A fine dull orange sandy ware with abundant fine rounded quartz grains
6086	Oxidised Sandy ware	1	3	1	Rim	Hollow ware	Clear glaze int & ext	Later Medieval	Soft dull orange sandy textured fabric with flakey clear glaze int & ext
6086	Reduced Sandy ware	1	14	1	BS	Hollow ware	Dark green-brown glaze int & ext	C13th - C15th	Fine dark grey reduced fabric
6086	Sandy ware	6	16	6	BS	Hollow ware	U/Dec	Medieval	Quartz tempered sherds; soft and abraded with angular quartz grit
6088	Hillam type ware	1	3	1	BS	Hollow ware	U/Dec	LC11th - EC13th	Sooted ext

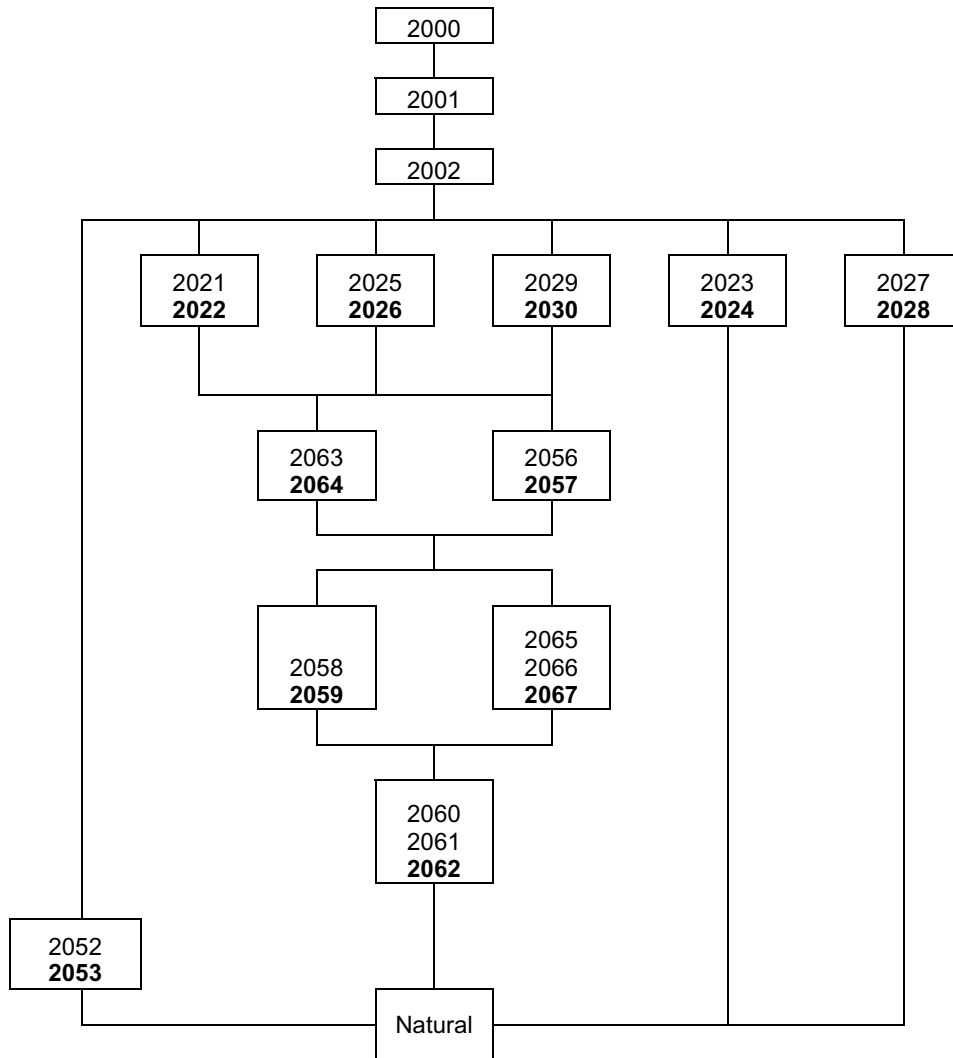
Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Comments
7006	BGCW	1	21	1	BS	Hollow ware	Flaked glaze int & ext	C18th - EC19th	
7006	BGFW	1	8	1	BS	Hollow ware	Clear glaze ext and patchily int	LC17th - C18th	
7006	BGFW	2	6	2	BS	Hollow ware	Brown glaze int & ext, ext only	C18th - EC19th	
7006	Coarse Blackware	1	6	1	BS	Hollow ware	Black glaze int & ext	C17th	
7006	Coarse Blackware	4	210	3	Base & BS	Hollow ware	Black glaze ext only	C17th - EC18th	Footed base
7006	Coarse Sandy ware	1	17	1	BS	Hollow ware	U/Dec	C13th - C15th	Odd sherd
7006	Colour Glazed ware	1	16	1	Base	?Teapot	Shiny brown 'Rockingham' type glaze ext	LC18th - C19th	
7006	Hillam type ware	2	3	2	BS	Hollow ware	U/Dec	LC11th - EC13th	
7006	Redware	1	17	1	BS	Bowl/pancheon	U/Dec	C17th - EC18th	Clear glaze int; cf. Slipware type 1
7006	Redware type	3	6	3	BS	Hollow ware	Clear glazed	C17th - EC18th	
7006	Slipware type 1	1	10	1	Rim	Dish/bowl	Trailed white slip int	C17th - EC18th	
7006	Soft Orange Sandy ware	1	2	1	BS	Hollow ware	Patchy discoloured splash glaze ext	LC11th - EC13th	Very soft, quartz tempered bright orange fabric
7007	Blackware type	1	5	1	BS	Hollow ware	Shiny black glaze int & ext	C17th	Could be Late Blackware but the fabric is closer to Blackware
7015	Coarse Blackware	1	41	1	BS	Hollow ware	Brown glaze int & partially ext	C17th - C18th	
7015	Redware	1	4	1	BS	Dish/bowl	Clear glaze int	C17th - EC18th	Knife trimmed ext
7017	Blackware	1	2	1	BS	Hollow ware	Black glaze int & ext	C17th	
7017	Cistercian ware	1	2	1	BS	Hollow ware	Raised ridge around body	c.1450 - c.1600	
7017	Creamware	1	2	1	Rim	Plate	Wavy edged plate	c.1740 - c.1820	
7017	Edged ware	1	5	1	Rim	Plate	Wavy edge with relief moulded 'Grass' pattern edge	c.1810 - c.1830	
7017	Late Blackware	2	14	2	BS	Hollow ware	Black glaze int & partially ext	C18th	
7017	Late Mottled ware	1	18	1	Rim	Bowl	Mottled glaze int & ext, raised bosses on rim	C19th	Finish resembles C18th Mottled ware but the fabric is a refined

Context	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Comments
									earthenware and the form is a C19th one
7017	Sponged ware	3	5	1	Rim	Plate	Blue sponged decoration int	c.1830+	
7017	Unidentified	1	1	1	BS	Hollow ware	Clear glaze on a fine oxidised fabric	Post-medieval	
8000	Fine Redware	1	1	1	BS	Hollow ware	U/Dec	LC18th - C19th	Clear glaze int & ext on fine red fabric
8000	TP Whiteware	1	7	1	Rim	Server/carver	Willow	M - LC19th	
	Total	120	1863	116					

Appendix 5:

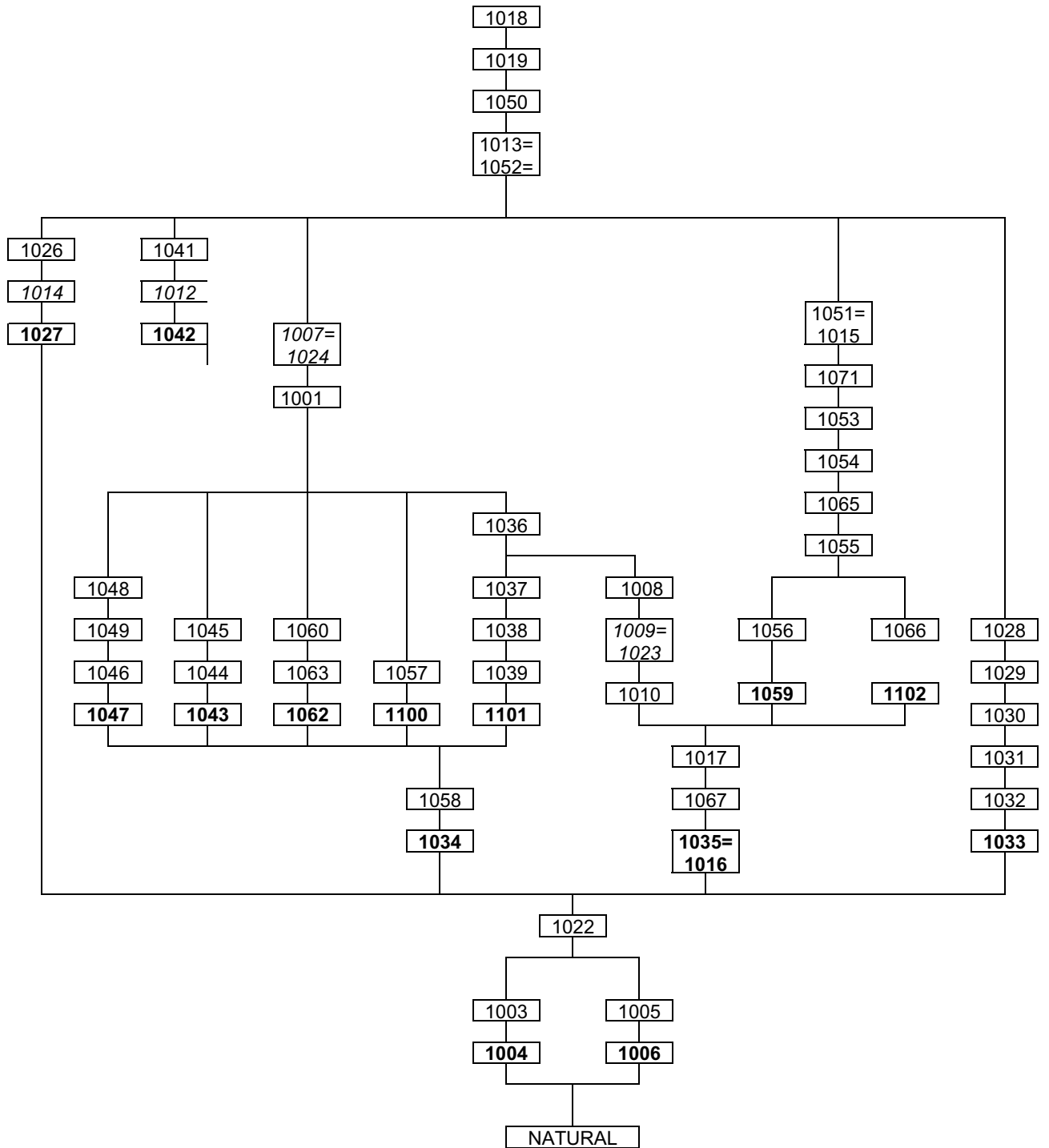
Matrices for Areas A and C

Area A



Bold = cut

Area C



Bold = cut

Italic = Structure

Appendix 6:

Specification for an archaeological excavation

**WEST YORKSHIRE ARCHAEOLOGY ADVISORY SERVICE:
SPECIFICATION FOR AN ARCHAEOLOGICAL EXCAVATION AT BONDGATE &
MYERS CROFT, OTLEY**

(Document revised March 2006 & August 2007)

Specification prepared on behalf of Leeds City Council at the request of Chris Cox of Henry Riley

Planning Refs: 29/336/03/FU, 29/187/99/FU, 06/02247/FU & 06/02249/FU

1. Summary

1.1 A limited amount of archaeological work consisting of open-area excavation is proposed to mitigate the impact of development at the above site.

1.2 This specification deals with the excavation and the preparation of an assessment report on the results of the fieldwork. The results will indicate whether any further archaeological monitoring (in the form of a watching brief during development) will be required. The assessment report will establish whether further analysis and the preparation of a publication report are warranted. Any work arising from the results of the excavation and the assessment report will be additional to this specification.

1.3 This specification has been prepared by the curatorial branch of the West Yorkshire Archaeology Advisory Service (WYAAS), the holders of the West Yorkshire Sites and Monuments Record.

NOTE: The requirements detailed in paragraphs 6.1, 6.2, 6.3, 6.4, 6.5, 7.6, 7.7 and 9.1 are to be carried out by the archaeological contractor prior to the commencement of fieldwork and the notification form should be completed and returned to WYAAS.
--

2. Site Location & Description (Figure 1)

Grid Reference: SE 2020 4526

2.1 The proposed development site lies in the centre of the town of Otley, c.15km north-west of Leeds city centre. The complete development site is an irregular shape and occupies 14,000m² of land between Bondgate to the north and Myers Croft to the south, and Station Road to the west and Gay Lane to the east.

2.2 The site is currently occupied by a variety of tenants and uses. In the western part of the site, buildings still front onto Bondgate, to the rear is an abattoir and off Myers Court are several structures and an electricity sub-station. Most of the buildings are still standing and in use, the areas between are mostly tarmac and concrete surfaces used as car-parking. The eastern part of the site adjacent to Gay Lane consists of uneven ground with overgrown vegetation and demolition rubble from a four-storey tannery and terraced houses which formerly stood on the site.

2.3 Excavation Areas A and B are located on areas of car-parking, while Area C is grassed. Vehicle access can be gained from Bondgate, Myers Croft and Gay Lane. The underlying geology of the site consists of boulder clay overlying periglacial sands and gravels.

2.4 The site within the District of Leeds and the historic township of Otley.

3. Planning Background

3.1 The area defined above is covered by four current planning applications which have been submitted by Sainsbury's Supermarkets Ltd and approved by Leeds City Council. The applications are:

- A supermarket with car parking in the western part of the site (ref. 29/187/99/FU)
- A detached 4-storey building comprising 14 flats, 6 college classrooms and community facilities in the eastern part of the site (refs 29/336/03/FU & amendment 06/02249/FU)
- An extension to the car park including new exit to Gay Lane & landscaping (Ref. 06/02247/FU)

3.2 In response to each of these applications the Planning Authority was advised by WYAAS that there was reason to believe that important archaeological remains may be affected by the proposals. An archaeological evaluation was undertaken in partial fulfilment of a condition attached to planning consents 29/187/99/FU & 29/336/03/FU.

3.3 The evaluation comprised the preparation of a desk-based assessment and a programme of trial trenching. The work was undertaken by York Archaeological Trust and the results revealed that significant archaeological remains are present in two areas of the site. These areas will be disturbed or destroyed by the development of the site and further archaeological excavation and recording works are required to mitigate this impact.

3.4 This specification has been prepared by WYAAS, at the request of Chris Cox of Henry Riley (St Nicholas Chambers, Side, Newcastle upon Tyne, NE1 1PE) to detail what is required and to allow an archaeological contractor to provide a quotation.

4. Archaeological Interest

4.1 Prior to the recent evaluation the only evidence of Roman activity from Otley was a burial found at the parish church in 1888 (dated by coins and pottery) and various spot finds of coins, a brooch and pottery. The Roman road from Tadcaster to Ilkley (Margary ref. 729) passes just to the south of the modern town.

4.2 Otley was a significant religious and trading centre from the 7th or 8th century onwards. It formed part of an estate belonging to the Archbishop of York and the Archbishops' manor house is known to have been sited within Otley, next to the River Wharfe, overlooking the medieval bridge. The earliest settlement probably focussed around the parish church on Kirkgate. A 13th century survey mapped buildings along Boroughgate and Walkergate. The enclosure map of 1783 shows long narrow plots ('tofts') extending from Bondgate and buildings fronting onto Gay Lane. The site therefore appears to lie within the historic urban core of the town.

4.3 Later maps show that by the mid 19th century the area adjacent to Bondgate was occupied by several buildings, including a tannery, but the tofts behind the buildings still existed and one was occupied by a ropewalk. The site continued to include a mixture of industrial and small-scale agricultural activity until the construction of Myers Croft in the mid 20th century. This opened up access the rear of the tofts to

new development and by the 1960s the outline of the historic property divisions had largely been lost.

4.4 The trial trenching evaluation (in June/July 2004) comprised 11 trenches. The most significant discovery was in Trench 6 which revealed a series of stake holes and a cobble path which were dated to the 2nd century AD. These are the first Roman-period stratified deposits and finds to be identified and recorded in Otley. The area of Trench 6 has been expanded to form excavation Area A (Fig. 2). At the end of the evaluation a waterproof membrane was placed over the exposed archaeology prior to backfilling.

4.5 No evidence of medieval activity was found during the evaluation. However, structural remains, including a cobble surface, a grit stone block wall and a clay-lined pit, were found in Trench 7. This structure is not depicted on the earliest maps but the finds indicate an 18th-century date. Trench 7 has been expanded to form excavation Area C (Fig. 2). At the end of the evaluation a waterproof membrane was placed over the exposed archaeology prior to backfilling.

4.6 No further significant archaeology was identified in any of the other evaluation trenches. Excavation Area B is positioned to investigate an area which was not accessible at the time of the evaluation.

4.7 The evaluation results indicate that the following major artefact categories may be encountered during the excavation: Roman, medieval and post-medieval pottery; Roman CBM and, Roman and medieval coins.

5. Aims of the Excavations

5.1 The objective of the project is to fully record, analyse and report all archaeological remains within the areas of interest ('preservation by record') prior to their destruction during the development of the site, and to place the results of this work in the public domain by depositing it with the WY Historic Environment Record (Registry of Deeds, Newstead Road, Wakefield WF1 2DE).

5.2 The specific aims are to:

Obtain sufficient information to understand the nature of the Roman-period and 18th-century activity at the site;

Obtain dating and phasing information for all features;

To understand and present the archaeological evidence in a local or regional or national context as appropriate.

5.3 The results will allow WYAAS to determine whether any further fieldwork (in the form of a watching brief during development) will be required and the assessment report will establish whether further analysis and the preparation of a publication report are warranted.

6. General Instructions

6.1 Health and Safety

6.1.1 The archaeologist on site will naturally operate with due regard for Health and Safety regulations. The excavation may require the preparation of a Risk Assessment of the site in accordance with the Health and Safety at Work

Regulations. WYAAS and its officers cannot be held responsible for any accidents that may occur to outside contractors while attempting to conform to this specification. Any Health and Safety issues which may hinder compliance with this specification should be discussed with WYAAS at the earliest possible opportunity.

6.2 Confirmation of Adherence to Specification

6.2.1 Prior to the commencement of *any work*, the archaeological contractor must confirm adherence to this specification in writing to WYAAS, or state (with reasons) any proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of WYAAS to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor. Modifications presented in the form of a re-written specification/project design will not be considered by WYAAS. Any technical queries arising from the specification detailed below should be addressed to WYAAS without delay.

6.3 Confirmation of Timetable and Contractors' Qualifications

6.3.1 Prior to the commencement of *any work*, the archaeological contractor must provide WYAAS in writing with:

- a projected timetable for the site work;
- details of the staff structure and numbers;
- names and CVs of key project members (the project manager, site supervisor, any proposed specialists, sub-contractors *etc.*).

6.3.2 All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of WYAAS.

6.4 Notification

6.4.1 The excavations will be monitored as necessary and practicable by WYAAS in its role as curator of the county's archaeology. WYAAS should be provided with as much notice as possible in writing (and not less than one week) of the intention to start work. A copy of the archaeological contractor's risk assessment of the site should accompany the notification.

6.4.2 The archaeological contractor should give representatives of the Leeds Museums and Galleries sufficient notice of start of works so that they may visit the site to view work in progress. Contact: Katherine Baxter, Curator of Archaeology, tel: 0113 2305492; email: katherine.baxter@leeds.gov.uk.

6.4.3 As a courtesy, English Heritage's Regional Science Adviser, Andy Hammon, should also be notified of the intention to commence fieldwork. (Tel.: 01904 601983; email: andy.hammon@english-heritage.org.uk).

6.5 Documentary Research

6.5.1 Provision should be made for the project manager or site supervisor to visit the West Yorkshire Historic Environment Record in order to research the archaeological/historical background of the site and environs and to familiarise

themselves with the desk-based assessment and evaluation report. In addition to providing a knowledge base for the work in hand, the results of this research may be incorporated into the contractor's report where they are considered to contribute to that report, but any extraneous material should be omitted. Please note that the HER makes a charge for consultations of a commercial nature.

6.6 Evaluation Archive

6.6.1 Provision should be made for integrating the results from the evaluation into the post-excavation process that is covered by this specification. In particular, the evaluation finds will be submitted for specialist assessment along with the finds from this stage of the work.

6.7 Location of Services, etc.

6.7.1 The archaeological contractor will be responsible for locating any drainage pipes, service pipes, cables etc which may cross any of the trench lines, and for taking the necessary measures to avoid disturbing such services.

7. Fieldwork Methodology

7.1 Trench Size and Location (Figure 2)

7.1.1 The work will involve the excavation of three areas totalling 825m². The contractor should also make provision for a contingency area of up to 100m². The use of the contingency will depend upon the results obtained during the initial excavations and will be implemented at the discretion of WYAAS. The decision to invoke all or part of the contingency area will be issued in writing, in retrospect after site discussions if necessary.

7.1.2 The open-area excavation trenches should be located as shown on Figure 2.

	Area (m ²)	Rationale
Area A	650	To fully investigate and record the area of Roman activity identified in evaluation Trench 6
Area B	30	To fully investigate and record the area fronting Bondgate which may contain the remains of medieval tenements. (This area was not accessible during the evaluation.)
Area C	145	To fully investigate and record the area of 18 th -century activity identified in evaluation Trench 7

Total excavation area: **825m²**

Contingency allowance: **up to 100m²**

7.2 Method of Excavation

7.2.1 The excavation areas may be opened using an appropriate machine fitted with a wide toothless ditching bucket. The topsoil and recent overburden should be removed down to the first significant archaeological horizon in successive level spits of maximum 0.2m thickness. Under no circumstances should the machine be used to cut arbitrary trenches down to natural deposits. All machine work must be carried out under direct archaeological supervision and the machine halted if significant archaeological deposits are encountered. The top of the first significant

archaeological horizon may be exposed by the machine, but must then be cleaned by hand and inspected for features. Excavation should then continue manually.

7.2.2 All pre-20th century remains will be treated archaeologically (and excavated and recorded to normal standards), unless it can be demonstrated to WYAAS's satisfaction that the remains are later than c.1850 and have no earlier phases.

7.2.3 All archaeological remains will be hand excavated in an archaeologically controlled and stratigraphic manner sufficient to meet the aims and objectives of the project. The excavation will record the **complete** stratigraphic sequence, down to naturally occurring deposits and will investigate and record **all** inter-relationships between features. The following excavation strategy will be employed:

- Linear boundary features: a minimum sample of 20% of each linear boundary feature such as ditches and trackways. Each section should be at least 1m wide and, where possible, sections will be located and recorded adjacent to the trench edge. All intersections will be investigated to determine the relationship(s) between the component features. All termini will be investigated.
- Other linear and discrete features: all stake holes, post-holes, pits, ring ditches, kilns, and other structural/funerary/industrial features will be 50% excavated in the first instance, recorded in section, and then fully excavated. All intersections will be investigated to determine the relationship(s) between the component features. Where possible, sections will be located and recorded adjacent to the trench edge.
- Built structures: walls, floors etc will be excavated sufficient to establish their form, phasing, construction techniques. All intersections will be investigated to determine the relationship(s) between the component features.

7.2.4 All artefacts are to be retained for processing and analysis except for unstratified 20th-century material, which may be noted and discarded. Finds will be stored in secure, appropriate conditions following the guidelines in First Aid for Finds (3rd edition).

7.3 Method of Recording

7.3.1 The trenches are to be recorded according to the normal principles of stratigraphic excavation. The stratigraphy of each area is to be recorded, even when no archaeological deposits have been identified.

7.3.2 Section drawings (at a minimum scale of 1:20) must include heights A.O.D. Plans (at a minimum scale of 1:50) must include O.D. spot heights for all principal strata and any features. At least one section of each trench edge, showing a representative and complete sequence of deposits from the modern ground surface to the natural geology, will be drawn.

7.3.3 The actual areas of excavation and all archaeological (and possibly archaeological) features should be accurately located on a site plan and recorded by photographs, scale drawings and written descriptions sufficient to permit the preparation of a detailed archive and report on the material. The trench locations, as excavated, will be accurately surveyed, tied into the O.S. National Grid and located on an up-to-date 1:1250 O.S. map base.

7.4 Use of Metal Detectors

7.4.1 Spoil heaps are to be scanned for ferrous and non-ferrous metal artefacts using a metal detector capable of making this discrimination, operated by an experienced metal detector user (if necessary, operating under the supervision of the contracting archaeologist). Modern artefacts are to be noted but not retained (19th-century material and earlier should be retained.)

7.4.2 If a non-professional archaeologist is to be used to carry out the metal-detecting, a formal agreement of their position as a sub-contractor working under direction must be agreed in advance of their use on site. This formal agreement will apply whether they are paid or not. To avoid financial claims under the Treasure Act a suggested wording for this formal agreement with the metal detectorist is: "In the process of working on the archaeological investigation at [*location of site*] between the dates of [*insert dates*], [*name of person contributing to project*] is working under direction or permission of [*name of archaeological organisation*] and hereby waives all rights to rewards for objects discovered that could otherwise be payable under the Treasure Act 1996."

7.5 Environmental Sampling Strategy

7.5.1 Bulk samples must be taken from all securely stratified deposits using the methodologies outlined by English Heritage in the Centre for Archaeology Guidelines no.1 (2002), "Environmental Archaeology. A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation".

7.5.2 Samples for specialist environmental analysis and scientific dating (soil profiles, archaeomagnetic dating, dendrochronology etc.) should be taken if suitable material is encountered during the excavation. The English Heritage Regional Science Advisor should be consulted (Dr Andy Hammon, tel.: 01904 601983, email: andy.hammon@english-heritage.org.uk) and provision should be made for an appropriate specialist(s) to visit the site, take samples and discuss the sampling strategy, if necessary.

7.6 Conservation Strategy

7.6.1 A conservation strategy must be developed in collaboration with a recognised laboratory. All finds must be assessed in order to recover information that will contribute to an understanding of their deterioration and hence preservation potential, as well as identifying potential for further investigation. Furthermore, all finds must be stabilised and packaged in accordance with the requirements of the receiving museum. As a guiding principle, only artefacts of a "displayable" quality would warrant full conservation, but metalwork and coinage from stratified contexts would be expected to be x-rayed if necessary, and conservation costs should also be included as a contingency.

7.7 Human Remains

7.7.1 Any human remains that are discovered must initially be left *in-situ*, covered and protected. WYAAS will be notified at the earliest opportunity. If removal is necessary the remains must be excavated archaeologically in accordance with the *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England* published by English Heritage (2005), a valid

Ministry of Justice licence, if appropriate, and any local environmental health regulations.

7.8 Treasure Act

7.8.1 The terms of the Treasure Act 1996 must be followed with regard to any finds that might fall within its purview. Any finds must be removed to a safe place and reported to the local coroner as required by the procedures as laid down in the "Code of Practice". Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

7.9 Unexpectedly Significant or Complex Discoveries

7.9.1 Should there be unexpectedly significant or complex discoveries made that warrant, in the professional judgement of the archaeologist on site, more detailed recording than is appropriate within the terms of this specification, then the archaeological contractor should urgently contact WYAAS with the relevant information to enable them to resolve the matter with the developer.

8. Monitoring

8.1 The project will be monitored as necessary and practicable by WYAAS, in its role as curator of the county's archaeology and advisor to the local Planning Authority. WYAAS's representative will be afforded access to the site at any reasonable time. It is usual practice that the visit is arranged in advance, but this is not always feasible.

8.2 WYAAS's representative will be provided with a site tour and an overview of the site by the senior archaeologist present and should be afforded the opportunity to view all trenches, any finds made that are still on site, and any records not in immediate use. It is anticipated that the records of an exemplar context that has previously been fully recorded will be examined. Any observed deficiencies during the site visit are to be made good to the satisfaction of WYAAS's representative, by the next agreed site meeting. Access is also to be afforded at any reasonable time to English Heritage's Regional Archaeological Scientific Advisor.

9. Archive Deposition

9.1 Before commencing any fieldwork, the archaeological contractor must determine the requirements for the deposition of the excavation and evaluation archives. Leeds Museums and Galleries do not currently accept archives resulting from archaeological fieldwork and discussions are continuing as to the most appropriate location for the excavation archive. In this instance WYAAS will take the archive but the requirements of the Leeds Museums and Galleries are to be adhered to (see Appendix 1).

9.2 The deposition of the archive must be accompanied by a storage fee, currently £113 per standard box, payable to West Yorkshire Joint Services. The contractor will be charged the fee current at the time of deposition.

9.3 It is the responsibility of the archaeological contractor to endeavour to obtain consent of the landowner, in writing, to the deposition of finds with a public body, initially WYAAS, but eventually it is hoped, with Leeds City Museums.

9.4 It is the responsibility of the archaeological contractor to meet Leeds Museums' requirements with regard to the preparation of fieldwork archives for deposition (see Appendix 1).

10. Post-excavation Assessment and Analysis

10.1 Initial Treatment of Artefacts and Samples

10.1.1 Upon completion of fieldwork all finds will be cleaned, identified, marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines. Metalwork will be x-rayed (as per paragraph 7.6) and assessed by a conservator. Any samples taken shall be processed appropriately.

10.2 Archive Consolidation

10.2.1 The site archive will be checked, cross-referenced and made internally consistent. A fully indexed archive shall be compiled consisting of all primary written documents, plans, sections, photographic negatives and a complete set of labelled photographic prints/slides.

10.2.2 The complete archive (including finds) will be prepared in accordance with the requirements of the recipient museum (see section 9 above).

10.2.3 The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds in a publicly accessible archive (see paragraph 9.3 above). In the absence of this agreement the field archive (less finds) is to be deposited with the West Yorkshire Archaeology Advisory Service.

10.3 Assessment - Artefacts

10.3.1 All artefacts must be assessed by a qualified and experienced specialist. Assessment should be generally based on MAP2 but should include:

- preparation of a descriptive catalogue;
- dating (where possible);
- an assessment of the significance of the assemblage;
- an assessment of the potential for further analysis to contribute to the interpretation of the archaeology of this site;
- an assessment of the potential for further analysis to contribute to artefact studies;
- recommendations for additional artefact illustration/photography;
- an assessment of the condition of the assemblage and recommendations for conservation, retention/discard and archiving.

10.4 Assessment - Samples

10.4.1 All environmental material must be assessed by a qualified and experienced specialist. Assessment should be generally based on MAP2 but should include:

- preparation of a descriptive table/catalogue;
- identification of material suitable for scientific dating;

- an assessment of the significance of the assemblage;
- an assessment of the potential for further analysis to contribute to the interpretation of the archaeology of this site;
- an assessment of the potential for further analysis to contribute to environmental studies;
- an assessment of the condition of the assemblage and recommendations for retention/discard and archiving.

10.5 Dating

10.5.1 Scientific dating should be undertaken at this stage if it is required to fulfil the aims of the project.

11. Reporting (Stage 1) – Interim Assessment of Potential

11.1 Following the return of the specialist reports to the archaeological contractor, but prior to the commencement of preparation of the detailed site report, the contractor should arrange a meeting with the WY Archaeology Advisory Service and (at his discretion) English Heritage's Regional Science Adviser (Andy Hammon, English Heritage, 37 Tanner Row, York YO1 6WP). The purpose of this meeting is to discuss the results of the initial stratigraphic synthesis and initial scientific analyses, and to determine

- the ability of the available data to fulfil the stated aims and objectives of the project
- any requirement for further scientific analyses prior to the formulation of the full report on the site.

The meeting may take the form of a telephone discussion, at the discretion of the WY Archaeology Advisory Service.

11.2 Prior to the meeting, documentation sufficient to enable the Advisory Service and English Heritage's Regional Science Adviser to evaluate any proposals for further analysis should be made available to WYAAS and EH. This documentation should consist of the following as a minimum, but should not include a detailed site narrative or constitute a draft of the final report:

11.2.1 Text

- A brief narrative outline of the results of the excavation (N.B. this is not intended to be a detailed description of the stratigraphic sequence, but should provide sufficient detail to permit the form and development of the site to be understood by a third party who has not visited the excavation);
- Detailed description of any features/feature groups, the interpretation of which may be affected by the results of further scientific analysis;
- A re-evaluation of the aims and objectives of the project in the light of the initial specialist analysis;
- A descriptive context catalogue;
- Unedited copies of specialist reports;

- Detailed and specific recommendations for further artefact and environmental analysis;
- Detailed and specific recommendations for any additional scientific dating;
- Detailed and specific recommendations for further documentary research;
- Costings for any recommended further research, scientific analysis or dating;
- Recommendations for general publication in monograph form or in an appropriate journal, if warranted by the results of the excavation.

11.2.2 Illustrations

Illustrations should be sufficient to permit the summary discussion to be understood by a third party, and should include:

- Location plan;
- Trench locations (as excavated), overlaid on an up-to-date 1:1250 O.S. map base;
- Draft phase plans (these should be at a scale sufficient to illustrate major context and feature groups important to an understanding of the site narrative)
- Plans, sections and photographs sufficient to permit the narrative outline to be understood, and to support recommendations for further specialist analysis. Draft drawings and marked-up digital photographs are acceptable as long as these are legible.

12. Reporting (Stage 2) – Full Report

12.1 If further specialist analysis is judged by the WY Archaeology Advisory Service to be necessary and appropriate, this work should be commissioned and the results incorporated into a full report. If no further specialist analysis is required, then a full report will be produced.

12.2 Details of the style and format of the full report are to be determined by the archaeological contractor. However, it should be produced with sufficient care and attention to detail to be of academic use to future researchers. The report should be fully illustrated and include:

- background information;
- a description of the methodology;
- a full description of the results;
- an interpretation of the results in a local/regional/national context as appropriate;
- a full bibliography.

Appendices to the report should include:

- Unedited copies of final specialist reports;
- a quantified index to the site archive

- written confirmation from the relevant museum or other repository that the archive has been accepted for long-term storage, with full location details of the archive
- a copy of this specification.

12.3 Location plans should be produced at a scale which enables easy site identification and which depict the full extent of the site. A scale of 1:50,000 is not regarded as appropriate unless accompanied by more detailed plan(s). The location of the trenches (as excavated) should be overlaid on an up-to-date 1:1250 O.S. map base.

12.4 All illustrations should be executed to publication standard. Site plans should be at an appropriate, measurable scale showing the trenches as excavated and all identified (and, if possible, predicted) archaeological features/deposits. Trench and feature plans must include O.D. spot heights for all principal strata and any features. Section drawings must include O.D heights and be cross-referenced to an appropriate plan.

12.5 Finds that are critical for dating and interpretation should be illustrated.

12.6 Discrete features crucial to the interpretation of the site should be illustrated photographically.

12.7 In addition to the full report to be deposited with the WY Historic Environment Record, the results of this excavation may merit publication in monograph form or in a suitable archaeological journal (subject to the judgement of the WY Archaeology Advisory Service). If further publication is considered to be necessary, the archaeological contractor will be expected to approach the editor of the appropriate publication (after discussions with WYAAS) to confirm the journal's requirements and views with regard to the suitability of the proffered material.

12.8 The full report will be submitted directly to the WY Archaeology Advisory Service within a timescale agreed by both parties. The report will then be assessed by WYAAS to establish whether or not it is suitable for accession into the WY Historic Environment Record. Any comments made by WYAAS in response to the submission of an unsatisfactory report will be taken into account and will result in the reissue of a suitably edited report to all parties, within a timescale which has been agreed with WYAAS. Completion of this project and a recommendation from WYAAS for the full discharge of the archaeological condition is dependant upon receipt by WYAAS of i) a satisfactory full report and, should publication be warranted, ii) a copy of a letter from an appropriate journal editor or publisher confirming acceptance of the article.

12.9 The full report, once accepted by WYAAS, will be supplied on the understanding that it will be added to the West Yorkshire Historic Environment Record and will become a public document after an appropriate period of time (generally not exceeding six months).

12.10 The attached summary sheet should be completed and submitted to the West Yorkshire Archaeology Advisory Service for inclusion on WYAAS's website. During fieldwork monitoring visits WYAAS officers will take digital photographs which may be published on the Advisory Service's website as part of an ongoing strategy to enable public access to information about current fieldwork in the county.

13. General Considerations

13.1 Authorised Alterations to Specification by Contractor

13.1.1 It should be noted that this specification is based upon records available in the West Yorkshire Historic Environment Record and on a site visit carried out in February 2006. It is recommended that archaeological contractors should carry out a site inspection prior to submitting a tender. If, upon visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist's professional judgement that:

- i) a part or the whole of the site is not amenable to recording as detailed above, and/or
- ii) an alternative approach may be more appropriate or likely to produce more informative results

Then it is expected that the archaeologist will contact WYAAS as a matter of urgency. If contractors have not yet been appointed, any variations which WYAAS considers to be justifiable on archaeological grounds will be incorporated into a revised specification, which will then be re-issued to the developer for redistribution to the tendering contractors. If an appointment has already been made and site work is ongoing, WYAAS will resolve the matter in liaison with the developer and the Local Planning Authority.

13.2 Unauthorised Alterations to Specification by Contractor

13.2.1 It is the archaeological contractor's responsibility to ensure that they have obtained WYAAS's consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in WYAAS being unable to recommend determination of the planning application to the Local Planning Authority based on the archaeological information available and are therefore made solely at the risk of the contractor.

13.3 Technical Queries

13.3.1 Any technical queries arising from the specification detailed above, should be addressed to WYAAS without delay.

13.4 Publicity

13.4.1 If the project is to be publicised in any way (including media releases, publications etc.), then it is expected that WYAAS will be given the opportunity to consider whether its collaborative role should be acknowledged, and if so, the form of words used will be at WYAAS's discretion.

13.5 Valid Period of Specification

13.5.1 This specification is valid for a period of one year from date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

Andrea Burgess August 2007

West Yorkshire Archaeology Advisory Service

Registry of Deeds

Newstead Road

Wakefield

WF1 2DE

Telephone: 01924 305178

Fax: 01924 306810

E-mail: aburgess@wyjs.org.uk

Appendix 7:

Specification for an archaeological watching brief

**WEST YORKSHIRE ARCHAEOLOGY ADVISORY SERVICE:
SPECIFICATION FOR AN ARCHAEOLOGICAL WATCHING BRIEF
AT BONDGATE & MYERS CROFT, OTLEY**

Planning refs: 29/336/03/FU, 29/187/99/FU, 06/02247/FU & 06/02249/FU

Specification prepared on behalf of Leeds City Council at the request of Nikki Panesar of RGCM Limited

1. Summary

1.1 A limited amount of archaeological work consisting of a watching brief is proposed to identify and record any archaeological remains which are revealed and/or disturbed during demolition works at this site. This specification has been written by Archaeological Services WYAS on behalf of the West Yorkshire Archaeology Advisory Service (WYAAS), the holders of the West Yorkshire Historic Environment Record.

NOTE: The requirements detailed in paragraphs 6.2, 6.3, 6.4 and 11.1 are to be carried out by the archaeological contractor **prior** to the commencement of fieldwork.

2. Site Location & Description

Grid Reference: SE 2020 4526

2.1 The proposed development site lies in the centre of the town of Otley, c.15km north-west of Leeds city centre. The complete development site is an irregular shape and occupies 14,000m² of land between Bongate to the north and Myers Croft to the south, and Station Road to the west and Gay Lane to the east. The watching brief should be undertaken during any ground disturbance in the area fronting Bondgate and the area of the County Court building (Area B, Fig. 1).

2.2 The site is currently occupied by a variety of tenants and uses. In the western part of the site, buildings still front onto Bondgate, to the rear is an abattoir and off Myers Court are several structures and an electricity sub-station. Most of the buildings are still standing and in use, the areas between are mostly tarmac and concrete surfaces used as car-parking. The eastern part of the site adjacent to Gay Lane consists of uneven ground with overgrown vegetation and demolition rubble from a four-storey tannery and terraced houses which formerly stood on the site.

2.3 The site within the District of Leeds and the historic township of Otley.

3. Background

3.1 The area defined above is covered by four current planning applications which have been submitted by Sainsbury's Supermarkets Ltd and approved by Leeds City Council. The applications are:

- Erection of Supermarket with car parking, landscaping and laying out of access (ref. 29/187/99/FU)
- Extension to car park including new vehicle access to Gay Lane and landscaping to proposed supermarket (refs 29/336/03/FU & amendment 06/02249/FU)

- Single storey St John's Ambulance building and associated parking together with six car parking spaces for residents on Gay lane (Ref. 06/02247/FU)

3.2 In response to each of these applications the Planning Authority was advised by WYAAS that there was reason to believe that important archaeological remains may be affected by the proposals. An archaeological evaluation was undertaken in partial fulfilment of a condition attached to planning consents 29/187/99/FU & 29/336/03/FU.

3.3 The evaluation comprised the preparation of a desk-based assessment and a programme of trial trenching. The work was undertaken by York Archaeological Trust and the results revealed that significant archaeological remains are present in two areas of the site. These areas will be disturbed or destroyed by the development of the site and further archaeological excavation and recording works are required to mitigate this impact.

3.4 The Planning Authority were advised by WYAAS that there is reason to believe that important archaeological remains may be affected by the proposed development and that an archaeological watching brief is required. The archaeological work is a condition to the planning consent.

4. Archaeological Interest

4.1 Prior to the recent evaluation the only evidence of Roman activity from Otley was a burial found at the parish church in 1888 (dated by coins and pottery) and various spot finds of coins, a brooch and pottery. The Roman road from Tadcaster to Ilkley (Margary ref. 729) passes just to the south of the modern town.

4.2 Otley was a significant religious and trading centre from the 7th or 8th century onwards. It formed part of an estate belonging to the Archbishop of York and the Archbishops' manor house is known to have been sited within Otley, next to the River Wharfe, overlooking the medieval bridge. The earliest settlement probably focussed around the parish church on Kirkgate. A 13th century survey mapped buildings along Boroughgate and Walkergate. The enclosure map of 1783 shows long narrow plots ('tofts') extending from Bondgate and buildings fronting onto Gay Lane. The site therefore appears to lie within the historic urban core of the town.

4.3 Later maps show that by the mid 19th century the area adjacent to Bondgate was occupied by several buildings, including a tannery, but the tofts behind the buildings still existed and one was occupied by a ropewalk. The site continued to include a mixture of industrial and small-scale agricultural activity until the construction of Myers Croft in the mid 20th century. This opened up access the rear of the tofts to new development and by the 1960s the outline of the historic property divisions had largely been lost.

4.4 The trial trenching evaluation (in June/July 2004) comprised 11 trenches. The most significant discovery was in Trench 6 which revealed a series of stake holes and a cobble path which were dated to the 2nd century AD. These are the first Roman-period stratified deposits and finds to be identified and recorded in Otley.

4.5 No evidence of medieval activity was found during the evaluation. However, structural remains, including a cobble surface, a grit stone block wall and a clay-lined pit, were found in Trench 7. This structure is not depicted on the earliest maps but the finds indicate an 18th-century date.

4.6 No further significant archaeology was identified in any of the other evaluation trenches. Area B is positioned to investigate an area which was not accessible at the time of the evaluation.

4.7 The evaluation results indicate that the following major artefact categories may be encountered during the excavation: Roman, medieval and post-medieval pottery; Roman CBM and, Roman and medieval coins.

5. Aim of the Watching Brief

5.1 The aim of the watching brief is to identify and record the presence/absence, extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits which are disturbed or exposed as a result of demolition works and the grubbing out of foundations in the area of interest.

5.3 This work will inform whether any further archaeological investigation is required prior to or during construction in mitigation of the destruction of buried archaeological remains through 'preservation by record'.

6. General Instructions

6.1 Health and Safety

6.1.1 The archaeologist on site will naturally operate with due regard for Health and Safety regulations. In this case, where archaeological work is carried out at the same time as the work of other contractors, regard should also be taken of any reasonable additional constraints that these contractors may impose. This work may require the preparation of a Risk Assessment of the site, in accordance with the Health and Safety at Work Regulations. The West Yorkshire Archaeology Advisory Service and its officers cannot be held responsible for any accidents or injuries that may occur to outside contractors engaged to undertake this watching brief while attempting to conform to this specification. Any Health and Safety issues which may hinder compliance with this specification should be discussed with WYAAS at the earliest possible opportunity (see section 12.2).

6.2 Confirmation of Adherence to Specification

6.2.1 Prior to the commencement of *any work*, the archaeological contractor must confirm adherence to this specification in writing to WYAAS, or state (with reasons) any proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of WYAAS to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor (see para. 12.2 below). Modifications presented in the form of a re-written specification/project design **will not** be considered by WYAAS.

6.3 Confirmation of Timetable and Contractors' Qualifications

6.3.1 Prior to the commencement of *any work*, the archaeological contractor **must** provide WYAAS **in writing** with:

- a projected timetable for the site work
- details of the staff structure and numbers
- names and CVs of key project members (the project manager, site supervisor, any proposed specialists, sub-contractors *etc.*)

6.3.2 All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles, in accordance with PPG 16 para. 21. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of WYAAS.

6.4 Notification and Monitoring

6.4.1 The watching brief will be monitored as necessary and practicable by WYAAS in its role as curator of the county's archaeology. WYAAS should be provided with **as much notice as possible in writing** (and certainly not less than one week) of the intention to start the watching brief. A copy of the archaeological contractor's risk assessment of the site should accompany the notification.

6.4.2 The museums officer named in paragraph 11.1 should be notified in writing of the commencement of fieldwork at the same time as WYAAS.

7. Fieldwork Methodology

7.1 An archaeologist should be present on site during the excavation of any area below a depth the current ground surface in the area defined in paragraph 2.1, whether this be for demolition, grubbing out of foundations, site preparation, foundation trenches, service trenches or landscaping. The archaeologist should view the area as it is being dug and any trench sections after excavation has been completed. Where archaeology is judged to be present, the excavated area should be rapidly cleaned and the need for further work assessed. Where appropriate, any features and finds should then be quickly hand excavated, sampled if appropriate, and recorded.

7.2 Features/deposits of archaeological concern should be accurately located on a site plan and recorded by photographs, scale drawings and written descriptions sufficient to permit the preparation of a report. Section drawings (at a minimum scale of 1:20) must include heights O.D. Plans (at a minimum scale of 1:50) must include O.D. spot heights for all principal strata and any features.

7.3 The actual areas of ground disturbance (even if no archaeological remains are present) should be recorded on a suitable base map/development plan and the stratigraphic sequence and the depth of the excavations will be briefly recorded. If archaeological remains are identified, their location is to be accurately tied into the National Grid and located on an up-to-date 1:1250 O.S. map base.

7.4 Excavated soil should be searched as practicable for finds. All finds, except unstratified 20th century material, should be collected and retained for processing.

7.5 All securely stratified contexts should be sampled for environmental analysis and scientific dating. Additional 'spot' samples should be taken if suitable material is encountered during the watching brief.

7.6 The intention of the archaeological watching brief is not to unduly delay the work of other contractors on site, however, a degree of flexibility is also expected of the developer in order that the archaeologist can fulfil the terms of this specification (see 8.1 below). The archaeologist shall not excavate any area beyond those scheduled for destruction by the development.

7.7 If, in the professional judgement of the archaeologist on site, the watching brief reveals below-ground conditions which indicate that potentially archaeological levels

are absent, the archaeologist should contact WYAAS to discuss reducing or curtailing the requirements. The work may only be curtailed with the prior agreement of WYAAS and written confirmation will be provided by WYAAS.

8. Unexpectedly Significant or Complex Discoveries

8.1 Should there be, in the professional judgement of the archaeologist on site, unexpectedly significant or complex discoveries made that warrant more detailed recording than possible within the terms of this specification, then the archaeological contractor is to urgently contact WYAAS with the relevant information to enable the matter to be resolved with the developer.

8.2 Any human remains that are discovered must initially be left *in-situ*, covered and protected. WYAAS will be notified at the earliest opportunity. If removal is necessary the remains must be excavated archaeologically in accordance with the *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England* published by English Heritage (2005), a valid Ministry of Justice licence, if appropriate, and any local environmental health regulations.

8.3 The terms of the Treasure Act, 1996 must be followed with regard to any finds, which might fall within its purview. Any such finds must be removed to a safe place and reported to the local coroner as required by the procedures laid down in the 'Code of Practice'. Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

9. Post-excavation Analysis and Reporting

9.1 On completion of the fieldwork, any samples shall be processed and all finds shall be cleaned, identified, analysed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines. Finds of 20th century date should be quantified and summarily described, but can then be discarded if appropriate. All finds of 19th century or earlier date should be retained and archived.

9.2 A fully indexed field archive shall be compiled consisting of all primary written documents, plans, sections, and fully labelled photographs/slides. Standards for archive compilation and transfer should conform to those outlined in *Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation* (Archaeological Archives Forum, 2007). Labelling should be in HB pencil on the back of the print and should include film and frame number; date recorded and photographer's name; name and address of site; national grid reference. Photographic prints should be mounted in appropriate archivally-stable sleeves. A quantified index to the field archive should form an appendix to the report. The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds in a publicly accessible archive (see Section 10 below). In the absence of this agreement the field archive (less finds) is to be deposited in the West Yorkshire Historic Environment Record.

9.3 Should the watching brief be undertaken by the same contractor as the excavation of Areas A and C (see WYAAS specification; August 2007), then this watching brief and any resulting further work may be reported concurrently (see WYAAS specification; August 2007, section 10 *et. seq.*). Should this be otherwise a fully illustrated report should be produced, which should include background

information on the need for the project, a description of the methodology employed, and a full description and interpretation of the results, placing them in a local and regional, and if appropriate, national context. It is not envisaged that the report is likely to be published, but it should be produced with sufficient care and attention to detail to be of academic use to future researchers.

9.4 Location plans should be produced at a scale which enables easy site identification and which depicts the full extent of the areas covered by the watching brief (a scale of 1:50,000 is not regarded as appropriate unless accompanied by a more detailed plan or plans). Plans should be at an appropriate scale showing: areas excavated and the identified (and, where possible, predicted) archaeological features/deposits. Trench and feature plans **must** include O.D. spot heights for all principal strata and any features. Section drawings **must** include O.D heights and be cross-referenced to an appropriate plan.

9.5 All artefacts and environmental material will be analysed by a qualified and experienced specialist. Artefact analysis is to include the production of a descriptive catalogue. Finds critical for dating and interpretation should be illustrated.

9.6 Details of the style and format of the report are to be determined by the archaeological contractor, but should include a full bibliography, a quantified index to the site archive, details of the current and intended location of the archive and, as an appendix, a copy of this specification.

10. Report Submission and Deposition with the HER

10.1 The archaeological contractor will supply a copy of the report to the client and another copy **directly** to the WYAAS within a period of **one month** following completion of fieldwork, unless a revised date has been agreed in writing with WYAAS. Completion of this project and a recommendation from WYAAS to discharge the planning condition are dependant on receipt by WYAAS of a satisfactory report which has been prepared in accordance with this specification. Any comments made by WYAAS in response to the submission of an unsatisfactory report will be taken into account and will result in the reissue of a suitably edited report to all parties, within a timescale which has been agreed with WYAAS.

10.2 The report will be supplied on the understanding that it will be added to the West Yorkshire Historic Environment Record. and will become publicly accessible once deposited with the WYAAS unless confidentiality is explicitly requested, in which case it will become publicly accessible six months after deposition.

10.3 The attached summary sheet should be completed and submitted to the WYAAS for inclusion in the summary of archaeological work in West Yorkshire published on WYAAS' website.

11. Archive Deposition

11.1 Before commencing any fieldwork, the archaeological contractor must determine the requirements for the deposition of the excavation and evaluation archives. Leeds Museums and Galleries do not currently accept archives resulting from archaeological fieldwork and discussions are continuing as to the most appropriate location for the excavation archive. In this instance WYAAS will take the archive but the requirements of the Leeds Museums and Galleries are to be adhered to (see Appendix 1).

11.2 The deposition of the archive must be accompanied by a storage fee, currently £113 per standard box, payable to West Yorkshire Joint Services. The contractor will be charged the fee current at the time of deposition.

11.3 It is the responsibility of the archaeological contractor to endeavour to obtain consent of the landowner, in writing, to the deposition of finds with a public body, initially WYAAS, but eventually it is hoped, with Leeds City Museums.

11.4 It is the responsibility of the archaeological contractor to meet Leeds Museums' requirements with regard to the preparation of fieldwork archives for deposition (see Appendix 1).

12. General Considerations

12.1 Authorised Alterations to Specification by Contractor

12.1.1 If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist's professional judgement that:

- i) a part or the whole of the site is not amenable to recording as detailed above, and/or
- ii) an alternative approach may be more appropriate or likely to produce more informative results,

then it is expected that the archaeologist will contact WYAAS as a matter of urgency in order that the matter can be resolved in liaison with the developer and the Local Planning Authority.

12.2 Unauthorised Alterations to Specification by Contractor

12.2.1 It is the archaeological contractor's responsibility to ensure that they have obtained WYAAS's consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in WYAAS being unable to recommend determination of the planning application to the Local Planning Authority based on the archaeological information available and are therefore made solely at the risk of the contractor.

12.3 Technical Queries

12.3.1 Similarly, any technical queries arising from the specification detailed above, should be addressed to WYAAS without delay.

12.4 Valid Period of Specification

12.4.1 This specification is valid for a period of one year from date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

Andrea Burgess December 2007

West Yorkshire Archaeology Advisory Service

Registry of Deeds

Newstead Road

Wakefield

WF1 2DE

Telephone: (01924) 30

Fax: (01924) 306810

E-mail: aburgess@wyjs.org.uk

Bibliography

- ASWYAS., 2003, *Site Recording Manual*, Archaeological Services WYAS
- Bayley, J., Dungworth, D., and Paynter, S., 2001, *Archaeometallurgy*, English Heritage
- BGS, 2000, *England and Wales Solid and Drift Geology*, British Geological Survey, Sheet 69 1:50,000
- Carreras, C., and Williams, D. F., 2003, 'Spanish olive-oil trade in late Roman Britain: Dressel 23 amphorae from Winchester', *J. Roman Pottery Studies*, 10, 64-68
- Cumberpatch, C. G., 2002, 'The pottery', in Roberts, I., *Pontefract Castle Archaeological Excavations 1982-86*, Yorkshire Archaeology 8, 169-226
- Dobney, K., Hall, A. R., Kenward, H. K. and Milles, A., 1992, 'A working classification of sample types for environmental archaeology' in *Circaea, the Journal of the Association for Environmental Archaeology*, 9, 24-26
- EH, 1991, *The Management of Archaeological Projects*, (2nd ed.), English Heritage
- Flood, R. J., 1976, *Clay tobacco pipes in Cambridgeshire*
- Finlayson, R., 2004a, *Land adjacent to Bondgate and Gay Lane, Otley, West Yorkshire. Report on an archaeological assessment*, York Archaeological Trust, Report 2004/5
- Finlayson, R., 2004b, *Bondgate and Gay Lane, Otley, West Yorkshire. A Report on an archaeological evaluation*, York Archaeological Trust, Report 2004/52
- French, D. H., 1971, *An Experiment in Water Sieving*, Anatolian Studies, 21, 59-64
- Gomersall, H. M., 2000, 'Departed Glory: the archaeology of the Leeds tanning industry 1780-1914; in *Industrial Archaeology Review*, vol. 22, November 2000, no. 2, 133-144
- Gomersall, H., 2005, *Research Agenda: Industrial Archaeology*, West Yorkshire Archaeology Advisory Service, Issue 1, June 2005
- Goodall, I., 1996, 'Objects of iron, in Foreman, M., *Further Excavations at the Dominican Priory, Beverley, 1986-1989*, Sheffield Excavation Reports 4, 150-154
- Hall, A., and Kenward, H., 2003, 'Can we identify biological indicator groups for craft, industry and other activities?' in Murphy, P. and Wiltshire, P. E. J., (eds), *The environmental archaeology of industry; Symposia of the Association for Environmental Archaeology 20.*, Oxford, 114-30.
- Holbrey, R., 2000, 'Danefield Wood, Otley, West Yorkshire. Archaeological Survey' Archaeological Services WYAS, unpubl. (ASWYAS Report No. 828)
- IFA, 2008a, *Code of Conduct*, Institute of Field Archaeologists'
- IFA, 2008b, *Standard and Guidance for an Archaeological Watching Brief*, Institute of Field Archaeologists
- IFA, 2008c, *Standards and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*, Institute of Field Archaeologists
- IFA, 2008d, *Standards and Guidance for Archaeological Excavation*, Institute of Field Archaeologists
- Jarzembowski, E. & B., 1985, 'Internal bowl marks in pipes from London', in Davey, P., (ed.), *The archaeology of the clay tobacco pipe*, IX, British Archaeological Reports, British Series 146, ii, 389-399

- Jung, P., 2003, 'Pollocks of Manchester: three generations of clay tobacco pipemakers', in Higgins, D. (ed.), *The archaeology of the clay tobacco pipe, XVII*, British Archaeological Reports, British Series 352, 389
- Kenward, H., 2005, 'Insect and other invertebrate remains', in Iversen, M., Robinson, D., Hjerminde, J., and Christensen, C. (eds), *Viborg Sønderlø 1018-1030. Arkæologi og naturvidenskab i et værkstedsområde fra vikingetid*. (Jysk Arkæologisk Selskabs Skrifter), Højbjerg: Viborg Stiftsmuseum/Jysk Arkæologisk Selskab, 215-237
- Kenward, H. K., Hall, A. R., and Jones, A. K. G., 1980, 'A tested set of techniques for the extraction of plant and animal macrofossils from waterlogged archaeological deposits.' *Science and Archaeology*, 22, 3-15
- Kloet, G. A. and Hincks, W. D., 1964-77, *A checklist of British insects*
- Mainman, A., 2004, 'Pottery assessment' in Finlayson, R., 2004, *Bondgate and Gay Lane, Otley, West Yorkshire; a report on an archaeological evaluation*, York Archaeological Trust, Report 2004/52
- Monaghan, J., 1997, 'Roman Pottery from York', in *The Archaeology of York*, Vol 16, The Pottery fascicule, 18/8
- Margary, I.D., 1973, *Roman Roads in Britain*
- Office of National Statistics, 2008, 'Population information for Otley and Wharfedale Ward', <http://www.neighbourhood.statistics.gov.uk>, accessed 22/08/2008
- Peacock, D. P. S., and Williams, D. F., 1986, *Amphorae and the Roman Economy*
- Perrin, J. R., 1999, 'Roman Pottery from Excavations at and near to the Roman Small Town of Durobrivae,' Water Newton, Cambridgeshire, 1956-5, *Journal of Roman Pottery Studies Vol. 8*
- Ponsich, M., 1974, *Implantation Rurale Antique sur le Bas-Guadalquivir*, Vol. I, Madrid
- Ponsich, M., 1979, *Implantation Rurale Antique sur le Bas-Guadalquivir*, Vol. II, Paris
- Ponsich, M., 1991, *Implantation Rurale Antique sur le Bas-Guadalquivir*, Vol. III, Paris
- Remesal, J., 1986, *La Annona militaris y la exportacion de aceite bitico a Germania*, Madrid.
- Rose, M., 2007a, *Walkergate, Otley; Archaeological Watching Brief*, Archaeological Services WYAS, Report No. 1601
- Rose, M., 2007b, *Station Road, Otley; Archaeological Watching Brief*, Archaeological Services WYAS, Report No. 1662
- Schweingruber, F. H., 1990, *Anatomy of European Woods*, Berne and Stuttgart
- Shaw, M., 1987, *Early post-mediaeval tanning in Northampton, England*, Special Travel Guide Archaeology, Vol. 40, No. 2, 43-47
- Soil Survey of England and Wales, 1983, *Soils of Northern England (Sheet 1) Scale 1:250,000*
- Stace, C., 1997, *New flora of the British Isles*, 2nd edition
- Taylor, S., and Gault, W. R., 1979, 'Late nineteenth century clay tobacco pipes from Warwick', in Davey, P., (ed.), *The archaeology of the clay tobacco pipe*, British Archaeological Reports, British Series 63, Oxford, 279-293

- Williams, D. F., and Peacock, D. P. S., 1983, 'The importation of olive-oil into Roman Britain', in Blazquez, J. M. and Remesal, J., (eds.), *Produccion Y Comercio del Aceite en la Antiquedad. II Congresso*, Madrid, 263-280
- Wood, P., 1999, *A Guide to the landscape of Otley seventh to seventeenth century*
- WYAAS, 2007, *Otley Conservation Area: Historical development and changing character of the conservation area*
- Zohary, D. and Hopf, M., 2000, *Domestication of Plants in the Old World*, 3rd Edition