P.N. 1347

Archaeological Excavation at St. Mary's Gate/ Warser Gate, Nottingham, Post-Excavation Assessment 2005-2006

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Supervisor…….. date……
Project Manager……..… date……

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Planning Application 04/02406/PFUL3

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Archaeological Excavations at St Mary's Gate/Warser Gate, Nottingham 2005-2006

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Cover photo: Excavation works facing east towards St Mary's Gate

Archaeological Excavations at St Mary's Gate/Warser Gate, Nottingham 2005-2006

SUMMARY

In October 2005 Birmingham Archaeology were commissioned by John Samuels Archaeological Consultants on behalf of Natrass Giles, to excavate two evaluation trenches on land occupying an area to the west of St. Mary's Gate and to the south of Warser Gate, central Nottingham (NGR SK 57593980). The site lies within the northern extent of the former late Saxon Borough, with the potential for medieval deposits including possible caves. Since buildings (which were due to be demolished) still remained on the site, an area of hard standing, in the northeastern corner of the development area was evaluated. The evaluation trenches identified a well, backfilled in the 17th century which contained residual medieval ceramics. This feature survived within an island of natural sandstone, surrounded by post-medieval building foundations and cellars, which had largely truncated evidence for Saxon or medieval occupation. Given the potential for the survival of archaeological deposits below the building which was due to be demolished (and not available for evaluation), the area was subject to a watching brief after demolition. As the watching brief progressed extensive deposits dating to the medieval period were uncovered. This resulted in a revised strategy for excavation and salvage recording from November 2005 to May 2006.

The excavation revealed a network of caves cut into the natural sandstone across most of the site. Some of the caves were recorded at levels of between 3.5 and 4m below the modern ground level. As the only backfill comprised post-medieval building rubble a date for the caves was unclear, however one cave in the southwestern corner of the site contained medieval pottery, animal bone and tile.

The medieval features were mostly located within the western and central-southern parts of the site. These comprised of a complex of inter-cutting pits with several deep, vertically sided, sub-rectangular and sub-circular pits cut into the natural bedrock. Of particular note were two grain-drying ovens and the remains of a rectangular (possibly timber) structure within the southwestern quarter of the site.

Along the eastern and northern boundaries of the site most of the medieval deposits at street level had been truncated by post-medieval buildings, related to the former street frontages. Deep building foundations and attendant cellaring were observed to a depth in excess of 3m below ground level. The footings and cellars of post-medieval buildings were recorded in plan, with the remaining features such as wells, excavated to a safe depth.

Archaeological Excavations at St Mary's Gate/Warser Gate, Nottingham 2005-2006: Post Excavation Assessment.

1 INTRODUCTION

1.1 Background to the project

Birmingham Archaeology was commissioned by John Samuels Archaeological Consultants on behalf of Natrass Giles to undertake a programme of trial trenching, watching brief and excavation in advance of the construction of an office block, restaurant and underground car park development at NGR SK 57593980 (hereafter referred to as the site), Planning Application 04/02406/PFUL3.

This report outlines the results of a field evaluation between 10th and 14th of October and a subsequent excavation from the 7th to the 25th of November and the 5th to the 9th of December 2005. A one day watching brief was also conducted on the 31st of May 2006. This document is not a publication report, but provides an assessment of the archive (finds and records) and recommendations for final publication of the results as outlined by the Institute of Field Archaeologists Standards and Guidance for Archaeological Evaluations (IFA 2001a) and English Heritage (Gill 1991).

The evaluation and excavation conformed to a specification prepared by John Samuels Archaeological Consultants (JSAC 2005), which was approved by the Local Planning Authority prior to implementation in accordance with guidelines laid down in Planning Policy Guidance Note 16 (DoE 1990).

1.2 Location

The site is located in the centre of Nottingham (Figs. 1 to 3), bordered by St Mary's Gate to the east, St Mary's Place to the south and by Warser Gate to the north. Prior to excavation buildings were present across the southern and western sides of the site, while the northern quarter of the site was hard standing, used as a car park. The site lies on Nottingham Castle Sandstone and is located at 45.5m AOD, c.2.5km to the north of the River Trent.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Most of the sites excavated in Nottingham remain unpublished and are therefore not publicly accessible. This issue of publication in the City of Nottingham currently remains a serious problem, with little more than summaries available for the many of the sites excavated to date. The following background has referenced the work of both C. S. B Young (two papers, one in 1982 and one in 1986) and G. A. B Young (City Archaeologist) who provided yearly summaries for the Thoroton Transactions. As part of this assessment report the following section is not a full history of historic Nottingham, but is designed to provide relevant background information. Full intra-site analysis should be considered as part of a full publication report.

Fig.1

2.1 Background

The pre-conquest defences (Fig. 2)

Nottingham has been occupied since at least the Iron Age (Young 1987), with late Iron Age features recorded along the top of the cliff at Halifax Place (6) and Fisher Gate (3, Young 1982). Evidence for Roman occupation is however, notably absent. Early Saxon settlement seems to have been focused in the vicinity of Carter Gate, with early defences (Period 1) presumably enclosing a pre-existing nucleus (Young 1986). Evidence for the early, Period 1 defences was excavated at Fisher Gate (3) in 1971, Boot's Garage in 1972 (4), however, the nature and date of this settlement still remains uncertain. Archaeological evidence would suggest this to be between 650 and 850, but a date marginally earlier or later cannot be ruled out.

Settlement activity post dating the Period 1 defences, but earlier than those of the Pre-conquest defences (Period 2) has been excavated at Drury Hill (1) and Fisher Gate (3), and again appears to have been focused along the top of the cliff. This is characterized by small boundary or enclosure ditches and aceramic pits. The structures of this period do not appear to relate to the later street plan (Young 1982 and 1986). At Drury Hill (1), the transition was illustrated by the presence of a sunken floored building, possibly of middle Saxon date (c.650-850) which had been cut by the Period 2 pre-conquest defences (Young 1982).

The line of the pre-conquest defences (Period 2) of Nottingham as first postulated by Stevenson (1918), have been confirmed by systematic excavations and watching briefs undertaken between 1957 and the present. These defences define the extent of the late Saxon Borough and appear to date to around 850. The western line of these defences were well documented as part of excavations at Bridlesmith Gate (Wildgoose 1961 and Dawe 1967) and Drury Hill (1, Young 1982 and 1986), while a watching brief at Deans Street in 1999 (8, Young 2000) failed to locate the defences in this area. The northern extent of the defences were excavated to the northeast of St Mary's Gate, at Woolpack Lane in 1970 (2) and more recently as part of a watching brief and excavation at Goosegate in 2004 (18, Richards 2005 and Young 2005). The Period 2 defences (Fig. 2) date to the second half of the 9th century and comprised of a ditch with a timber rampart, the latter of which was packed with the upcast from the ditch (Young 1986). The Period 2 defences were recut for the Period 3 defences comprising an enlarged bank created using the upcast. These defences appear to be associated with properties excavated at Boots Garage (4), which would suggest a construction date for Period 3 close to the chronicled repairs of 918 (Whitelock *et al* 1963).

The medieval period

After the conquest the Saxon defences (Period 3) were filled in and properties built over the top. The Domesday book of 1086 records a total of 23 houses within the borough ditch. The Domesday Book also records a total of 48 merchants houses within the old Saxon and the new Norman boroughs. By the time new defences were constructed in the first half of the 12th century (Period 4) the Period 3 defences had completely silted up. The Period 4 defences were designed to completely enclose both boroughs and comprised a ditch and bank with a wide berm. The area of the Saxon Borough was subject to further changes in property divisions, particularly during the 13th century. At Woolpack Lane (18) a 14th century a ditch more than 2 metres wide, was found to be aligned at right angles to Goose Gate. This was cut into the top of the pre-conquest ditch (Period 3) and was interpreted as a property boundary (Richards 2005 and Young 2005).

Excavation at the northern end of Western Street, to the south of the early 12th century defences uncovered large quantities of medieval pottery waste, suggesting the presence of pottery production sites nearby (20, Walker 2006 and Young 2006). It would appear that

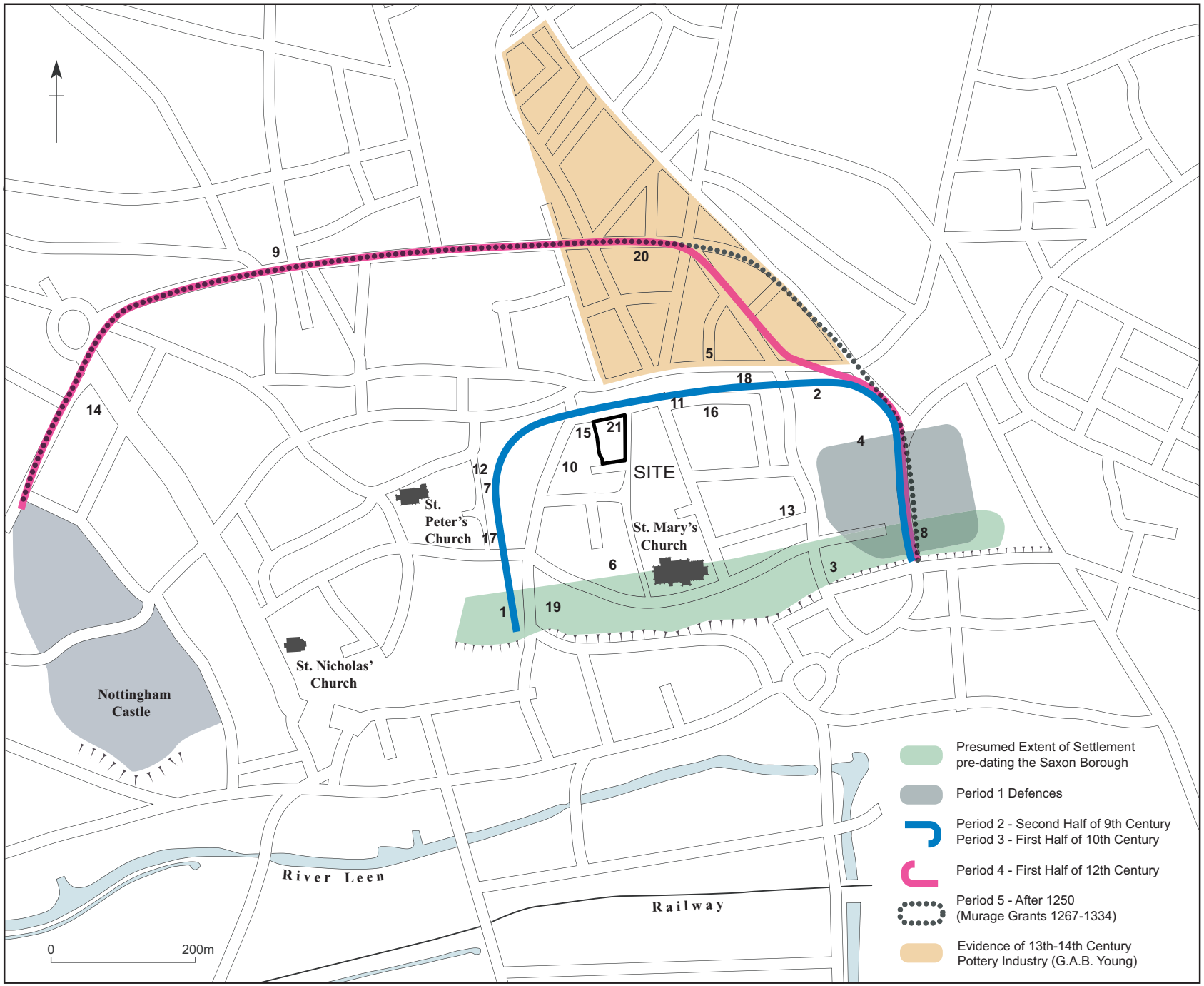

SITE
St. Peter's Church
St. Mary's Church
St. Nicholas' Church
Nottingham Castle
River Leen
Railway
0
200m
Presumed Extent of Settlement pre-dating the Saxon Borough
Period 1 Defences
Period 2 - Second Half of 9th Century
Period 3 - First Half of 10th Century
Period 4 - First Half of 12th Century
Period 5 - After 1250
(Murage Grants 1267-1334)
Evidence of 13th-14th Century
Pottery Industry (G.A.B. Young)

Fig.2

during the 13th and 14th centuries much of the north eastern area of the medieval town, both inside and outside the wall, was given over to the manufacture of pottery. G. B. A. Young suggests that this can generally be defined within "an area which stretches from Goose Gate to the south, to St Ann's Street to the north, George Street to the west and Huntingdon Street to the east" (Young 2006, Fig. 2).

Cave systems within the city of Nottingham are well documented (McCormick 2001) and to-date over 430 manmade caves have been recorded in Nottingham. While the cave networks developed from the medieval period onwards, they are notoriously difficult to date as, many appear to have been in use over an extended period. More than 50 are thought to date to the medieval period. To the west of the site two stone-cut cellars or undercrofts were recorded during a watching brief at 21-23 Bridlesmith Gate (12, Gnanaratnam 2000, Young 2001). These were undated but were thought to be medieval in date. Two medieval cave systems were also exposed during a watching brief and excavation to the east of the site at Woolpack Lane (16). Both cave systems demonstrated the diagnostic features of malt kiln complexes. One was badly truncated, but the other was almost complete with an elliptical kiln, well, cistern, large pillar-cave and two subsidiary caves largely intact. This cave also had steps adjacent to the kiln leading to a small cave on a lower level, which gave access to a stoke hole.

Recent excavations immediately to the west of the site, on the junction of Fletcher Gate and Warser Gate (15, Young 2002) provided some evidence for buildings provisionally dated to the 10th century. Also two cave systems were exposed both of which appear to have been malt kiln complexes (which in Nottingham comprise primarily of a kiln, well, cistern and a rectangular germination cave (McCormick 2001 and Young 2003). Both systems at the Fletcher Gate/Warser Gate site featured steps leading down to a large chamber with stokehole, kiln, well and storage 'bins' (Johnson 2003 and Young 2003). A number of straight sided and conical shaped cess pits were dated to the 13th and 14th centuries, the latter being typical of medieval cess pits in Nottingham.

2.2 The site

The site is located immediately to the south of the pre-conquest defences, and fronts onto the south side of Wasser Gate, part of the intra-mural road network that formed a continuous circuit around the interior of the Period 2 defences. This circuit may have had a defence-related origin as excavation has shown that it predates properties fronting onto it (4, Young 1986).

In October 2005 two trial trenches were excavated within the area of hard standing in the northern quarter of the site. Within the trenches was a well which contained residual medieval ceramics and 17th century deposits. The remainder of features comprised post-medieval building foundations and cellars. These had largely truncated any earlier deposits within the street frontages fronting onto Warser Gate and St Mary's Gate. The remainder of the site was not accessible for evaluation and was subject to a watching brief during groundworks. It was thought possible that archaeological deposits may survive between building plots, particularly away from the street frontages (JSAC 2005).

A watching brief commenced during the removal of overburden, and excavations for a basement car park on the 7th of November 2005. It quickly became apparent that extensive archaeological features of medieval date were cut into the natural sandstone, particularly away from the Warser Gate and St Mary's Gate street frontages, along the western and southern extents of the site.

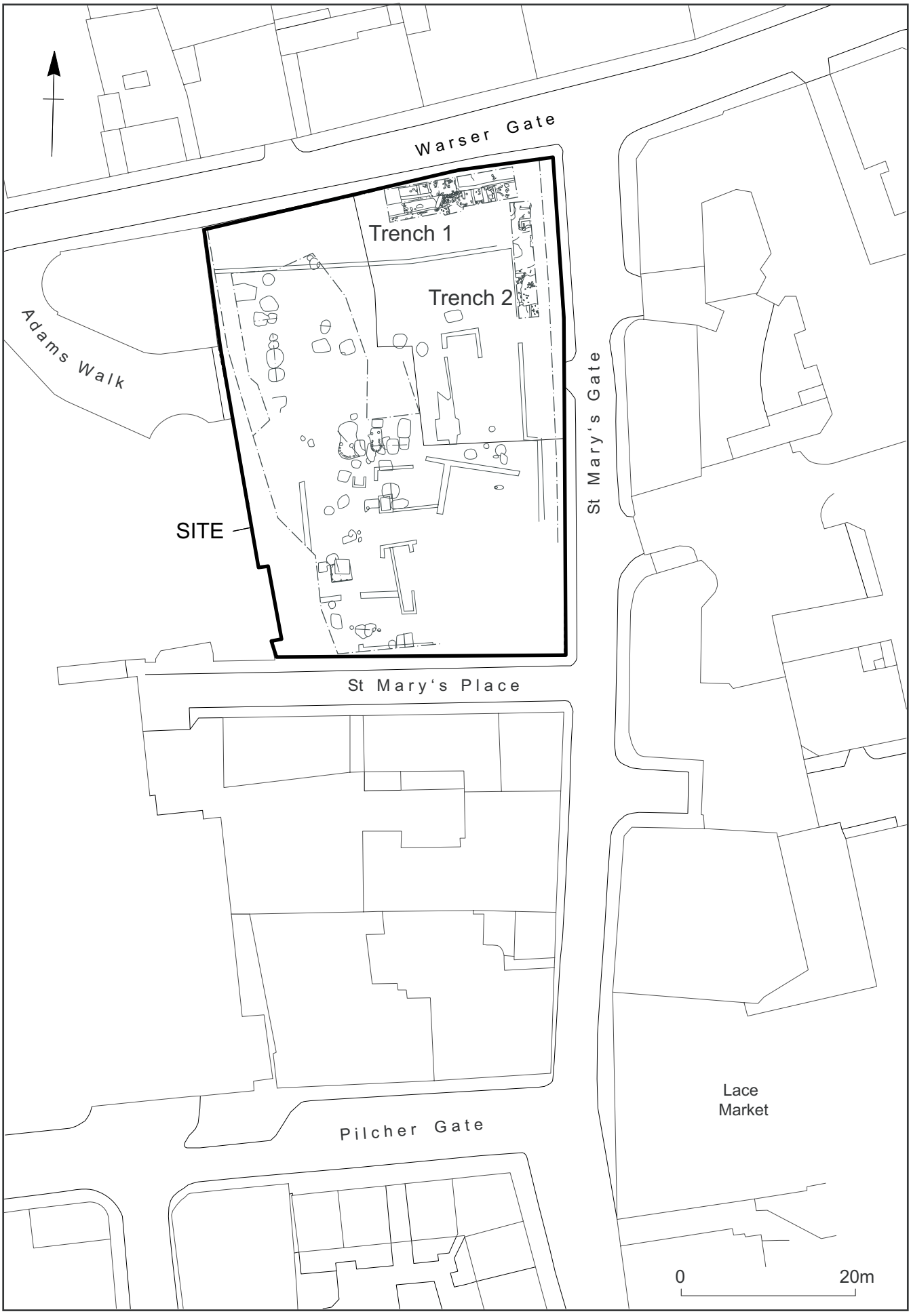

Warser Gate
Trench 1
Trench 2
Adams Walk
SITE
St Mary's Gate
St Mary's Place
Pilcher Gate
Lace
Market
0
20m

Fig. 3

2.3 Objectives

The general aim of the excavation and watching brief was to define the survival, nature, extent and potential significance of any archaeological remains and to ensure appropriate archaeological sampling and recording was undertaken to ensure 'preservation by record' in advance of the development.

More specific aims were to:

- Assess the potential for the survival of archaeological remains relating to the Late Anglo-Saxon and later medieval periods.
- To determine whether remains had survived in the undeveloped back spaces between buildings, below later basements and away from the street frontages.
- To examine the presence of manmade sandstone caves

2.4 Methodology

Evaluation

During the evaluation 2 trenches were excavated within the northeast corner of the site totalling 82.5m2. Trench 1, measuring 15m by 4m and Trench 2, measuring 15m by 2m, were situated along the northern and eastern edges of the site, parallel to Warser Gate and St. Mary's Gate respectively. The trenches were positioned in order to identify archaeological deposits relating to buildings and activity associated with the former street frontages. The modern overburden was removed using a JCB mechanical excavator with a toothless ditching bucket. Overburden was removed under archaeological supervision down to the top of the uppermost archaeological horizon or the natural sand. Subsequent cleaning and excavation was carried out by hand.

Watching brief and excavation

As part of the watching brief the modern overburden (1000) was removed from the site, an area of approximately 52m by 35m. This was removed using a tracked 360 with a toothless ditching bucket, under archaeological supervision. Deep building foundations and cellaring within the northern and eastern extents of the site had removed any potentially surviving archaeology. Across the western, central and southern areas of the site the upper surface of archaeological deposits was revealed at depths of between 0.7 and 1.1m below the modern ground surface. The machined horizon was cleaned by hand to further define archaeological features. Excavation by hand comprised at least 50% of all discrete archaeological features and in some cases 100% of features.

All stratigraphic sequences were recorded, even where no archaeology was present. Features were planned at a scale of 1:20 and a digital site plan made using Fastmap and AutoCAD software. Sections were drawn through all cut features and vertical stratigraphy at a scale of 1:20. A comprehensive written record was maintained using a continuous numbered context system on pro-forma context cards, commencing with the number 9000 for the evaluation works and 1000 for the excavation and watching brief. Written records and scale plans were supplemented by photographs using monochrome, digital and colour slide films.

Twenty litre soil samples were taken from datable archaeological features for the recovery of charred plant remains. The environmental sampling policy followed the guidelines contained in the Birmingham Archaeology Guide to On-Site Environmental Sampling (Birmingham

Archaeology 2005). Finds were cleaned, marked and remedial conservation work was undertaken as necessary. Treatment of all finds conformed to IFA standards and guidance (2001b).

The site archive includes all artefactual and ecofactual remains recovered from the site. The site archive will be prepared according to guidelines set down in Appendix 3 of the Management of Archaeological Projects (Gill 1991). By arrangement the finds and the paper archive will be deposited with John Samuels Archaeological Consultants (CgMs).

3 RESULTS

3.1 Introduction

Many of the features are shown on plan as very straight sided features with sharp corners. This is unusual for archaeological sites as most sites are cut into a subsoil which will both weather and subside (hence most features are almost never vertically sided, and are usually more rounded). However, most of the features were cut into the natural bedrock and therefore, provided they have not been truncated by later activity, they have retained their original shape, and the angular features shown on plan are representative of the features encountered on the site.

For the purposes of this report, and prior to spot dating of the pottery, the features have been divided into three main periods of activity:

The caves
The medieval period
The post-medieval structures

Caves were cut into the natural sandstone and were generally present within most parts of the site. Caves were assigned structure numbers and most appear to have been sealed by modern overburden (1000). The caves were often cut to different depths and many were only visible at depths of between 3.5 and 4m below the modern ground level. A date for many of the caves is difficult to determine as many were filled with Post-medieval building rubble. Most of the medieval features were located within the western and central-southern parts of the site. These comprised of a complex of inter-cutting pits with several deep, vertically sided, sub-rectangular and sub-circular pits cut into the natural bedrock. Due to health and safety concerns access to the caves was restricted and consequently for some caves only a photographic record was made.

Of particular note were two grain-drying ovens (1148 and 1149) within the central part of the site, and the remains of a rectangular structure (1329) were clearly visible towards the southwestern area of the site, with the settings cut into the sandstone bedrock, perhaps for a timber superstructure.

3.2 Evaluation

Trench 1 (Fig. 4)

A number of brick structures were excavated within Trench 1, parallel with and at right angles to, Warser Gate. The structures were overlain by layers of rubble and redeposited material.

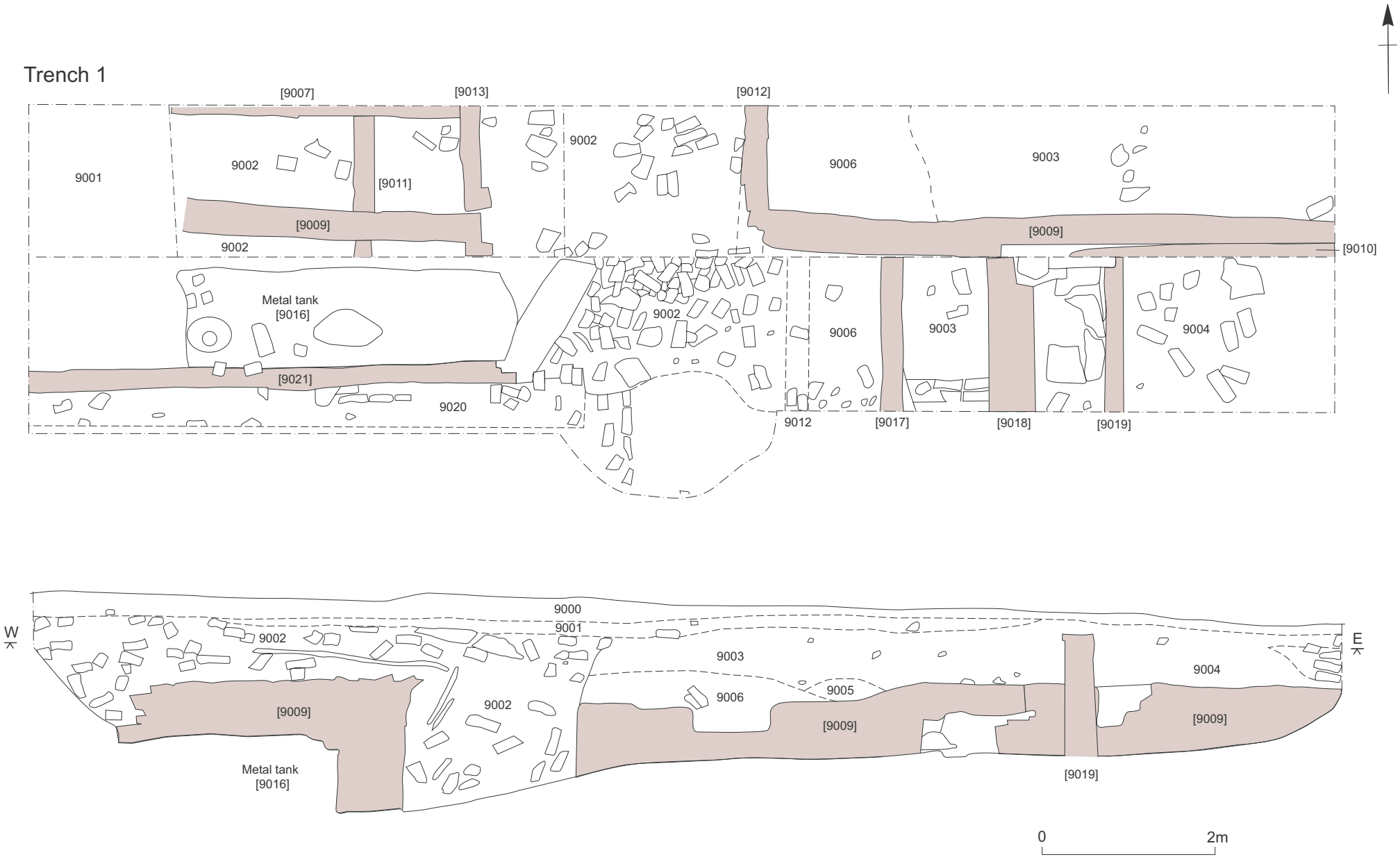

Trench 1
[9007]
[9013]
[9012]
9001
9002
[9011]
9002
9006
9003
[9009]
[9009]
9002
[9010]
Metal tank
[9016]
9002
9006
9003
9004
[9021]
9020
9012
[9017]
[9018]
[9019]
W
E
9000
9001
9002
9003
9004
9005
9006
9002
[9009]
[9009]
[9009]
Metal tank
[9016]
[9019]
0
2m

Fig. 4

At the eastern end of Trench 1 a large pit (9014) cut natural sandstone. This was over 3m in depth and was filled with brick and rubble (9004). To the west of this was a north-south aligned brick wall (9019) with foundations at a depth of at least 2.50m below the modern ground level. The wall (9019) and three further north-south aligned walls (9012, 9017 and 9018) buted against an east-west wall (9009). Areas between the brick walls were filled by layers of rubble (9005, 9006) which was in turn sealed by redeposited sand (9003). A north-south wall (9012) appears to be the part of the same structure as wall 9009.

In the western area of the trench further walls (9011 and 9013) also appear to for part of a contemporary structure with wall 9009. Further east west aligned brick walls (9007 and 9021) were recorded parallel with wall 9009. Between walls 9009 and 9021 was a large metal storage tank (9016). The tank was aligned east-west and measured approximately 4.0m in length by 1.10m wide. Due to the risk of contamination further excavation was not undertaken in this area. In the western half of the trench the walls were sealed by a substantial deposit of brick rubble (9002) which cut layer 9003 sealing the brick walls in the eastern half of the trench. These deposits were in turn sealed by a layer of brick hardcore (9001) extending across the trench, underlying the modern tarmac surface (9000).

Trench 2 (Fig. 5)

In Trench 2, natural sand (9030) was exposed at 45.42m AOD in the central area of the trench. The eastern extent of a sub-circular feature (9022) was recorded cutting this natural sand (Fig. 4, S1). The cut was very steep sided, measuring 1.70m north-south and in excess of 0.90m east-west. Probably a well, the feature (9022) was excavated to a depth of 1.3m (44.02m AOD) below the trench surface. The lower fills (9024 and 9025) contained a copper alloy coin or jetton and a second copper alloy object and fragments of tile and animal bone. Notably 9024 contained post medieval pottery, with some residual medieval sherds (Ratkai below). The uppermost fill of the well (9023) comprised brick, tile and post-medieval demolition rubble. This (9023) was in turn sealed by a levelling layer of redeposited sand (9040), and overlain by a brick rubble demolition layer (9039), between 0.30 and 0.45m deep, underlying the tarmac car-park surface (9026).

In the central area of the trench was a brick wall (9032) on a broadly north-south alignment which cut the natural sand (9030). At the northern end of the trench, an east-west aligned brick-built cellar (9029) with brick steps (9042) descending to the east below the surface of the trench. The steps were overlain by a later phase of wall (9035). At the northern end of the trench an east-west aligned red brick wall was exposed (9038), possibly an internal division within cellar 9029. The cellar fill (9028) produced post medieval pottery, glass, with crushed brick and tile in the upper fills (9027). A second cellar (9037) at the southern end of Trench 2, truncated any earlier archaeological deposits. The fills of the cellar (9027, 9033, 9034 contained crushed brick and tile.

4 THE EXCAVATION (Fig. 6)

4.1 The caves

Towards the southwestern corner of the site a large rectangular pit/shaft (1335) and associated east-northeast facing cave entrance were observed (1386) at a level of approximately 2.2m (below the tarmac ground level). This entrance (1386) measured approximately 3m by 2m and was in excess of 2m deep, however unlike other caves it had not been back-filled with post-medieval building rubble. The score marks of the tools used to dig

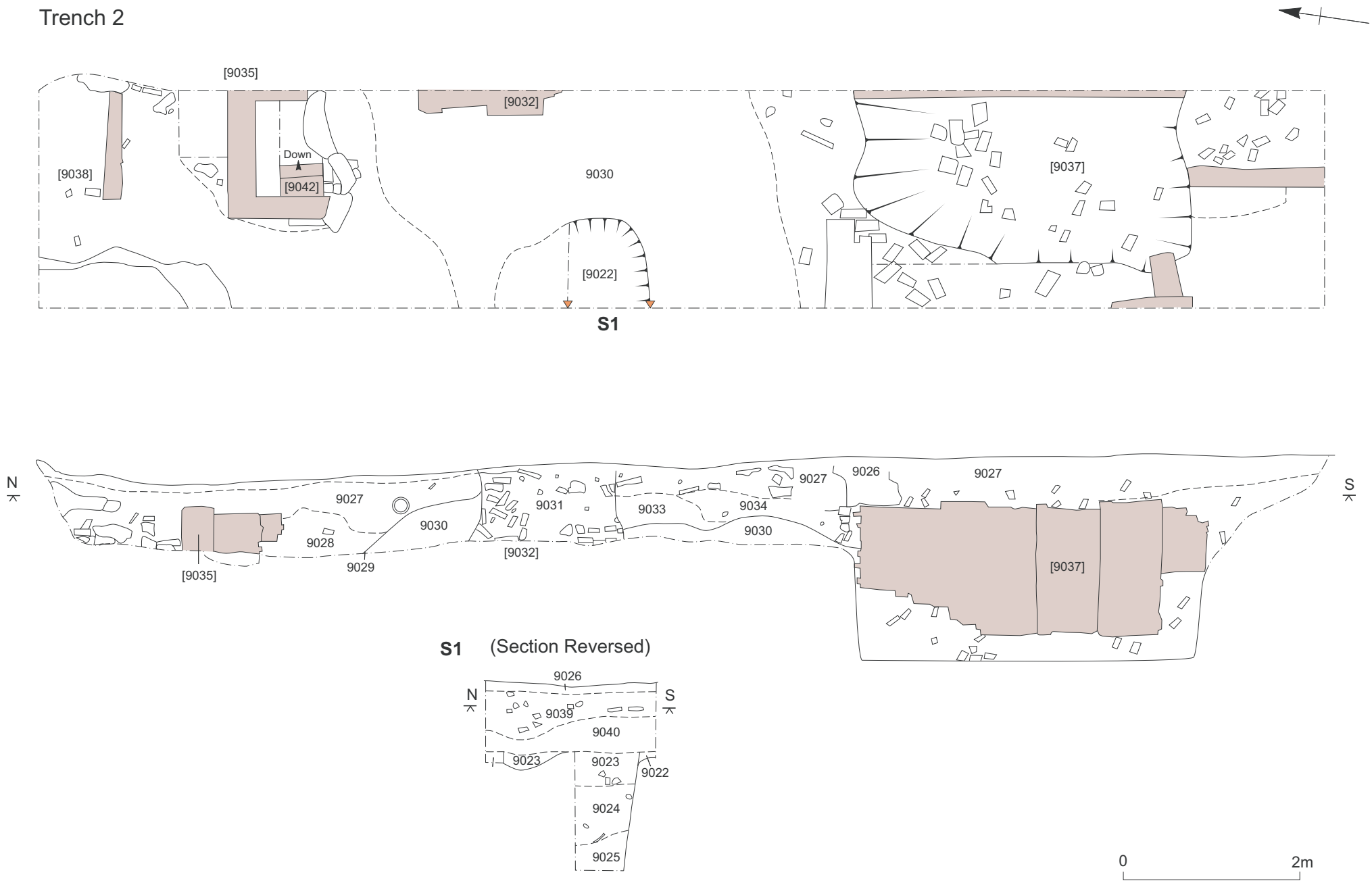

Trench 2
[9035]
[9038]
Down
[9042]
[9032]
9030
[9022]
[9037]
S1
N
S
9027
9028
9029
9030
9031
9033
9034
9026
[9035]
[9032]
[9037]
S1 (Section Reversed)
9026
9039
9040
9023
9022
9024
9025
0
2m

Fig. 5

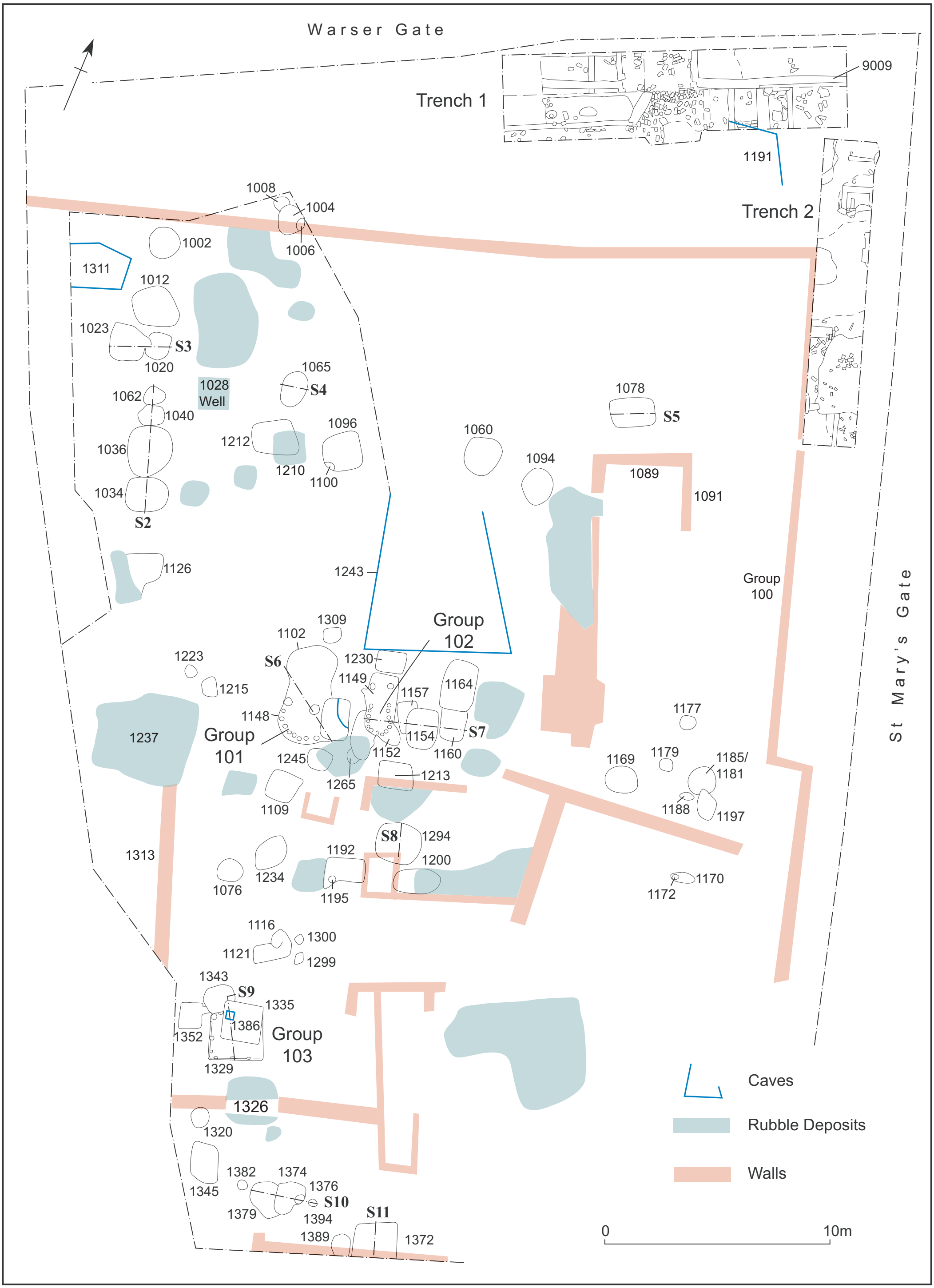

Warser Gate
Trench 1
9009
1191
Trench 2
1008
1004
1006
1002
1311
1012
1023
S3
1020
1062
1040
1036
1034
S2
1028
Well
1065
S4
1212
1096
1210
1100
1126
1060
1094
1078
S5
1089
1091
1243
Group
100
St Mary's Gate
Group
102
1309
1102
S6
1223
1215
1230
1149
1157
1164
1148
1154
S7
1237
Group
101
1245
1152
1160
1265
1213
1109
1177
1169
1179
1185/
1181
1188
1197
S8
1294
1313
1192
1200
1234
1076
1195
1170
1172
1116
1300
1121
1299
1343
S9
1335
1386
1352
Group
103
1329
1326
1320
1382
1374
1376
1345
S10
1379
1394
S11
1389
1372
Caves
Rubble Deposits
Walls
0
10m

Fig. 6

out the cave could be seen cut into the sandstone. Due to the unsafe conditions the infill of the cave (1385) was excavated by machine. A 20 litre sample was taken of the greyish-brown sandy-silt fill (1385), which contained pieces of medieval pottery, also animal bones and tile.

In the northeastern corner of the site a cave (1191) had been cut approximately 3-4m into the natural sandstone. The entrance, which faced southwest, measured approximately 3mx3m, and was in excess of 2m deep. It provided evidence of horizontal timbers in the form of 4 square post cuts, each measuring 0.2x0.2m. On the western edge of the site a second cave entrance (1311) measured 2.8 by 3m and in excess of 2m in depth. This was exposed at a depth of approximately 1-1.50m below the level of the tarmac ground surface and clearly extended to the west. Towards the central area of excavation the entrance to a third cave (1243) faced northeast and measured 4x3.8m in plan and in excess of 3m in depth. This appears to be related to a number of interconnected chambers. This entrance was probably associated with a shaft (1144) situated approximately 4m to the southwest of cave 1243. Each of the caves contained post-medieval deposits, providing a *terminus anti quem* rather than a date for when the caves were cut.

4.2 The medieval features (Fig. 6)

Pits and postholes within the northwestern quarter of site

Most of the medieval features within the northwestern corner of the excavation were pits and postholes. These comprised a series of both isolated and intercutting sub-circular and sub-rectangular pits, which survived in groups across this part of the site; 1002, 1004, 1006, 1012, 1020, 1023, 1034, 1036, 1040, 1062, 1065, 1096, 1100, 1126, and 1212 (S2 – Fig. 7). These pits were generally between 1 and 2m in diameter, with near vertical sides, and slightly rounded or flat bases. The depths of the pits ranged between 0.2m and 1.35m, and in some instances were re-cut. Some of the pits appeared to have been used for the disposal of rubbish and contained substantial quantities of medieval pottery. A notable example was pit 1012, where the fills (1013, 1015 and 1026) contained large quantities of green glazed jars and jugs. Another sub-circular pit (1065, S4 - Fig. 7) with vertical sides and a flat base, contained several sherds of pottery and a substantial assemblage of animal bone.

Pits within the northeaster quarter of site

Most of the northern and northeastern parts of the site were subject to considerable truncation from post medieval building activity. However, three pits (1060, 1078, and 1094) did survive within a small island of natural sandstone. Pit 1078 (S5 – Fig. 7) was a large, vertically-sided, rectangular pit, measuring approximately 2m by 1.45m and 2.2m deep, with a steep sided (1080). A smaller pit (1087, not on plan, S5 – Fig. 7) had cut the eastern edge of pit 1084. Two other large sub-circular pits (1060 and 1094) measured approximately 2m in diameter and 1.3m deep. These were cut with steep sides and flat bases, and contained frequent fragments of green glazed pottery and animal bone. Pit 1094, which had been partially truncated on its eastern side by post-medieval building foundations, contained a considerable quantity of tile.

The ovens (Groups 101 and 102, Plate 1)

To the southwest of the cave entrance (1243) was a sub-circular corn drying oven (1148 - Group 101, Plate 2, S6 – Fig 8). This was accessed via a series of four steps (1102) cut into the sandstone bedrock (1001). Each step measured 0.25m in length, and led down from north to south into the main body of the kiln, which measured 1.65m in diameter, 0.9m in depth, and had almost vertical sides and a flat base. Eight small stake/postholes encircled the southern and western edges. There were also two larger postholes (1135 and 1225), one on

Plate 1: Group 101 (left) and Group 102 (right) facing north

Plate 2: Group 101 facing northeast

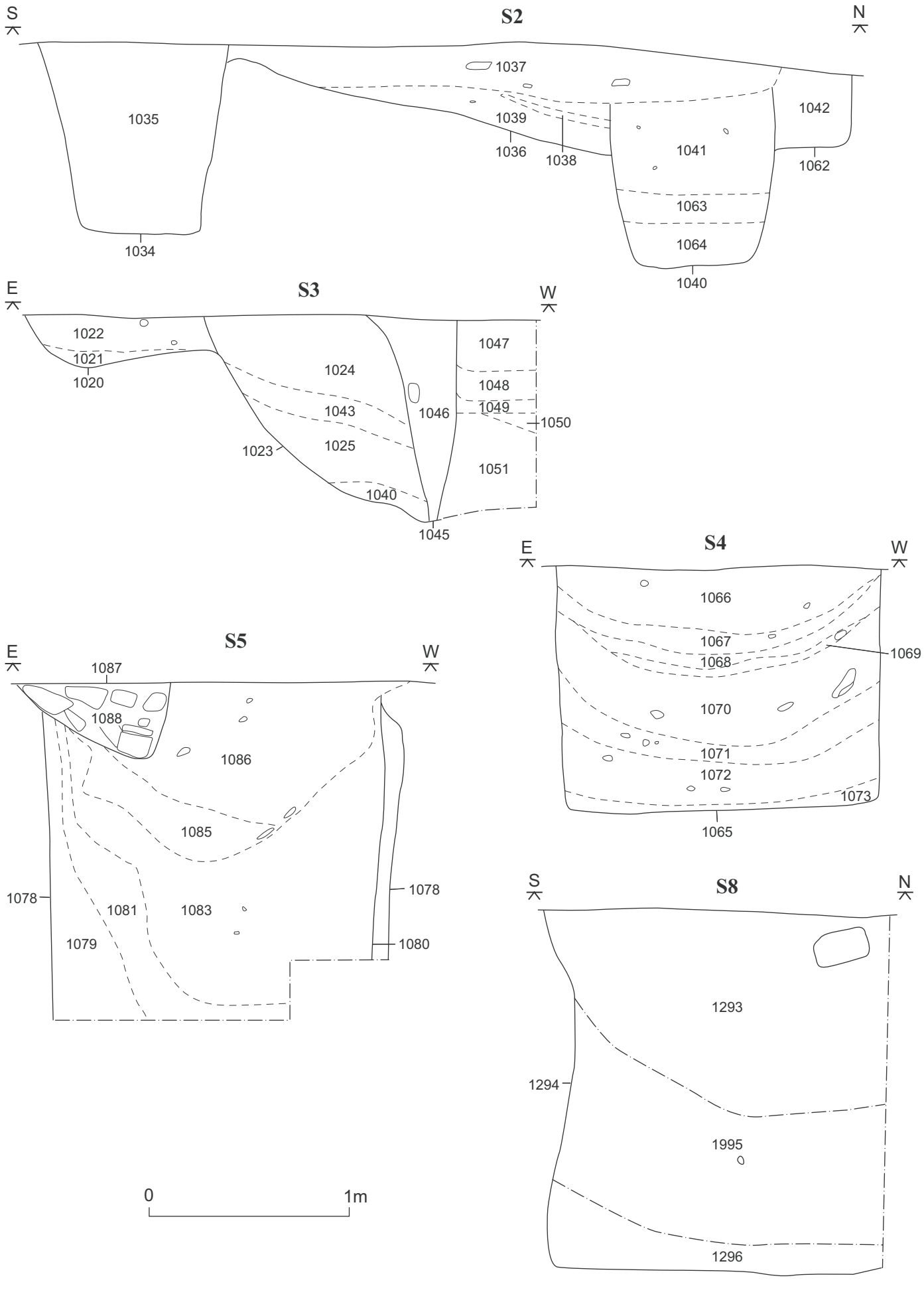

S2
S
N
1035
1037
1039
1036
1038
1041
1042
1062
1063
1064
1034
1040
S3
E
W
1022
1021
1020
1024
1043
1046
1049
1047
1048
1050
1023
1025
1051
1040
1045
S4
E
W
1066
1067
1068
1069
1070
1071
1072
1073
1065
S5
E
W
1087
1088
1086
1085
1078
1081
1083
1079
1078
1080
S8
S
N
1293
1294
1995
1296
0
1m

Fig. 7

the eastern side of the feature and the other on the western site. In the central part of the oven an area of burnt sandstone is evidence of the original fire (Plate 2).

A second corn drying oven (1149 – Group 102, Plates 3 and 4) was cut into the sandstone bedrock (1001), approximately 2m to the east of the first kiln (Group 101), however, the arrangement of the structure (Group 102) was rather different. A total of fourteen stake/postholes were cut around the internal edge of the oven and a further two more postholes (1228 and 1246), situated in the northeastern and the northwestern corners. The oven measured 2.8m by 1.2m with steep sides and a flattish base. A possible indication of the original clay dome capping material, which may have collapsed into the oven when it went out of use, was provided by the lowest fill, a thick dark red clay (1150, S7 – Fig. 8). Further evidence of the oven structure was provided by an east-west aligned cut 0.6m deep and 0.15m wide, presumably a horizontal beam slot (1297). Slots cut into the top of similar ovens were recorded at Fisher Gate (3, Young 1982), and were possibly used to support part of the superstructure of the kiln.

Pits and postholes within the central area

A steep sided rectangular pit (1157, Fig. 8) would appear to pre-date the two ovens, having been cut to the west by horizontal beam slot 1297 (part of Group 102) and to the east by a distinctive circular pit (1154). Pit 1154 measured 2m in diameter and 1.3m deep, it had vertical sides and a flat base and contained medieval pottery. Intriguingly, a seemingly contemporary pit (1160, S7 – Fig. 8) appeared to respect this pit, and had a distinctively stepped eastern edge. It had been truncated to the north by an elongated pit (1164), which had gradually sloping sides and a concave base.

Further medieval pits were located in the central area of the site, to the south of a cave entrance (1243). Many of these pits were intercutting: 1104, 1109, 1154, 1157, 1160, 1164, 1213, 1215, 1223, 1230, 1265, and 1309. The pits were sub-circular and sub-rectangular in shape, with very steep sides and slightly rounded or flat, bases. The diameters of the pits ranged between 1.1 and 2m. A cave entrance (1144) had been cut by a sub-circular pit (1104). The lower charcoal-rich fill (1138) of the pit (1104, S6 – Fig. 8) contained large quantities of tile and medieval pottery. Of particular note was a fragment from a medieval glazed crested ridge tile, coated in a dark green glaze.

Also to the south of the cave entrance (1243) was a vertically sided square pit (1230, Fig. 8), which measured 1m in diameter. The pit was not bottomed for safety reasons, but the upper fills (1231) contained medieval pottery, animal bone and tile and probably represented a shaft leading into cave 1243, which was subsequently exposed immediately to the north.

To the south of the corn drying oven (Group 102) was an almost circular pit (1265), the dark brown silt-sand infill (1266) of which contained a high quantity of green glazed pottery and charcoal. The southern edge of the corn drying oven (Group 102) and pit 1265 had both been truncated by an elongated pit (1140). While this pit contained some fragments of clay pipe, these would appear to be intrusive as the fill (1141) contained no other artefacts that would indicate a post-medieval date. The southeastern edge of the oven (Group 102) had also been cut to by a sub-circular pit (1152).

Group 103 and pits and postholes within the southern-central area

To the south of the ovens were several dispersed pits of medieval date (1076, 1121, 1192, 1200, 1234, and 1294, Fig. 6) and a post-hole (1195). Some of the pits (1192, 1200 and 1294) had been partially truncated by post-medieval buildings however, most of the undisturbed contexts from these pits contained medieval pottery. Once again, these pits were

Plate 3: North facing section of Group 102

Plate 4: Group 102 facing south, after full excavation

Plate 5: Group 103 after full excavation

Plate 6: The excavations facing southeast

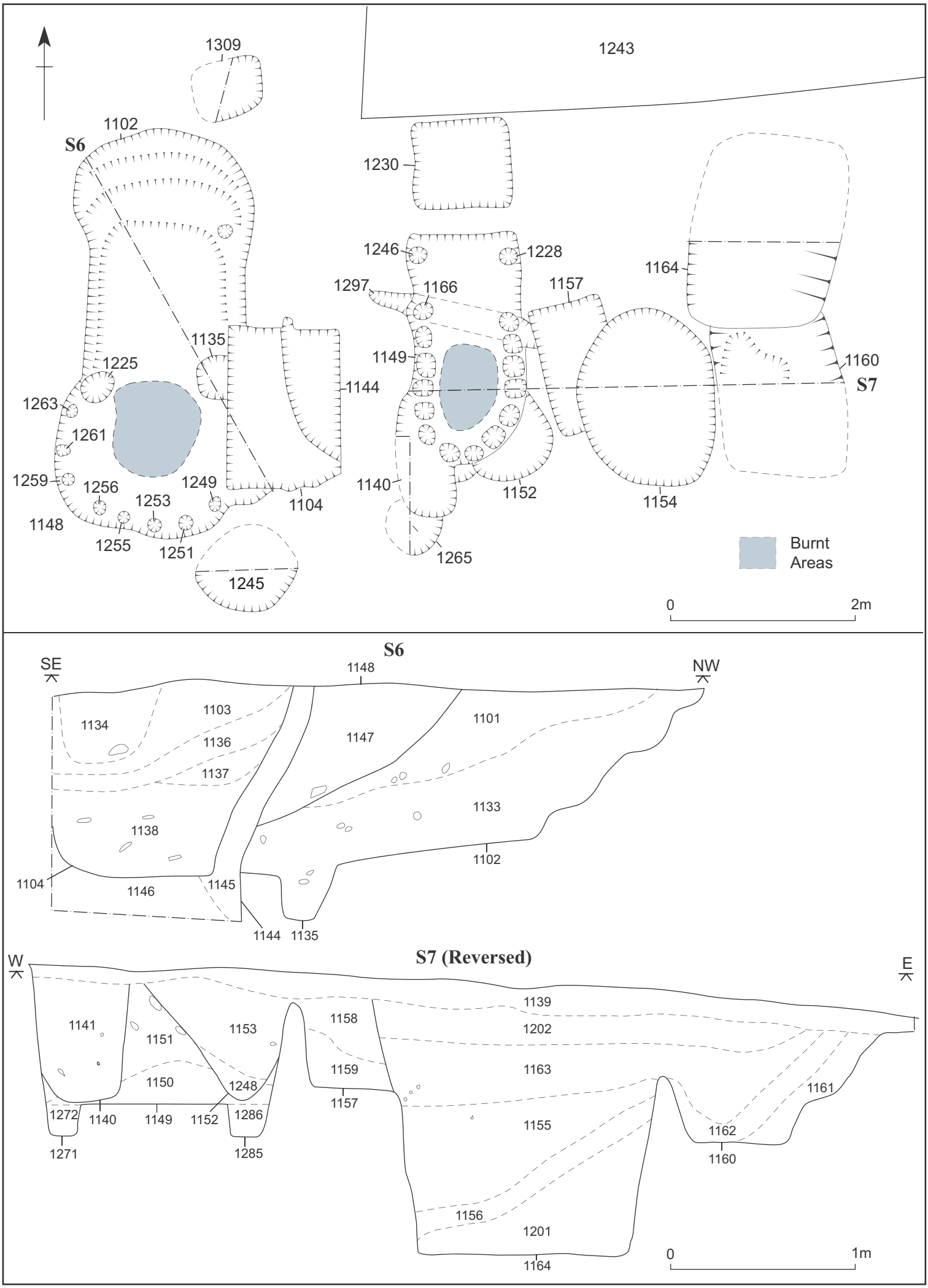

1309
1243
1102
S6
1230
1246
1228
1164
1297
1166
1157
1135
1225
1149
1160
1144
S7
1263
1261
1259
1256
1249
1253
1104
1140
1152
1154
1148
1255
1251
1265
1245
Burnt Areas
0
2m
S6
SE
NW
1148
1103
1134
1136
1147
1101
1137
1133
1138
1102
1104
1146
1145
1144
1135
S7 (Reversed)
W
E
1139
1141
1153
1158
1202
1151
1159
1163
1150
1248
1161
1157
1272
1140
1149
1152
1286
1155
1162
1271
1285
1160
1156
1201
1164
0
1m

Fig. 8

very steep sided with depths varying considerably from a shallow sub-circular pit (1234), which measured 1.5m in diameter and only 0.16m in depth to large pit (1294) measuring approximately 2m in diameter and 1.8m in depth. To the southwest of pit 1294 three postholes (1116, 1299, and 1300), positioned around a shallow rectangular cut (1121) produced organic deposits.

Within the southwestern corner of the site were a number of rectangular and sub- rectangular pits. Of particular interest was a large, very straight sided, rectangular cut (1329, Group 103, Plate 5, Fig. 9) measuring 2.7m by 0.77m and 0.33m deep. Two thin, shallow beam slots (1349 and 1353) bordered the southern and western edges respectively, with 5 post-holes cut around the edge. The shallow rectangular post-holes were equidistant with a sixth larger, circular post-hole (1367) situated in the north-western corner of 1329. Another post-hole (1369) was partially visible to the northeast of 1367, having been cut by later pits (1343 and 1361). The post-holes and beam slots had been cut into the sandstone and appeared to be the settings for a superstructure.

Immediately to the north of Group 103 was a sub-circular pit (1343), which represented the earliest in a sequence of pits. The re-cut (1361) of the pit (1343) was cut to the west by a rectangular pit (1352), which measured 1.1m by 0.92m. This pit (1352) had vertical sides and was not bottomed for safety reasons. The charcoal rich fill (1351) contained green glazed medieval pottery, iron slag and animal bone. It is possible that the original function of pit 1352 was associated with the network of shafts relating to the caves.

Features 1329 and 1361 were truncated by a large rectangular pit (1335). This very deep, vertically-sided pit produced vast quantities of medieval pottery sherds and animal bones from the varied fills (1336-1342). The lower fills (1341 and 1342, S9 - Fig. 9) were particularly charcoal rich suggestive of nearby industrial processes, perhaps tanning or the treatment of cloth. Later fills however, comprised a greenish-brown silt sand (1338) and a greenish-white ashy deposit (1339), which may suggest a possible secondary use as a cess pit. Excavation continued to a depth of 1.80m however the feature was not fully excavated for safety reasons. Pit 1335 may originally have been intended to provide access to a cave (1386). 1335 had been re-cut by a smaller pit (1332, not illustrated), which contained medieval tile, pottery, animal bone and fired clay (1333 and 1334).

Pits and postholes at the southern extent of the site

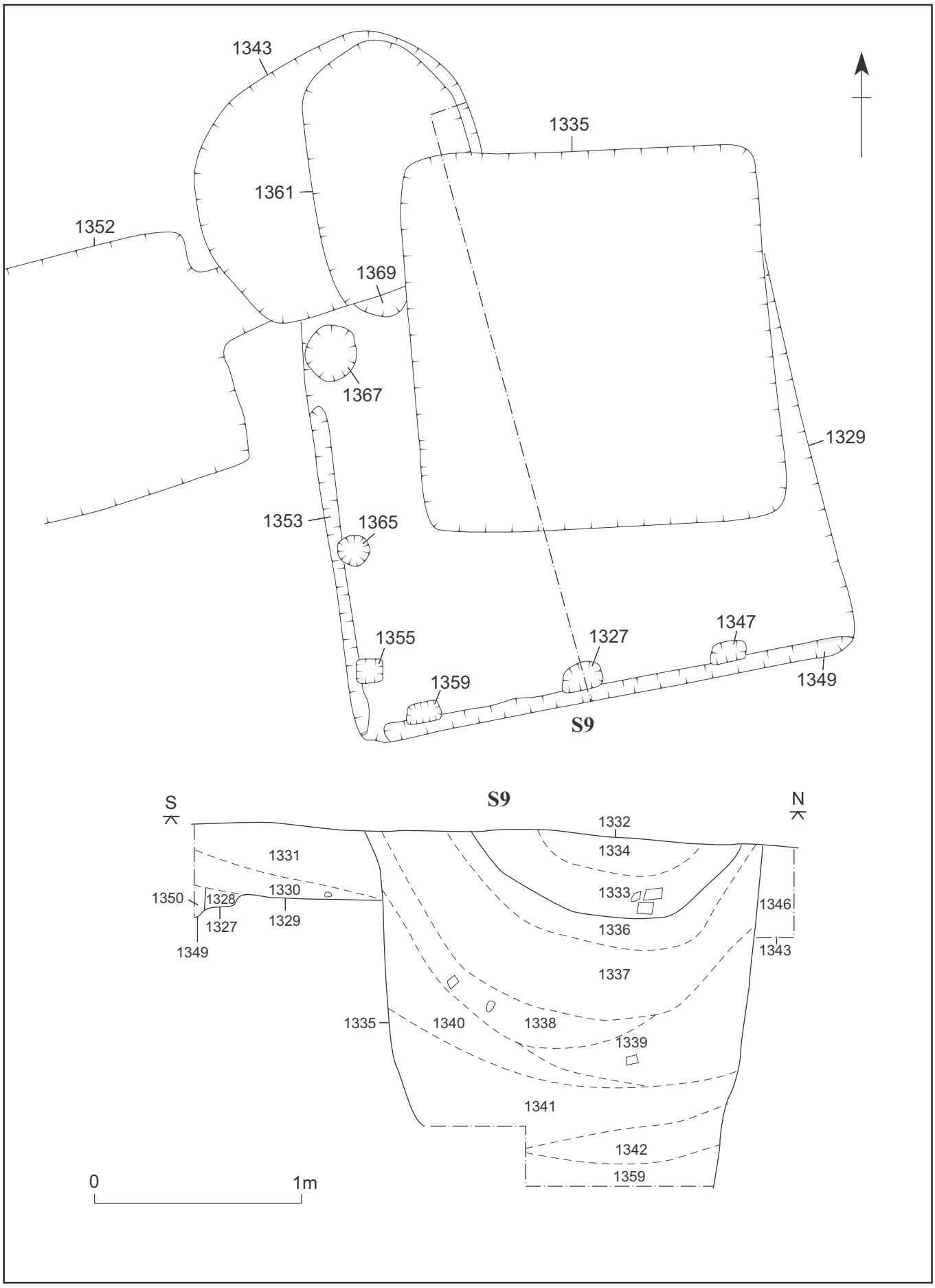
To the south of Group 103 two more medieval pits were exposed (1320 and 1345, Fig. 6) the former having been cut by a post-medieval wall (1323), was very truncated. The latter (1345) which measured 1.65m in diameter and 0.75m deep, was notable for the high concentration of charcoal around the outer edge of the pit. To the east of pit 1345 an irregular shallow scoop (1379) with a vivid greenish upper infill (1381), which was in turn cut by a second shallow scoop (1379, S10 - Fig. 10). The proximity of 3 post-holes (1376, 1382 and 1394) may indicate an industrial origin for these features. The most substantial post-hole (1345), measuring 0.44m in diameter and 0.38m deep, contained burnt bone (1384). Both the pit 1379 and post-hole 1376 had been truncated by a shallow post-medieval pit (1374).

At the southern edge of excavation a large rectangular pit (1372, Plate 8, Fig. 6) and a sub-circular pit (1389) were partially revealed. Pit 1389 measured approximately 1.1m in diameter and contained medieval pottery also tile and animal bone. Pit 1372 measured 2m by approximately 1.6m, had steeply sloping sides, a flattish base and was 1.45m deep. Notably the lower fill comprised a charcoal rich silt sand (1373, S11 - Fig. 10) and the upper infill (1371) contained high quantities of animal bone. Other finds included medieval pottery, degraded wood and metal finds.

Plate 7: Excavation works facing southeast

Plate 8: Excavation of pit 1372

Plate 9: View of excavation facing north, with machine excavation for the basement in the background


1343
1335
1361
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1327
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1359
1349
S9
S9
S
N
1332
1331
1334
1330
1333
1350
1328
1346
1327
1329
1336
1349
1343
1337
1335
1340
1338
1339
1341
1342
1359
0
1m

Fig. 9

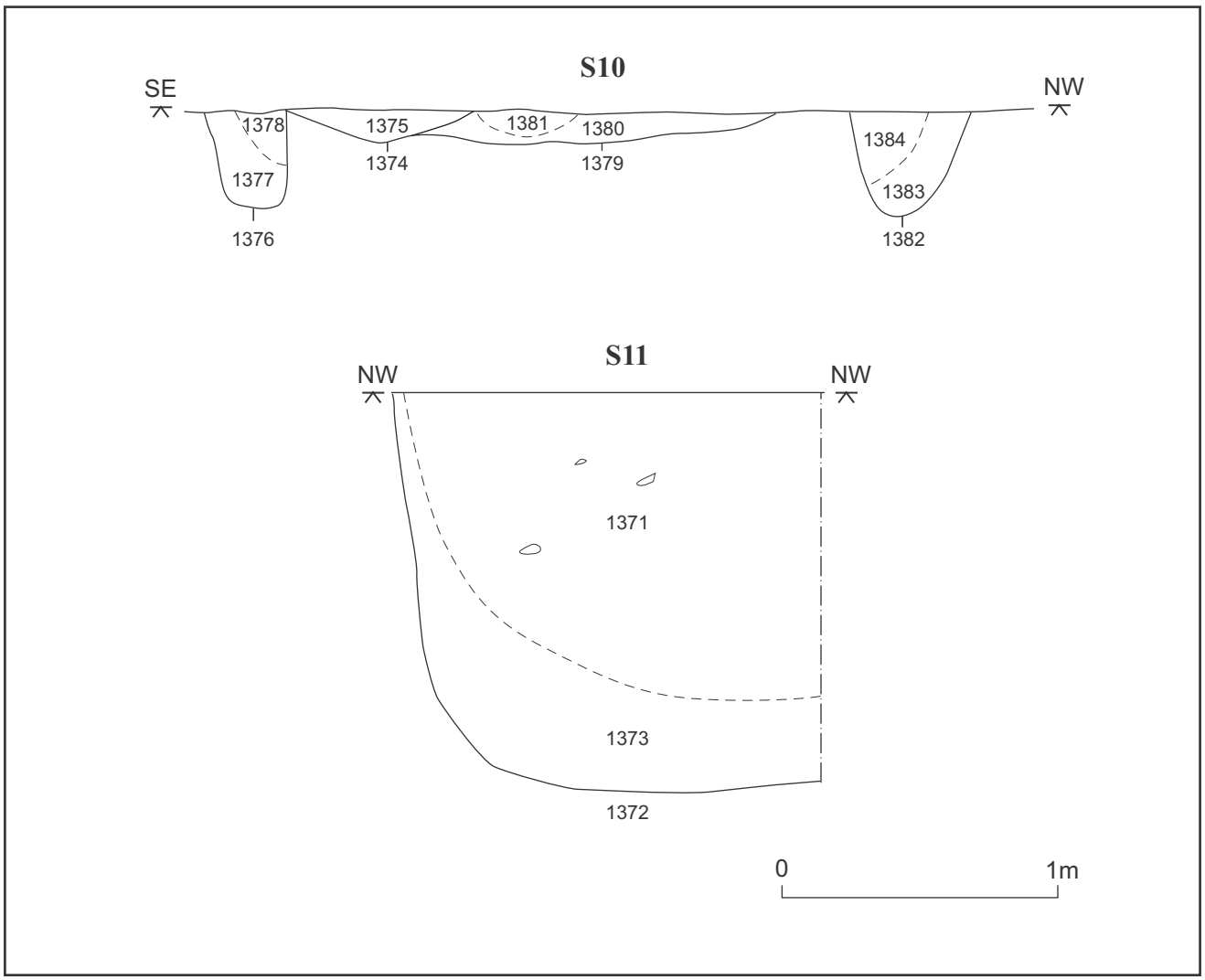
S10
SE
NW
1378
1375
1381
1380
1384
1377
1374
1379
1383
1376
1382
S11
NW
NW
1371
1373
1372
0
1m

Fig. 10

Pits and postholes in the central-eastern extent of the site

A number of sub-circular and sub-rectangular pits: 1169, 1170, 1177, 1179, 1181, 1185, 1188, 1197 and a post-hole 1172 were uncovered in the southeastern area of the site. These were generally truncated by extensive post-medieval building foundations. The more substantial pits had vertical sides with u-shaped profiles, and ranged in diameter from 0.6-1.6m. The most notable of these features, pit (1181), measured 1.6m in diameter, 0.6m deep and was filled with a greenish silt sand (1182), which produced pottery and animal bone. This had been cut by a slightly later pit (1185, not visible in plan), the fill of which (1186 and 1187) produced fairly substantial amounts of pottery and animal jaw bones.

4.3 Post-medieval building foundations and cellars

Across the northern limits of the site the evaluation had uncovered deep east-west aligned building foundations parallel to Warser Gate. These had truncated deposits to a depth in excess of 3m below the tarmac ground level. The foundations included substantial walls and associated cellaring (9009, Trench 1), which related to a former pub. Further evidence of deep cellaring (9029 and 9037, Trench 2) was uncovered along the eastern edge of the excavation, parallel to St Mary's Gate. To the west three walls (1089 and 1091) were partially uncovered, possibly part of a post-medieval a cellar.

To the south of properties fronting Warser Gate, on the western side of the site, a small number of post-medieval pits (not illustrated) such as 1210 and a probable well (1028) were excavated. The ovoid shaped well measuring 1.8m by 1.2m was lined to a depth of 0.2m with sandstone blocks and tiles bonded with pinkish-red clay (1032). The upper part of the well was excavated to a depth of approximately 1m until its narrow confines made safe excavation too difficult. It is possible that 1028 represents a disused medieval well, however the excavated fills, notably (1027, 1030 and 1031) contained pottery dating to the post-medieval period. To the southeast of 1028 the cut of a steep sided pit (1210) was partially excavated and found to have truncated the eastern side of a large medieval pit (1212).

Extensive post-medieval brick walls (group 100) were recorded in plan throughout the eastern and southern extents of the site. A number of post-medieval wall cuts had partially truncated medieval features. A wall foundation trench (1221) had cut the southern edge of medieval pit (1213).To the southwest of this a post-medieval brick wall (1206) formed three sides of a small structure. Immediately to the north of wall 1206 a thin charcoal flecked deposit of silt sand and rubble (1139) was recorded, sealing a number of intercutting medieval pits (1140, 1152 and 1157).

Towards the western extent of the site a pit (1237), which measured 1.68m in diameter and 0.68m deep was recorded at the northern extent of a north-south aligned brick wall (1313). The area immediately to the east and south of pit 1237 was largely comprised of walls (1323) relating to building foundations and cellars. The wall (1323) sealed a large pit (1326) which was excavated to a depth of 0.56m. The pit measured 2.7m by 2.3m with steep sides and produced large quantities of animal bone, post-medieval pottery, slate and tile. At the southern edge of excavation cut for an east-west post-medieval cellar wall (1387) was partially exposed, indicating further extensive cellaring extending to the south.

5 THE FINDS

5.1 The Pottery *by Chris Cumberpatch*

Introduction

The pottery was examined by the author between the 23rd February and 2nd March 2007. The assemblage consisted of 1974 sherds of pottery weighing 39,345 grams and represented a maximum of 1766 vessels. Amongst the pottery were a number of fragments of ceramic building material and other items (twenty-three in total). The data are summarised in Appendix 2 and Table 1, with the abbreviations used in the appendix and tables explained in Table 2.

Context	Type	No	Wt	ENV	Part	Form	Dec	Date range	Notes
1005	Sewer pipe	1	64	1	Fragment	Pipe	N/A	c.1850+	Salt glazed sewer pipe
1041	CBM	1	7	1	Fragment	?Brick	N/A	Medieval	
1046	Tile	1	42	1	Fragment	Tile	Clear glaze on one side	Medieval	
1051	CBM	1	8	1	Fragment	?Tile	U/Dec	Undated	
1059	CBM	1	9	1	Fragment	?Brick	U/Dec	Undated	
1067	Black stone	1	7	1	Stone	N/A	N/A	Undated	
1067	Burnt stone	1	12	1	Fragment	U/ID	N/A	Undated	
1075	CBM	1	2	1	Fragment	?Brick	U/Dec	Undated	
1138	Plaster	1	1	1	Fragment	U/ID	U/Dec	Medieval	Sample 16
1153	CBM	1	6	1	Fragment	U/ID	U/Dec	Undated	
1155	Plaster	1	25	1	Fragment	U/ID	U/Dec	Undated	
1201	?	4	18	4	Fragment	U/ID	U/Dec	Undated	Probably burnt sandstone with a deposit on one side
1209	Sewer pipe	1	34	1	Fragment	Pipe	N/A	c.1850+	Salt glazed sewer pipe
1244	Tile	1	6	1	Fragment	Tile	U/Dec	Undated	
1266	CBM	2	13	2	Fragment	?Brick	U/Dec	Undated	
1337	Tile	1	38	1	Fragment	Tile	U/Dec	Undated	
1385	Tile	1	95	1	Fragment	Roof tile	Clear glaze on one side	Medieval	
1393	Tile	1	15	1	Fragment	Tile	U/Dec	Medieval	
9024	Tile	1	15	1	Fragment	Tile	Clear glaze on one side	Medieval	
	Total	**23**	**417**	**23**					

Table 1. Ceramic building material and other items from St Mary's Gate / Warser Gate, Nottingham

Methodology

Publication of medieval and post-medieval pottery from Nottingham has been extremely limited and very few substantial medieval pottery assemblages have, as yet, been published in full, in spite of a considerable number of excavations in the city. Fortunately, the recent publication of a corpus of material from Lincoln has included some discussion of Nottingham material (Young and Vince 2005) and a summary of the type series for the city has been circulated in manuscript form (Nailor and Young 2001a). This can be linked with the type series held in the Brewhouse Yard Museum, Nottingham via the assessment exercise report compiled

by Nailor and Young (2001b). In view of this, the methodology adopted for this assessment involved a visit to the Brewhouse Yard Museum and the creation of an *ad hoc* site specific reference collection based upon a selection of the sherds from the site. The sherds used for this purpose have been noted in Appendix 2 and have been bagged separately as a group. They are labelled as such and accompany the assemblage as a whole. It is to be hoped that the full report on the assemblage will involve the verification of the identifications and the inclusion of full descriptions of the fabric and ware types. The type codes used by Young, Vince and Nailor in the publications cited above have been used to identify the individual sherds and groups of sherds in Appendix 2. These codes are explained briefly in Table 2 and fuller explanations and definitions can be found in the published and unpublished sources cited here.

Abbreviation	
app	Applied
app&imp	Applied and impressed
Bal Jug	Baluster jug
EMLOC	Local early medieval wares, unidentified
ext	External
imp	Impresed
int	Internal
Jar/CP	Jar / Cooking pot
LMLOC	Local later medieval wares, unidentified
LSLOC	Late Saxon - Local
MEDLOC	Local medieval wares, unidentified
MEDX	Non-local medieval wares
Mic. Sandy ware	Micaceous Sandy ware
NCSW	Nottingham Coarse Sandy ware
NCSW	Nottingham Coarse Sandy ware
NEMCS	Nottingham Early Medieval Coarse Sandy ware
NESP	Nottingham Early Splashed ware
NOTGE	Nottingham Early Green Glazed ware
NOTGL	Nottingham Light Bodied Green Glazed ware
NOTGR	Nottingham Reduced Green Glazed ware
NOTLBG	Nottingham Light Bodied Gritty ware
NSP-F	Nottingham Splashed ware - Fine
NSP-F/S	Nottingham Splashed ware - Fine/Sandy
NSP-S	Nottingham Splashed ware - Sandy
ox	Oxidised
Q grit	Quartz grit
RGW	Reduced Gritty ware
RSW	Reduced Sandy ware
SHELL	Shell Tempered ware
Site TS	Site type series
susp	Suspension (glaze)
TS	Type series
u/gl	unglazed
YGCW	Yellow Glazed Coarseware

Table 2. Abbreviations used in Table 1

The pottery has been quantified by number of sherds, weight of sherds and estimated (maximum) number of vessels (ENV), the latter figure representing the number of sherds counting joining sherds as one rather than two or more which is the case with the absolute number of sherds. In a small number of cases incidences of cross context joins have been

noted, but this was done on a haphazard basis as time precluded a comprehensive programme of refitting and cross-joining. It is probable that far more cross-context joins exist, particularly between contexts 1337, 1338, 1339 and 1340 (pit 1335, S9 – Fig. 9).

Discussion

The brief for the work described here referred to spot dating and a brief assessment of the assemblage. The spot dating of individual groups of sherds is provided in Appendix 2 and an assessment of the significance of the assemblage is given below. Brief notes on certain aspects of the assemblage are required to provide background for the assessment.

Much of the *Shell Tempered ware* is in poor condition, extensively leached and abraded and often with post-depositional deposits on the sherd surfaces. In a small number of cases it was possible to identify sherds of Potterhanworth type on typological grounds, but a priority for a full report should be the detailed examination of this class of pottery with a view to identifying not only the date range but also the origin of the pottery. It is clear from the Lincoln volume that there was a significant degree of interaction between Nottingham and Lincoln which is represented in pottery assemblages from the latter city and on the face of it, it would appear that a significant quantity of Shell Tempered ware was reaching Nottingham from Lincolnshire and possibly from Lincoln itself.

A number of context groups included sandy textured greywares which have been classified in Appendix 2 as *Torksey type ware* (TORKT). It is probable that a proportion of these sherds are of 'true' Torksey ware while others may be of Torksey ware type, i.e. manufactured at centres other than Torksey but according to the same basic template. Future work on the assemblage should include the differentiation of Torksey ware from the various Torksey type wares identified to date.

Stamford ware has been identified, a far as possible, to the sub-groups defined by Kilmurry (1980) and Leach (1987). Examples of specific Stamford wares from Doncaster and Stamford itself were used along with the material in the Brewhouse Yard type series to assist in this process. A number of sherds require further examination and the possibility that some sherds are of Stamford type also requires further investigation.

A small number of sherds appeared to represent waste from the manufacture of pottery. While the quantities were far too small to indicate manufacture on the site itself, they are of significance in indicating either manufacture in the immediate area or the import of waste material to the site for some undetermined purpose.

Assessment

The significance of the assemblage lies in the fact that it appears to represent a body of material dating to the earlier part of the post-Conquest period (11th century to mid to later 13th century) with a smaller later medieval component and an even smaller pre-Conquest component. The later post-medieval and early modern to recent group is of somewhat more limited significance because of its small size, but it does have the potential to contribute to the questions surrounding site formation processes which are emerging as significant in the context of excavations in Britain's northern industrial cities (Cumberpatch 2005). The assemblage was recovered using recognised methods and techniques and is fully documented according to prevailing professional standards. This makes it eminently suitable as the subject of a full archive report as defined by the Medieval Pottery Research Group (MPRG 2001) and the Institute of Field Archaeologists (IFA 2005) with publication as a desirable final outcome.

In addition to forming part of the final report on the site itself and contributing to the interpretation of the features and structures identified on the site, the assemblage has a role in the wider understanding of medieval Nottingham. As noted above, publication of pottery assemblages excavated to date in Nottingham has been limited; the city has a poor record in this respect when compared to other medieval towns and cities in the north midlands and Yorkshire (including Lincoln, Newark, Doncaster, Hull, Beverley, Pontefract and York) and can in this respect be compared with neighbouring Derby. The result is that pottery assemblages from sites within a wide area of Nottinghamshire and Derbyshire are lacking in detail and precision and individual sites remain poorly understood because of a lack of basic data pertaining to the Nottingham pottery industry (Cumberpatch 2004). The St Mary's Gate / Warser Gate assemblage offers an opportunity to begin to rectify this unfortunate situation through the preparation of a full report conforming to accepted guidelines. Further work should include the following elements:

- Creation of a formal type series for the site, based upon the work of Nailor and Young (2001a, 2001b) with the resolution of issues identified in Appendix 2 with specific reference to the unidentified sherds (EMLOC, MEDLOC, LMLOC, MEDX) and the ambiguous sherds (identified provisionally and indicated by the suffix –type after the type name);

- Further examination of the Shell Tempered wares and Torksey type wares with a view to definite identification of ware type and origin with the possibility of closer dating of individual sherds and contexts;

- Selection, where necessary, of individual sherds for further analysis (petrological and chemical) to contribute to the full description of the assemblage;

- Full discussion of the relationship between the pottery and the archaeological strata and features on the site;

- Full discussion of the relationship between the pottery and other groups of finds from the site.

The full report on the assemblage should conform to the guidelines set out by the Medieval Pottery Research Group (2001) and the Institute of Field Archaeologists (2005) with reference to the preparation of final reports and archive creation.

5.2 **An assessment of the metal finds** *by Erica Macey-Bracken*

A small assemblage of copper alloy and iron finds was recovered from the site. Most of the material was heavily coated in corrosion products, although some items could still be identified.

Nails

The largest recognisable group of metal items recovered from the site was a collection of 18 iron nails. Most of these nails came from some of the pits on the site, although two nails (1146, 1332) were recovered from the caves that were encountered during the excavation.

Context	Number of nails
1011	1
1013	2
1025 (from residue)	2
1026	1
1035	1
1110	2
1138 (from residue)	1
1146	1
1168	1
1334	1
1371	1
1393	1
9024	1
9025	1

Table 3: Nails

Other Iron objects

Fourteen other pieces of iron were recovered from the site. Most of these pieces were too corroded to be identifiable, and they will require x-rays to see if it is possible to gain any ideas of their original form and function. The only identifiable piece was a large washer, 40mm in diameter, which was recovered from the fill over a wall (1206), and is likely to be of modern date.

Copper Alloy

Five pieces of copper alloy were recovered from the site, most notably a pin from a pit (1217) and a curved triangular piece (9025), possibly part of a late medieval – early post-medieval scabbard chape (Dr. Roger White, pers. comm.) from the evaluation. The remainder of the copper alloy assemblage consisted of a thick curved copper strip (1367) from a posthole (1366), a piece of copper sheet (1092) from one of the pits (1091) and a piece of copper scrap from the well (1028).

5.3 The Jeton *by Roger White*

The evaluation produced a partial jeton from one of the well fills (9025). This item is quite well preserved, and was identified as a Hans Krauwinkel jeton, dating to the second part of the 16th century (Dr. Roger White, pers. comm.). At this time, Nuremberg was the European centre for the manufacture of jetons, and Hans Krauwinkel was one of the principal manufacturers of these reckoning counters.

5.4 An assessment of the tile *by Erica Macey-Bracken*

A total of 425 fragments of ceramic tile were recovered during the evaluation and excavation, with a further 37 fragments recovered from the heavy residues. The assemblage was quite fragmentary, with no complete tiles recovered, but the individual fragments were largely unabraded. The assemblage was quantified by count and weight, and examined macroscopically for the purposes of this assessment.

The bulk of the assemblage comprised of unglazed tile in a coarse orange fabric. Other fabrics were also noted, including a coarse grey fabric, and further work will be necessary to determine the range of fabrics present in the assemblage. It will be necessary to consult published tile assemblages form Nottingham for comparable material from elsewhere in the city.

Glazed tile fragments were also noted in the assemblage, most notably a large fragment of crested ridge tile, coated in a dark green glaze (1138) and two fragments of decorated tile (1153, 1176), one of which showed a Fleur-de-Lys. The remainder of the glazed fragments were only partially-glazed however, suggesting that the glazing may not have been intentional, and that the tiles were merely glazed accidentally during firing – for example by proximity to a glazed object in the kiln. The ridge tile and the two decorated tiles should be subject to full analysis and should be drawn as part of the published report.

5.5 An assessment of Other Finds *by Erica Macey-Bracken*

Other finds from the site included slag, fired clay, stone, glass, coal, charcoal, clay pipe, shell and mortar. All the finds were quantified by count and weight, and examined macroscopically for the purposes of this assessment. The assemblage is stable, and should present no long-term storage problems.

Slag

Forty-four pieces of metallic slag were recovered from the site. Most of the material was non-magnetic, although at least two contexts (1049, 1074) had magnetic slag present. Further investigation of this material by a slag specialist will be necessary to determine the range of material present.

Other Finds

The remainder of the assemblage consisted of forty-two fragments of charcoal and coal, and three fragments of mortar. None of this material was diagnostic, and no further work is recommended for this group.

Context	Slag	Fired Clay	Stone	Glass	Clay Pipe	Shell	Mortar	Charcoal
1007	1							
1011					2			
1013	4		1					
1022	2							2
1023						5		
1024			1					
1026			3					
1027						4		
1028					2			
1035							1	
1041			7					
1042								1
1046	4		1					
1049	1							
1054								1
1059	1							
1063			1					
1066	9							
1067	1							
1068	2							
1070	2							
1074	1							
1077	2							
1092					1			
1097	2							
1102 / 1101			1					
1103			1					
1106					1			4
1114	1							
1124							1	
1136	1							
1138	1							
1141			3			41		
1151	1							
1155								2
1163	1							
1193		5						
1198							2	
1220					1			
1242						1		
1321	1							
1333	1	4						
1336		1						
1337	1	6						
1341		1						
1375					1			
1384			1					
9023					1			1
9024					1			7
9025								4

Table 4 Other Finds

Fired Clay

Eighteen pieces of fired clay were recovered. Five pieces were recovered from the fill (1193) of a medieval pit (1192). Several of the pieces appeared to have been formed around tubular structures (1333), and may well have formed part of a structure in the south-west corner of

the site in the locality of Group 103. The fired clay however, was recovered from the fill of a pit (1332) that cut this group, and is possibly later.

Stone

Twenty pieces of stone, including a possible quern fragment were recovered from the site. With the exception of the quern fragment (1046), the remainder of the assemblage appears unworked, but should be examined to determine if the stone is of local origin or imported.

Clay Pipe

Ten fragments of clay pipe stem were recovered. None of the stems were stamped or had any diagnostic features, although one stem still had traces of the red coating applied to the mouthpiece to stop the smoker's lips sticking to the pipe. This was standard practice in pipe-making in the 19th century, with the mouthpieces of cheap pipes being dipped in a mixture of pipe clay and water. More expensive pipes were coated in a mixture of soap, wax and gum until the later part of the 19th century, when it became common practice to treat the mouthpiece with red sealing wax (Ayto, 1999, 24). No further work is necessary for this group

Shell

Forty-six fragments of shell were recovered. All of the shell was from oysters, and appears to be food debris, rather than debris from shell working, as no worked or offcut pieces were recovered. No further work is necessary for this group.

5.6 The Animal Bone *by David Brown*

This assessment was conducted following the guidelines of MAP2 (Gill 1991) with further adherence to the English Heritage notes of Davis (nd) and Payne (1991).

Methodology

The assemblage comprised of a total of 1534 fragments (20624g) equating to four standard-sized museum archive boxes. From this total, only 575 fragments were identifiable. Due to the relatively small size of the assemblage, the assessment adopted an NISP (Number of Identifiable Specimens/Skeletal Parts) quantification methodology meaning each individual fragment of bone was counted regardless of identification.

Data was recorded on an electronic pro forma Microsoft Access database for ease of reference and accessibility. The information recorded was as follows:

1. Context number
2. Fragment count
3. Weight (g)
4. Condition
5. Fragmentation
6. Number of measurable bones
7. Number of ageable epiphyses
8. Number of ageable mandibles
9. Number of gnawed, burned and butchered specimens
10. Number of domestic mammal, bird, fish, wild and indeterminate specimens
11. Notes section recording extra information such as pathology or specific species identified

'Condition' refers to the state of preservation. The definitions of the stages of preservation used in this assessment have been adapted from Behrenmeyer's numerical stages of weathering (1978; cited in O'Connor 2000: 44) but it was felt that these criteria could be attributed to general preservation levels. These criteria are as follows:

Stage	Diagnostic criteria
0	Bone surface shows no signs of cracking and flaking.
1	Bone surface shows some cracking, either superficial mosaic-like appearance or parallel to orientation of collagen fibres. Articulation surfaces may show mosaic-like cracking.
2	Bone surface shows flaking, usually along the edges of breaks and cracks. These edges are angular with no rounding.
3	Bone surface shows roughened patches, which may or may not result from flaking of the surface, only to a depth of 1.5mm. Crack edges may be rounded.
4	Bone surface is rough with loose splinters. Cracks are wide with rounded edges that are actively splintering.
5	Bone is disintegrating into splinters and the original shape may no longer be apparent.
6	Mixed stages in one context (either archaeologically or residually)

Table 5: A table of the definitions of stages of preservation adapted from Behrensmeyer's stages of weathering (1978; cited in O'Connor 2000: 44)

The degree of fragmentation was also numerically coded as with preservation using criteria below:

Stage	Diagnostic criteria
1	Whole (complete)
2	Whole or slightly fragmented
3	Fragmented, some specimens identifiable
4	Medium/small, small/powder, unidentifiable fragments
5	Mixed (either archaeologically or residually)

Table 6: A table of the definitions of the stages of fragmentation

Further points of methodology were adopted for assessment purposes, these included; the non-speciation of vertebrae and rib elements; the recording of specimens as 'measurable' only where a length measurement as defined by Von Den Driesch (1976) was possible; the aging of mandibles only where at least two teeth were present or could be refitted. At this stage, 'age' refers to the ability to assign a specimen to one of the following groups: 'foetal/neonatal'; 'juvenile'; 'sub-adult'; 'adult'.

The assemblage

From a total of 1534 fragments, only 575 fragments were identifiable to groups 'domestic mammals', 'birds', 'fish' or 'wild', with more specific identification where necessary. The assemblage was largely hand-collected, with some bone fragments recovered from the wet sieving residues. Bone preservation was mixed but was generally noted as 'satisfactory/poor' as a result of the acidic sandy soils. Fragmentation was also mixed across the site and within contexts but was generally recorded as 'satisfactory/poor'. The possibility of residual

contamination was acknowledged due the truncation of deposits by later features and development.

The assemblage was characterised by a preponderance of domestic mammal species such as cattle, pig, sheep/goat, dog and cat. Very few birds, fish and wild species were noted. However a number of species included rabbit (*Oryctolagus cuniculus*), hare (*Lepus europaeus*) and red deer (*Cervus elaphus*). There was also a substantial quantity of foetal/neonatal specimens (contexts 1074, 1075, 1141, 1201, 1338, 1339). 43 bones were recorded as measurable, 75 bones were recorded as ageable based upon epiphyseal data and 34 mandibles were recorded as ageable. There were 27 recorded incidences of bones that had been gnawed, mostly by cats and dogs. In addition to this 129 burnt specimens and 104 butchered specimens were also recorded.

The frequencies of element types (lower limb bones and skull elements) and processing evidence from cut and chop marks would suggest a degree of primary industrial activity (skinning/tanning) and butchery. Dog bones also show evidence of processes indicative of skinning/tanning. Furthermore, the numerous examples of horncores, especially those exhibiting traces of chopping or smashing, indicate hornworking. Evidence of secondary butchery (e.g. filleting/jointing) is also present in the remains with some specimens exhibiting scrape marks on diaphyses and traces of chopping and cut marks on articulations.

The archaeofaunal data concurs with post-excavation interpretations and highlights an interesting series of industrial activities, possibly contemporaneous (but unclear prior to full site phasing). Phasing of the site and a review of contemporary activities would aid full analysis of the animal bone material. Further analysis will contribute to our understanding of both medieval animal husbandry practices and their relationship to industrial activities. This analysis should consider how these practices changed over time and whether they differed, or were replicated within the wider environment of the rest of the settlement and its hinterland. As the fish bone was mostly recovered from the wet sieving residues, further processing of residues may recover enough fish bone to provide a suitable assemblage for further analysis. Specialist fish bone analysis would determine if these were marine taxa or freshwater taxa.

5.7 The palaeo-environmental remains *by Pam Grinter*

A total of fifteen samples, provisionally dated from the medieval period were assessed to determine:

- if plant remains were present and of interpretable value.
- if the plant remains provide information about deposition of charred material at the site.
- if the plant remains provide information about the surrounding environment.

Laboratory method

A 10 L sample from each context was processed for charred plant remains using water flotation Flots were examined using a low-power microscope at magnifications between x10 and x40. Nomenclature follows Stace (1997) for indigenous taxa and Zohary and Hopf (2000) for economic plants.

Results

Ten samples contained charred plant remains (Table 7) which included wheat (*Triticum aestivum* type) and barley (*Hordeum* sp.) grains in low numbers, fragments of hazelnut shell (*Corylus avellena*) and weed seeds which included lady's bedstraw (*Galium* sp.) corn cockle (*Agrostemma githago* L) and Elder (*Sambucus nigra* L). The samples also contained fragments of fish and animal bone along with fragments of charcoal.

	Context	Charcoal	Bone fragments	Charred Plant Remains (nuts, fruits, seeds)	Comments on Flot
1	1013	++ +	+	+	100% of flot examined. Charred seeds are present.. The following taxa were noted: wheat (T*riticum* sp) Barley. (*Hordeum* spp). Hazel nut shell frags (*Corylus avellena*) *Lithosprermum arvense . Bromus* sp*.* Ladies bedstraw (*Galium* sp.) ASSESSED AS POOR.
2	1012	++	-	+	100% of flot examined. Charred seeds are present.. The following taxa were noted: wheat (T*riticum* sp) Barley. (*Hordeum* spp). Hazel nut shell frags (Corylus *avellena*) ASSESSED AS POOR.
4	1025	-	-	-	100% of flot examined. No charred plant remains observed. ASSESSED AS POOR.
6	1026	+	-	+	100% of flot examined. Charred seeds are present.. The following taxa were noted: wheat (*Triticum* sp) *Lamium* sp. ASSESSED AS POOR.
16	1104	+	+	-	100% of flot examined. Uncharred seeds of Elder (*Sambucus nigra*) present*.* ASSESSED AS POOR.
19	1150	-	-	+	100% of flot examined. Charred seeds are present.. The following taxa was noted: Barley. (*Hordeum* sp) ASSESSED AS POOR.
28	1155	+	+	+	100% of flot examined. Charred seeds are present.. The following taxa was noted: Barley. (*Hordeum* spp) ASSESSED AS POOR.
34	1150	+	+	+	100% of flot examined. Charred seeds are present.. The following taxa was noted:) Barley. (*Hordeum* spp) ASSESSED AS POOR.
35	1295	+	+	+	100% of flot examined. Charred seeds are present.. The following taxa was noted: Barley. (*Hordeum* spp)*.* ASSESSED AS POOR.
52	1338	+	+	+	100% of flot examined. Charred seeds are present.. The following taxa were noted: Barley. (*Hordeum* spp). corn cockle (*Agrostemma githago*) the uncharred seeds of Elder (*Sambucus nigra*) were also present. ASSESSED AS POOR.
53	1344	++ +	+	+	50% of flot examined. Charred seeds are present.. The following taxa was noted: wheat (*Triticum* sp.) ASSESSED AS POOR.
58	1346	+	-	+	100% of flot examined. Charred seeds are present.. The following taxa was noted: Barley. (*Hordeum* spp). ASSESSED AS POOR.
62	1385	+	+	+	100% of flot examined. No Charred seeds are present. The uncharred seeds of Elder (*Sambucus nigra*) were observed. ASSESSED AS POOR.
63	1373	+	+	-	100% of flot examined. No charred plant remains observed. ASSESSED AS POOR.

Table 7: Assessment results for charred plant remains. Key: + = < 10 items, ++ = 10 – 30 items, +++ > 30

Discussion

The charred plant assemblage obtained from the samples taken at St. Mary's Gate/Warser Gate, Nottingham comprises primarily of a few indeterminate wheat and barley grains together with a few fragments of charred hazelnut shell and wild taxa. The cereal grains clearly represent crop harvesting or processing activities which may have taken place nearby. The wild species included field gromwell (*Lithospermum arvense* L.) and corncockle (*Aggrostemma githago* L.) both of which are weeds commonly associated with cultivation. The presence of the uncharred seeds of elder (*Sambucus nigra* L) are not uncommon in archaeological samples as the fruits of this hedgerow shrub have a particularly tough outer layer and preserve well.

The occurrence of wheat and barley within medieval contexts is not unusual and as the quantities involved were less than 5 grains in each case, further analysis would not yield any useful information.

Conclusions

The charred plant remains from medieval features were present, but in very low numbers in ten of the 15 flots examined. It is therefore not recommended that any further analysis is undertaken.

6 ASSESSMENT AND POTENTIAL

6.1 The archive

Context sheets	431
Level records	5
Drawings (A3)	7
Films (plus digital photos)	9
Environmental samples (each 20L)	52
Daub/fired clay	18
Tile	425
Medieval pottery	1799
Post-medieval pottery	71
Slag	44
Animal bone	20251g

Remaining finds
Brick: 2, Mortar: 3, Clay Pipe: 9, Shell: 46, Crucible: 1, Iron Nails: 15, Other Iron: 8, Copper Alloy: 2, Other Metal: 1, Bottle Glass: 7, Other Vessel Glass: 1, Other Glass: 1, Quern: 1, Charcoal: 42, Coins: 1

6.2 Summary of potential and recommendations

The excavation in context

The excavations at St Mary's Gate have provided a valuable resource for research into this part of the Saxon Borough during the medieval period. In particular the excavations revealed a complex of inter-cutting medieval pits, two grain-drying ovens and the remains of a rectangular (possibly timber) structure. The nature of this structure remains as yet, unclear. No other evidence for medieval buildings were recorded, although it is almost certain that they once existed within the extent of the site since buildings provisionally dated to the 10th century were recorded adjacent to the site at Fletcher Gate (Johnson 2003 and Young 2003). This would suggest that the site had been levelled down as far as the natural bedrock, probably during the post medieval period. This may account for the fact that the deposits comprised mainly of pits and cut features, rather than evidence for structural phases found within other parts of the Saxon Borough (Drury Hill 1, and Halifax Place 6, Young 1987).

The absence of structures may also be due in part to post medieval cellarage along the street frontage, with the survival of medieval deposits only evident to the rear of these. At Fisher Gate several pits, ovens and kilns were similarly recorded in an area to the rear of structures. The kilns were mainly for corn drying with one kiln (c.1200) being remarkably similar in construction to the two kilns forming groups 101 and 102. The kiln at Fisher Gate comprised of

steps leading down to a pit. The pit had a circuit of post holes at the base and slots for beams at ground level. The kiln had burnt down during use leaving carbonized grain, and charred two charred vertical poles in each post hole. Although no 13th or 14th century conical shaped cess pits were recorded at St Mary's Gate, the kilns, pits and caves are consistent deposits recorded immediately to the west at Fletcher Gate (15, Young 2003).

In the south-east corner of the PreConquest Borough at Plumptre Street (13, Malone 2001a) two phases of occupation were recorded during a watching brief. Pottery dating from the 9th to the 13th century was found in pits which had been cut into natural sandstone. Earliest phase (late 9th to early 10th) produced Torksey type wares as well as a Linclon Kiln-type pedestal lamp. The second phase (12th to mid 13th century) produced 'splashed wares', mostly jugs. Excavations at Plumptre Street (13, Malone 2001b and Young 2001) a sequence of 12th or 13th century rubbish pits were followed by the construction of a stone oven, roughly keyhole shaped. The sides of the oven were built with sandstone bonded with clay, and the floor was paved with sandstone slabs. Deposits within the oven contained the remains of cereals and pea or bean.

Recommendations

The fieldwork summary and site archive should be used to provide a phased site narrative based on the stratigraphic relationships and the pottery spot dating. The bulk of the pottery assemblage dates to the earlier part of the post-Conquest period (11th century to mid to later 13th century) with a few later medieval and pre-Conquest sherds. Given the lack of published material within Nottingham a preliminary study of the pottery has highlighted the potential for this resource to increase our understanding not only of features within the site boundaries, but of the dynamics of pottery production in this area. The pottery should therefore be subject to full archiving and publication in accordance with the Institute of Field Archaeologists (IFA 2005) and the proposals outlined in this report (Cumberpatch above). This may include some petrological analysis in order to provide a full assemblage description.

Once a phased narrative of the site has been produced the animal bone assemblage should be subject to full analysis to further our understanding of both medieval animal husbandry practices and their relationship to industrial activities. The fish bones probably relate to domestic refuse, and recent analysis of fish bone assemblages in other medieval cities has produced a surprising variety of both marine and freshwater taxa, particularly eel, flounder, plaice, herring and cod (Hancox 2005). Further work would be required on the assemblage from St Mary's Gate to determine if these fish were locally caught or farmed, or if they are being imported from the coast. While further processing of residues for charred plant remains is not recommended, it is recommended that the remaining samples from medieval contexts are processed for fish bones.

Further work as part of the publication should include:

- Further investigation of the slag assemblage by a specialist to determine the range of processes present.
- X-rays of selected iron fragments.
- Comparison of the tile assemblage with similar assemblages from Nottingham. The glazed crested ridge tile from pit 1104 and two fragments of decorated tile (1153, 1176) should be subject to analysis and drawn as part of the published report.
- Provenance provided for the stone artefacts to determine origin.

The charred plant remains were considered poor, and it seems unlikely that an analysis of the pollen would be productive. It is therefore recommended that no further work is undertaken on the environmental samples (with the exception of processing for fish bones).

Archaeological deposits within Nottingham present a unique opportunity for the study of medieval town development. This is partly due to good preservation of deposits, but also to the fact that archaeological features are cut through bedrock, and do not suffer the same level of compression, subsidence and collapse that similar features are prone to within areas of softer geology. The site needs to be placed in a broader chronological framework by comparison not only within the Saxon Borough, but in relation to other medieval cities. With respect to other medieval cities in the north midlands and Yorkshire the publication of sites in Nottingham has been relatively poor and the St Mary's Gate excavations provides an opportunity to rectify this situation. The results of this site should now be made publicly available and published in the Transactions of the Thoroton Society.

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Index to Fig. 2

No.	Location	Type of works	Date of works
1	Drury Hill	Excavation	1969-1970
2	Woolpack Lane	Excavation	1970
3	Fisher Gate	Excavation	1971, 1973, 1974 and 1978
4	Boots Garage	Excavation	1972
5	Goose Gate	Excavation	1976 and 1977
6	Halifax Place	Excavation	1970-1980
7	Fountain Public House	Watching brief	
8	Dean Street	Watching brief	1999
9	Ferman Street	Watching brief	1999
10	Fletcher Gate	Watching brief	1999
11	Woolpack Lane	Watching brief	
12	Bridlesmith Gate	Watching brief	2000
13	Plumptre Street	Excavation	2001
14	Chapel Bar	Watching brief	2001
15	Warser/Fletcher Gate	Excavation	2003
16	Woolpack Lane	Watching brief	2003
17	Pepper Street	Watching brief	2005
18	Goose Gate	Watching brief	2004
19	Garmer's Hill	Excavation	2005
20	Western Street	Excavation	2006
21	St Mary's Gate	Excavation	2005

Appendix 1

Database of excavated contexts