

BRONZE AGE FEATURES AND MEDIEVAL FIELD SYSTEMS ASSOCIATED WITH THE SOUTHAMPTON FRANCISCAN FRIARY FROM OCEANA BOULEVARD, ORCHARD PLACE, SOUTHAMPTON

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ABSTRACT

The site lay immediately to the east of the eastern defences of medieval Southampton. The excavations produced a Mesolithic pit, together with a small number of Bronze Age features, and pottery and flint tools from the Mesolithic to the Late-Iron Age. Occupation resumed in the Late-Saxon period when a number of pits and a well were dug. The area was agricultural throughout the medieval period with small ditched fields, with evidence of brickearth extraction in some. One pit contained iron smithing debris, and an animal-powered mill was constructed in one field. The area remained in agricultural use into the post-medieval period, the south part probably pasture, the north part an orchard. The area was finally encroached on by the expanding town by the beginning of the 19th century.

INTRODUCTION

The Archaeology Unit of Southampton City Council carried out an evaluation excavation on behalf of Custom Built Ltd in 1998 (site code SOU 865) followed by two further evaluation excavations (SOU 1265 and 1334) and two open area excavations (SOU 1316 and 1366) on behalf of Barratt Southampton between 2003 and 2006. The northern part of the site (SOU 1265 and 1316) was on the site of the former Southampton Customs House, whilst the southern part (SOU 865, 1334 and 1366) was previously occupied by the British Sailors' Society.

Site location, topology and geology

The site lay at NGR SU 421110, immediately to the east of the eastern defences of medieval Southampton, towards the southern end of the town. It was bounded to the west by Lower Canal Walk, to the north by Briton Street, to the east by Orchard Place, and by a property known as Bowling Green House to the south (Fig. 1).

The natural topography of the area has been obscured by modern urban development. However, the area slopes gently down to the estuary of the River Test shore some 200 m to the south-west. A spot height of 4.3 m OD was recorded on Briton Street immediately to the north of the site, and another of 3.7 m OD on Platform Road near the shore.

The geological survey map (BGS 1987) shows the site to lie on River Terrace Deposits (mainly loam and clay) resting on River Terrace Gravels.

HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

Residual material of the prehistoric and Roman periods has been found on several sites in the area, though there is very little evidence for in-situ occupation. A series of post-holes found on the Lower High Street site 230 m to the west may date from the Roman period (Russel 1990).

The earliest clear indications of human occupation in the area can be dated to the

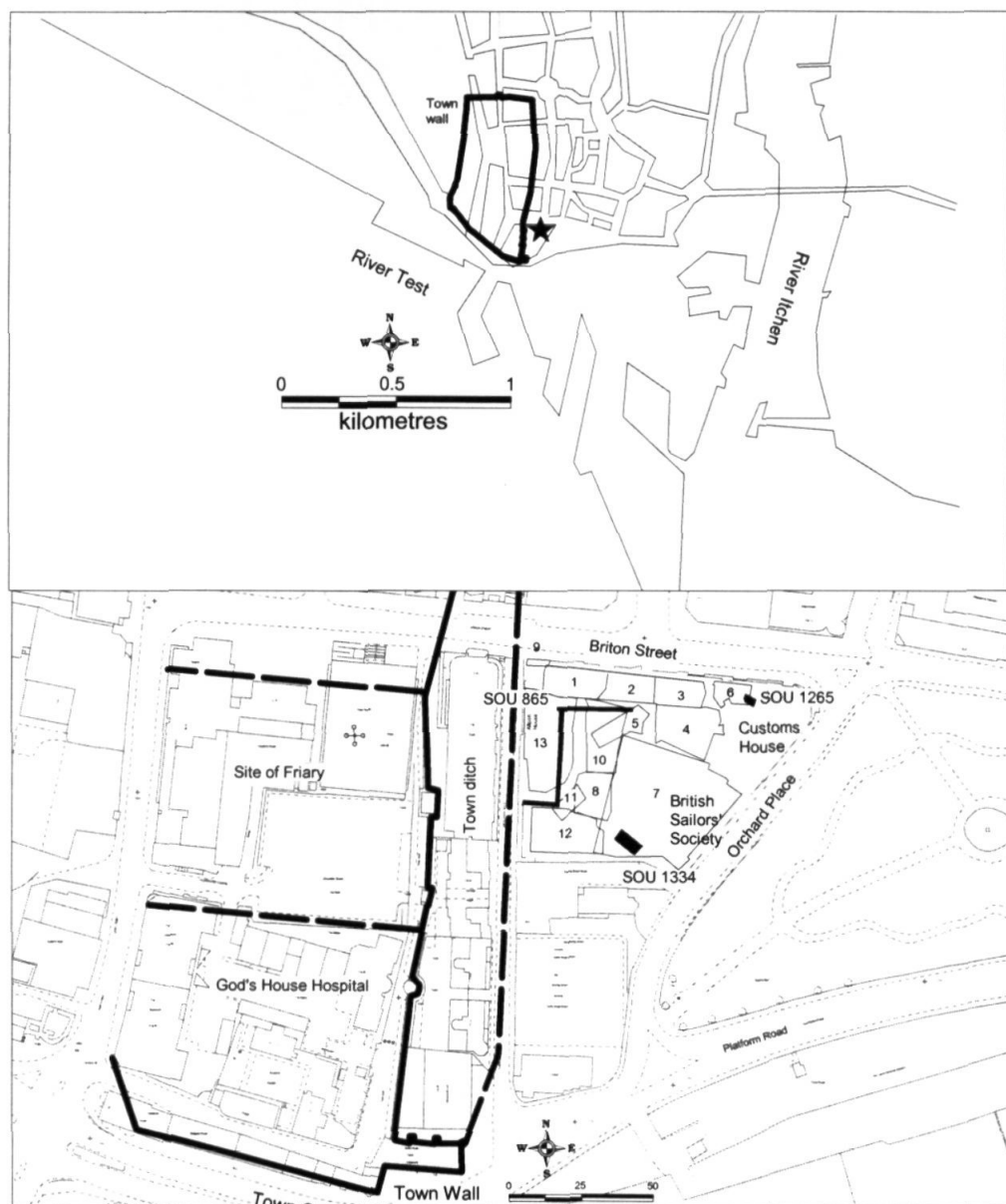


Fig. 1 Top: Location of the site shown as a star outside the walled medieval town. Bottom: Trenches 1 to 5 were SOU 1316, and trenches 7 to 13 were SOU 1366. To the west lay the town ditch, with the Friary precinct within the town wall. God's House Hospital lay to the south of the Friary.

Late-Saxon period and occupation deposits datable to the 10th to 12th centuries AD are common within the area of the medieval walls. This Late-Saxon occupation continued into the late 12th-early 13th century, at which point there was substantial reorganisation of the south-east corner of the town, with two religious establishments being placed there; Maison Dieu (God's House) hospital *c.* 1196 (Kaye 1976), and the Franciscan Friary *c.* 1233–4 (Ruddock 1945, 137). Parts of God's House have been excavated as SOUs 162, 300 and 532 (Smith 1997), parts of the Friary have been excavated as SOUs 199 and 1355 (Russell 2009). The Friary was some 45 m to the west of the present site.

The town received murage grants from 1202 but the walls may not have been completed in stone until about 1360 in which year an inquisition called for work on the west side of town in order to complete the walled circuit (Platt 1973, 122). The southern part of the town wall in the area of the Friary and God's House Hospital appears to incorporate parts of earlier stone structures. Speed's map of Southampton, published in 1611, shows that there was a single ditch to the east of the town wall at its southern end, but that it divided into two ditches to the north.

The Friary owned land outside the defences in the area known as Newtown in the Middle Ages. References go back to at least the 13th century, when some of the leading families in the town, including John de la Bulehuse and William Fortin (fl 1237–1252), are recorded as having properties in Newtown (Platt 1973, 235 and 241). It was the latter who endowed the Friars with land in Newtown. In 1268 God's House Hospital gave land on its northern boundary to the Friary, in exchange for land outside the town ditch. The town granted the Hospital a right of way across the town ditch to reach its new land (Kaye 1976, 130), which presumably became the stone tower known as God's House Gate, dated to the late 13th century (Faulkner 1975, 62). This land was probably due east of the God's House precinct and south of the Friary holding. In 1297 God's House incurred expenses for building an

earthen wall between itself and 'Nywyntone' to the east (Davies 1883, 455).

The Friars retained their land to the east of the town wall, and north of the God's House land. The burgesses granted permission to the Friars in 1373 to build 'a little gate called Posterne' through the Town Walls to allow them to gain access to their garden beyond the walls (Southampton City Council Records Office reference SC4/2/109). The postern still survives in the town wall. A Queens College document of 1436 records the position of the Friary garden; in that year William Chamberleyne quit-claimed to Thomas Eglesfeld, provost of God's House, two messuages and land in the suburb. The property lay between the town ditch on the west, a piece of William Chamberleyne's land on the east, the road from God's House Gate to the Itchen on the south and the garden of the Franciscans on the north (SRO Queens Coll MSS no 437). It is thus probable that part or all of the present site would have formed part of the Friar's garden.

At least some of the area appears to have been orchards in the mid-14th century when a royal inquisition of 1360 found that the town walls were obstructed by gardens and houses. Sir Henry Peverell, keeper of the town, commenced removal of apple and pear trees but the landowners prevented the works (Platt 1973, 122–3).

The Friary was dissolved in 1538; the deed of surrender makes no mention of land (Ruddock 1945, 145); it may have been leased out before the dissolution in return for a premium.

A map published by Speed in 1611, though probably prepared a few years earlier, shows people bowling on an unenclosed green (labelled 'Gods House Grene') at the south end of Orchard Place. A boundary line, possibly representing a wall or ditch is shown at the north end of the green, just to the south of a change in orientation in the town wall to the west. If this represents its true position it ought to be located approximately on the boundary between SOUs 1316 and 1366. Two buildings are shown immediately to the north of this boundary, together with a number of enclosed fields. The southernmost of these fields, which

contains the buildings, is shown as having trees; this possibly represents an orchard. The road to the east of these fields is labelled as 'Orchard lane'.

The area of the present site had come into the ownership of Queen's College Oxford by 1715 when a plan, folio 44 of a portfolio known as 'Brine's plans', was prepared of the College's properties in the town. Brine's plan shows that in 1715 the area to the north of the old bowling green was orchards, rented to a Mr Lambert.

Mazell's 'Plan of Southampton and of the Polygon' of 1771 shows the area north of the bowling green divided into small, near square, fields. Occasional buildings are shown in these fields. Queen's College records the plot in 1774 as *Orchard and public house in Orchard Lane, and orchard adjoining the last* (Kaye 1984, 116). The latter appears to have been on the Briton Street frontage.

Milne's 'Plan of the Town of Southampton' of 1791 does not show details of field boundaries. It appears to show a similar arrangement of dispersed buildings to the north of the bowling green. However, the line of Briton Street is shown on a north-west to south-east alignment. A group of buildings is shown on the north side of this street, indicating that suburban development of the area to the east of the town walls had started by 1791.

An annotation on Brine's plan dated 1806 records that the area was sub-divided into three properties let to Messrs Allen, Eldridge and Lintott. Two buildings were shown on Mr Eldridge's plot to the east near the Orchard Lane frontage. The southern one is labelled as having been built in 1818, and the one to the north in 1802. A bow-fronted house was built on Mr Lintott's plot, labelled 'New House Built in 1818'. The buildings would have been located on SOU 1316, the area of SOU 1366 having no buildings although with occasional trees.

This general impression of isolated buildings within small fields was supported by a small excavation 90 m to the north-east of the present site (SOU 1283: Clelland 2006). It produced a medieval ditch, gullies and pits. A post-medieval post-hole suggests the possibility of structures at that period.

In 1795 work commenced on construction of the Southampton to Salisbury Canal (Welch 1966). Its southern end made use of the town ditches. The canal was not a commercial success and ceased to operate by 1811. By 1820 it had become a stagnant nuisance. Its southern end had been filled in by the time that the Royal Engineers' map was surveyed in 1846.

Nineteenth century maps show terraced housing on the south side of Briton Street. The house of c1818 at the east end had been replaced by terraces fronting Briton Street and Orchard Place by 1870. These properties broadly corresponded to SOU 1316. The area to the south of the Briton Street terraces (broadly corresponding to SOU 1366) consisted of two open yard areas, the southern one being labelled as a timber yard, with an irregular range of buildings between them. Later Ordnance Survey maps show much the same situation until after the Second World War. The British Sailors' Society building was built on the site of the timber yard by 1947, though much of the terraced houses to the north remained. These were demolished when Briton Street was realigned in the mid-1950s. The west end of Briton Street was then moved to the south to give a more east to west alignment.

THE EXCAVATIONS

Excavation methodology

It was not possible to excavate the two sites as single trenches, instead areas were made available by Barratt Southampton as construction work progressed. SOU 1316 was dug as Trenches 1 to 6, and SOU 1366 was dug as Trenches 7 to 13. The trench edges did not always coincide, resulting in loss of archaeological deposits between trenches (Fig. 1). A watching brief was held on piling around the north and east edges of SOU 1316. Trench 9 was another watching brief on ground works on the Briton Street frontage that did not expose archaeological remains. The modern overburden was removed by mechanical excavator to reveal the natural brickearth, although small

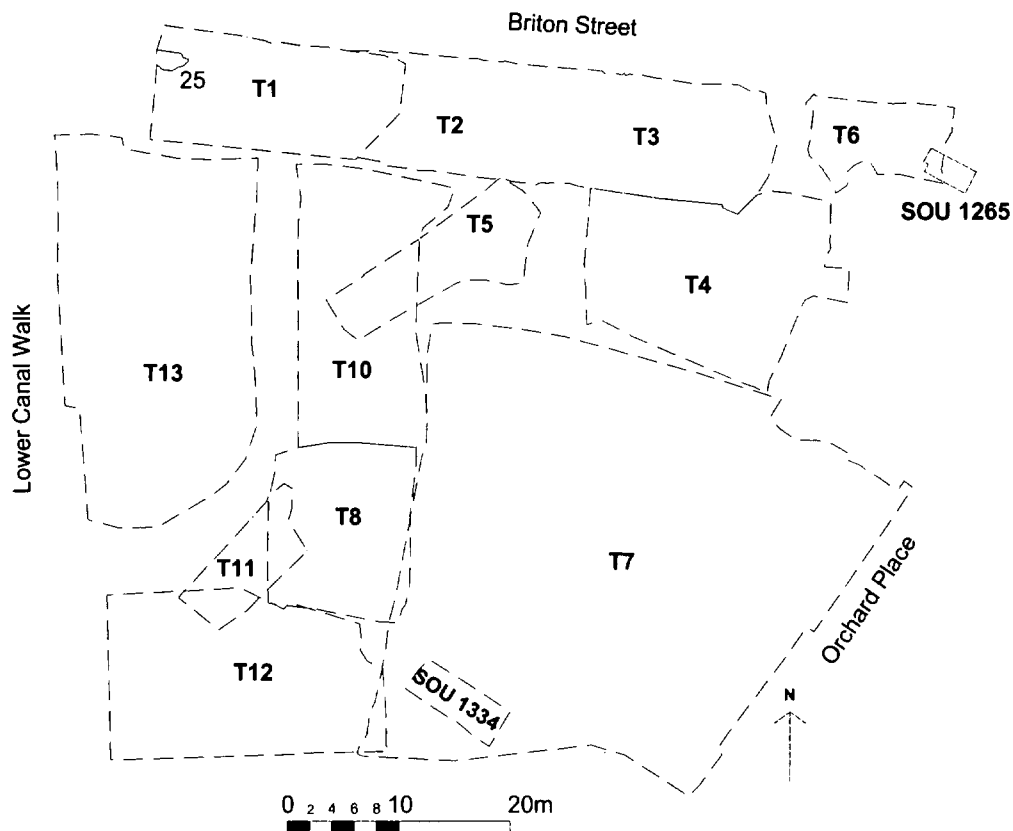


Fig. 2 Prehistoric features

areas of the buried soil horizon above the brickearth were examined by hand. In general discreet features were half-sectioned, and at least one section was excavated across each ditch.

Results of the excavations

The following descriptions form a combined summary of the results from all of the phases of excavation. More detailed descriptions are given in the individual archive reports. Summaries of the specialist reports are also given. Period plans are given for the main periods of activity. Ditches are shown hatched for ease of recognition.

Natural

The deeper groundworks on SOU 1316 showed that the Bracklesham Beds were overlain by the gravels of the River Terrace deposits. The gravel was overlain by a layer of brickearth. The top of the brickearth was at 2.91 m OD at the north of the site and at 2.37 m OD at the south of the site. The upper part of the brickearth had been subject to much human disturbance demonstrated by discontinuous layers of brickearth mixed with varying quantities of soil overlaying the cleaner brickearth. This disturbed brickearth overlay prehistoric features in trench 12 (see below). An indistinct, east to west aligned, feature (880) in trench 12 may have been a

natural feature of uncertain date, perhaps a water channel.

Prehistoric

Eight features have been dated to the prehistoric period (Fig. 2). Four irregular features (25, 58, 298 and 307) cut the natural brickearth in trenches 1, 5 and 6. Features 58, 298 and 307 were small, but 25 was at least 2 m wide. They each had a fill with a high brickearth content (24, 59, 299 and 308). A small quantity of roof slate was recovered from 24 and 59, and a sherd of medieval pottery from 24; all were very small and are considered intrusive. Ten worked flints and 9 burnt flints were also recovered from fill 24. No prehistoric pottery was recovered from any of these features.

Four small pit-like features (477, 819, 827, and 878) cut the natural brickearth in the south-west corner of the site (trenches 7 and 12). They each had brickearthy fills (497, 820, 828, and 879 respectively). Fill 497 was capped by a charcoal-rich soil (478). Feature 477 contained only pig bone. The other three features all produced fragmentary prehistoric pottery. The pottery from feature 878 was Late-Neolithic or Early-Bronze Age (see below), that from 819 and 827 was Middle-Bronze Age, together with a small sherd of Late-Iron Age or Early-Roman pottery from 819. Features 819 and 878 also produced worked flints; notably 878 contained a disc scraper and a Late-Neolithic or Early-Bronze Age arrow head. The small charcoal assemblage from fill 879 suggests a light woodland environment, possibly with heathland nearby (see below). A sequence of redeposited natural deposits overlay feature 477. They consisted of patchy gravel (457) poking through brickearth (405), which became paler to the west (415). A small area of mixed brickearth (588) near the north end of trench 7 may have been part of the same depositional sequence. No finds were recovered from any of these layers. Residual prehistoric pottery and worked flints were recovered from several later contexts. These included eleven further sherds of Late-Iron Age or Early-Roman wares. These features demonstrate Bronze Age occupation, with further activity in the Late-Iron Age/Early-Roman period.

Late-Saxon, AD 850 – AD 1075

Four features were found on SOU 1366 (Fig. 3), but none were identified on SOU 1316. Three of the features (772, 857, and 1020) were small pits, the fourth 956 was a well. Pits 772 and 857 each had two loam fills (773/774 and 858/864) from which Late-Saxon pottery was recovered. Pit 1020 was slightly different in that its lowest fill was brickearth with abundant flecks of oak and ash charcoal (1021) from which flint flakes, Late-Iron Age and Late-Saxon pottery, mixed cereal grains, a fragment of possible hearth lining, and fragments of an iron chain were recovered. The nature of these pits is uncertain.

The well was a large, sub-circular, pit. It had a diameter of 2.3 m and a depth of 2.05 m, its base being at 0.53 m OD. Ground water was encountered at about 0.75 m OD. The primary fills of pit 956 were deposited around a central, circular, shaft (1048) with a diameter of 0.9 m (Fig. 4). This probably originally had an organic lining, but none survived. The space around the shaft was backfilled with a series of dumps of brickearth with sandy lenses (963, 964, 979, 982, 999, 1001, 1012, 1027, and 1049). A small quantity of finds was recovered from fills 964 and 963. These included burnt flint, burnt brickearth and daub, hammerscale and an iron hook, fragments of oak charcoal, pig teeth fragments, and five sherds of Late-Saxon pottery.

The shaft was filled with a sequence of horizontal deposits suggesting the well silted up gradually before the shaft rotted. The top of the shaft was ragged suggesting that the lining had started to collapse before the infilling was completed. Finds included greensand and Purbeck stone, together with a fragment of Roman brick; daub and burnt brickearth, bone, charcoal, an iron rove and a nail, and some iron slag.

These four features indicate a phase of Late-Saxon activity, but its nature is unclear. Few features were found suggesting the occupation was not intense, on the other hand 244 sherds of pottery were recovered. Most of the pottery was residual, and its small sherd size suggests it came to the site as part of manuring of the

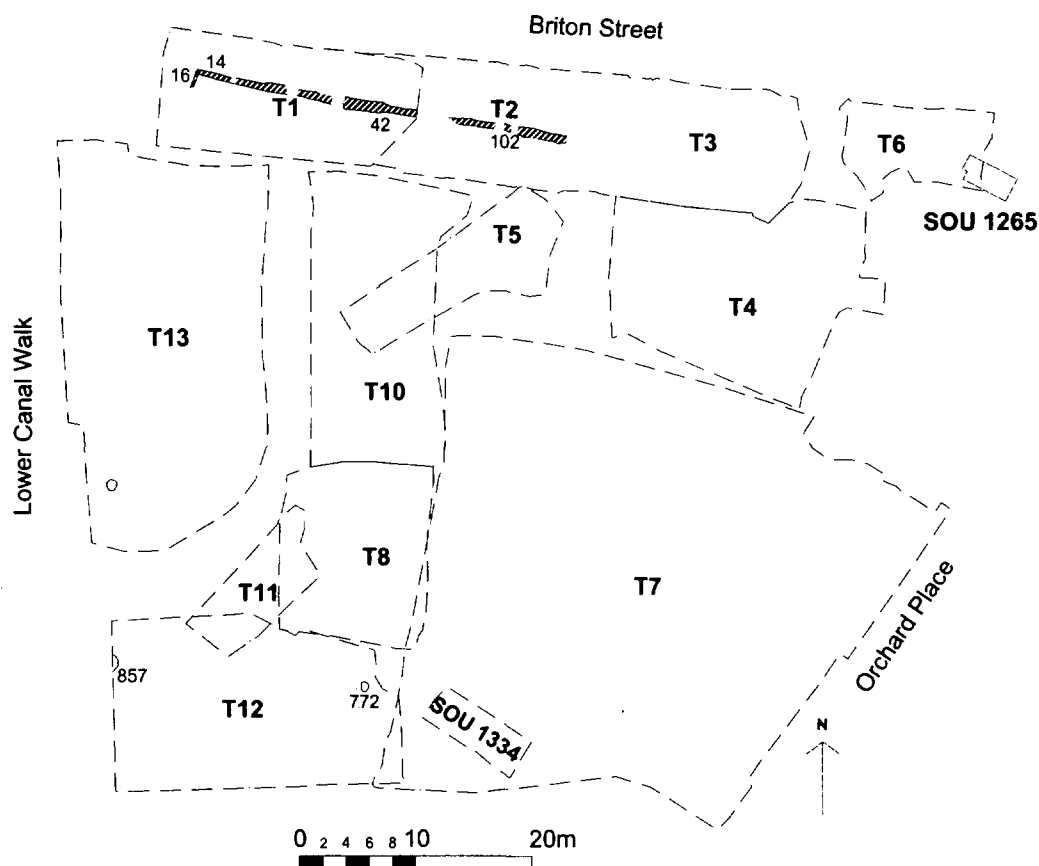


Fig. 3 Late-Saxon and Anglo-Norman features

fields. The daub and burnt brickearth suggest a timber building, the hearth lining, slag, hammer scale and charcoal suggest a blacksmith nearby; the roman brick and stone could have come from the hearth. The nail, rove and chain could have been products. The small number of bones of domestic animals and the cereal grains suggest that food refuse was being disposed of.

Anglo-Norman. AD 1066 – AD 1250

Only one feature was dated to this period, an east to west ditch (14, 42, and 102) which cut the natural brickearth (Fig. 3). It was at least

32.5 m long, but its east end had been removed by later features. Its west end (16) turned to the south, but faded out after 3 m. Its fill (15, 17, 43, and 103) produced very few finds; these included prehistoric flints and pottery, and two sherds of Anglo-Norman pottery. These ditches mark the beginning of a field system that was maintained throughout the medieval period. The fact that only Anglo-Norman or earlier pottery was found in this ditch suggests it was allowed to silt up in that period.

High-medieval, AD 1250 – AD 1350

Several ditches cut the natural brickearth or

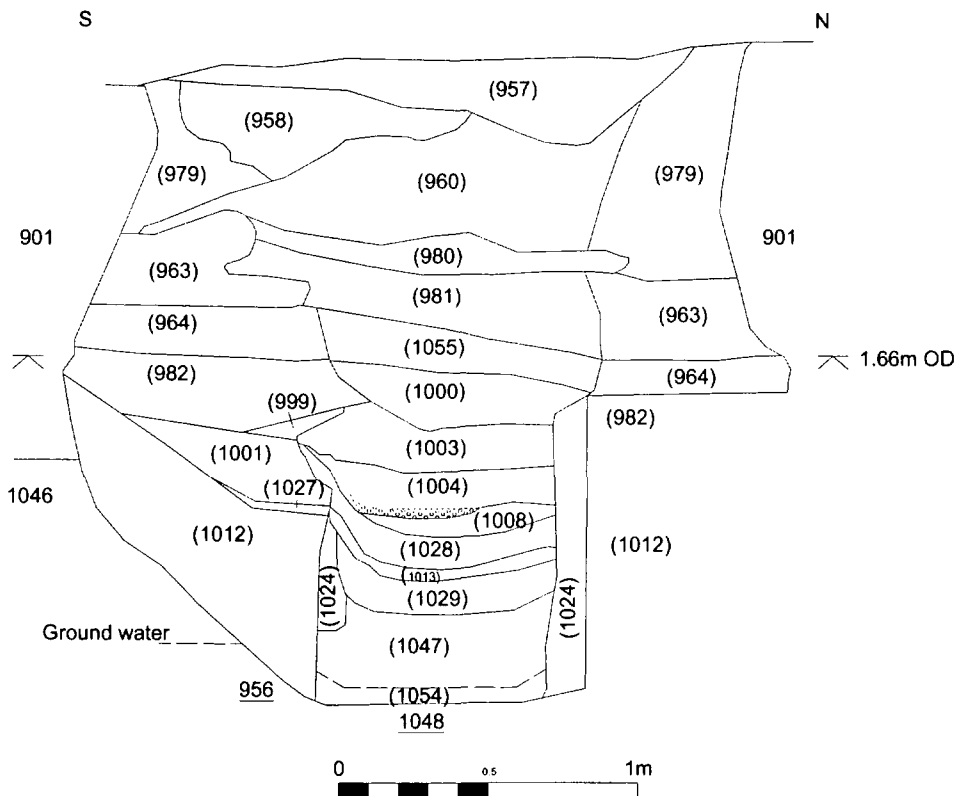


Fig. 4 East facing section through well 956

the Anglo-Norman or earlier features (Fig. 5). Most were discontinuous due to later disturbances. In some cases it could be shown that the ditches silted up and were recut on at least one occasion. Further it cannot be proven that all of the ditches were open at the same time. However, a tentative attempt at defining fields is given below, each suggested field being assigned a number.

Field 1 was a possible field in the south-east corner of the site broadly corresponding to trench 7, and approximately parallel with Orchard Place which certainly existed by 1611, and may well be older. The field was slightly trapezoidal in plan, its north end being wider, at a minimum of 38 m, than its south end at 24.8 m. It was at least 33 m long. It was defined by

ditches 416, 424, 438, 446, 466, and 594 on its west side, 520 to the north and 431 to the east. They were up to 1.6 m wide and 0.5 m deep. Its south edge lay beyond the limit of excavation. There was a change in alignment between ditch sections 416 and 594 at the south end of the west edge. There was certainly a terminal to the south end of 416, but 594 was too disturbed to define its form. If they were contemporary with each other, they would represent an approximately 1.7 m wide gap in the boundary. There was another gap between 416 and 424. A northern terminal to 416 was seen in SOU 1334 (8) with a possible post-hole (10) between them. These gaps presumably provided access between fields. The ditches had brickearthy fills which produced few finds. Those finds that

Field 2 was identified to the north of the west side of field 1. It was much smaller, measuring 26.5 m east to west, by 14.3 m north to south. It was defined to the west by two disjointed lengths of ditch (64 and 280) that continued the line of the western ditch of field 1. Its north edge was defined by ditch sections 133, 147, 152, and 255, and its east edge by 253 and 261. Its south edge was defined by ditch 222 which ran parallel with ditch 520 to field 1, but the relationship between them had been removed. It is probable that there was another field to the east, but that area had been destroyed by the removal of the footings and basement of the Customs House.

A short length of north to south aligned ditch (210) may have sub-divided field 2 into two unequal sections. The south end of 210 had been removed by a double row of intercutting, sub-rectangular, pits that formed a north-west to south-east alignment parallel with the southern edge of the field. The northern row (pits 172, 174, 199, 203, 215, and 227) was 14.7 m long. Three further features (201, 224 and 238) cut into the edges of the eastern pits. The southern row (176, 184, 195, and 197) was shorter at 7.5 m and was restricted to the west. The pits were of similar dimensions, for instance pit 184 measured 1.8 m by 2 m, and they were all dug down to the top of the gravel. They had loamy fills from which quite large finds assemblages datable to no earlier than the high-medieval period were recovered. The most significant finds were two almost complete sheep skeletons from pits 172 and 203. Four further intercutting pits (240, 249, 257, and 259), aligned roughly north to south, were present near the east end of field 2. They were more irregular than the other pits. These features have been interpreted as being brick-earth digging quarries, that were subsequently backfilled with rubbish deposits.

Field 3 has been identified to the north of the east end of field 2. It was defined to the west by ditch 158/167 and the east by 311 giving a width of 20.3 m. Its northern edge lay beyond the limit of excavation.

Field 4 fronted Orchard Place, but most of this area had been removed by the Customs

House footings. Two small pit-like features (318 and 328) were present.

Field 5 was located to the north of the west end of field 2. A short length of ditch (108) on the north edge of trench 3 was on the same alignment as the western ditches of fields 1 and 2, and may have defined the western edge of field 5. This area was heavily disturbed by a large late-medieval feature (119, see below) which may have removed any southern continuation of ditch 108. Field 5 was 9 m wide.

A 3.4 m wide, roughly north to south aligned, trackway ran to the west of Fields 1, 2 and 5. Its west side was defined by discontinuous ditch lengths (62/89, 278, 610 and 768) whose north end were paralleled by a further ditch alignment (60 and 97) some 0.8 m to the west and the south end by 775. Two east to west aligned ditch sections (420 and 426) cut across the line of this presumed trackway near the south end of trench 7. It is not clear how they related to the trackway, and no clear relationship could be established between them and 424. Two pits (293 and 485) were present on the eastern edge of this putative trackway, with a stake-hole (296) just to the south of 293. It is probable that the trackway provided access to the various fields.

The situation to the west of the trackway was less clear. Field 6 was identified in trench 12, its north end being defined by ditch 777/849 which continued the line of ditch 420. The west and south ends of this field lay beyond the limit of excavation. A roughly north-west to south-east aligned ditch (825) may have been a sub-division of this field, but it did not last long as its north end was cut by later features (855 see below). Ditch 849 cut a sub-circular pit (851). Its finds assemblage included high-medieval pottery, hearth linings, and 4.1 kg of iron smithing slag. Andrews was of the opinion that the slag was in a primary position and suggests iron smithing in the near vicinity in the early high-medieval period. Five intercutting pits (842, 855, 865, 874, and 886) cut features 825 and 880. A further pit (838) was to the east of this sequence, and another one (867) to the south. Three further pits (770, 781, and 808) were present near the east edge of field 6. All

of these pits were very similar to the brickearth quarries identified in field 2, and may have served the same functions.

Field 7 was located to the north of field 6. Its north end was defined by ditches 668 and 1018. It was 14.5 m wide in the north to south axis, though its west end also lay beyond the limit of excavation. Its north-east corner was divided off by a curving ditch line (605 and 1039). It is not clear what function this sub-division would have served. Two pits (626 and 628) were present in this sub-divided area. Three further pits (734, 741, and 745) were present in the main part of the field, 734 and 745 being close to the southern boundary of the field.

Field 8 was located on the west side of the area. It was defined to the north by ditches 961, 978, and 993, and to the east by ditch 905. They were a maximum of 0.8 m wide and 0.33 m deep. The northern boundary may have been redefined by a 0.4 m wide and 0.22 m deep ditch (647/945) 0.8 m to the south. There may have been further sub-divisions or an earlier field system as shown by the remnant of a 0.52 by 0.16 m, north to south aligned, ditch (1043) that was cut by ditch 993. Its line was roughly continued by an amorphous group of at least 14 ephemeral features (925–944 and 969–976). They have been interpreted as being root holes, and might indicate the presence of a hedge. A 0.2 m deep, irregular, pit (1052) at the south end of this alignment may have been part of it.

The area to the east of field 8 was poorly defined, but was probably divided into two fields (9 and 10) by a short surviving length of ditch (719) that was redefined in the late-medieval period by a hedge (679 see below). The north end of field 10 was defined by ditch 647 that continued the line of 945. These fields were 19 m long, east to west, and field 9 was 7.8 m wide, and field 10 13 m wide. Three or four pits (274, 292/268/689, and 689) were present in field 10. Three small fragments of painted window glass, presumably from the Friary, were found in pit 689. Two stake-holes of uncertain function (272 and 276) were also found in field 10.

The arrangement to the north of fields 8 and

10 was different. The area was divided into two fields (11 and 12) by a north to south aligned ditch (30) that cut the Anglo-Norman ditch 42. The north edge of both fields and the west edge of field 12 lay beyond the limit of excavation, though a late-medieval ditch (28/144) was present on the north edge of the excavation. Field 11 was 14.4 m wide. An irregular feature (79) with multiple fills was present near the southern edge of field 11. It was dug down to the top of the gravel. It was probably a series of inter-cutting brickearth quarries like those in fields 2 and 6. A fragment of another feature (56) to its west may have been part of the same sequence. A stake-hole (83) was present on its edge.

At least 48 irregular features datable to the medieval period or later were excavated. The most likely interpretation for them is that they were root holes or cultivation beds. Unlike the two hedge alignments that have been identified, they did not appear to form regular patterns or alignments, so may have been associated with isolated plants growing in the fields, either deliberately grown perhaps to provide shade for livestock, or were weeds.

An agricultural soil developed over the natural brickearth across the entire site. It was mostly removed prior to the main phases of excavation, but the evaluations showed it to be between 0.5 and 0.9 m thick. The base of this layer was investigated in nine locations (11 in trench 1, 94 in trench 2, 114, 122, 130 in trench 3, 306 in trench 6, 662 in trench 10, 748 in trench 11, and 766 in trench 12). A scan of the seeds from contexts 11 and 130 suggested the cultivation of pulses and cereals in the area, though they could not be dated. These samples produced finds datable from the prehistoric to the high-medieval periods. It is probable that this soil started developing in the medieval period at the latest, and continued to build up until the beginning of the 19th century.

Late-medieval, AD 1350 – AD 1550

Fewer ditches were assigned to the late-medieval period than to the high-medieval period (Fig. 6), though it is possible that some of the ditches dated to the earlier period were in fact later or remained open into the late-medieval period.

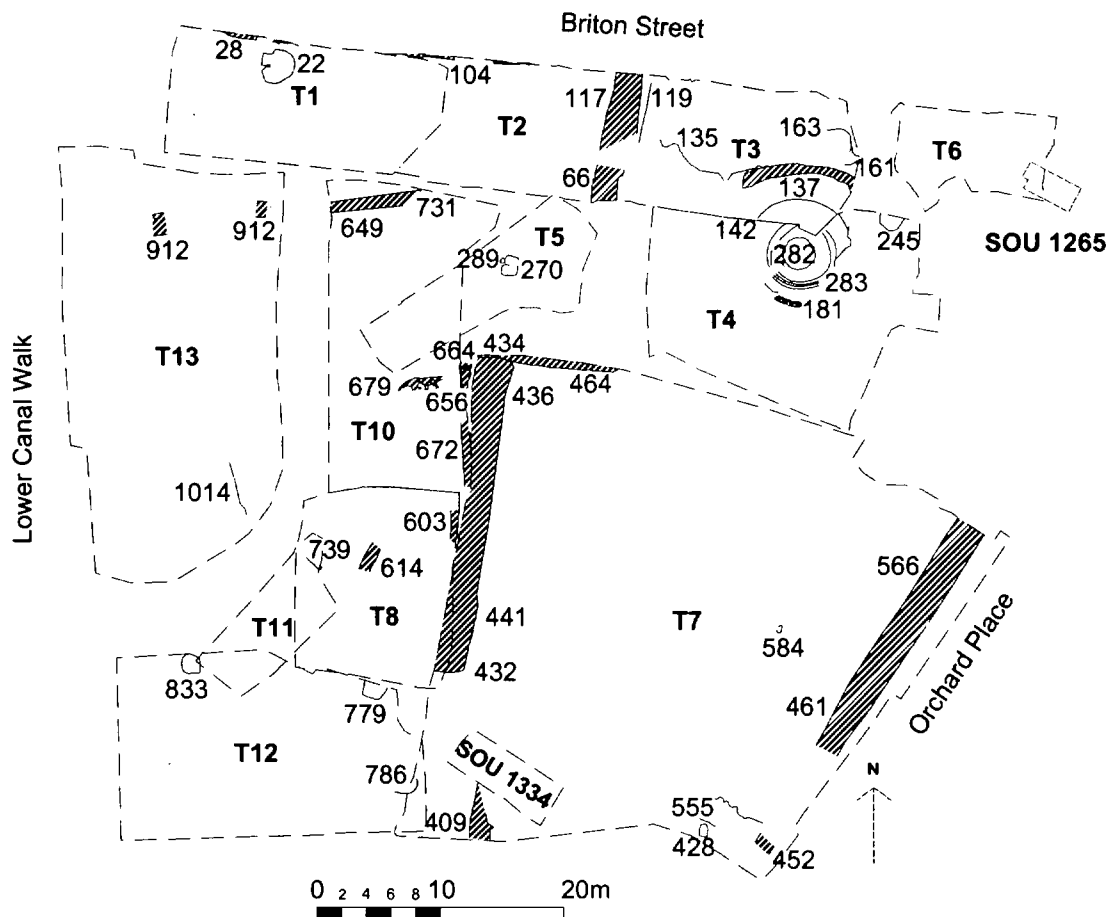


Fig. 6 Late-medieval features

However, a similar, though simplified, field pattern can be assigned to the late-medieval period.

The ditches defining field 1 in the south-east corner of the site were redug, though slightly to the west of their high-medieval location. The west edge of the field (432/436/441/603/656/664/672) roughly coincided with the west edge of the high-medieval trackway. The dislocation in the orientation noted at the south end of a proposed opening through the western ditches appeared to continue into the late-medieval period (ditch 409). The field's eastern boundary (452/461/566) also

appeared to shift to the west, perhaps reflecting an encroachment of Orchard Place onto the fields. The northern edge did not appear to have shifted significantly, though the ditch was redefined (434/464) and cut across the line of the trackway. Two amorphous features in the south-east corner of field 1 (428 and 555) have been interpreted as being either bedding trenches or perhaps the base of a midden. A small pit (584) was present to their north.

No clear boundaries defining field 2 were found, though a curving ditch (137) to the north of the high-medieval north ditch was present. A large circular feature (142) was

present to its south. It cut the high-medieval ditches 147 and 210. It was very difficult to define, largely having fills of redeposited brick-earth. It had a diameter of 8.8 m. A dark stain (283) forming a ring about 3 m from its centre has been interpreted as being the remains of a wooden partition. The outer ring of the feature was shallow at between 0.1 and 0.2 m deep, and its fill contained abundant impressions of vegetable matter (probably grass or straw). There was a circular pit (282) at the centre of the feature that had a diameter of about 2.6 m and a depth of 0.53 m. Its fill contained abundant building material including slate and stone. This feature has been interpreted as an animal powered mill. The outer ring would have formed the animal walk, whilst the central pit would have held the mechanism within a wooden housing indicated by staining 283. The building material was probably demolition material from its dismantling. The latest datable find was a fragment of an unusual blue glass jar or flask dated to the 13th to 15th centuries.

The mill appeared to have been rebuilt. A 2.2 m long fragment of a limestone rubble wall (181) was built through the outer fills of the southern edge of feature 142. A smaller pit (190) measuring 0.57 m by 0.32 m was dug through the backfill of 282. It was probably a housing for the milling mechanism. The fills of both pits 190 and 282 were overlain by a secondary demolition spread with abundant charcoal and slate and a large iron bar that may have been part of the mill mechanism. An irregular pit-like feature (245) was present to the east of the mill.

The high-medieval field divisions at the north-east corner of the site (fields 3 to 5) did not appear to survive into the late-medieval period. A substantial north to south aligned ditch (66/117), 2.1 to 2.8 m wide, was present near the west end of field 5 slightly to the east of the line of the high-medieval western boundary to field 2. However, the area to the south, that would have bounded field 2, was not made available for excavation. Unusually for the ditches, this ditch produced quite a large finds assemblage that included building rubble and domestic rubbish such as animal bone and

late-medieval pottery. A significant find was a tinned horse spur with applied decoration dated to the early-14th century (see below).

The area of fields 3 and 5 was heavily disturbed by a large, amorphous feature (119/135/161) with a depth of between 0.25 and 0.45 m. A large finds assemblage was recovered from its loamy fills, including a hearth bottom, iron slag, and a Long Cross penny of Henry III struck at Canterbury in 1250. Possible interpretations for this feature are that it might have been a bedding trench for agricultural activity or hollow caused by activity associated with the mill to the south. A pit (163) was found on its eastern edge, though the relationship between the two had been removed by a modern disturbance. It had loamy fills that produced building rubble, animal bone and a 15th century glass linen smoother.

Very few divisions were identified on the western side of the site. This is particularly true of the south-west corner corresponding to fields 6 to 10. It is possible that the area became one large field, or that the late-medieval divisions were simply not identified. A couple of fragments suggest that the latter interpretation might be nearer the truth. A 2 m length of south-west to north-east aligned ditch (614) cut the high-medieval ditch 605 in the north-east corner of field 7.

Three pit-like features were found to the south of 614. Two of them (779 and 786) had irregular edges and were quite deep at 1.77 and 1.4 m respectively. Their bases were at 0.5 and 0.89 m OD, that would place them close to the modern water table of about 0.75 m OD. Pit 786 cut two high-medieval pits (781 and 808) and had a limestone slab laid against the base of its western edge. The edges of both features showed signs of collapse, and they have been tentatively interpreted as being short-lived wells, presumably dug to irrigate the fields. The third pit (833) was only 0.53 m deep. It cut the high-medieval ditch 849. It had brickearth rich fills which produced relatively few finds. Its function is unclear.

Fragments of two large features (739 and 1014), both with loamy fills, were found to the west of ditch 614. Feature 739 was 0.65 m deep, and 1014 was 1.22 m deep. The relationship

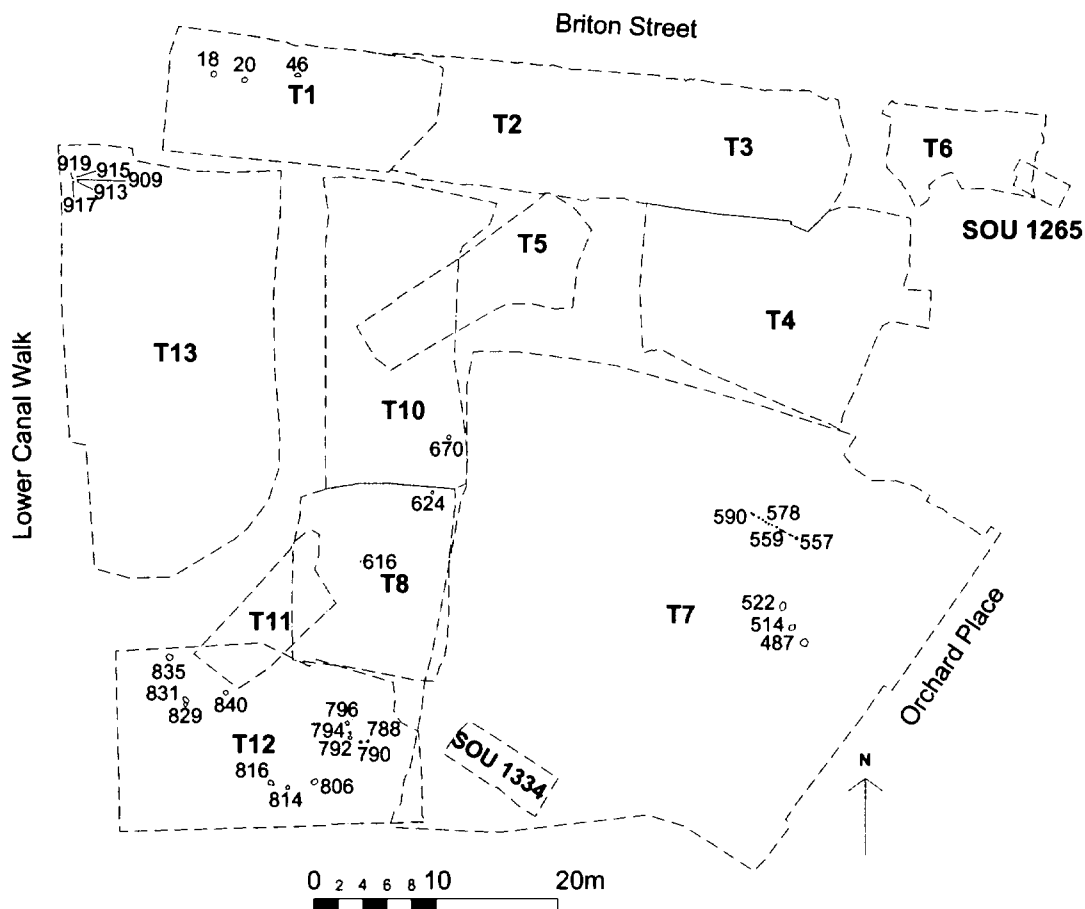


Fig. 7 Medieval structural features

between them was removed by groundworks, but it is possible that they were part of the same feature. The difference in depth might be explained by its base rising up to a terminal at its south end. An interesting find from 739 was an iron knife with an inlaid blade. The function of the features is unclear.

The high-medieval ditch 719 between fields 9 and 10 was cut by a substantial ditch-like feature (679) which had six irregular features (697, 701, 703, 705, 709, and 711/713) cut through its fills. They all had loamy fills from which sizable finds assemblages were recovered. These included a ceramic louver, copper alloy objects

(including a buckle and tweezers), iron objects, hearth linings, and iron slag. Clay tobacco pipe from fill 704 (of feature 703) may have been intrusive or suggestive of a long continuation of use. The features have been interpreted as being a hedge growing out of a ditch.

The high-medieval ditch defining the north end of fields 8 and 10 was recut in the late-medieval period (ditch 649/731/912) some 0.2 m to the south. Four stake-holes (947, 949, 951, and 953) cut its base at the west end.

An irregular pit-like feature (270) cut the high-medieval ditch 278 on the boundary between the high-medieval field 10 and the

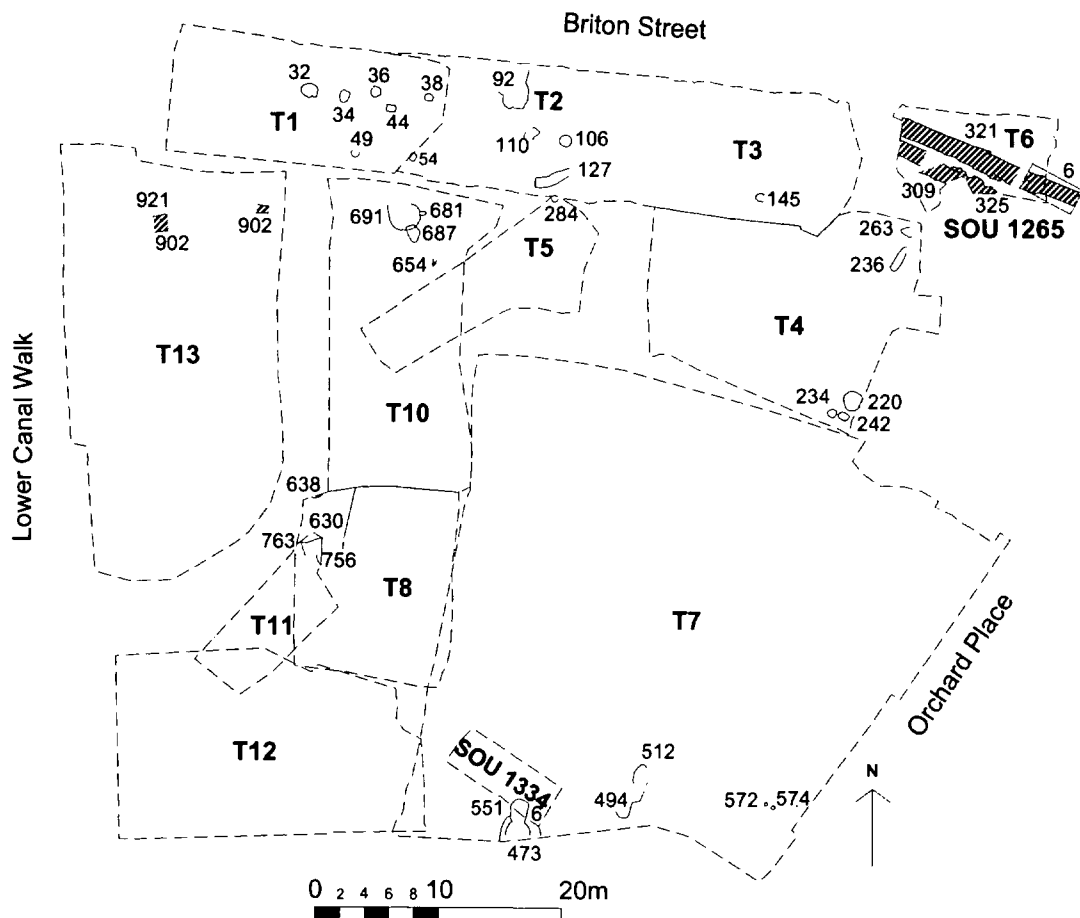


Fig. 8 Post-medieval features

trackway. At least one stake-hole (289) was cut into its base. The function of this pit is unclear.

The southern edge of a ditch (28/104) was found on the northern edge of trenches 1 and 2. They defined the northern edge of fields 11 and 12, but their loamy fills produced late-medieval pottery.

An irregular shaped pit (22) was present just south of ditch 28. The fills produced a large finds assemblage that included stone quern fragments, hammerscale, an iron buckle and a

copper alloy pendant with incised floral decoration. The latter was probably part of a horse harness.

Structural elements of uncertain date

Several stake-hole like features could be tentatively grouped together into structural alignments (Fig. 7). None were securely dated, but most probably dated to the medieval period.

There were two probable fence alignments in field 1 aligned roughly north-west to south-

east. The southern alignment was about 4 m long, and consisted of three stake-holes (487, 514, and 522) at approximately 1.8 m centres. Feature 514 was lined with stones. The second alignment was located 5 m to the north of the southern fence and was about 4.4 m long. It consisted of 14 closely spaced small stakes, of which only four (557, 559, 578, and 590) were large enough to investigate. A sherd each of Late-Saxon and Anglo-Norman pottery was recovered from them.

Three roughly L-shaped alignments (788/790/792/794/796, 806/814/816, and 829/831/835/840) were found in field 6. Their finds assemblages could be dated to no earlier than the high-medieval period. They appeared to be part of flimsy structures, perhaps wind breaks or temporary animal pens.

A sub-square structure, approximately 0.3 m wide, consisting of five stakes (909, 913, 915, 917, and 919) was found just north of the line of the ditches between fields 8 and 12. The stake in the south-east corner appeared to have been replaced. No dating evidence was recovered from them.

Three substantial stake-holes to the north in field 12 (18, 20, and 46) may have formed part of another alignment, though they were irregularly spaced and did not form a straight line. Three isolated stake-holes (616, 624, and 670) were found in fields 9 and 10. The finds suggest a date no earlier than the high-medieval period.

Post-medieval, AD 1550 – AD 1800

Few post-medieval boundaries were identified (Fig. 8). However, the clay tobacco pipe from the late-medieval hedge line between fields 9 and 10 suggests that it may have continued to grow well into the post-medieval period. It is possible that some of the other medieval ditches remained open in the post-medieval period. Mazell's map of 1771 clearly shows a checkerboard of square fields in this area. Post-medieval ditches were found in two locations. However, the medieval field system may no longer have existed, and so features for this period will be generally located by reference

to the site trenches rather than the postulated fields.

The first location formed a recut of the late-medieval ditch 912 between fields 8 and 12 (ditch 902). Its finds dated to no later than the high-medieval period, but its stratigraphic position, cutting the late-medieval ditch, indicates a post-medieval date. A stake-hole (921) cut its fill.

The second location was in trench 6 and SOU 1265. Two broadly parallel, north-west to south-east aligned, ditches (6/321 and 309/325) cut across the high-medieval features associated with fields 3 and 4. Most of the pottery dated to the medieval period, but two sherds of post-medieval pottery were recovered from 321 and a further four such sherds from SOU 1265 feature 6. An assemblage of quite large horse and cattle bones was recovered from both ditches which Hamilton-Dyer considered to be indicative of a post-medieval date (see below). The most likely interpretation for these ditches is that they formed road side ditches against the south side of Briton Street which had been laid out by the late-18th century.

The land use either side of the line of ditch 902 was different. Only sporadic features were found to its south, perhaps indicating an area of market gardening or pasture. A sub-oval pit (691) cut the late-medieval ditch 731. Its finds included clay tobacco pipe. Two small features (681 and 687) cut its edges. There was another pit (220) in the south-east corner of trench 4. Two small features (234 and 242) to its south might have been tree holes. Two irregular features (236 and 263) were present to their north. A pair of probable post-holes (572 and 574) were present in the south-east corner of trench 7. A possible midden base (494/512) was found to their west, and may have been a replacement of the late-medieval midden identified to its east. A feature (654) which cut the high-medieval feature 660 near the east edge of field 10 may have been a fragment of ditch or a bedding trench. The finds included clay tobacco pipe.

The large late-medieval feature 739 in trench 11 was recut by a very large feature (630/756) that was at least 7 m wide and 1.1 m deep. It cut

Table 1 Quantities of worked flint by type

<i>Type</i>	<i>Number</i>	<i>Notes</i>
Arrowhead	1	
Core	14	
Flake	236	
Blade	6	Flake of blade dimensions
Fragment	43	Not definitely worked flint
Scraper	6	
Tool	7	
TOTAL	313	

Table 2 Quantities of flakes, blades and other debitage by type

<i>Flake type</i>	<i>Number</i>	<i>Notes</i>
Primary flake	16	
Secondary flake	48	
Tertiary flake	74	
Flake fragment	56	
Tiny flakes	23	Retouch or shatter
Secondary blade	1	
Tertiary blade	1	
Blade fragment	4	
Debitage	4	Miscellaneous waste
Uncertain flake	15	
TOTAL	242	

from within the post-medieval agricultural soil horizon that overlay the natural brickearth (see below). A circular feature (638) was cut through its base. A band of decayed wood (fill 635) was present near the top of 630. Another large, irregular, feature (763) cut these features in turn. The function of these features is unclear, but there seems to have been a long succession of large features dug in this area.

A circular lime kiln (473), with a diameter of 3.2 m and a depth of 0.9 m, cut the late-medieval

ditch 409 on the south edge of trench 7. It was lined with brickearth-bonded limestone. The primary fills and lining as well as the surrounding natural soils were all scorched. Few finds were recovered from its fills, and those that were could not be proven to be later than high-medieval. However, its stratigraphic position, cutting the late-medieval ditch, suggests a much later date, perhaps in the post-medieval period.

A rectangular feature (551) cut the fills of

the lime kiln on its north edge. In SOU 1334 (feature 6) it was shown to cut from near the top of the post-medieval agricultural soil (see below). Its function is unclear.

To the north of ditch 902 eleven irregular, sub-circular, features (32, 34, 36, 38, 44, 49, 54, 106, 110, 145, and 284) cut either the natural brickearth or medieval features. They were arranged in three broad bands running east to west. They all had loamy fills, some with common charcoal flecks. Apart from 106, their finds need not date them to later than the high-medieval period, though their stratigraphic position would indicate a later date. An orchard is mentioned at this location in God's House documents of 1715 and 1774 (see above) and feature 106 produced 26 sherds of sugar mould that could only have come from the sugar refinery developed on the site of the Friary in 1742.

Two irregular features (92 and 127) were found in trench 2. They produced later post-medieval finds, and were probably disturbances associated with the cultivation of the orchard or with the suburban development of the area around 1800.

Modern, AD 1800 – present

A 0.5 m thick layer of redeposited brickearth (2/10) was deposited over the agricultural soil horizon across the entire site. It probably represents a deliberate levelling of the ground surface prior to the early-19th century suburban development of the area.

THE FINDS

The flint by M F Garner

A total of 313 worked flints weighing 2.235 kg was recovered (Tables 1 & 2). Seven worked flints were recovered from a natural brickearth layer in Trench 12 and 57 flints came from prehistoric features in Trench 12 and ten from pit 25 in trench 1. The remainder of the worked flints were residual.

Nearly half of the worked flints (by weight and fragment count) were recovered from

Trench 12. Nearly half of the burnt flints also came from Trench 12. The distribution in the remaining trenches bore little relationship to the size of the trench, but shows a fairly even distribution. This perhaps suggests that there was a concentration of prehistoric activity in the south-west corner of the site.

The earliest prehistoric feature would seem to be Pit 25 (Trench 1) where a Mesolithic date is likely. The assemblage consisted of ten flakes (Table 3) and nine burnt flints. Several of these flakes had blade dimensions and utilisation is suggested by edge damage and wear. The colour of the flint varied from near white to near black and the surviving cortex indicates that the flint source was weathered nodules.

The greatest concentration of pieces was in Early Bronze Age pit 878 (Trench 12) which produced 3 tools, 47 (primary, secondary, and tertiary) flakes, and 5 fragments. The tools comprise a barbed-and-tanged arrowhead, a thumbnail scraper (31 mm across), and a utilised flake. About half of the flakes came from a soil sample and many weigh less than 1 g and may have been from retouching. Flint knapping must have taken place very close to the pit. The flint in the assemblage varies from pale grey to mottled dark grey and the surviving cortex indicates that the flint source was weathered nodules. The pit also contained seven burnt flints and Bronze Age pottery. Another prehistoric feature (819) in Trench 12 contained two flakes.

Conclusions

The total assemblage comprised 1 barbed-and-tanged arrowhead, 6 scrapers, 242 flakes and blades, 14 cores, 7 other tools, and 35 uncertain fragments. The arrowhead and thumbnail scraper are mentioned above (pit 878). The other five scrapers comprised three concave scrapers (one on a blade) and two end scrapers. One of the end scrapers was abruptly retouched around the distal end of a tertiary flake and may have been Neolithic. The other tools were utilised flakes including two possible piercers and a denticulate. Cores were represented by small crude examples and by fragments, some of which were not definitely from cores. One

Table 3 Flints from fill 24 of pit 25, dimensions are in mm

Type	Wgt (gm)	No of frag	Description	Item no	Long	Wide	Thick
Blade	1	1	Blade, damaged at both ends. Tertiary	156	35	13	2
Blade	1	1	Blade, proximal end missing. Distal end utilised?	157	38	10	4
Blade	2	1	Blade, distal end missing. Edge damage and gloss patina. Utilised?	158	38	18	3
Blade	1	1	Blade fragment (medial), edge damage	159	15	11	2
Blade	2	1	Blade fragment. Distal end missing. Burnt	160	32	13	5
Flake	1	1	Tertiary flake	0	18	12	3
Flake	2	1	Flake fragment (distal), utilised?	0	24	18	3
Flake	4	1	Secondary flake	0	29	24	6
Flake	6	1	Secondary flake	0	36	24	11
Flake	2	1	Flake fragment, no cortex	0	33	12	5

complete core was formed from a river pebble and was used as a multiple platform core. The flakes includes debitage and uncertain flakes. One tertiary flake had blade dimensions and two fragments may have been from blades.

The surviving cortex indicates that the raw material was river pebbles and nodules. Many of the pieces exhibit edge damage that is consistent with ploughing. Apart from this damage the flints are relatively fresh and there is little patination. The assemblage is too small to warrant detailed metrical analysis but in general the flakes are small and squat.

The worked flints probably represents a low rate of loss over a considerable period; the blades may be Mesolithic, the assemblage from pit 878 probably is Early Bronze Age, and many of the flakes have characteristics indicating a later prehistoric date

The prehistoric pottery by E Morris

A total of 90 sherds (486 g) of pottery was examined, and includes Late Neolithic-Early Bronze Age, Middle Bronze Age, later prehistoric, Middle-Late Iron Age and Late Iron

Age/Early Roman types. The collection is, for the most part, in poor condition with many abraded sherds, some of which are split sherds or flakes. The mean sherd weight is only 5.4 g. Amongst the unabraded sherds, it is possible to determine that the pottery was handmade. Very few diagnostic vessel forms were identified but there are sherds from two Beakers and decorated sherds from two Deverel-Rimbury urn-type vessels (Fig. 9).

Fabrics

The earlier prehistoric pottery fabrics (Late Neolithic to Early Bronze Age) are consistently made from fine silty clays into which grog had been added. There appear to be two types of silty matrix clays used to make these fabrics, one with significant quantities of fine quartz grains and one which has few visible grains even in thin section. Therefore, it appears that there were two similar but different clays utilised at this time; all are relatively fine in texture but the density of silt-sized quartz grains is very different amongst them. Fabric G1 is a coarse fabric with large pieces of grog temper added to a very silty

matrix while fabric G2 is a finer version of this recipe with smaller pieces of grog and only a slightly silty matrix. Both fabrics, however, are densely tempered with grog which itself was also made from fine silty clay fabric vessels. One sherd which is very small has what appears to be 'grog-tempered-grog', a phenomenon which has formally been identified amongst Middle Bronze Age grog-tempered fabrics (Gibson, *et al.* 2004; Morris 2008). Fabric G3 is significantly different; while its clay matrix is a silty type with a moderate amount of naturally-occurring quartz grains, similar to G1, its grog is not. The grog found in G3 was made from two different vessels; one which had a sandy clay matrix and, most importantly, one which had been highly fired to an isotropic condition and contained pieces of what appear to be fuel ash slag. It is possible to see this material within the highly fired grog using a binocular microscope at x10 power microscopy. Fabric G4 has been defined as similar to fabric G3 but without any evidence for the unusual isotropic-fired grog with fuel ash slag. Therefore, there are four different grog-tempered fabrics in this earlier prehistoric pottery collection and while at least two different silty clays had been selected as the basis for the fabrics, three different types of grog had been added to them. These silty clays and the variety of grogs, originating from other crushed vessels, give us a window into the range of natural and cultural raw materials and technological choices available to potters during the Late Neolithic-Early Bronze Age.

Fabric GF1 heralds the beginning of a change in the tempering regime at some time around the end of the Early Bronze Age and the beginning of the Middle Bronze Age with the addition of equal amounts of grog and flint temper. Both of these additives are strongly affected by human agency as the grog is crushed pottery and the flint is burnt or calcined and then crushed before adding to the clay. The clay matrix of GF1 is similar to the matrix of G2 with rare to sparse silt-sized quartz grains present. The Middle Bronze Age potters continued the tradition of using silty clays but the grog temper was replaced with crushed burnt or calcined flint. In addition, a

new technological approach to the making of fabrics was adopted with the appearance of two different ends of the sieving spectrum present. Fabric F1 is a finely sieved, flint-tempered fabric with well-sorted pieces of small flint chips while fabric F3 has the opposite range with only larger pieces of flint present. Fabric F2 is moderately-tempered with intermediate to finer crushed flint displaying a full range of sizes.

A number of different vessels represented by single sherds appear to have been made from later prehistoric-type fabrics (Morris 1996; Rees 1994). These include two with modest amounts of crushed burnt flint temper added to possibly the same sandy clay matrix; one has only the flint temper (FQ1) while the other also had an equally modest amount of angular grog (FG1). Both could belong to the Late Bronze Age period when flint was a common temper but often added only in small quantities into sandy clays. Three fabrics are simply sandy clays, but all three have fine to medium-grained quartz naturally-occurring in the original clays selected. However, each is subtly different; Q1 has a modest amount of probably naturally-occurring irregularly-shaped vesicles which may have been crushed shell, Q2 does not have the vesicles and Q3 derives from a different sandy clay due the presence of numerous glauconite pellets. All of these later prehistoric-type fabrics could have been made from locally available clay resources. In particular, the glauconitic sandy fabric may have been made from deposits derived from Selsey Sand and Earnley Sand beds of the Bracklesham Group located along the banks of the Southampton Water in exposed sections of silty sands, sandy silts and sandy clays (Edwards and Freshney 1987, 44–8 & 53–9, figs. 22 & 28). Any number of flint-bearing gravel deposits in the area could have provided the flint added as temper to create these fabrics.

One sherd in the collection derives from a typical flint-tempered, later Iron Age saucepan pot-type fabric, F4. This sherd is burnished on both surfaces but undecorated. Saucepan pots were made from the 4th through the 1st century BC in central southern England and may have continued to be made, or at least used, into the early years of the Roman period

in the mid-1st century AD. The presence of three, handmade Late Iron Age or Early Roman fabrics, F100, G100 and Q100, may have been contemporary with fabric F4. Fabrics F100 and Q100 are extremely distinctive and very similar to each other; both have very coarse sandy clay matrices and, therefore, it appears that flint temper was added to Q100 to make F100. Fabric G100, on the other hand, is nearly quartz sand free. The special aspect of this fabric was the apparent use of two or three different types of grog as temper, but this needs confirmation using further petrological analysis. Flint-gritted, grog-tempered and sandy fabrics were identified as coarsewares from more than one local source in the major assemblage of early Roman pottery from Dairy Lane, Nursling (Seager Smith 1997, 35) and at Bitterne Manor (Clausentum) (Cotton and Gathercole 1958), but these types of fabrics are also known to occur in pre-Roman contexts of the first century AD as well (Cunliffe 1971, 160, fig. 72, 6–10). Therefore, they are generally dated to the first century AD and referred to as Late Iron Age/Early Roman (Gibson 2004; Timby 2002).

Nothing in any of the fabrics as defined here and investigated through petrological analysis indicate anything other than local resources having been used to make these wares. However, the range of inclusions present can be found in many locations across the south and therefore a non-local source cannot be ruled out.

Forms, dating and contextual associations

Sherds from two beakers were recovered from pit 878 (Fig. 9, PRN 2030 and PRN 2034). One in fabric G1 has a raised cordon at the neck and below this there are two pairs of finger-nail impressions, while the other made in fabric G2 is only a small fragment of the rim area. Approximately 20% of the 260 mm diameter cordoned Beaker rim was recovered but only a fragment of the rim and a few body sherds from the second Beaker. Cordoned Beakers and vessels with finger-nail decoration in pairs are well-known types (Case 1995, fig. 6.4, nos. 4 and 14; Clarke 1970; Gibson 1980, fig. 136: 7–8). Beakers were in use from the end of the

third millennium BC into the first centuries of the second millennium BC in Britain (Gibson 1986). Plain body sherds in fabrics G1, G3 and G4 had been redeposited in later pits 838, 856 and 857 and also in the later field system ditch 961 but no other examples of fabric G2 were recovered elsewhere on site. These sherds may be fragments from other Beakers or simply Late Neolithic-Early Bronze Age vessels of uncertain type.

Sherds from three Middle Bronze Age vessels, one of which was decorated with a finger-tip impressed, horizontal cordon (Fig. 9, PRN 2001), were recovered from depression 819. One vessel had been made from the fine, flint-tempered fabric F1 and had smoothed surfaces and relatively thin walls (7–9 mm), one made from intermediate fabric GF1 had thick walls (11–15 mm), and one was a coarse fabric F3 vessel with thick walls (9–13 mm). The fabrics and decoration of these pots are typical of Deverel-Rimbury urn-type vessels made from fine, intermediate and coarse fabrics (Ellison 1980). Urns with applied cordons decorated with finger-tip impressions were found in the Middle Bronze Age cemetery at Kimpton (Dacre and Ellison 1982, figs. 14, D3 & 18, E33). The fabric F1, well-smoothed and thinner sherd probably originated from a Globular type vessel, while the others were either Barrel or Bucket vessels (Gibson 1986) based on fabric and wall thickness. A second vessel, represented by a horizontal cordon and made from fabric F2 (Fig. 9, PRN 2035), had been redeposited in later feature 142. In addition, one sherd in fabric GF1, likely to have been from another Middle Bronze Age vessel, was recovered from ditch 147.

All of the possible later prehistoric fabrics were represented by formless, undiagnostic body sherds. The single sherd of saucepan pot-type fabric is distinctive due to the high quality burnish on both surfaces of this fragment which indicates it was a neutral-profile or open form of vessel. The combination of fabric, surface treatment and modest wall thickness of this fragment (6–8 mm) all indicate it represents a Middle-Late Iron Age saucepan pot. This sherd may be contemporary with all of the Late Iron Age/Early Roman fabric material in the col-

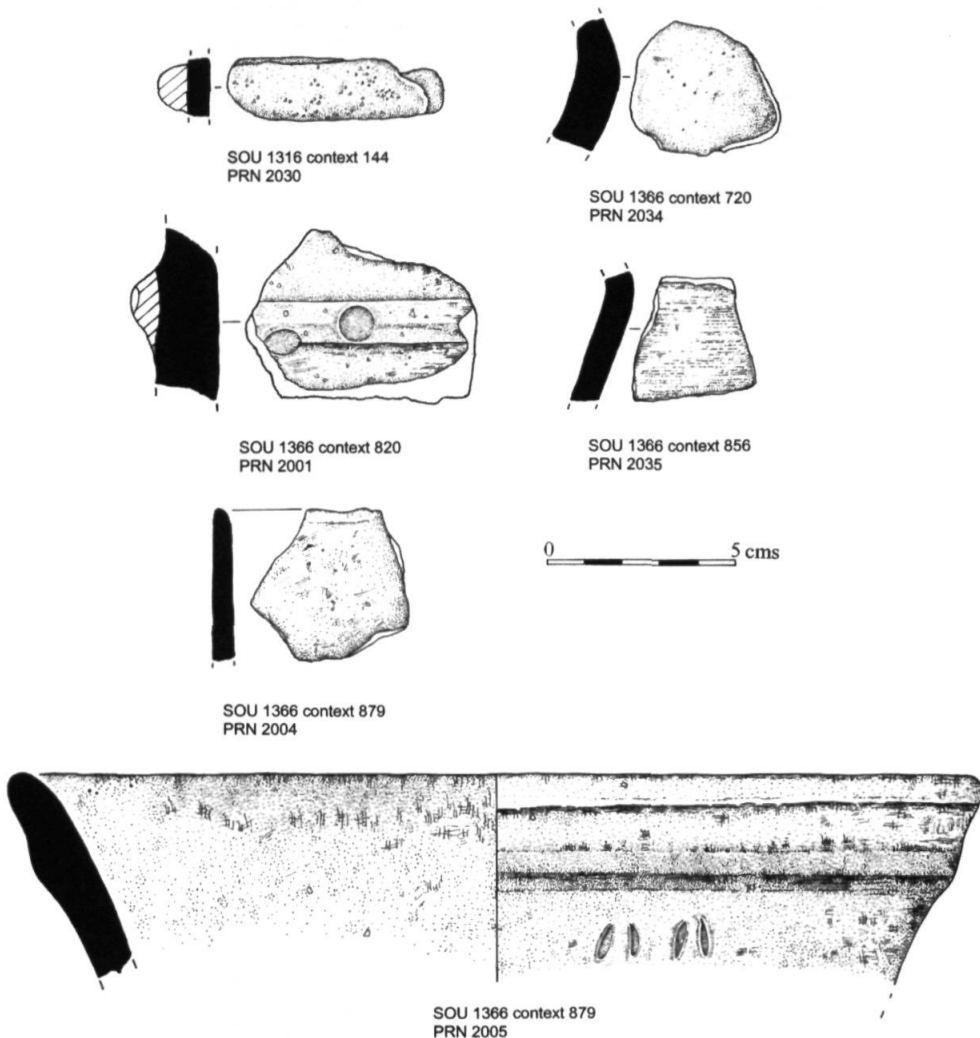


Fig. 9 Prehistoric pottery. Drawn by B McNee

lection. Two sherds from later pit 855 derive from necked jars: one has thick walls, measures 200 mm in diameter at the neck and may have functioned as a dry storage vessel (Fig. 9, PRN 2005), while the other is smaller and has burnt residue on the interior surface indicating its use as a cookpot (Fig. 9, PRN 2004). If the saucepan pot had been contemporary, its role would most likely have been as a bowl for serving or eating

food from in contrast to these necked, closed form jars.

Conclusion

The wide range of fabrics and the limited range of vessel forms demonstrate that significant Late Neolithic-Early Bronze Age activity took place at Oceana Boulevard revealed by the presence of sherds from several Beakers, or Beaker-type

Table 4 Amounts of pottery by period

<i>Period</i>	<i>No</i>	<i>Weight g</i>	<i>Average sherd weight</i>
Early-medieval/Late-Saxon	244	1018	4.4g
Anglo-Norman	575	3933	6.8g
High-medieval	1748	14546	8.3g
Late-medieval	27	411	15.5g
Medieval undated	15	36	2.4g
Totals	2608	19927	

Table 5 Early medieval/Late Saxon pottery

<i>Fabric</i>	<i>Number of sherds</i>	<i>Weight g</i>
Chalk-tempered	2	9
Coarseware	5	54
Flint-tempered	55	255
Organic-tempered	1	5
Sandy	10	20
Michelmersh	2	7
Totals	75	350

vessels, including two found in prehistoric pit 878. Middle Bronze Age activity is represented by possibly seven vessels, including two typical of the Deverel-Rimbury style of southern England. There is nothing to indicate that these sherds are from funerary urns, and there is every reason to suspect that they represent a brief Middle Bronze Age settlement in this area. Remnants of possible Late Bronze Age to Iron Age pottery were identified in the collection but the next significant phase of settlement activity took place at the end of the Iron Age or possibly the early Roman period during the first century AD

Medieval pottery by A D Russel

The medieval pottery from this site comprises 2,608 sherds weighing 19.927 kg. A full pottery 'spot date' was carried out by D H Brown whose

tables are deposited with the archive. Pottery of a range of dates was found (Table 4).

The medieval use of this area would seem to have been predominantly agricultural although there is evidence of smithing, and part of the site were exploited for brickearth. All the features contained organic rich soils with pottery and animal bone, and the pottery is likely to have been brought from the medieval town among rubbish used to fertilise the fields. As such it may have been collected from a number of properties within the town, and perhaps gives a cross section of pottery in use during the medieval period in Southampton. Each period will be examined in turn.

Early medieval/Late Saxon, AD 850–1075

The average sherd weight was 4.7 g, suggesting these sherds had been incorporated in the soil

Table 6 Anglo-Norman pottery

<i>Fabric</i>	<i>no</i>	<i>wt</i>
coarseware	228	1459
scratchmarked	161	1203
AN glazed	32	523
Dorset	1	2
North French glazed	99	423
Normandy gritty	50	283
Normandy Smooth	2	32
Rouen	1	5
North French red-painted	1	3
Totals	575	3933

Table 7 High-medieval pottery

<i>DHB code</i>	<i>Fabric</i>	<i>no</i>	<i>wt</i>
STCS	Soton coarseware	808	6020
HMS	Hmed sandy wares	417	2460
SHR	S Hants redware	222	2278
	Hmed coarseware	76	521
LV	Laverstock	52	1199
STS	Soton sandy	33	168
	Common orange coloured ware	25	465
LOPS	pink sandy	12	120
STWW	Soton whiteware	9	112
LOWW	Local whiteware	8	224
	Dorset wares	8	147
	non-local inc Cornish	5	179
STHC	Soton High st	1	35
IBMR	Iberian micaceous	1	7
SO	Saintonge	64	551
SNZO	French highly dec	3	8
NFWS	French whiteware	2	33
NFMW	French micaceous	3	26
Totals		1749	14553

Table 8 Late medieval pottery

<i>Fabric</i>	<i>No</i>	<i>wt g</i>
Late medieval sandy	19	301
Later med coarseware	1	49
Later med glazed	2	20
Sieburg	2	20
Iberian red micaceous	2	14
Developed Normandy Gritty	1	7
Totals	27	411

and the soil had been cultivated continuously, with further breakage of the sherds (Table 5). Although this group is small the relative quantities for the late Saxon wares can be compared with those calculated from the Late Saxon pottery assemblage of Southampton (Brown 1995), and little difference can be seen.

Anglo-Norman AD 1066–1250

The average sherd weight was 6.8 g suggesting these sherds were subject to less damage by cultivation than the Late Saxon material. Nine fabrics were present (Table 6).

The English wares thus formed some 73% of the total numbers of sherds, with North French wares making up the other 27%. In a recent study of the pottery from the Anglo-Norman town the North French wares made up only 9% of the pottery assemblage, with English wares making up 91% (Brown 2002, 91). The high proportion of imported pottery being deposited on these fields suggests that the refuse was coming from a part of the town where North French wares were an unusually high proportion of the pottery being used, perhaps the south-west quarter.

High-medieval, AD 1250–1350

The high medieval pottery formed the largest group (Table 7). The sherds averaged 8.3 g suggesting they had been subject to less damage than the earlier material.

The English wares comprised 96% of the

pottery of this period, with 4% being made up of imported wares. The recent study of pottery in the medieval town showed that imported pottery comprised 16% of the high-medieval assemblage inside the walled town, thus at this period the manure being spread on these fields came from people that had little access to imported pottery.

Late-medieval, AD 1350–1550

The late-medieval pottery formed the smallest group (Table 8), and the sherds were the largest at an average of 15.5 g suggesting they had been deposited last on the fields. Very little pottery was deposited during this period, or after, suggesting that cultivation ceased and the land was turned over to pasture or orchards in the late 14th century.

With only 27 sherds present this group is probably too small to bear statistical analysis, but the English wares comprised 81% of the pottery of this period, with 19% being made up of imported wares. The recent study of pottery in the medieval town showed that imported pottery comprised 53% of the late-medieval assemblage inside the walled town, thus at this period the manure being spread on these fields came from people that, as in the high-medieval period, had little access to imported pottery.

Slag by P Andrews

A total of some 7 kg of iron smithing slag was

recovered, including several near-complete smithing hearth bottoms (SHBs), the hemispherical bun-shaped lumps of slag, usually up to 150 mm in diameter and weighing up to 1 kg (but generally *c.* 0.5 kg), which formed in the base of smithing hearths. Only one abraded piece (0.18 kg) of slag came from the evaluation SOU 865, with 0.81 kg from SOU 1316 and 6.12 kg from the larger, southern part of the site (SOU 1366).

The debris was almost entirely restricted to the south-western corner of the site and only seven contexts produced more than 0.1 kg, five of which were high-medieval (474, 706, 862, 863, and 992), one late-medieval (1002), and one modern (645). Of these, context 863 (pit 851, in the south-west corner of the site) contained 4.10 kg of smithing slag and a small quantity of hearth lining. This appears to represent a single dump of material and included a minimum of six fragmentary or near-complete SHBs, one with traces of hearth lining and what appears to be part of a tuyère hole. It might be noted that contexts 862 (pit 838 in field 6) and 474 (limekiln 551 in field 1) lay in broadly the same area as pit 851, as did context 769 (ditch 768) which contained some hearth lining, and this might suggest a minor focus of iron smithing activity just beyond the town walls rather than simply a dump of debris from elsewhere.

Iron by A D Russel

A total of 394 fragments of iron were recovered, weighing 5.8kg. The most common objects were nails, 233, followed by unidentified fragments at 82. There were 18 roves and 20 clench bolts, a number of them still joined together suggesting timber from clinker-built boats was being recycled, probably as firewood, and the scrap metal released was being discarded. Five knives were represented by nine fragments, and there was one buckle, one spur, three horseshoe fragments, two fragments of strip, a staple and a fragment of plate. Much of the metalwork could have been blacksmith's waste, certainly one rove was still joined to half of another, perhaps the result of breakage during manufacture.

Late Saxon period

The only identifiable object was a rove from the well.

High Medieval period

Nails were the most common find, and there were six clench bolts and five roves, a horseshoe fragment, two fiddle key nails from horseshoes, and a staple. The primary phase of the mill was marked by four nails and a horseshoe fragment, the secondary phase produced predominantly nails, but a number of fragments of bar and a staple may have been fittings from the mill.

Late Medieval period

The features of this period produced predominantly nails, clench bolts and roves. The knife, item 112 from context 750, a fill of a late-medieval ditch, was of interest. It was quite a delicate object and the blade was inlaid with a maker's mark, probably in a copper alloy. The mark perhaps was a lower case letter 'a'. SOU 1316 produced an iron buckle and a spur (see below). The buckle was square with a roller and could have come from horse harness.

Post-medieval period

The post-medieval period produced mostly nails, together with one rove, one clench bolt, three fragments of sheet/plate, and three knives. One, item 26, had a wide blade and a whittle tang and may have been a cleaver. Item 61 was a knife with a whittle tang and a slightly thickened back to the blade. The third, item 121, was a heavy duty tool, with a flat tang having two large iron rivets that would have held the handle plates.

Horse rowel spur by B Ellis

The spur is in a fragile condition, recovered from fill 100 in the late-medieval ditch 117 on SOU 1316. Partial cleaning of the surface accretions has been made. It has rusted into the soil in which it is embedded to such an extent that further cleaning is impossible. It has been described from x-rays. It is now in three pieces (Fig. 10).

The spur has a straight neck with a multi-point rowel of about 27 points. The surviving



Fig. 10 The rowel spur from fill 100 (ditch 117). Drawn by B Ellis from X-rays

complete spur side plunges forward into a deep bend under the wearer's ankle, rises and then droops gracefully at the front where there is an elaborate, but unclear, terminal. X-ray 3490 shows what may be a buckle. The remains of what was probably a crest appear above the junction of the neck with the sides. Only two broken fragments remain of the other side of the spur. There are traces of non-ferrous plating. Iron spurs were often plated with a thin coating of tin (Jope 1956; Ellis 1991, 54, 61). The outer surface of the complete side has three bold florets riveted onto it. Each has about twelve petals and a prominent conical centre. The terminal may have had decorative attachments and both fragments of the broken side of the spur also have florets. Disc-like thicknesses of the soil flanking the rowel may have been florets on the rowel bosses, now too unclear for certainty.

The overall dimensions of the fragments with soil covering are 160 mm by 67 mm by 53 mm. The estimated original length of the spur measured forward from the rowel to a point mid-way between its terminals is about 140 mm.

An iron spur of similar form decorated with applied flowers, but also having a flower-shaped collar at the junction of its neck with its sides, was excavated from the ruins of the castle of Saint Vaast-sur-Seulles on the Cherbourg peninsula in Normandy. This castle was destroyed following a siege in 1356 (Blangy 1889, 41 and plate 30 fig 1; Halbout, Pilet and Vaudour 1986, 223 No 965). This, and the few 14th century spurs known to have been decorated with applied flowers, are discussed in connection with the iron fragment of one of them from London (Ellis in Clark 1995, 128 – 129 and 133 – 134 spur no. 323). All but one are from France or England.

*Copper alloy by A D Russel**High-medieval***Pin:** SOU 1316 items 22 & 23 context 65

A drawn wire pin 39 mm long and 1 mm dia. The head was spirally wound, and then further finished to a near spherical form.

Buckle: SOU 1316 item 53 context 198

An rectangular buckle frame 22 mm by 16 mm, with a sheet roller. Traces of the iron pin survive.

Cauldron repair patch: SOU 1316 item 60 context 204

A fragment of cut sheet, 68 mm by 33 mm. Three short slits have been driven through for attaching the patch to a larger vessel with folded sheet metal rivets, one of which remains.

Lawyer's Bodkin: SOU 1316 item 113 context 281

A 221 mm length of slightly tapering rod some 4 mm in dia., broken at the eye. The head is biconical with two concentric grooves, and is fairly smooth.

Buckle: SOU 1366 item 139 context 868

A small double oval buckle, one frame broken off, with integral plate, held by a single rivet to a leather strap, fragments of which survive. This is probably from a shoe, similar examples from London date from 1350 to 1450 (Egan and Pritchard 1991, 11).

*Late-medieval***Horse pendant:** SOU 1316 item 7 context 26

A 20 mm square and 4 mm thick cast body with lobed edges and a pierced shaft. The bottom of the depression formed by the sides is covered in thick red enamel. On top of the enamel a boss is attached with a thick rivet, slightly off centre. The boss forms a saltire cross, each arm of the cross being tri-lobed. The entire surface of the body including the back is covered in plated with gold, probably by mercury gilding. The object is well worn, more on the back than the front, and the suspension hole has worn into an oval.

Strap-end: SOU 1316 Item 8, context 123

Strap-end made from a single sheet folded widthways, held to a leather strap with three rivets. Size 28 mm by 16 mm wide. The sheet is decorated along the long sides with an incised line with a border of closely spaced punched triangles, and along the short side with a row of closely spaced punched triangles. Two rivets survive, they are in a softer greyer metal than the plate and have prominent near spherical heads.

Offcut: SOU 1316 item 2 context 132

A piece of sheet folded and crumpled to 35 mm by 21 mm. The edges show evidence of having been cut with shears. One side is smooth, the other shows numerous striations.

Sewing needle: SOU 1316 item 3 context 139

A needle 1.5 mm dia. and 53 mm long. The eye has been punched through, splitting the head. Striations on the shaft suggest it was drawn.

Metal working waste: SOU 1316 item 112 context 271

A roughly rectangular piece some 25 mm by 21 mm by 10 mm. its surface is glassy in places as if it is slag, but the x-ray reveals a mass of metal inside, with a bifurcation.

Offcut: SOU 1366 item 4, context 445

A length of sheet 60 mm long by 10 mm wide. Inside one edge is a scratched cutting line, the sheet was then cut with shears.

Decorative fitting: SOU 1366 item 73 context 728

A fragment of very thin, curved, pressed sheet, with a rivet, some 11 mm by 4 mm.

Tweezers: SOU 1366 item 75 context 730

A pair of tweezers 62 mm long by 17 mm wide. The arms are of semicircular section, the jaws filed flat.

Buckle: SOU 1366 item 76 context 730

A buckle with attached plate, 50 mm long by 30 mm wide. Three rivets held the ends plates together onto a leather strap, fragments of which survive. The buckle plate was recessed for the frame and coated with white metal, and the surface was filed to assist its adherence. The pin shows signs of long use. The oval frame has the bar offset and narrowed. The area on which the pin rested is thickened, this part is decorated with three grooves at either end. In London this seems to be a long-lived type, found between the late 12th and the late 14th century.

Fragment: SOU 1366 item 77 context 730

A fragment of curved pressed sheet, with two rivets, some 15 mm by 11 mm.

Buckle: SOU 1366 item 123 context 730

A fragment of buckle plate 17 mm by 15 mm wide. Incised decoration is present on one surface. The decoration does not fit the plate suggesting it has been re-used.

*Post-medieval***Lace Chape:** SOU 1316 item 120 context 322

A chape 28 mm long formed from a rolled piece of sheet. The seam is inturned. The end of the leather lace is still in-situ.

Early-modern

Buckle: SOU 1316 item 116 context 314.

An small oval buckle with a light flattened frame 12 mm by 14 mm wide. The buckle plate was made from a folded, tapering strip of sheeting. Two rivets held it to a strap. A 2 mm dia. hole through the plate adjacent to the frame must have held the pin. This size of buckle, often quite crudely finished, is typical of a buckle from a spur.

Unstratified

Pin: SOU 1316 item 130 context 303

A drawn wire pin 36 mm long and 1 mm dia. The head was spirally wound, and then further finished to a near spherical form.

Jetton: SOU 1366 item 1 context 400

A counter modelled on a long-cross penny. There are 5 pellets in each quadrant, with an outer circle of pellets where a coin would have lettering.

Buckle: SOU 1366 item 12 context 400

A one piece buckle plate some 40 mm long by 26 mm wide, that has been opened out and is nearly flat. Three rivet holes held it to the strap or belt. The visible side is outlined with two lines of loosely spaced triangles. The outer surface of the plate was coated with a white metal.

Amulet: SOU 1366 item 49 context 400

A bar cast in a one piece mould, 49 mm long and 7 mm wide with a semicircular section. It has been flattened at one end into an almost snake-like head, and there are grooves, possibly meant to be a spiral on the body.

Buckle: SOU 1366 item 11 context 449

One of a pair of buckle plates, some 48 mm long by 14 mm wide. There is a pair of rivet holes at each end, and a pair of lines around the margins, made with closely spaced punched holes.

Offcut: SOU 1366 item 47 context 449

A tapering offcut some 20 mm long by 10 mm wide, with evidence of cutting along one edge.

Silver coin by I Wellington

Silver Long Cross penny of Henry III (1216–1272) struck at Canterbury. From context 131 (item 1). North (1963) type Class 4a Long Cross penny, moneyer Nicole. Struck 1250–1251. North 989. Obv; HENRICUS REX III – crowned head facing sceptre in right hand. Rev; C(A) \\

NT\\HIC\\OLE – long cross voided with three pellets in each angle.

Vessel glass by H Willmott

Thirteen fragments of vessel glass were recovered from seven different contexts in SOU 1316, and represent a total of ten different vessels. None was recovered from SOU 1366. Almost all the glass is highly fragmented, making positive identification difficult in some cases. However, most of the pieces can be relatively accurately dated.

The only object is half a potash glass sleek stone, or linen smoother from context 149. Sleek stones first occur in glass in the 8th – 9th centuries and continue in use into the post-medieval period. In general, smaller examples are earlier, and the example here is similar in size and shape to four found at St Peter's Street Northampton dating to around the 15th century (Oakley & Hunter 1979, 296).

The remaining fragments are all from vessels. The most unusual is a small fragment of curved body in a light blue opaque white glass from context 183. Medieval in date, its form is more uncertain. However, it has been noted that the vast majority of medieval blue glass occurs in the shape of jugs or flasks (Tyson 2000, 32). The fact this example is opaque makes it even more unusual, although the handle from a late 15th-century jug of similar colour was found at Trichay Street, Exeter (Charleston 1984, 268). The other fragment of medieval glass is a more common type from context 225. It is a small piece of plain curved body in a devitrified potash glass, and almost certainly from a flask. Potash flasks were a relatively common form between the 12th and 15th centuries, and it is not possible to provide a more refined date for this fragment.

Three fragments, all from fill 237 in post-medieval feature 236, are slightly later in date. The first is the lower portion of bowl from a tazza, or shallow-dished goblet. Tazze were an Italian form, made from a very fine soda glass, and popular during the 16th century (Willmott 2002, 57–8). The shape spread and was later produced in many other European glassmak-

ing centres. However, the quality of the glass in this example suggests a Venetian origin, and probably dates to the early 16th century. A similar fragment of high quality clear soda glass probably has a similar provenance. This comes from a fine straight sided beaker which is decorated up part of the side of the body with optic-blown vertical ribbing. Dating to the first half of the 16th century, this piece is also likely to be Venetian. The final fragment from this context is also made in the same type of glass, but is too fragmented for more positive identification.

The remaining fragments of glass are all post-medieval. Three of these from fill 314 from modern ditch 313 are probably from the same vessel and form part of the side of a green onion-shaped wine bottle. This type can be quite accurately dated to the first quarter of the 18th century. Of similar date, and from the same context, are two thin fragments of blue/green glass. These come from a globular phial, a form that originated in the 17th century, but which continued, as with this example, into the very early 18th century (Willmott 2002, 90). The remaining two fragments are rather more recent in date. A small piece of body from a vessel of uncertain form, but the quality of the glass is suggestive of a 19th-century date from fill 191 in the late-medieval mill pit 190 may have been intrusive. The other is also a body fragment, but from a press-moulded bottle, dating to the late 19th or early 20th century from fill 254 in the high-medieval ditch 253 may also have been intrusive.

ANIMAL AND PLANT REMAINS

Animal bone by S Hamilton-Dyer

Excepting a small amount of modern and unstratified material, all the bone from hand collection was examined. Mammal bones were counted and identified to taxon. Counts were also made of the number of measurable bones, mandibles with aging data and bones with epiphyseal fusion data (see site archive). Bird and

fish bones were similarly counted. In addition the catalogue contains notes of gnawing and other significant aspects of the material from each context. The bones extracted from sieved samples were not recorded but were briefly examined. Notes on significant contents have been added to the catalogue of the hand collected material.

Taxonomic identifications were made using the author's modern comparative collections. Ribs and vertebrae of the ungulates (other than axis, atlas, and sacrum) were identified only to the level of cattle/horse-sized and sheep/pig-sized. This restriction does not apply to associated bones where ribs and vertebrae were assigned to species. Unidentified shaft and other fragments were similarly divided. Any fragments that could not be assigned even to this level have been recorded as mammalian only. Recently broken bones were joined where possible and have been counted as single specimens.

Almost 15 kg of animal bone was recovered by hand collection from the two sites, 8.5 kg from 1316 and 6.4 kg from 1366. The fragment counts of the two assemblages, accounting for broken bones together, are 926 bones from 1316 and 891 from 1366. The condition of the bone is quite variable; many individual bones are in good condition but in several contexts there are also at least some bones that are eroded. The number of individual bones hand recovered from each context is very low; 171 contexts contained less than ten bones, another 48 contexts contained between 10 and 41 bones, only four contexts contained more than this. These four contexts include two high-medieval pits (194 and 204) that contained sheep burials, the post-medieval pit 692 and tree hole 449.

The bones are mainly of the domestic ungulates, as expected for these periods and area. Overall the bones identified to taxon are dominated by those of sheep but this includes two skeletons. If these are discounted then cattle dominates the assemblages, along with cattle-sized indeterminate fragments. Pig is present in many contexts and horse in a few. Other mammal taxa are rare; they include red deer (antler), dog, cat, rabbit and hare. Bird bones

are present in several contexts. Most appear to be of fowl and other domestic poultry but there are a few other species. Fish remains are uncommon, largely due to their small size and difficulty of retrieval by hand. The exception is the post-medieval pit 691 where several bones were seen together and more easily recovered. In the sieved samples fish remains vary from occasional 'background' material, mainly eel and herring, to more substantial deposits with several taxa.

Breakages, both in the past and from excavation, have limited the amount of metrical information available. The number of bones that are sufficiently complete to offer standard metrical data is just 43; mainly of sheep/goat. Similarly there are few mandibles that have at least one tooth in position for recording tooth eruption and wear data; just 12 altogether of the three main taxa and from all phases. Epiphysial fusion data is more frequent at 202 bones of six taxa. The highest number is 83 for sheep/goat, but this does include multiple records for the sheep skeletons. The next most frequent are cattle at 65. This is still inadequate, however, for detailed analysis of aging patterns as these cover all phases.

Prehistoric

A single pig bone was recovered from context 478.

Late Saxon

The 16 bones from this phase are of indeterminate cattle and sheep/pig size together with a pig canine.

High-medieval

One bone each of cat and bird (probably fowl) were recovered from pit fill 472. None of the bones were measureable.

In pit 172 the remains are of a sub-adult sheep, laid on its right side. The neck and head is flexed upwards so that the lower part of the mandibles is uppermost. This, lower, fill 173 contained only the sheep – apart from two bird bone fragments and some small pieces of unidentifiable mammal bone (from the sieved samples). The upper fill 194 contained the left

hind leg and part of the neck of the sheep, along with mixed bone of several taxa. The splayed position of the hind legs suggests that this represents the disposal of an intact and recently dead animal, rather than a stripped carcass or an animal dead long enough for considerable flesh reduction. The pit is larger than required for the burial and it seems likely that it was conveniently available for rapid disposal of the animal, soon to be flyblown and unpleasant if not already. Although it is possible to remove a skin without leaving marks, the removal usually leaves at least some knife marks and none were observed. If the animal died of flystrike or during the moult then the skin would not be of use. Aging data from epiphysial fusion indicates that the animal died (or was killed) around or just under a year old, as the earliest fusing epiphyses are fused but one of the 1st phalanges and all of the later fusing elements are unfused. In the mandibles the 1st molar is in wear but the 2nd is only half erupted, indicating a probable age of 9–10 months. This aging is slightly subjective because individuals vary and we do not have information about the previous health of the animal, or specific information about this 'breed'. The age has been estimated using data from Moran & O'Connor (1994) and Jones (2006). The implication, assuming an early spring birth, is that the animal died during its first winter.

The sheep in pit 203 is, by contrast, a fully adult animal with all bones completely fused. In the mandibles all the permanent teeth are in full, or even heavy, wear. The 2nd premolar is not present in either mandible but it is difficult to judge whether this is congenital absence, or the teeth were lost and the alveoli completely healed over. The animal was horned and has slight depressions on the medial side of the horn cores. This condition is likely to indicate a period of nutritional stress. The shape of the horn cores, together with the morphology of the pelvis, indicates a female. The aging data indicates an animal of perhaps five years old. This is not an uncommon age for deaths and culls of ewes if they have become 'broken mouthed' or barren. It was not, however, an old animal as they can live beyond 10 years. As

the bones were all fused, unlike the younger animal it is possible to measure the limb bones and estimate a withers height, of about 50cm. This small size is at the lower end of the range previously reported from other high-medieval material from Southampton (eg. Hamilton-Dyer unpub 1997).

Burials of complete sheep have not been previously found in high-medieval material from Southampton; probably because most material is from rubbish pits inside the walls, and is of a mainly domestic nature. The two here clearly indicate a different type of activity outside the walls. The adult ewe is particularly useful from an archaeozoological point of view as it can be used as an animal of known sex for comparison with disarticulated material.

Other material from pits 203 and 172 is a mixture of elements of the domestic ungulates, some butchered, together with a few bird and fish bones. This was probably partly from the old material used for backfill and partly from contemporary rubbish used to fill the pits. Similar material was recovered from the other pits and the bone is not of the concentration and richness often observed in pits inside the walls. The eroded remains of a shed red deer antler was found in the bones from 782, one of only two deer bones from the whole site. Fish, mainly from the sieved samples, include eel, conger, cod, whiting, herring and mackerel. These are typical of medieval material from Southampton.

There are 207 bones from the high-medieval ditches. The identified bones are mainly of cattle with sheep/goat next most frequent and pig also common. Three bones of horse, three of fowl and one of hare are also present. Fish include thornback ray and shark. Although not identified from bones, dog is indirectly evidenced by gnawing on some bones.

Late-medieval

Almost no bone at all was recovered from contexts associated with the primary phase of the mill. The few fragments of domestic ungulates are supplemented by some fish remains in a sieved sample and a jackdaw tibia from 183. It is tempting to suggest this might

have been from a bird living in the structure, but this is mere speculation.

A quite different assemblage was recovered from the secondary phase; the 68 bones are well preserved and mainly of the domestic ungulates. The bones include two of calf (one butchered) and several bones have large clear chop marks. Two of the bones, one cattle and one sheep, from 171 have slight charring and are both quite large for medieval material. There are also a variety of bones of other taxa in small numbers. These include cat, hare, rabbit, rat, fowl, duck, pigeon, cod and ling. This last is represented by two, very well preserved, adjoining vertebrae from a fish well over a metre in length. All of this material is well preserved, with a few exceptions, and is likely to have been deposited and covered quickly. Most of the bones are consistent with domestic waste.

The late-medieval ditch fills produced the second largest group of bone, though still not large at 348 specimens. In common with much of the site, most fills produced less than ten bones, which are mainly of the domestic ungulates. Horse is present in some fills, including a group of 15 bones from ditch fill 728. These are possibly from a single carcase and include a femur, damaged but estimated to have been from an animal about 1.23 m at the withers. A tibia from 695 gives a similar estimated withers height of 1.24 m. A dog metapodial and a haddock cleithrum were found in pit fill 246. A large thornback buckler was found in 730 and sieved samples from this and other contexts produced more fish, mainly herring, whiting and flatfish.

Seventy bones are from six late-medieval pits. Almost half of all the material is of indeterminate cattle-sized bones. Cattle, sheep/goat and pig are the most common of the identified bones. Other taxa are represented by one bone each of fowl and goose, a spurdog spine and some flatfish remains in the sieved samples.

Post-medieval

Only six fragments were recovered from the kiln contexts, five of these are unburnt and are probably incidental. One, however, from 543 is a pig tibia shaft calcined blue and filled with

a red-ochre burnt soil. This distinctive blue colour indicates a probable burning temperature of over 700°C and the red of the soil may indicate the level of oxygen available. Bone and shell can be used as well as limestone for lime production, although this bone may have been incorporated accidentally.

Bone from post-medieval fills is likely to include some from contexts with residual material, based on the ceramic finds. For this reason most of the bones have not been analysed in detail. In general the bone is of a similar, mainly domestic, mixture with the domestic ungulates dominant. Ditch fill 310 contained several horse bones, perhaps from one carcase, including a complete metacarpus offering an estimated withers of 1.38 m. This is slightly larger than the few available for the medieval contexts but is still only pony-sized. Ditch fill 322 contained several heavily butchered cattle bones and a well gnawed femur together with some bones of neonate calf. Knife marks on a large sheep scapula show where meat had been stripped from the blade. Pit 691 contained only a small number of mammal bones but a large quantity of fish, both hand collected and sieved. Only the smaller of the sieved samples was recorded but material from the larger one appeared to be very similar. The fish are of a wide variety of species. The larger fish represented are thornback ray, conger, cod and haddock. Some of the bones are from large specimens. The smaller fish are herring, eel, whiting, gurnard, mackerel and flatfish. These species are also found in many medieval contexts in Southampton, although haddock is uncommon.

Conclusions

The assemblages are not sufficiently large for detailed analysis, especially of such aspects as size of stock and herd composition. The remains are generally similar to others from medieval Southampton. There are, however, some significant features of the assemblages that are different from material recovered nearby. In comparison with material from within the walls the faunal material is less densely deposited. Many contexts contain less

than ten bones and even the most productive pits are less densely packed than most from within the walls. Bones with differing condition states are common, suggesting that some of the deposits contain redeposited material as well as fresh bone. The sheep burials suggest that this area is peripheral to main occupation areas but also that animals were being kept on or very near the site. No such deposits have been discovered from inside the walls, nor would they be expected; while a dead cat might be buried in a yard pit along with other domestic refuse, the large and rapidly decomposing carcase of a sheep would need burial away from habitation. Similarly the groups of horse bones from ditch fills, these are often found in the upper, secondary, fills of ditches at the periphery of settlements. The ownership of this area of land is not known for certain but it is suggested that the nearby friary just inside the walls is a possibility. A bone assemblage has been studied from St Denys Priory (Morris unpub.). The remains suggested that some cattle and sheep were bought as joints (probably from the market) while others were more complete and may have been supplied from lands belonging to the priory. As with other medieval assemblages in Southampton the sheep consumed there were not of prime meat age and probably came from wool flocks. If the land at SOUs 1316/1366 did belong to the Friary it seems to have had sheep at pasture. A slaughter and butchery site is not in evidence, nor are the remains of in-situ habitation and direct kitchen waste. Instead, most of the remains appear to be low level disposal of general, mainly domestic, waste together with carcase disposal. The bulk disposal of slaughter and butchery waste must have been carried out elsewhere.

Palaeo-environmental evidence

Introduction by M J Allen

Bulk samples were processed by standard flotation methods. A series of 27 samples were recorded to contain various small quantities (c. 1–30 fragments) of charcoal >4 mm. Most were from Saxon and medieval contexts, with one prehistoric feature sampled and one post-

Table 9 Plant remains from Late Saxon pit 1020 and Late Medieval pit 739

<i>phase</i>	<i>Late Saxon</i>	<i>Late Medieval</i>
<i>feature</i>	<i>Pit 1020</i>	<i>Pit 739</i>
<i>context</i>	<i>1021</i>	<i>751</i>
<i>sample</i>	<i>65</i>	<i>36</i>
Charred remains (grain)		
<i>Hordeum</i> sp. (Barley)	10	—
<i>Triticum</i> sp. (Wheat)	12	—
<i>Avena</i> sp. (Oat)	12	—
<i>Secale</i> sp. (Rye)	2	—
Cereal sp grain indet	15	—
Seed indet	1	—
'Waterlogged' seeds		
<i>Ficus carica</i> (Fig)	—	44
<i>Sambucus nigra</i> (Elder)	—	7
<i>Menyanthes trifoliata</i> (Bogbean)	—	2
<i>Solanum</i> (Nightshade)	—	2
<i>Ranunculus</i> (Buttercup)	—	2
<i>Carex</i> (Sedge)	—	300
<i>Lamium</i> (Dead-nettles)	—	21
<i>Urtica dioica</i> (Stinging Nettle)	—	26
<i>Vitis vinifera</i> (Grape)	—	1
<i>Ajuga</i> (Bugles)	—	2
<i>Chenopodium</i> (Goosefoot)	—	12
<i>Apium</i> (Marshwort)	—	16
<i>Atriplex</i> (Oraches)	—	3
<i>Ranunculus batrachium</i> (Water buttercup)	—	2
<i>Eleocharis</i> (Spike-rush)	—	34
Miscellaneous insect remains		
Weevil	—	1
Fly Pupa	—	5

medieval lime kiln. Two samples contained plant remains.

Plant remains by P Mills and MJ Allen

Two samples of plant remains were provided for identification; these comprised of charred remains from Late-Saxon pit fill 1021, and plant remains from late-medieval pit 739. These two samples are important; the Late-Saxon pit fill 1021 more so, in view of the lack of charred plant remains reported from Saxon Southampton. Previous plant assemblages have been relatively sparse (Biddle 1997; Green 1992; Monk 1977; 1980), with larger assemblages only being reported upon more recently (Hunter 2005).

The plant remains were identified at Worcestershire Historic Environment and Archaeological Service using standard reference works (Stace 2001; Cappes *et al.* 2006; Hubbard 1985). The identification from the two samples are presented in Table 9, where plant nomenclature follows Stace (2001).

Late-Saxon remains

The identified charred remains from pit 1020 (fill 1021) were predominantly cereal grains (barley, wheat, oat and rye). The preservation of the remains was varied allowing only two thirds of the cereals to be identified. Of the grain identified there is a near equal split between barley (*Hordeum* sp.), wheat (*Triticum* sp.) and oat (*Avena* sp.). These were few in number but what can be determined is that there was a variety of cereals been either stored or used within food preparation. Rye was likely to be a 'weed' rather than a crop due to its low representation here, and the fact that it was not cultivated as a crop until the Medieval period (Beher 1992; Hallan and Thirsk 1989).

It is important to note that there was no chaff and only one weed seed present in the sample. The lack of chaff and weed seeds in this sample is probably a function of the processing and sorting. Interesting at the St. Mary's Stadium site, where large numbers of grain were present (over 1000 grains per sample), little or no chaff was present or preserved with them (Hunter 2005, 172).

Late-medieval remains

The seeds from pit 739 (Table 9) contain a variety of reeds and sedges, weeds seeds (buttercup, stinging nettles etc), fruits (figs) and economic plants (grape). They probably represent disturbed ground with aquatic/wet conditions locally; probably open grass/scrub with human activity close to marsh/bog. Some of the plants of aquatic/wet areas in the sample are tolerant to saline conditions (halophytes). These plants, marshworts (*Apium*), goosefoot (*Chenopodium*) and oraches (*Atriplex*), might suggest salt marsh, however, they can also grow in freshwater environments (Stace 2001). A number of other plants that grow in freshwater habits were present, and bogbean (*Menyanthes trifoliata*), spike-rush (*Eleocharis*) and water buttercup (*Butorachium*) grow within bogs (Clapham pers. comm.), but some (e.g. water buttercup) are typical of freshwater streams and rivers such the Test and Itchen.

A number of the plants would grow as 'weeds', either in crop fields or, as with stinging nettle (*Urtica dioica*), have a strong association with disturbed ground. The Elder (*Sambucus nigra*) may have been growing within the area as its preferred habitat is disturbed ground in amongst hedgerows (Stace: 2001). Other species such as sedge (*Carex*) and buttercup (*Ranunculus*) are typical of grasslands and meadows.

Importantly in this small assemblage are a number of edible plants. The fruit seeds such as fig (*Ficus carica*) and grape (*Vitis vinifera*) are likely to be imports. If fig had grown locally then seeds would probably be underdeveloped, and this was not the case with this sample (E. Pearson pers. comm.).

The wood charcoal by D Challinor

Most of the charcoal came from contexts that were medieval in date and offered the opportunity to investigate the fuelwood used in the high and late medieval phases. A prehistoric and two Anglo-Saxon features were also presented. The charcoal provided was generally of good size

Table 10 Summary of the charcoal results by phase

Taxa		Prehistoric	Late Saxon	High Medieval	Late Medieval	Unphased
<i>Fagus sylvatica</i> L.	beech	—	—	9	10	—
<i>Quercus</i> sp.	oak	2	4	32	32	6
<i>Alnus glutinosa</i> Gaertn	alder	—	—	—	7	—
<i>Corylus avellana</i> L.	hazel	8	—	1	4	—
<i>Prunus</i> sp.	cherry type	—	—	2	2	—
Maloideae	hawthorn group	1	—	3	6	—
cf Maloideae		—	—	—	1	—
<i>Cytisus/Ulex</i>	broom/gorse	2	—	—	—	—
<i>Acer campestre</i> L.	field maple	—	—	—	1	—
<i>Fraxinus excelsior</i> L.	ash	9	—	1	—	—
<i>Sambucus nigra</i> L.	elder	—	1	5	1	—
Bark		—	—	1	6	—
Indeterminate		—	—	5	4	—
Total no. of samples		1	2	14	9	1
Total no. of fragments		22	5	59	74	6

(>4 mm in transverse section), but the quantities per sample were low, reflecting the paucity of material originally deposited, or accumulated, in the contexts.

Where possible c. 20 fragments were identified from each sample, but in most cases the quantity available was significantly lower and 100% of the sample was analysed. A total of 27 samples, comprising 166 fragments, were examined. The charcoal was identified by fracturing and sorting into groups based on the anatomical features observed in transverse section at $\times 7$ to $\times 45$ magnification. Representative fragments from each group were then selected for further examination in longitudinal sections using a Meiji incident-light microscope at up to $\times 400$ magnification. Identifications were made with reference to Schweingruber (1990), Hather (2000) and modern reference material. Nomenclature and classification follow Stace (1997).

The full results for the analysis are recorded in the archive, and a summary of the results, providing numbers of fragments identified from each phase is given in Table 10. The quantity of charcoal varied enormously, with some samples producing only a single identifiable fragment. The preservation was also variable, and generally tended to be quite comminuted and friable. Ten taxa were positively identified, with the level of identification varying according to the biogeography and anatomy of the taxa. All of the specimens were comparable to native species and no exotic woods were noted. The *Prunus* could not be identified to species level in the fragments examined. The following taxa were identified; *Fagus sylvatica* (beech), *Quercus* sp. (oak), *Alnus glutinosa* (alder), *Corylus avellana* (hazel), *Prunus* sp. (cherry type), Maloideae (hawthorn, apple, pear, service etc.), *Cytisus/Ulex* (broom/gorse), *Acer campestre* (field maple), *Fraxinus*

excelsior (ash), *Sambucus nigra* (elder). Several samples produced small diameter roundwood and bark fragments.

The paucity of the charcoal examined obviously limits the interpretation of the material, but the analysis, nonetheless, provides a record for several chronological periods. The nature of the contexts – mostly pits – and the absence of significant other industrial or structural remains suggests that the charcoal came from spent fuelwood debris, presumably of domestic origin. A single sample from lime kiln 473 (context 544) is an exception and, as might be expected in an industrial context, the charcoal came from oak, including some mature heartwood. The prehistoric sample was not unusual, producing a mixed assemblage of hazel, oak, ash and hawthorn group, suggesting the use of light woodland/hedgerow type wood. The presence of gorse/broom indicates the exploitation of heathland resources.

The high and late medieval samples exhibited a greater diversity of taxa than the earlier phases, although this may be a reflection of the greater quantity of samples and charcoal specimens available. It is really too difficult with so little data to comment on the late Saxon fuelwood use. Certainly by the medieval period the nature of firewood supply had changed, at least for urban centres. Firewood was usually collected from the underwood species of local managed woodlands, which were then bound into faggots for transportation into the towns (Rackham 1996). This may account for a fundamental change in the rise of beech in firewood assemblages, which has been noted at the site of Southampton French Quarter (Challinor, forthcoming 2009) and other medieval towns (e.g. Oxford, Challinor 2002). The dataset from Oceana Boulevard is too small to be conclusive on this point, but neither does it contradict the trend.

Indeed, the type of immature roundwood fragments noted at Oceana Boulevard could have come from a typical firewood supply of faggots, although some of the samples come from field systems where the charcoal may have derived from a more immediate source. The Late Medieval pit 739, for example, produced

alder charcoal as well as plant material. Alder is a species which prefers damp conditions, and since its wood does not burn well it is not usually well represented in the faggots supplying firewood. It is likely that the alder wood was gathered from the damp ground adjacent to the feature.

Conclusions by M J Allen

In the high and late Medieval period the immediate locality at and around Oceana Boulevard was one of open grass and scrub. Abutting this was damper sandy marshy ground. Both the charcoal (high-medieval) and the plant remains (late-medieval) indicate damp ground (alder), marsh and bog (sedges, spike-rush, marshworts, goosefoot and bogbean) which may include salt marsh, and running freshwater (water buttercup). In the immediate locality there is evidence of anthropogenic activity and higher nitrogen values (stinging nettles).

The Saxon cereal remains are sparse, originating from just a single charred assemblage. They probably represent residual charred material incorporated with other general domestic debris. The late-medieval plant sample is small, but the presence of fig (44) and grape (1) is of interest.

DISCUSSION

Prehistoric

The flint assemblage suggests some level of human activity in the area from the Mesolithic period onwards. The flint from the large pit 25 is probably Mesolithic. The earliest clear evidence for occupation dates from the early to middle Bronze Age. The evidence consisted of a few insubstantial features, though the nature of the occupation is unclear. They did not appear to be cremation pits, but no structural evidence of this period was identified. The flint assemblage strongly suggested that knapping took place on site. The flint and pottery both indicate continued activity in the late Iron Age or early Romano-British period.

Late-Saxon and Anglo-Norman

There was some human occupation in the Late-Saxon and Anglo-Norman periods. However, the level of occupation was much lower than has been noted on extra-mural sites to the north such as at SOU 397 where at least three phases of Late-Saxon to Anglo-Norman timber buildings were excavated (Robey 1990). A small assemblage of Late-Saxon pottery, and a somewhat larger assemblage of Anglo-Norman pottery was recovered from Oceana Boulevard. Four Late-Saxon features were identified on SOU 1366, though none were identified on SOU 1316. Three of them were small pits of uncertain function, though the fourth was a well. A small assemblage of charred cereal grains were recovered from one of the pits. However, they were probably derived from waste and need not indicate cereal production on site.

No features dated to the Anglo-Norman period were identified on SOU 1366, though a field ditch was assigned to this period on SOU 1316 to the north, suggesting that there was continuation of activity. The nature of this activity was likely to have been agricultural, presumably supplying the sizable settlement that was developing to the west.

High-medieval

The level of activity increased in the high-medieval period. It broadly corresponds with the founding of the Franciscan Friary immediately to the west in about 1233. The area seems to have continued to be used for agricultural purposes. A series of field ditches were established that continued into the post-medieval period. Their position changed slightly over time. At least 12 separate fields were identified. A major east to west aligned ditch seemed to survive into the post-medieval period at the north end of trenches 10 and 13 that was re-cut on several occasions. Its line may have been defined to the east on SOU 1316 trench 4 by the north end of field 2. It is probable that this represents a property boundary, and may correspond with a property boundary shown

on Speed's map published in 1611. There is a problem with this that there appeared to be a trackway that crossed the proposed boundary. However, it is possible for such a track to cross a property boundary. Furthermore, the track appeared to go out of use in the late-medieval period, so it is possible that there was a division of property ownership at that time.

It is likely that the area to the south, largely corresponding to SOU 1366, formed the gardens of the Franciscan Friary, whose house was to the west inside the town walls. It is possible that the intra-mural property boundary between the Friary and the God's House Hospital to its south crossed the line of the Town Wall. Externally this same line forms a property boundary between the Bowling Green House and the Bowling Green that was certainly established by the post-medieval period. A pre-Town Wall dovecote, that is presumed to have been part of the God's House property, was incorporated into the Town Wall suggesting that the property tenure may have crossed the later line of the Town Wall. The area of Bowling Green House located to the south of SOU 1366, but to the north of the God's House Hospital property, opposed the little gateway through the walls, known as Friars' Gate, which was constructed in or soon after 1371 specifically to give the Friars access to their garden outside the walls.

It is possible that the area to the north, broadly corresponding to SOU 1316, was in separate ownership. The line of the possible boundary ditches excavated at the north end of SOU 1366, projected to the west approximately corresponds to a change of alignment in the town wall, and an internal property boundary to its west. Excavations have shown that there was a stone boundary wall roughly on this alignment on the Telephone House site (SOU 1355). This was taken to be the northern precinct wall of the Friary, forming a boundary to a tenement to the north (Burgesses' tenement 121 – Russel 2009, 34 – 38). It is also possible that this property boundary crossed the line of the Town Wall and was retained throughout the medieval

period. There is therefore tenuous evidence that medieval property boundaries established within the circuit of the town's defences may have continued external to their line.

The limited palaeo-environmental evidence from the site indicates that during the medieval period the area was open grass and scrub, with marshy ground in the vicinity. There were some weeds of cultivation. The animal bone evidence, especially the relatively large number of horse bones in the upper ditch fills and the two articulated sheep skeletons, also suggests pasture in the vicinity. However, the excavated evidence suggests a more complex situation, with several amorphous features that are perhaps best interpreted as being bedding trenches for cultivation. Perhaps the best interpretation is that the area was used for a combination of animal pasture and small-scale cultivation.

Several pits were dug in the fields in the high-medieval period. Many seemed to be small pits with relatively few finds, perhaps dug to dispose of cultivation debris. However, several formed rough, inter-cutting, alignments, and were probably brickearth-digging pits. They were quite small, and were probably dug to obtain brickearth for daub for building works. The fills are characterised by having quite large finds assemblages, often with substantial quantities of animal bone. It is possible that they were deliberately filled with rubbish, perhaps imported from the Friary. Most of the isolated pits had smaller assemblages, the main exception being pit 689, a large pit from near the north end of trench 10, whose sizable assemblage included two sherds of painted window glass, presumably sourced from the Friary.

One pit (851) located near the south-west corner of the site contained large quantities of slag, hammerscale (mostly flakes but with a few droplets) and hearth linings. Andrews was of the opinion that it was a single dump of iron smithing material, and so the pit may have been a rubbish pit for a smithy in the immediate vicinity. The actual smithy was not found.

Several stake-holes were identified. None could be securely dated, but were most likely to be of medieval date. With the exception

of a definite fence line in the open field 1 in trench 7, none could be defined into clear features. It is likely that they were all associated with short-lived structures such as fences and hurdles. There was no evidence for more permanent structures. It would therefore seem that the tenements in Newtown referred to in contemporary documents were discontinuous, and were not located on Oceana Boulevard.

This period produced the largest pottery assemblage by period of the site. A large proportion (96%) of the assemblage was of English production, as opposed to the average for Southampton of 84%. It is difficult to explain this by comparison to likely sources of the pottery, as the Friary produced a figure of 82% English wares (Jervis 2009). The assemblage was closer to that of the poorer parts of the town in the north-east quadrant (eg SOU 175).

Late-medieval

The basic land-use established in the high-medieval period continued into the late-medieval period. The field ditches defining field 1 in trench 7 were re-cut, though fewer sub-divisions of the rest of the site were identified. The redefined field 1 moved over the line of the high-medieval trackway, and this possibly represents a change in land tenure that no longer required access between all of the fields. Perhaps the north edge of fields 2, 8 and 10 became a property boundary. These possible property boundary ditches at the north end were re-dug. The main division to the west of field 1 was an east to west aligned hedgerow in trench 10.

Few features were certainly assigned to the late-medieval period. There was a possible midden in the south-east corner of trench 7. Only two rubbish pits were identified (584 in trench 7 and 833 in trench 12). Two large features (739 and 1014), possibly associated with each other were found in trenches 11 and 13. Their purpose is unclear. Two deeper pits (779 and 786) in trench 12 may have been well pits. However, no shaft was identified in either pit, so they may either have been abandoned

due to collapsing edges before they were completed, or they were not well constructed.

The late-medieval period produced a much smaller pottery assemblage than the high-medieval period. Again the percentage of English wares was high, 81% against the town average of 53%. The relatively large size and unabraded nature of the sherds might indicate that they were spread on the site as manuring shortly before any ploughing ceased.

Post-medieval

Few features datable to the post-medieval period were identified. There was little evidence that the medieval field ditches were maintained, though the possible property boundary ditches at the north end of trenches 10 and 13 were re-cut. A single stake-hole cut into its base might indicate that it was defined by a fence. A fairly large rubbish pit (681) was cut across its line to the east in trench 10. The large late-medieval feature in trench 11 was cut by two large features (630 and 756) in the post-medieval period. Their function is unclear.

A large lime kiln pit (473) was present at the south end of trench 7. It was not clearly dated.

There appeared to a change of land use

in the post-medieval period. Speed's map published in 1611 shows figures bowling on a piece of land whose northern boundary would seem to coincide with the supposed property boundary on the north edge of SOU 1366. By the early 18th century the whole area of the site, with the exception of the northwest corner, was owned by God's House Hospital, and had been subdivided into three properties on which substantial houses with gardens were built.

Early modern

The area started to be developed for suburban housing in about 1800. The ground level was built up by a 0.5 m thick dump of brickearth prior to the construction of the houses.

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