

**SALVATION ARMY SITE
70 BADDOW ROAD
CHELMSFORD
ESSEX**

ARCHAEOLOGICAL EXCAVATION



Essex County Council
Field Archaeology Unit

October 2008

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ARCHAEOLOGICAL EXCAVATION

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**SALVATION ARMY SITE, 70 BADDOW ROAD
CHELMSFORD
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ARCHAEOLOGICAL EXCAVATION

Client: AYH plc acting for the Salvation Army
NGR: TL 7119 0631
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Site Code: CF56
ECC FAU Project No: 1834
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SUMMARY

The Essex County Council Field Archaeology Unit carried out an archaeological excavation for the Salvation Army before rebuilding of the Salvation Army Citadel, 70 Baddow Road, Chelmsford, Essex. The excavation was undertaken as a condition on planning consent placed by the local planning authority in accordance with Planning Policy Guidance 16. Archaeological trenching in 1971, when the previous Citadel was built, recorded a Roman pit and a linear feature running east-west across the site, interpreted as a post-medieval hollow-way filled with alluvial flood deposits from the nearby river Can. The report on the 1971 trenching (Wickenden 1992, 49-50) argues that the hollow-way perpetuated the line of a Roman road, a forerunner of Baddow Road, whose gravels had been washed away by flooding. The 2008 excavation aimed to supplement the earlier work by investigating areas that had not been disturbed by the 1971 building, concentrating particularly on understanding the hollow-way and its relationship with episodes of river flooding.

Trench 1 in the south-west of the site recorded a mixed alluvial deposit containing large amounts of Roman rubbish, mainly pottery, dating to the mid-2nd to mid-3rd century, with a few sherds of medieval pottery representing later disturbance. Residual Mesolithic flint tools were also recovered. This is consistent with evidence from the surrounding area, that the site lay in an area of rubbish disposal at the north-eastern limit of the Roman town, outside both the town defences and the extra-mural temple precinct.

Trench 2 in the north-east of the site investigated the post-medieval hollow-way and re-interpreted it as a relict channel at the southern edge of the flood-plain of the river Can, filled with alluvial deposits to a depth of at least 1.8m (2.45m below modern ground level). There is no evidence for a Roman road crossing the site, and the main Roman road leading eastwards out of Chelmsford ran 90m to the south. The pottery from the 1971 trenching was re-examined and, together with the pottery recovered in 2008, has dated the sequence of infilling of the channel to the 14th to 16th centuries.

The earliest map of Chelmsford, drawn by John Walker in 1591, shows the Can flowing in a loop well to the south of its modern course, and the channel recorded on the Salvation Army site was a meander of the river at the southern edge of its original flood-plain. Study of plant remains in samples taken from the waterlogged lower fills of the channel indicates that water conditions were stagnant, with periodic inundation from flooding, typical of a gradually silting backwater. A plank-and-post timber structure at the edge of the deepest part of the channel represents revetment of the bank or possibly a jetty. Pottery in the channel fills dates its final silting to the 14th century, and it was deliberately levelled over in the 14th or 15th century by a thick layer of gravel mixed with organic rubbish, including the carcass of a horse. Historical records show that dumping of rubbish in Chelmsford's rivers was a common occurrence in the late medieval period. The channel and adjacent areas were levelled up again in the late 15th to 16th century with a thick layer of soil.

The archaeological evidence from the site is consistent with Walker's map of 1591, which shows Baddow Road running along the south bank of the river Can, with no sign of the earlier (infilled) river channel. To the west, in the medieval town area, Baddow Road is first dated to the 14th century. The process of infilling and levelling over the channel at the Salvation Army site appears to have begun at this date or soon after, and this reclamation work enabled Baddow Road to be extended eastwards along its present line in the late medieval period. The site evidence for a thick soil overlying the channel is also consistent with the 1591 map, which shows orchards, gardens and meadows alongside the river.

1.0 INTRODUCTION

1.1 Project Background

The Essex County Council Field Archaeology Unit (ECC FAU) was commissioned by AYH plc on behalf of the Salvation Army to undertake a small archaeological excavation at 70 Baddow Road, Chelmsford before rebuilding of the Salvation Army Citadel. The excavation followed the demolition of the existing complex, built in 1971, and preceded the construction of a new worship hall and community facilities. Because of the known archaeological potential of the site an excavation was required as a condition on planning consent (CHL/01166/07/FUL), in accordance with Planning Policy Guidance note 16 on Archaeology and Planning (DoE 1990). The site had previously been investigated by trial trenching when the original Citadel was built in 1971, and for this reason the 2008 excavation was of limited extent and was designed to supplement the results of the earlier work. The excavation and reporting was carried out according to the brief issued by the Essex CC Historic Environment Management team (ECC HEM 2007), who also monitored the work, and the Written Scheme of Investigation prepared on behalf of the client by the Essex CC Field Archaeology Unit (ECC FAU 2008).

1.2 Report and Archive

Copies of this report will be supplied to AYH plc (for distribution to the Salvation Army and the Chelmsford Borough Council Planning Department), the Essex CC Historic Environment Management team, the Essex Historic Environment Record and the Apollo Group, the main contractor. A digital version will be uploaded to the Online Access Index of Archaeological Investigations (OASIS) (<http://ads.ahds.ac.uk/project/oasis>). The project finds and archive, including two copies of the report, will be deposited at Chelmsford Museum.

2.0 BACKGROUND

2.1 Location, Topography and Geology

The site is located to the south of Chelmsford's town centre at the corner of Baddow Road and Goldlay Road (TL 7119 0631) immediately to the north-east of the Odeon Roundabout on Parkway (Fig. 1). It is situated on the south bank of the river Can near its confluence with the river Chelmer. The uppermost drift geology comprises Chelmer first terrace gravels patchily capped by brickearth, overlying a 30m-deep buried glacial channel filled with mixed silts, clays and gravels (Bristow 1985; and bore-hole logs held in archive).

2.2 Archaeological and Historical Background

The site is located at the north-eastern limit of the Roman forerunner of Chelmsford, known as *Caesaromagus*, situated to the south of the crossing of the river Can (Fig. 1). After the Roman town was abandoned Chelmsford grew up to the north of the river crossing in the area of the modern town centre. The Domesday Survey of 1086 records Chelmsford as a small hamlet (Rumble 1983), but in 1199 it was granted a market charter and by the mid-13th century had become the main town in central Essex. A small suburb, Moulsham, existed south of the river crossing from the late Saxon period onwards, but the site lay outside the settlement in an area of small fields and orchards until the late 19th century.

The Roman and medieval towns have been extensively investigated and researched, and the following background is based on a wide range of published sources as well as records held in the Essex Historic Environment Record (EHER) at County Hall, Chelmsford. The publications consulted include a report on previous excavations in the area of the site (Wickenden 1992) and a reproduction of the earliest map of the town, drawn by John Walker (senior) in 1591 (Edwards and Newton 1985). The main topographical elements in the area of the site are shown on Fig. 1.

The site lies near the original south bank of the river Can, which is shown on Walker's map of 1591 as flowing well to the south of its modern course, close to Baddow Road. The present line of the river results from it having been diverted to the north in 1797 as part of the Chelmer and Blackwater Navigation. Originally, the Can had a wide flood plain, as a previous excavation 100m to the north-west of the site (Fig. 1, site CF14) recorded the southern limit of the flood plain as running immediately to the north of Baddow Road, up to 70m south of the modern riverbank (Allen and Lavender 1994; EHER 16114).

The Roman town was established in c. AD 70/75 on the site of a short-lived fort built after Boudica's revolt of AD 60/61. The town developed along the London-Colchester road (now Moulsham Street) and a second road leading to the south-east (south of Parkway), linking the town with Heybridge and Wickford (Fig. 1). It included a *mansio* (government posting station) and bath-house, and a temple precinct, which was rebuilt in the early 4th century with an impressive octagonal shrine. In c. AD 160-175 an earthwork ditch and bank was constructed to defend the core of the town.

The site lay at the north-eastern edge of the Roman town, outside the town defences. It was located 50m to the east of the Roman temple precinct (Fig. 1, site K; Wickenden 1992, 16-43; EHER 5862) and 90m north of the Roman Heybridge/Wickford road (Fig. 1, site D;

Wickenden 1992, 6-15; EHER 17121). A second road on a parallel alignment has been recorded immediately to the south of Baddow Road (Fig. 1, site AS; Wickenden 1992, 49-54; EHER 5900) and its line has been projected across the north of the Salvation Army site. The Roman road at site AS is dated to the 3rd-4th centuries, and is thought to have been visible, and possibly still in use, as late as the 13th century (Wickenden 1992, 53). Baddow Road was probably first laid out in the 14th century, as timber buildings of that date have been recorded either side of it, at site AS (Wickenden 1992, 53; EHER 5901) and at site CF14 (Allen and Lavender 1994, period X.3-X.4; EHER 16114). The site CF14 building was constructed after large-scale reclamation of the river floodplain in the 13th century (Allen and Lavender 1994, period X.1-X.2).

Watching brief work in 1970-1 during the construction of Parkway recorded Roman pits and wells, including a 3rd-century well 2.7m deep in Goldlay Road immediately to the east of the site (Figs 1 and 2, sites P37; Wickenden 1992, 58-62 and fig. 2; EHER 17121, 17170, 17514, 17525). More recently, an excavation at Lynmouth Gardens, 80m south-east of the site, recorded a small early Roman cremation cemetery and a 2nd-century pit with waterlogged fills containing leather and wooden objects (EHER 46252). Medieval pits and evidence of cultivation have also been recorded in the general area (EHER 17516, 16115).

Five trial trenches were excavated on the site by P.J. Drury in 1971 (Fig. 2) and his summary of the work is included as Appendix 3. The trenching results were later published as part of the Roman temple report (Wickenden 1992, 49 and fig. 27), with the post-Roman evidence summarised. The trenching recorded up to 1m of topsoil and alluvial silts sealing a medieval buried soil in some areas. It located a feature interpreted as a hollow-way on the projected line of the northern Roman road, filled with alluvial silt containing post-medieval pottery (although Drury originally identified the pottery as medieval). It was assumed that the gravel metalling of the Roman road had been eroded away by flooding. A Roman pit dating to the 3rd century was recorded in the south of the site, as well as medieval and post-medieval pits across the site generally.

3.0 AIMS AND OBJECTIVES

The general aim of the excavation was to investigate archaeological remains at the eastern limit of the Roman, medieval and post-medieval town areas and to preserve, by record, any archaeological deposits that would be destroyed by the construction of the new building. This work would supplement the trenching carried out in 1971, concentrating on areas outside the footprint of the old building but within the footprint of the new one.

The research objectives for the project were in line with those laid out in the research framework for archaeology in East Anglia (Brown and Glazebrook 2000). The specific objectives of the excavation were to establish:

- The date and character of activity at the eastern edge of the Roman town, especially the projected line of the Roman road and adjacent areas of pitting.
- The date and character of activity at the eastern edge of the medieval and post-medieval town, especially the hollow-way recorded in 1971.
- The palaeo-environment of the riverbank and any past human impacts on it through sampling and study of any organic material that might survive in well-dated and stratified alluvial deposits, especially if they were waterlogged.

4.0 METHOD

The requirement was for excavation of two trenches following the demolition of the existing building (Fig. 2). Trench 1, measuring 4 x 11m, was aligned east-west and located in the south of the site in the area of the Roman pit recorded in 1971. Trench 2, measuring 3.8 x 16.6m, was aligned north-south in the north-east of the site, in an area outside the footprint of the 1971 building. It was positioned across the line of the postulated Roman road and hollow-way.

The trenches were cut by a mechanical excavator and then excavated and recorded by hand. Trench 1 was investigated over its total area, with a small extension cut into its north section to enable hand-excavation of the sequence of alluvial and other soil accumulations. Trench 2 was stepped to allow hand-excavation at depth (Fig. 3). The top of the natural gravels and the postulated hollow-way was exposed for a single 1.8m machine-bucket width at a depth of 1.2-1.3m, with the overlying deposits left in a 1.5m-wide ledge on one side to allow them to be investigated and recorded in detail. No mechanical excavation was carried

out below this level, which was close to the planned depth of the strip foundations for the new building, with construction impacts below this limited to low-density piling. Further excavation was carried out by hand in three sondages, to a depth of 1.8m and, in one very limited area, to 2.45m. It became clear that the hollow-way was in fact a relict river channel filled with waterlogged alluvial deposits (the feature is shown as a 'Channel' on Figs 1 and 2). The channel was not bottomed as further excavation was impractical and beyond the limits of safe working.

All surfaces were sufficiently cleaned to identify any features present and spoil heaps were examined for archaeological material. Archaeological features and deposits were excavated using hand tools and finds were collected and bagged by context. The trench locations were surveyed through measurement to site boundaries recorded on Ordnance Survey, and levels were taken relative to Ordnance Datum. Features and deposits were recorded using pro-forma site recording sheets. Plans and sections were generally drawn at 1:20 and 1:10 respectively. The overall plan of Trench 2 was drawn at 1:40 and a detail of timbers at 1:10. A photographic record was maintained throughout the investigation. Soil samples were taken from the organic and waterlogged deposits encountered in the deepest part of the channel recorded in Trench 2, for analysis of plant macrofossils and other organic material.

5.0 RESULTS

The following description of fieldwork results is supplemented by further information on the excavated features and deposits presented in Appendix 1.

5.1 Trench 1

Trench 1 was located to the south-west of the site, measuring 4m by 11m and aligned north-west/south-east (Fig. 2). The surface of the undisturbed natural river terrace gravel, slightly dirty at the top (5) was encountered at between 22.23 and 22.35m OD across the trench (Fig. 4, section 1). This was overlain by a layer of orange-brown alluvial clay/brickearth (4), up to 0.35m thick, surviving only in the western third of the trench, to a height of 22.60m OD.

Overlying both the natural gravel and brickearth was a layer of mid to dark grey brown silty clay with charcoal and burnt clay flecks, and small grits and stone inclusions (8/11/18). This was an alluvial deposit mixed with rubbish, between 0.24m and 0.46m thick, which filled a depression in the centre and east of the trench where the alluvial clay was absent. It was mainly excavated by machine, but a strip along the northern edge of the trench (11) was excavated by hand (Fig. 2). A wide variety of finds was recovered, including 280 sherds of

Roman pottery dating to the mid-2nd to mid-3rd century, as well as iron nails, animal bone, glass, tile, slag, a copper alloy ring, a number of hob nails, and two residual Mesolithic flint tools. This represents an accumulation of mainly Roman material, although four sherds of medieval pottery dating to the mid-13th to 14th century were also recovered, suggesting an element of medieval disturbance. A soil sample taken from layer 11 (see 6.9, Environmental Assessment) contained very small amounts of charred grain and seeds, insufficient to reach any conclusions on this material.

The Roman pit recorded in 1971 was identified and planned, but had been disturbed (Fig. 2). Two other pits (1 and 6) were also recorded in plan, but although the fill of pit 6 (7) contained a few sherds of Roman pottery, modern bricks and cement found in both pits indicates that they were modern. Demolition rubble comprising fragments of brick, tile, concrete, mortar and other modern debris (3) sealed all the previous deposits, and through this was dug several modern features (9, 12, 15, 16) and one of the 1971 evaluation trenches (Fig. 4, section 1).

5.2 Trench 2

Trench 2 was located in the north-east of the site, measuring 3.8m by 16.6m and aligned south-west to north-east (Figs 2 and 3). The dirty surface of the natural river terrace gravel was encountered at the south-western end of the trench at a height of 22.6m OD and was truncated across the rest of the trench by a deep channel (27). This was on the line of the feature recorded in the 1971 trenching as a hollow-way, but was much deeper than had previously been thought, and was filled with a sequence of alluvial deposits, the lowest of which were waterlogged.

Only the south-western edge of channel 27 was located, and it was at least 13m wide, extending beyond the north-eastern limit of the trench. The thick silty clay soil (21) overlying the channel was excavated by machine down to its top fill (22) at a depth of 1.2-1.3m below modern ground level. Fill 22 extended over the whole width of the channel, sloping very gradually from 22.08m OD in the south-west down to 21.93m OD in the north-east. The channel's south-western edge (27) and two sondages (34 and 35) were hand-dug from this level along the width of the channel to establish the character of its fills and its overall depth.

The channel edge (27) sloped down gradually for 2.0m (Fig. 4, section 2) before levelling off at a depth of 1.1m (21.48m OD). The lowest fills at this point, 0.3m thick overall, represent erosion of the edge and were gravel-based and sterile alluvial sandy silts and clays (33, 32), containing no finds. Sondage 34, over 7m in from the edge, recorded the base of the

channel at a similar depth, showing that its edge levelled off to a broad shelf at 21.44m OD. At its base was fine blue clay-silt (23) 0.15m thick, and light yellow brown fine clay-silt (24) 0.20m thick above it. These fills were again sterile alluvial deposits and contained no finds.

At the north-eastern end of the trench, excavation of sondage 35 established that the channel sharply increased in depth. A small hand-dug box in the corner of 35 found that the base of the channel exceeded 20.77m OD, a depth of over 1.8m from the top of the channel, and 2.45m below modern ground level. There was also a more complex sequence of fills in this part of the channel (Fig. 3 inset; Fig. 4, section 3). The lowest deposit that was recorded was waterlogged mid-blue-grey silty clay with a few grits and gravels (31), containing animal bone and a tabular stone fragment. Above this was waterlogged brown-grey silty clay with occasional grits and gravels, shell, and fragments of wood (30). Finds recovered from this level included ten sherds of medieval pottery, a few sherds of residual Roman pottery, and small amounts of brick, tile, metalwork and animal bone. The medieval pottery is dated to the 14th century and includes a fragment of a Kingston-ware jug datable to c. 1310-60. Overlying fill 30 was a rich, surprisingly dry, peat deposit (29) that was sealed by dark blue-grey waterlogged silty clay (28), from which were recovered further small amounts of medieval and residual Roman pottery, animal bone, shell and tile. This sequence appears to have formed in a series of tip lines from west to east.

An assessment of plant macrofossils in soil samples taken from channel fills 28, 29 and 30 (see 6.9, Environmental Assessment) identified mainly dry-land herbs and weeds, and a surprising scarcity of wetland or aquatic species. The peat deposit 29 was mainly made up of compacted reed stems. The assessment concludes that water conditions within the channel were stagnant and that most of the plant remains were washed into it by periodic flooding.

A timber structure (36) was recorded at the top of and within waterlogged fills 30 and 31 (Fig. 4 inset). A plank, supported by at least one post ran south-west to north-east at right angles to the channel edge. Two other posts were recorded, although in the limited space it was impossible to identify a structural pattern. The timbers were sealed by the uppermost waterlogged fill 28. The structure may represent a consolidation of the edge of the deeper part of the channel, or possibly a jetty.

Sealing all the alluvial deposits described above, and extending across the entire width of the exposed channel, was a 0.30m-thick deposit of dark grey-green-brown gravel and clay-silt (22). From this was recovered 28 sherds of medieval pottery dating to the 14th century, a

few sherds of residual Roman pottery, tile, animal bone and shell. Although gravelly, this deposit was described by the excavator as containing “cess”, and incorporated highly decayed organic matter. Remains of a horse’s skull and many of the larger bones of its body in fill 22 suggest the disposal of a horse carcass. Overall, the character of fill 22 is in marked contrast to the clean, largely sterile alluvial deposits below it, and it is interpreted as a deliberate levelling across the top of the channel, through the disposal of rubbish as well as cleaner material such as gravel. The levelling would have consolidated the top of the channel, although it did not completely fill it, leaving a depression 0.5m deep.

Through levelling 22 was dug a small circular pit (25) that was filled by dark grey brown silty clay (26) that contained a few sherds of medieval pottery, probably residual, as well as tile, brick, animal bone and shell. The pit probably dates to the late medieval period. Overlying it was dark grey-black homogenous silty clay (21), up to 0.70m thick, that filled the channel and extended beyond its south-western edge, raising the general ground level by 0.20m (Fig. 4, sections 2 and 3). This layer was mainly excavated by machine, but a small area was hand-excavated, from which was recovered small quantities of post-medieval pottery dating to the late 15th-16th century, tile, animal bone and shell. A modern layer c. 0.30m thick that consisted of recent building debris and hogging (20) represented the latest levelling on this part of the site, for the car park for the 1971 Salvation Army Citadel.

6. FINDS AND ENVIRONMENTAL MATERIAL

Finds were recovered from a total of fourteen contexts, across two trenches. All of the finds have been recorded by count and weight, in grams, by context. Full quantification details can be found in Appendix 2. There are two main dating elements to the assemblage: Roman; and medieval and later. Most of the Roman material came from Trench 1, including some from a series of modern pits. The finds in pit 9 were wholly modern and have been discarded following recording. The modern finds in pit 6 have also been discarded. There is modern intrusion in layer 18 in the form of a cement fragment. Contexts in Trench 2 produced mainly medieval and later finds, with small amounts of residual Roman pottery and tile. The finds are described by category below.

6.1 Pottery

More than 300 sherds (5kg) of pottery were recorded in nine contexts. The largest proportion is Roman, which represents 90% by weight of the total. Several sherds of medieval pottery were recovered from layer 11 (Trench 1); all of the remainder came from contexts in Trench 2, as follows:

6.1.1 Medieval and later pottery, by Helen Walker

A small amount of medieval and later pottery, 47 sherds, weighing 499g, was excavated from six contexts. The most closely datable pottery in Trench 2 is from the lower fills (28 and 30) of channel 27 (sondage 35) and comprises sherds of Kingston-type ware that appear to be from a small rounded or biconical jug, dated c.1310 to c.1360 (Pearce and Vince 1988, fig. 41). Further up the sequence, the top fill (22) of the channel produced a relatively large number of jug fragments including an example in Medieval Harlow ware, which is usually confined to the west of the county. Its in-turned rim is of a type current from c.1250 to the 14th century, and a second jug rim, in medieval coarse ware, also has this type of rim. Other wares in this context comprise Hedingham ware, Mill Green fine and coarse wares and sandy orange ware, all of which could have been current from the mid-13th to 14th centuries. Sherds from the same Mill Green ware vessel occurred in pit 25 (fill 26), along with an example of wheel-thrown medieval coarse ware. All these finds could be current with the Kingston-type ware at the bottom of the pottery sequence and date to the 14th century. Layer 21, which overlay the channel, produced Tudor red earthenware dating to the late 15th to 16th centuries. Layer 11, in Trench 1, produced sherds of medieval coarse ware including a possible bowl rim datable to the 13th to 14th centuries, and a sherd of internally-glazed Mill Green ware, which may be 14th century or later.

6.1.2 Roman pottery

Seven contexts produced Roman pottery, amounting to 292 sherds, weighing 4506g. Almost all of the assemblage was recovered from contexts in Trench 1, with the bulk of this coming from layer 8/11/18. The pottery has been recorded by fabric and form by context, although only that from layer 11 has been recorded in more detail (Appendix 2.3). The fabrics were identified using the Essex CC Field Archaeology Unit fabric series, and the vessel forms by using the type series devised for Chelmsford (Going 1987, 13-54). The pottery is in relatively good condition with an average sherd weight of 15.4g.

A range of fabrics was identified, but more than 80% by weight comprised locally-made coarse wares. Several local and continental fine wares were recorded in layer 11, including a small amount of samian. Recorded vessel forms mainly comprise dishes and jars, with the occasional beaker. One of the samian dish sherds has a potters stamp. A footring base in cream-slipped red ware may be from a flagon and there is a single sherd from a mortarium. The fabrics and forms indicate a mid-2nd to early/mid-3rd century date range. The latest pottery consists of two small sherds of Nene Valley colour-coated ware and there are no typically 3rd-century folded beaker sherds.

The pottery accords with that from previous work on the site (Wickenden 1992, 49; Site Q) where a 3rd-century pit was excavated. A nearby well in Goldlay Road contained pottery dated to the second half of the 3rd century (Wickenden 1992, 62; Site P37, F3).

6.2 Brick and tile

Ten contexts produced brick and tile fragments, amounting to 67 pieces, weighing 3687g. Almost one quarter by weight is Roman, recorded in three contexts, and possible Roman fragments were also noted in layer 21 and the fill of pit 25 (26). Apart from the pieces found in layer 11/18, the Roman tile is all residual. Post-medieval brick fragments were retrieved from three contexts; these are too small for further comment. The bulk of the assemblage comprises roof tile fragments, amounting to 36 pieces weighing 2148g and recorded in seven contexts, nearly all in Trench 2. The roof tile is not closely datable and is associated with 14th century and later pottery. It is possible that the tile is contemporary with the pottery but it is equally possible that the fragments are later, and intrusive in the Trench 2 layers.

6.3 Metalwork

Three contexts contained metalwork, mainly in the form of iron nails. Among the nails are six hobnails from sample <2> taken from layer 11 (Trench 1), and a medieval fiddle key nail from the sample taken from fill 30 of channel 27 (sondage 35) (Trench 2). A plain copper alloy ring was recovered from layer 11. This is in good condition, but encrusted, with an external diameter of 20mm. The ring is difficult to date empirically, but the layer is dated to the Roman period and identical rings are shown in Crummy (1983) fig.197. Unfortunately, the function of these rings is unknown.

6.4 Worked and burnt flint, by Tony Blowers

Layer 18 produced one unworked burnt flint piece and two worked, the latter comprising a blade and an end scraper, both of Mesolithic date. Their presence in a Roman context is not surprising in this area of Chelmsford, since excavations at the Roman temple site, 70m to the west, recovered a large assemblage of Mesolithic and Neolithic artefacts (Wickenden 1992, 16).

6.5 Animal bone

A small assemblage of animal bone, amounting to 262 pieces, weighing 4259g, was recovered from nine contexts. More than three-quarters of the total by weight came from Trench 2, and is associated with medieval or early post-medieval pottery. The bone was scanned for condition and completeness, and the skeletal elements present were identified,

where possible, using Schmid (1972). The bone is fragmentary but, generally, in good surface condition. Most of the identifiable bone is sheep/goat, although its fragmentary nature may have biased assignment to taxon. There are few bones identified broadly as large mammal, however, and the apparent preponderance of mutton bones may be genuine.

The assemblage from Roman layer 11 (Trench 1), although small, contains a wider range of animals. Cattle, sheep/goat, pig and domestic fowl were all identified. The large mammal bones are also likely to derive from cattle. Almost all of the identifiable bone from Trench 2 comprises sheep/goat. Bird, fish and frog bones were present in the soil sample residues. Of interest are the horse bones (find spot 19) found in late medieval layer 22. Cranium, tibia, femur and scapula were certainly identified, and the large mammal bones in this layer are also likely to be horse. The cranium and tibia are complete, but the scapula has most of the blade missing and the femur is in fragments. The bones are likely to have derived from a single animal, a mature adult male, probably dying of natural causes and deposited in a relict water-channel for convenience of disposal.

The animal bone, apart from the horse, probably represents disposal of food waste, although few of the bones exhibit signs of butchery due to fragmentation.

6.6 Shell

Six contexts, all in Trench 2, produced small amounts of shell, amounting to 58 pieces, weight 285g. Most of the shell comprises oyster but cockle and mussel were present in fill 30 of channel 27 (sondage 35). The shell is associated with medieval and early post-medieval pottery.

6.7 Other finds

These are few. A small sherd of Roman blue-green vessel glass came from layer 11. This context also contained small amounts of slag and baked clay. Baked clay was also recovered from fill 32 of channel 27. A large tabular fragment of stone was collected from fill 31 of channel 27 (sondage 35). It is unclear whether this represents discarded building stone.

6.8 Environmental samples

Four bulk soil samples were collected for the purpose of environmental analysis. All four samples were processed by wet-sieving with flotation using a 0.5mm mesh and collecting the flotation fraction (flot) on a 0.5mm sieve. Since sample <3> comprised mainly plant material, only 50% of the sample was processed. The residues were dried and separated into coarse

and fine fractions using 4mm and 2mm sieves. The material in the coarse fraction (>4mm) was sorted by eye, and artefacts and environmental material extracted and bagged separately. The fine fractions were also bagged separately and retained. The flots were bagged by context and those from samples <3> and <4>, which contained much plant material, were initially stored wet. Retrieved artefacts were recorded by count and weight, where possible, and these details added to the quantification table in Appendix 2. A range of finds was recovered from the residues of all four soil samples. The flots mainly comprise root material, although samples <3> and <4> both produced wood fragments and seeds. Full details can be found in Appendix 2. The dried flots were submitted to Val Fryer for study, as follows.

6.9 Environmental assessment, by Val Fryer

Samples for the retrieval of the plant macrofossil assemblages were taken from one Roman deposit (11), sample <2>, and three late medieval fills (28, 29 and 30) within channel 27 (box section 35) (samples <1>, <3> and <4>). The dried flots were scanned under a binocular microscope at magnifications up to x16, and the plant macrofossils and other remains noted are listed in archive. Nomenclature within the table follows Stace (1997). Both de-watered and charred plant remains were noted.

6.9.1 Results

With the exception of a single indeterminate charred cereal grain and a small number of charred seeds from sample <2>, the assemblages were almost entirely composed of de-watered root/stem fragments, seeds of dry-land herbs and wetland plants and tree/shrub macrofossils. Preservation was moderately good, although some seeds were misshapen as a result of soil compression.

Seeds of dry-land herbs were especially abundant within the assemblage from sample <4>, but also occurred within the other three samples. Ruderal and colonising species were common, with taxa noted including hemlock (*Conium maculatum*), dead-nettle (*Lamium* sp.), nipplewort (*Lapsana communis*), black nightshade (*Solanum nigrum*) and stinging nettles (*Urtica dioica*). Seeds of grassland herbs including buttercup (*Ranunculus* sp.) and chickweed (*Stellaria media*) were also recorded along with a limited range of common segetal weeds including stinking mayweed (*Anthemis cotula*) and orache (*Atriplex* sp.). Wetland/aquatic plant macrofossils, including seeds/fruits of duckweed (*Lemna* sp.) and water crowfoot (*Ranunculus* subg. *Batrachium*), also occurred in all four assemblages and reed (*Phragmites* sp.) culm fragments/nodes were a major component within sample <3>. Tree/shrub macrofossils were rare, but included bramble (*Rubus* sect. *Glandulosus*) 'pips',

elderberry (*Sambucus nigra*) seeds and a single fragment of hazel (*Corylus avellana*) nutshell. Charcoal fragments, including some very large pieces, were present at a low density in all samples. Other remains were exceedingly scarce but included de-watered arthropods and water flea eggs (Cladoceran ephippia).

6.9.2 Discussion

The small charred assemblage within sample <2> from layer 11 in Trench 1 is probably derived from a low density of either scattered or wind-blown refuse, although the origin of the material is unclear. However, as the charred remains are so scarce, it would appear very unlikely that domestic and/or industrial activities were being conducted in the near vicinity during the Roman period.

The three samples from the fills of sondage 35 in channel 27 are somewhat perplexing as, although the macrofossils have been preserved by deposition in anaerobic conditions, wetland/aquatic species are relatively scarce within the assemblages. The exception to this is sample <3>, which appears to be largely composed of compressed mats of reed stems, most of which are covered with dense silt concretions. Evidence from the assemblages suggests that the channel was probably situated within an area of overgrown, scrubby, damp grassland, and it is, perhaps, most likely that many of the macrofossils were washed into its fills during one or more episodes of flooding. The few aquatic plant remains recorded suggest that water conditions within the channel were stagnant, but it is unclear why further wetland species are not present.

6.10 Comments on the assemblage

A range of finds, of both Roman and medieval and later date, was recorded. The Roman features in Trench 1 had suffered from truncation and intrusion by post-medieval and modern pitting, although a large amount of pottery was recovered from layer 8/11/18. Trench 2 uncovered a large feature, identified as a hollow-way in the 1971 work, but the current assemblages point to it being a relict water channel. The presence of what seems to represent the disposal of a horse carcass would preclude use as a routeway. The environmental report substantiates this view, indicating reed-filled standing water, although true aquatic vegetation was scarce. The lower excavated deposits appear to date mainly to the 14th century. The upper deposit 21 dates to the early post-medieval period, which ties in with previous work (Wickenden 1992, 49). Appraisal of the pottery recovered during the 1971 investigation by Helen Walker (Appendix 4) has shown that both sets of pottery are contemporary, dating the lower part of the channel feature to the 14th century. The post-

medieval brick and tile in some of the layers can be regarded as intrusive, especially if local ground conditions were soft.

Further work is not required on any of the finds. All of the finds should be retained. As indicated above, the modern material has already been discarded, along with the smaller fragments of brick and tile.

7. CONCLUSIONS

The 2008 excavation added to and re-assessed the results of the previous archaeological trenching carried out in 1971. The 2008 excavation trenches were located to investigate areas where archaeological remains had previously been found within the footprint of the new building but at the edge of or outside the footprint of the 1971 building. Trench 2 in particular was deliberately placed in a former car park area that had not been disturbed by construction of the 1971 building.

In the south-west of the site (Figs 1 and 2, Trench 1), a layer of alluvium mixed with rubbish, between 0.24m and 0.46m thick, overlay the river terrace gravels and alluvial clay/brickearth that formed the natural deposits across site. This soil contained a large quantity of Roman artefacts, including 280 sherds of pottery dated to the mid-2nd to mid-3rd century, consistent with large-scale dumping of Roman rubbish, but also contained a few sherds of pottery dated to the mid-13th to 14th century, implying some medieval disturbance. Two Mesolithic flint tools were also recovered as residual finds. The Roman pit found in the 1971 trenching was located, but all the other pits recorded in Trench 1 were modern, and the Roman pottery recovered from them was residual as it was mixed with obviously modern building debris.

Trench 2 in the north-east of the site (Figs 1-4) re-interpreted the post-medieval hollow-way recorded in 1971 as a relict channel at the southern edge of the flood-plain of the river Can. The feature was interpreted by the original excavator as a large drainage channel, but its full depth was not recorded as only the top fill was investigated (Appendix 3). The feature was thought to be quite shallow, which is probably why it was interpreted as a hollow-way in the published report (Wickenden 1992, 49).

The southernmost 13m of the river channel was recorded, and over most of Trench 2 it formed a gradually shelving profile just over 1m deep, filled with clean alluvial deposits. It became much deeper at the north-eastern end of the trench, because although the bottom of the channel was not recorded, waterlogged alluvial deposits were recorded to a depth of at least 1.8m (2.45m below modern ground level), which suggests that the deepest part of the channel was beyond the northern limit of the site. This contradicts the 1971 site plan (Fig. 2 and Wickenden 1992, 50, fig. 27), which shows a northern edge to the channel within the site area. The 2008 excavation, however, investigated the channel to a greater depth than the 1971 trenching, and suggests that the northern edge planned in 1971 represents a change in the upper fills of the channel rather than a true edge.

The earliest map of Chelmsford, drawn by John Walker in 1591 (Figs 1 and 5; Edwards and Newton 1985), shows the Can forming a loop well to the south of its modern course, and the channel recorded on the Salvation Army site appears to have been a meander of the river at the southern edge of its flood-plain. Study of plant remains in samples taken from the water-logged lower fills of the channel indicates that water conditions were stagnant, with periodic inundation from flooding, typical of a gradually silting backwater (see 6.9, Environmental Assessment). The plank-and-post timber structure 36 recorded at the edge of the deepest part of the channel (Fig. 3) represents a revetment of the bank or possibly a jetty.

Pottery in the channel fills dates its final silting to the 14th century, and it was then deliberately levelled over in the 14th or 15th centuries by a thick layer of gravel mixed with organic rubbish (now mostly decayed), including the carcass of a horse. The channel and adjacent areas were levelled up again in the late 15th to 16th centuries with a thick layer of soil. This sequence represents the final silting of the channel and the reclamation of this part of the river flood-plain between the 14th and 16th centuries. Re-examination of the pottery from the 1971 trenching, described as “post-medieval” (Wickenden 1992, 49), confirmed that it is of the same date, late 15th to 16th century, as the pottery recovered in 2008 from layer 21, the final stage of infilling of the channel (Appendix 4). The initial formation of the channel is not dated, and it is not known whether it was originally of prehistoric date or more recent.

The re-interpretation of the hollow-way as a relict river channel means there is no evidence, even indirect, of a Roman road crossing the north of the site (Wickenden 1992, 49 and Fig. 2), and the few sherds of Roman pottery in the channel fills are obviously residual, probably washed in as a result of flooding.

8. ASSESSMENT OF RESULTS

Survival of archaeological deposits varied across the site, with a high degree of modern truncation in the area of the demolished 1971 building and much better survival in the east of the site outside its footprint. The 1971 building had generally truncated deposits to a depth of up to 1.0m, roughly the level of the surface of the natural gravel, although Trench 1 in the south-west of the site recorded natural alluvial clay/brickearth and Roman/medieval alluvial deposits surviving patchily in a small area of shallower truncation to a depth of only 0.6m. In the north-east of the site, the sequence in Trench 2, consisting of river channel fills and overlying reclamation deposits, survived undisturbed by modern intrusions, because the trench was located in a former car park area outside the footprint of the 1971 building.

Sealed waterlogged alluvial deposits survived at a depth of below 1.8m, although the environmental assessment (see 6.9 above) concluded that most of the plant remains had been washed into the channel by flood action.

The excavation results, especially the re-interpretation of the postulated hollow-way as a relict river channel, add to understanding of the topography of the general area of the site (Figs 1 and 5). The river Can originally flowed further to the south than had previously been thought. Walker's map of 1591 shows the Can forming a southerly loop almost as far as Baddow Road, but the site evidence indicates that a river channel that later became cut off existed to the south of Baddow Road, running up against the southern limit of the floodplain. The main river channel probably always ran to the north of Baddow Road, with the channel recorded on site representing recutting of the outside of the river bend as a result of a major episode of flooding. This is consistent with evidence from previous excavations 100m to the north-west of the site, at the Meadows Car Park (Fig. 1, site CF14; Allen and Lavender 1994), where the flood-plain of the Can originally extended well to the south of the modern river, almost as far as Baddow Road. Other evidence from the Baddow Road/Parkway area (Drury 1972; Wickenden 1992) suggests that a wider area to the south of the main floodplain periodically became flooded.

The re-interpretation of the hollow-way as a relict river channel means that there is no evidence on site for the postulated Roman road. The Roman road running 90m to the south of the site (Fig. 1, site D) was clearly the main route leading eastwards out of Chelmsford and the Roman road to the north was secondary. This is confirmed by their respective dating, as the southern road was constructed in the early 2nd century and the northern road was not laid out until the 3rd century. The line of the northern road is known for certain at site AS to the north-west of the site (Fig. 1; Wickenden 1992, 49-53), but its continuation to the south-east as far as the Salvation Army site is uncertain. It was not recognised during watching brief work at the Odeon roundabout (Fig. 1, site P6) and the gravel layer recorded in a sewer trench immediately to the east of the site may not necessarily be a road surface (Fig. 1, P35). It is still possible that the Roman road extended as far as the Salvation Army site, but for this to be possible it has to be assumed that the river channel was post-Roman and washed away all evidence of the road. Whatever the extent of the road, it provided local access to the south bank of the river Can in the 3rd and 4th centuries, possibly servicing wharves, as suggested by Drury (1972, 11 and fig. 1).

The presence of large amounts of Roman rubbish in the south-west of the site is typical of the evidence from the surrounding area, that the site lay in an area of rubbish disposal at the

north-eastern limit of the Roman town, outside the town defences and the extra-mural temple precinct. The date range of the Roman pottery recovered from the site, mid-2nd to mid-3rd century, is consistent with the main period of Roman activity in the area.

It is not known whether the channel recorded at the Salvation Army site ever formed the main channel of the river Can or was always a backwater, but the environmental assessment (see 6.9 above) indicates that it had certainly become a backwater and was silting up by the 14th century. The reclamation of the channel in the 14th to 16th centuries occurred in two distinct stages: an initial infilling with mixed gravel and organic rubbish, including a horse carcass, followed by raising the general ground level with a thick layer of cleaner soil. The dumping of filth in Chelmsford's rivers was a common occurrence in the 14th and 15th centuries, despite an Act of 1388 introduced to prevent river pollution, and a local bye-law giving the manorial court the power to fine offenders a maximum of 6s 8d, a large sum of money for that period (Grieve 1988, 62 and 87-8). Court records show that the law was continually breached, with offenders being fined for throwing large quantities of entrails, dung and dead animals into the river. The presence of a horse carcass in the infilling of the channel therefore comes as no surprise. A record of 1407 comments wryly that "it was said horses led to water would not drink" (Grieve 1988, 62) and the river was clearly unsanitary. The thick upper soil layer is interpreted as a final reclamation of the river bank with cleaner material.

The archaeological evidence from the site is consistent with Walker's map of 1591, which shows Baddow Road running along the south bank of the river Can, with no sign of the river channel because it had already been infilled and levelled over by that date (Fig. 5). To the west, in the medieval town area, Baddow Road is first dated to the 14th century (Wickenden 1992, 53), and the process of infilling and levelling-over of the channel at the Salvation Army site had apparently begun at this date. These reclamation works enabled Baddow Road to be laid out on its present line along the riverbank, probably in either the 14th or 15th century, and certainly by the 16th century. The site evidence for a thick soil overlying the channel is also consistent with the 1591 map, which shows orchards and gardens alongside the river.

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APPENDIX 1: FIELDWORK DATA

Context No.	Feature	Trench	Type	Description	Date
1	1	1	Pit	Irregular	Undated
2	1	1	Fill	Brown silty clay, brick rubble	Undated
3		1	Overburden	Grey sandy silty clay, brick rubble	Modern
4		1	Alluvium	Orange-brown clay, 0.35m thick	Alluvium
5		1	Natural	Dirty top of natural gravel	Natural
6	6	1	Pit	Oval, 0.36m diameter, 0.22m deep	Modern
7	6	1	Fill	Brown clay-silt, brick rubble	Modern
8		1	Layer = 11	Grey-brown gravelly silty clay	Roman
9	9	1	Pit?	In section only	Modern
10	9	1	Fill	Brick and mortar rubble	Modern
11		1	Layer	Grey-brown gravelly silty clay	Roman, M2-M3 C
12	12	1	Pit	In section only	Modern
13	12	1	Fill	Modern rubble	Modern
14	15	1	Overburden	Mixed gravel/sand/modern rubble	Modern
15	15	1	Cut	In section only	Modern
16	16	1	Pit	In section only	Modern
17	16	1	Fill	Orange-brown clay with brick rubble	Modern
18		1	Layer = 11	Grey-brown silty clay	Roman
19		2	Finds = 22	Horse skull in 22	Medieval
20		2	Overburden	Orange hoggin	Modern
21		2	Layer	Dark grey silty clay	Post-med L15-16 C
22	27	2	Fill	Brown-grey-green silty gravelly clay	Medieval, 14 C
23	27	2	Fill (alluvium)	Blue grey silty clay	Undated
24	27	2	Fill (alluvium)	Yellow-brown sandy silty pebbly clay	Undated
25	25	2	Pit	Circular, 1.0m wide, 0.54m deep	Post-med
26	25	2	Fill	Grey-brown silty clay	Post-med
27	27	2	Channel	E-W, 12.8m+ wide, 1.9m+ deep	Natural
28	27	2	Fill (alluvium)	Blue-grey silty clay with sandy gravel	Medieval, 14th C
29	27	2	Fill (alluvium)	Dark brown peat, wood, gravel	Medieval
30	27	2	Fill(alluvium)	Brown-grey silty clay, pebbles	Medieval, 14th C
31	27	2	Fill (alluvium)	Blue-grey silty clay, gravelly	Undated
32	27	2	Fill (alluvium)	Yellow-brown silty sandy clay, gravel	Undated
33	27	2	Fill (alluvium)	Grey-brown sandy silt, with gravel	Undated
34	27	2	Box-sect = 27	1.0 x 1.0m	
35	27	2	Box-sect = 27	1.0 x 1.0m, 0.6m extension to SW	
36	27	2	Structure	Timber post and plank structure	Medieval, 14th C

APPENDIX 2: FINDS AND ENVIRONMENTAL DATA

Appendix 2.1: Finds data

Context	Feature	Count	Weight	Description	Date
7	6	4	152	Cement fragments (Discarded)	Modern Post med. Roman
		4	38	Brick fragments (Discarded)	
		3	120	Pottery; body sherds, black-surfaced and sandy grey wares, one has G17-type lattice	
8	Layer	1	18	Pottery; dish base sherd, black-surfaced ware, joins dish in 11	Mid 2nd-mid 3rd C
10	9	1	316	Cement/breeze-block (Discarded)	Modern Modern Modern Post med.
		1	40	Plaster (Discarded)	
		4	228	Brick fragments, inc airbrick (Discarded)	
		2	38	Roof tile fragments (Discarded)	
11	Layer	1	2	SF1 Copper alloy ring	-
		12	76	Iron nails; 8/14g nail, hobnails and flat fragment from sample 2	-
		192	604	Animal bone; cattle horn core and phalanx; rib, vertebra, skull and mandible fragments, large mammal; metapodial, proximal end missing, molars and maxilla fragment, sheep/goat; fragments, inc ?bird bone; 151/202g from sample 2, cattle metapodial epiphysis; sheep/goat molars; fragments, inc long bone, skull, vertebra and ?pig mandible	-
		-	30	Slag fragments from sample 2	-
		1	1	Glass; blue-green vessel body sherd, bubbly	Roman
		14	100	Baked clay fragments; 11/28g from sample 2	-
		8	665	Tile fragments	Roman
		4	88	Pottery; rim and body sherds, one with cordon	Medieval
		271	4066	Pottery; rim, base and body sherds, various fabrics, inc 54/445g rim and body sherds from sample 2	Roman
		18	Layer	1	20
2	48			Flints	-
1	8			Burnt flint (Discarded)	-
1	10			Tile fragment	Roman
8	112			Pottery; jar rim sherds and body sherds, black-surfaced and sandy grey wares, inc jar with bifid rim	Roman
19	22	8	2480	Animal bone; horse skull (no mandibles) molars and incisors very worn, empty sockets for canine teeth	-
21	Layer	5	96	Animal bone; metacarpus x 2, one unfused distal end, metatarsus, distal end missing, and metapodial shaft, sheep/goat; rib fragment, large mammal	-
		1	16	Shell; oyster, one valve	-
		8	720	Roof tile fragments, one may be Roman	Post med.
		2	26	Pottery; base and body sherds	Post med.
22	27	15	860	Animal bone; tibia, femur proximal condyle and scapula, most of blade missing, horse, pelvis fragment, large mammal; acetabulum, sheep/goat; fragments	-
		18	128	Shell; oyster, ten valves and fragments	-
		8	238	Brick fragments, one may be post-med. (two small indet. frags [10g] discarded)	Roman
		3	200	Roof tile fragments	Post med?
		28	310	Pottery; rim, base and body sherds	Medieval
		6	54	Pottery; body sherd, amphora; body sherds, sandy and fine grey wares	Roman

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Context	Feature	Count	Weight	Description	Date
26	25	2	18	Iron nails	-
		6	128	Animal bone; metacarpus x 2 and metapodial shaft with three chop marks, sheep/goat; vertebra and rib fragments, large mammal (one is marked 31)	-
		8	64	Shell; oyster, six valves and fragments	-
		4	266	Brick fragments, one may be Roman	Post med.
		5	474	Roof tile fragments, one with peg hole (one is marked 31)	Post med.
		2	12	Pottery; body sherds	Medieval
28	27 (35)	10	20	Animal bone; metacarpus, sheep/goat; fragment; fragments, 8/2g from sample 1, inc bird humerus, distal end, and caudal vertebra	-
		2	14	Shell; oyster, two valves	-
		7	284	Roof tile fragments, inc 1/86g from sample 1 (2/14g small pieces discarded)	Med/post med
		1	2	Pottery; body sherd	Medieval
		1	6	Pottery; body sherd, fine grey ware, from sample 1	Roman
29	27 (35)	1	1	Animal bone fragment from sample 3	Med/post med
		16	1	Shell fragments (?garden snail) from sample 3	
		1	54	Roof tile fragment from sample 3	
30	27 (35)	2	1	Iron fiddle key nail and fragment from sample 4	Medieval
		24	54	Animal bone; metacarpus and metatarsus, distal end missing, sheep/goat; 22/2g fragments, inc fish and frog, from sample 4	-
		13	62	Shell; oyster, seven valves; 6/4g from sample 4, mussel, two valves and fragments; cockle fragments	-
		2	94	Brick fragments	Post med?
		10	378	Roof tile fragments, inc 6/210g from sample 4	Med/post med.
		10	58	Pottery; body sherds, inc 5/8g body sherds from sample 4	Medieval
		2	130	Pottery; body sherds, storage jars	Roman
31	27 (35)	1	16	Animal bone; metapodial, distal end, sheep/goat, poor condition	-
		1	1275	Stone fragment, tabular, depth 51mm	-
32	27	1	32	Baked clay	-

Appendix 2.2: Bulk sample data

Sample	Context	Feature	Bulk weight	Bone	Burnt bone	Charcoal	Seeds/ Grain	Molluscs
1	28	Channel 27 (box-sec. 35)	21.5kg	X		X		
2	11	Layer	23kg	X		X		
3	29	Channel 27 (box-sec. 35)	5.5kg	X			X	
4	30	Channel 27 (box-sec. 35)	10.5kg	X			X	

X denotes presence

Appendix 2.3: Roman pottery from layer 11 by fabric

Fabric	Count	Weight	Description
AMPH	1	162	Body sherd, Dressel 20
TSG	7	82	Rim, base and body sherds, mainly dishes, one with potters stamp; 1/2g body sherd from sample 2
COLBM	1	20	Body sherd with 5mm diameter hole
STOR	31	1475	Storage jar rim sherds and body sherds; 4/200g body sherds from sample 2
MIC	1	4	Beaker rim sherd
COLB	3	25	Body sherds; 1/1g body sherd from sample 2
COLC	3	8	H20 beaker rim and shoulder sherds, and lower wall sherd
NVC	2	2	Body sherds from sample 2, one with barbotine line
MWSRS	9	54	Footring sherds and body sherds; 1/4g body sherd from sample 2
NKG	6	78	Footring base and body sherds
HGG	6	20	H6 beaker rim and body sherds; 1/4g body sherd from sample 2
BUF	2	40	Body sherds, one in pink fabric (possibly burnt), the other micaceous
ESH	2	44	G5.5 jar rim sherd and body sherd, same vessel, sparse shell, gritty fabric
GROG	2	28	Base and body sherds
GRF	7	32	Beaker base and body sherds, some with barbotine dots
BB2	27	584	B1 dish rim sherds, dish base and body sherds and jar body sherds, some with lattice decoration; 1/24g B2 rim sherd with lattice decoration from sample 2
BSW	82	684	Jar rim sherds, inc G9 and G20, base and body sherds; 24/134g rim and body sherds from sample 2
GRS	79	724	G3, G20 and G24 jar rim sherds, base and body sherds; 19/74g body sherds from sample 2
Totals	271	4066	

Appendix 2.4: Medieval and later pottery data

Context	Feature	Count	Weight	Description	Date
11	Layer	1	9	Mill Green ware sherd showing remains of clear internal glaze, probably from a bowl	?14th C
		3	79	Medieval Coarse Ware, including fragment of beaded ?bowl rim and sherd decorated with thumbled applied strip	13th -14th C
21	Layer	2	28	Tudor Red Earthenware base and body sherd, unglazed	late 15th/16th C
22	27	1	97	Medieval Harlow ware inturned jug rim and ribbed handle, slip-coated, unglazed	c.1250-14th C
		15	172	Medieval Coarse Ware comprising inturned jug rim, sagging base and misc. body sherds	c.1250-14th C
		4	12	Mill Green coarse ware three of the sherds are from the same vessel and show external fire-blackening	mid 13th-14th C
		1	7	Hedingham ware, body sherd showing partial mottled green glaze	mid 13th C +
		2	3	Mill Green ware showing cream slip-coating with applied red-slip stripe under plain glaze	mid 13th-14th C
		5	16	Sandy Orange Ware misc. small sherds including part of thumbled jug base and body sherd decorated with red and white slip beneath plain lead glaze	13th to 14th C
26	25	1	7	Medieval Coarse Ware, wheel-thrown	c.1250 to 14th C
		1	6	Mill Green ware, cream slip-coating and traces of red slip, same vessel in context 22	mid 13th to 14th C
28	27 (35)	1	3	Kingston-type ware, mottled olive green glaze, same vessel in context 30	14th C
30	27 (35)	5	52	Medieval Coarse Ware, misc. sherds including sagging base and at least one wheel-thrown sherd	c.1250-14th C
		1	4	Kingston-type ware perhaps from small rounded or biconnical jug c.1310 to c.1360, from soil sample 4	14th C
		1	1	Mill Green type ware from soil sample 4	14th to 16th C
		3	3	Medieval Coarse Ware from soil sample 4	12th to 14th C
		47	499		

APPENDIX 3: SUMMARY OF RESULTS OF THE 1971 TRENCHING

The following has been copied from a typescript in the archive of the 1971 trenching deposited at Chelmsford Museum.

Site at the Junction of Goldlay and Baddow Road, Chelmsford, Essex:

Trial Excavations - TL 7119 0631

P.J. Drury, May 1971

Trial trenching of this site by machine on 5 April 1971 located one small, shallow pit of third century date; the Romano-British occupation area suggested by the features observed in the adjoining section of Goldlay Road (in a sewer trench, 1970) now appears to lie east of Goldlay Road, extending northwards towards the river. This area is not threatened in the foreseeable future.

A silt filled feature c. 12m wide crossed the site from west to east; though it was not sectioned, there is reason to think it was a drainage channel, and not deep. Its upper fill contained medieval pottery. On the western periphery of the site a medieval pit and a limited spread of medieval roof tile were observed, the latter lying on a buried soil extant to varying degrees over much of the site, but often difficult to distinguish from the silt above. The usual stratification consisted of c. 0.20-0.30m topsoil or rubble overlying 0.20-0.70m alluvial silt above the natural brickearth or gravel, or buried soil where extant.

APPENDIX 4: POTTERY FROM THE 1971 TRENCHING

Medieval and later pottery from Site Q, 1971, H. Walker

A small amount of medieval and later pottery, seventeen sherds, was recovered from the 1971 trenching of the Salvation Army site and is itemised below. The pottery came from the upper fill of the relict river channel (originally described as a drainage channel, Appendix 3) and is equivalent to the material recovered from layer 21 in the 2008 excavation. It is broadly similar to that excavated in 2008, but with the addition of shell-tempered pottery dated c.1200, suggesting some earlier activity in the area. Also of interest is the lower handle attachment of a late medieval jug showing a post-firing incised cross, such marks are often found on pottery from ecclesiastical sites and are thought to denote ownership (Walker forthcoming). It is therefore possible that this vessel is associated with the nearby Dominican Priory (Drury 1974).

Context	Count	Weight	Description	Date
Baddow Rd stream bed	1	114	Tudor Red Earthenware cistern rim, showing typical internally bevelled rim and bifid handle	later 15th to 16th centuries
1	1	5	Shell-Tempered Ware	10th to 13th C
	3	15	Shell-and-Sand-Tempered Ware including a B2 cooking pot rim and a body sherd with a thumb applied strip	c.1200
	6	63	Medieval Coarse Ware including a B2 rim and a body sherd showing a thumb applied strip	?13th C
	3	67	Sandy Orange Ware, late medieval unglazed types including a thumb jug base which is extremely laminated/abraded and the lower handle attachment of a jug exhibiting the remnants of a post-firing incised cross	15th to mid 16th C
4	1	16	Medieval Coarse Ware sagging base sherd	later 12th to 14th C
	1	13	Colchester-type Ware sherd perhaps from upper part of jug, unglazed apart from single splash	14th to 16th C
	1	16	Tudor Red Earthenware, flat-topped rim from jug or cistern, rilled neck and slip-painted band around neck	later 15th to 16th centuries
	17	309		

APPENDIX 5: CONTENTS OF ARCHIVE

SITE NAME: SALVATION ARMY SITE, 70 BADDOW ROAD, CHELMSFORD, ESSEX

Index to the Archive

File containing:

1. Introduction

- 1.1 Brief for the archaeological investigation
- 1.2 Written scheme of investigation

2. Research Archive

- 2.1 Client Report (plus x2 bound copies at the rear of the file)
- 2.2 Analytical Reports
 - 2.2.1 Finds Report
- 2.3 Catalogues
 - 2.3.1 Context Finds Record
 - 2.3.2 Finds Catalogue

3. Site Archive

- 3.1 Context Index
- 3.2 Context Record Sheets 1 - 40
- 3.3 Register
 - 3.3.1 Plan Registers
 - 3.3.2 Section Registers
 - 3.3.3 Digital Photo Register
 - 3.3.4 Level Register
- 3.4 Trench Sheets
- 3.5 Miscellaneous maps, plans and sketch sections

CD (Digital photos and archive data)

Not in the file:

A1 plan sheets x 2 and A1 section sheets x 2
The finds occupy three boxes.

APPENDIX 6: ESSEX HISTORIC ENVIRONMENT RECORD SUMMARY

Site Name/Address: Salvation Army, 70 Baddow Road, Chelmsford, Essex	
Parish: Chelmsford	District: Chelmsford
NGR: TL 7119 0631	Site Code: CF56
Type of Work: Excavation	Site Director/Group: M. Pocock, ECC FAU
Dates of Work: 28-30 April 2008	Size of Area Investigated: 0.5 ha Two trenches = 100 sq m
Curating Museum: Chelmsford	Funding source: Salvation Army
Further Seasons Anticipated?: No	Related HER Nos.:
Final Report: Essex Archaeology & History	OASIS No.: essexcou1- 42818
Periods Represented: Mesolithic, Roman, medieval, post-medieval	
<p>SUMMARY OF FIELDWORK RESULTS:</p> <p>A small excavation was carried out before rebuilding of the Salvation Army Citadel. Previous trenching in 1971 had recorded a Roman pit and a linear feature running east-west across the site, interpreted as a post-medieval hollow-way filled with alluvial flood deposits from the nearby river Can. The report on the 1971 trenching (Wickenden 1992, 49-50) argues that the hollow-way perpetuated the line of a Roman road, a forerunner of Baddow Road, whose gravels had been washed away by flooding. The 2008 excavation investigated areas that had not been disturbed by the 1971 building.</p> <p>Trench 1 in the south-west of the site recorded a mixed alluvial deposit containing large amounts of Roman pottery dating to the mid-2nd to mid-3rd century, with a few sherds of medieval pottery representing later disturbance, and residual Mesolithic flint.. This is consistent with evidence from the surrounding area, that the site lay in an area of rubbish disposal at the north-eastern limit of the Roman town, outside the town defences and the extra-mural temple precinct.</p> <p>Trench 2 in the north-east of the site investigated the post-medieval hollow-way and re-interpreted it as a relict channel at the southern edge of the flood-plain of the river Can, filled with alluvial deposits to a depth of at least 1.8m (2.45m below modern ground level). The pottery from the 1971 trenching was re-examined and, together with the pottery recovered in 2008, has dated the sequence of infilling of the channel to the 14th to 16th centuries. There is no evidence for a Roman road crossing the site..</p> <p>The earliest map of Chelmsford, drawn by John Walker in 1591, shows the Can flowing in a loop well to the south of its modern course, and the channel recorded on the site was apparently a meander of the river at the southern edge of its original flood-plain. Study of</p>	

Site Name/Address: Salvation Army, 70 Baddow Road, Chelmsford, Essex

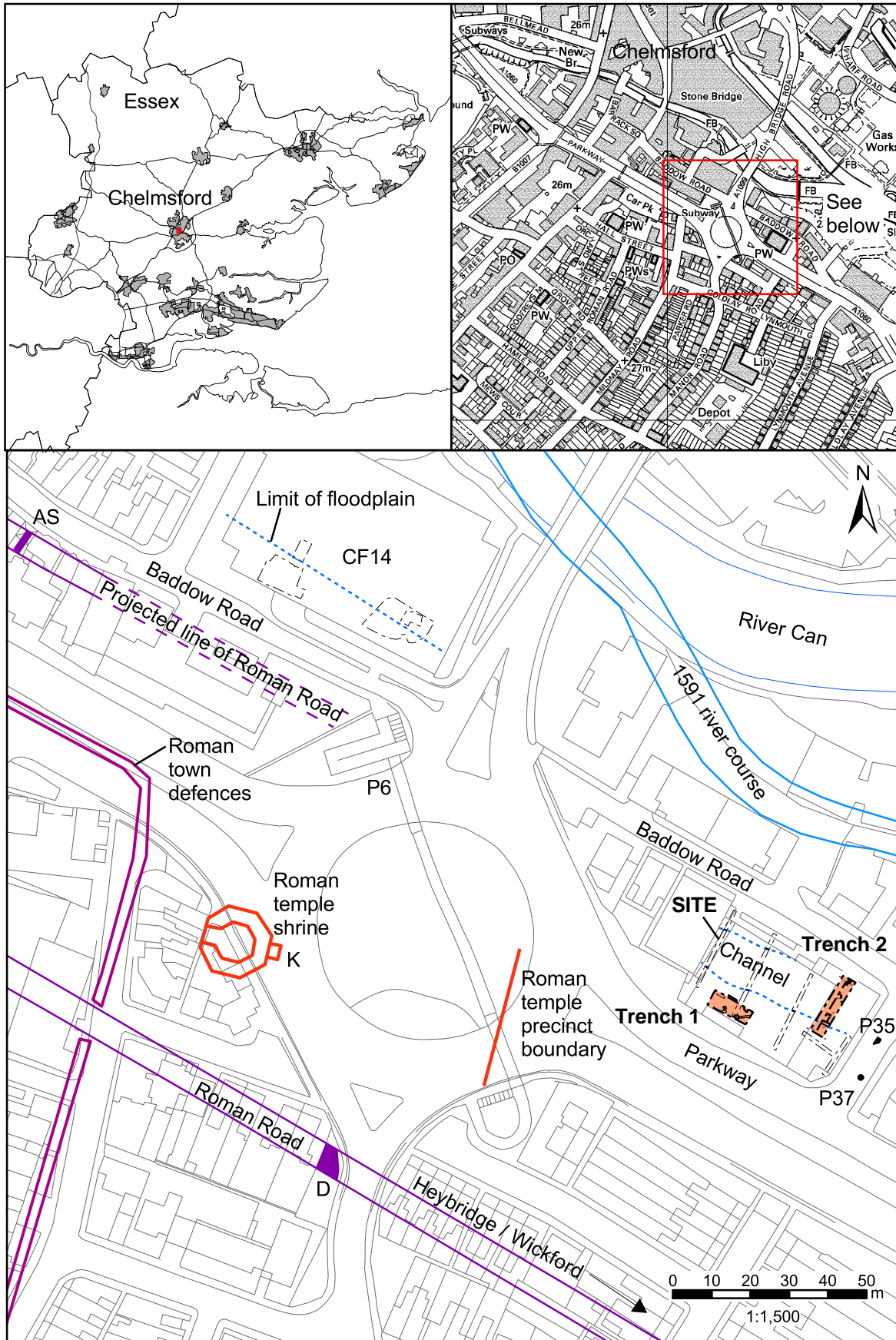
plant remains in samples taken from the waterlogged lower fills of the channel indicates that water conditions were stagnant, with periodic inundation from flooding, typical of a gradually silting backwater. A plank-and-post timber structure at the edge of the deepest part of the channel represents revetment of the bank or possibly a jetty. Pottery in the channel fills dates its final silting to the 14th century, and it was deliberately levelled over in the 14th or 15th century by a thick layer of gravel mixed with organic rubbish, including the carcass of a horse. Historical records show that dumping of rubbish in Chelmsford's rivers was a common occurrence in the late medieval period. The channel and adjacent areas were levelled up again in the late 15th to 16th century with a thick layer of soil.

The archaeological evidence from the site is consistent with Walker's map of 1591, which shows Baddow Road running along the south bank of the river Can, with no sign of the earlier (infilled) river channel. To the west, in the medieval town area, Baddow Road is first dated to the 14th century. The process of infilling and levelling over the channel at the Salvation Army site appears to have begun at this date or soon after, and this reclamation work enabled Baddow Road to be extended eastwards along its present line in the late medieval period. The site evidence for a thick soil overlying the channel is also consistent with the 1591 map, which shows orchards, gardens and meadows alongside the river.

Previous Summaries/Reports: Drury 1971 archive summary (see Appendix 3 of this report); Wickenden 1992, *The temple and other sites in the north-eastern sector of Caesaromagus*, Counc. Brit. Archaeol. Res. Rep. **75**, 49-50

Author of Summary: P. Allen

Date of Summary: 10 October 2008



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Fig.1. Site location

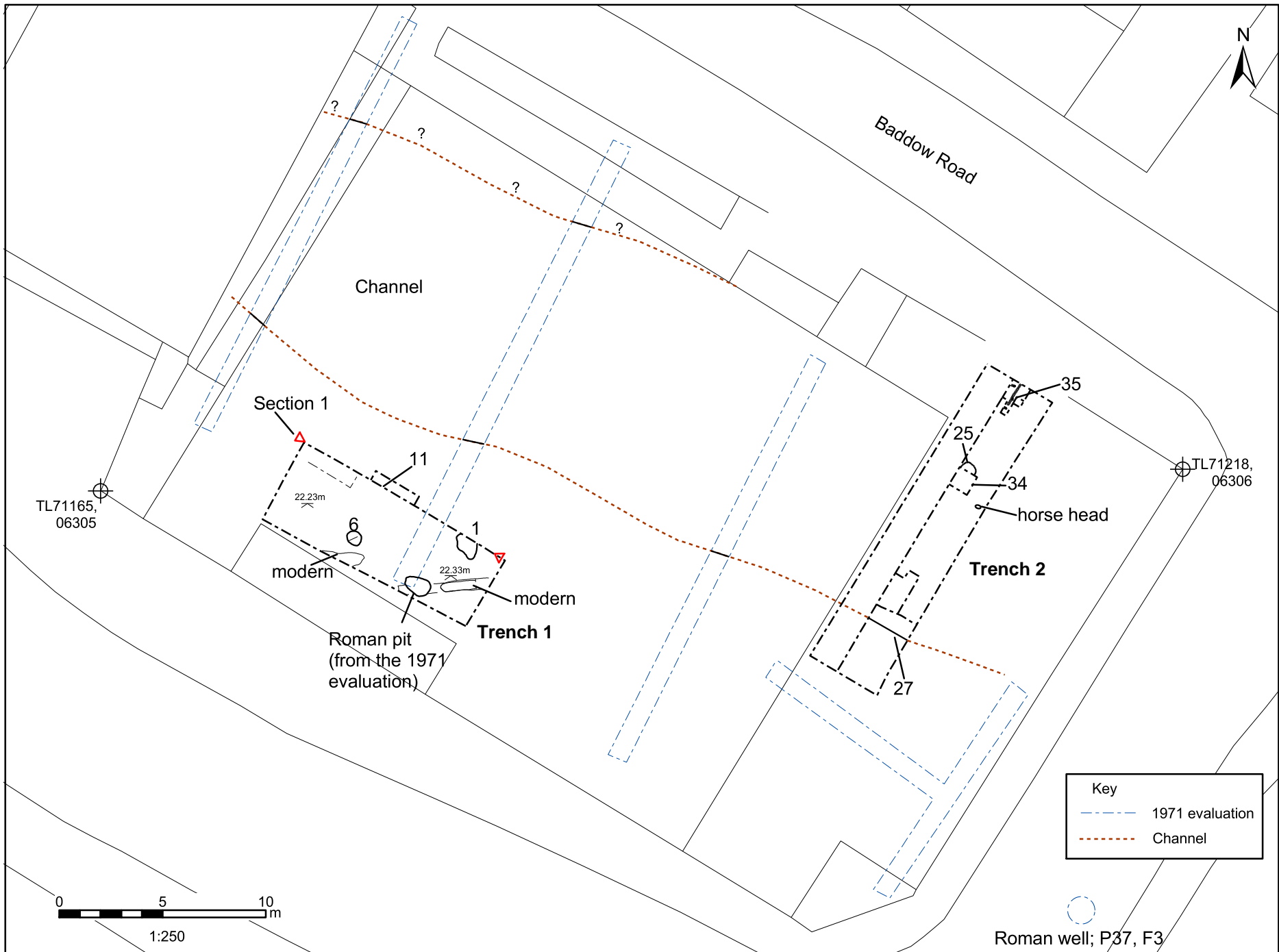
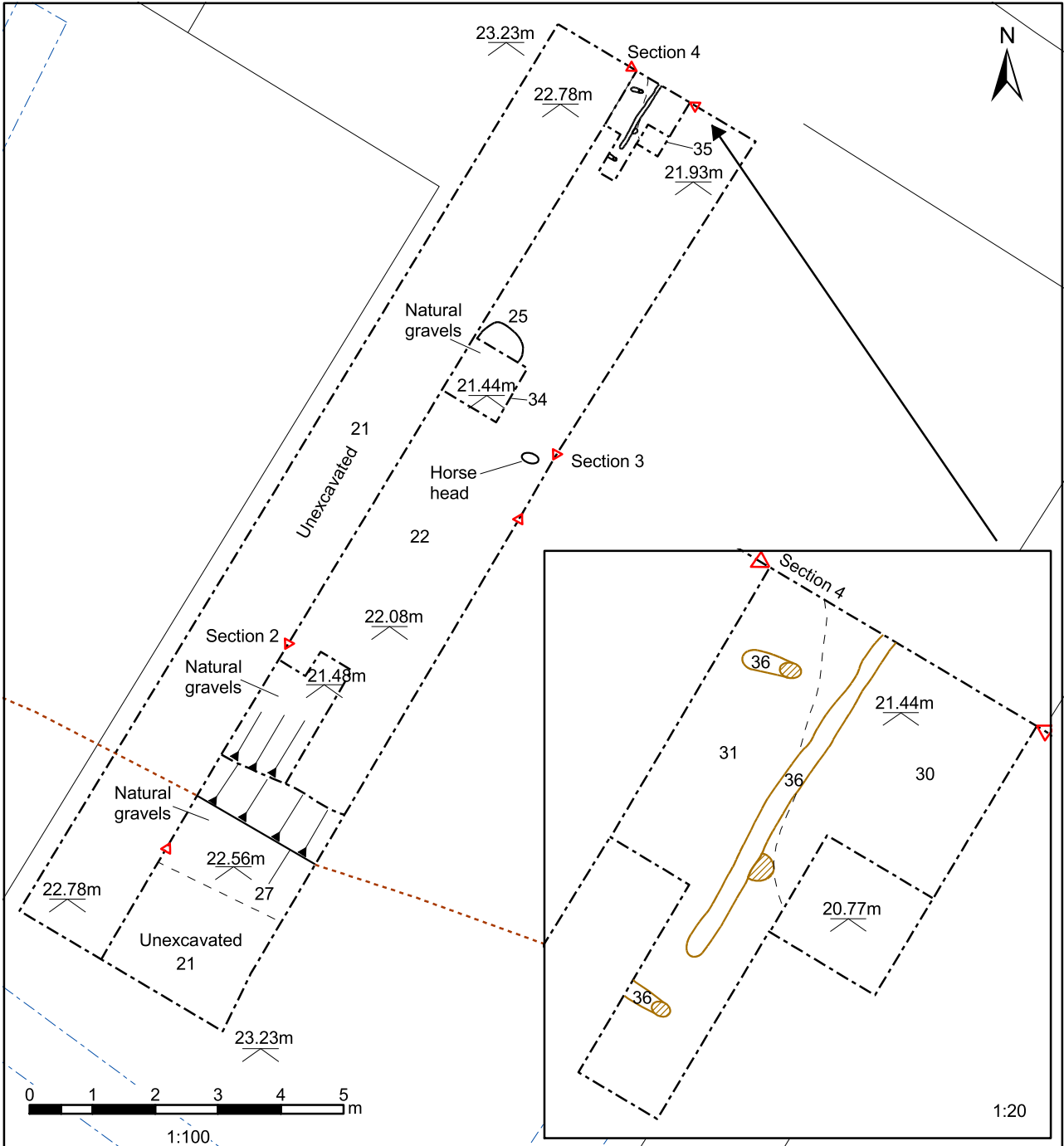


Fig.2. Site detail



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Fig.3. Trench 2

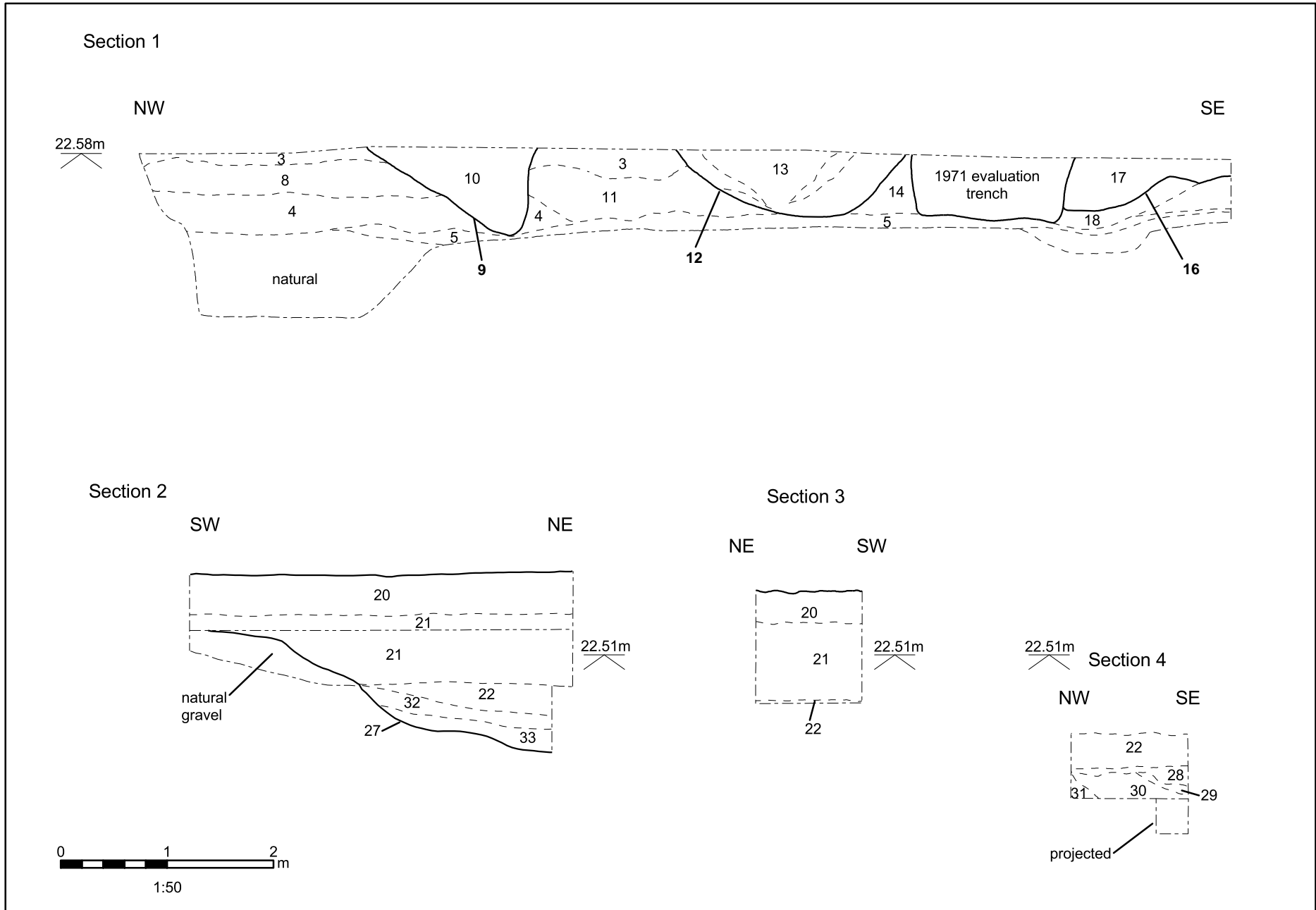


Fig.4. Sections



Fig.5. Walker's 1591 map rectified over the second edition Ordnance Survey (1893-1896)

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Plate 1. Trench 1: excavation in progress, looking NW



Plate 2. Trench 2: excavation of sondage 35 in river channel 27, looking N