St Michael's Lower School
St Albans, Hertfordshire

Archaeological Excavation Report

oxfordarchaeology east

March 2018

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Summary

Between the 12th and 15th of July 2017 Oxford Archaeology East carried out a small excavation in advance of a proposed extension at the mid-19th century St Michael's Lower School in St Albans, Hertfordshire. The site lies less than 50m from the north-east wall of Verulamium, a major Roman municipal town, which is designated a Scheduled Ancient Monument. A notable discovery was a flint wall foundation and associated layers that may have been part of an extra-mural Roman building established close to the Roman road to Colchester. Later activity was represented by a medieval pit along with post-medieval to modern demolition and construction levels and a path, presumably related to The Bell Inn and a malting that previously stood on or close to the site.

1 Introduction

1.1 Location and scope of work

1.1.1 An archaeological excavation was conducted by Oxford Archaeology (OA) East in July 2017 at St Michael's Lower School, St Albans in advance of a proposed single storey extension to the school. Located approximately 1km west of the modern city of St Albans, the site is positioned just to the north-west of the scheduled Roman town of Verulamium (TL 13753 07439; Fig. 1).

1.1.2 This archaeological excavation and watching brief was undertaken in accordance with a Brief issued by Simon West of St Albans District Council (Planning Application 5/16/3666), supplemented by a Specification prepared by OA East (Drummond-Murray 2017).

1.1.3 The work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, in accordance with the guidelines set out in *National Planning Policy Framework* (Department for Communities and Local Government March 2012).

1.1.4 The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

1.2 Geology and topography

1.2.1 The land immediately surrounding the site is flat and low-lying, *c*.83m above OD. It lies on undifferentiated river terrace deposits of sand and gravel, which overlies the bedrock geology of Lewes Nodular Chalk Formation and Seaford Chalk Formation which formed approximately 84 to 94 million years ago in the Cretaceous period (http://mapapps.bgs.ac.uk/geologyofbritain/home.html).

1.2.2 The site was positioned on the south-western side of the school in an area surfaced with tarmac. The school is located on the northern side of St Michael's Street, opposite a row of 19th-century terraced houses and an entrance to Verulamium Park (part of the Scheduled Monument). It is flanked to the south-west by the Rose and Crown public house and to the north-east by a private residence (No. 6 St Michael's Street). The River Ver, a tributary of the River Colne, runs broadly north–south, approximately 70m to the east of the site where it is crossed by St Michael's Bridge.

1.2.3 The site lies within St Michael's Parish in the administrative area of St Albans City and District in Hertfordshire. It is located within Character Area 4c of the St Albans Conservation Area, which covers Fishpool Street and St Michael's village.

1.3 Archaeological and historical background

1.3.1 A detailed and illustrated archaeological and historical background can be found in the desk based assessment (DBA) produced for the site (OA South; Allen 2017), from which the following section has been extracted. The DBA included consultation of records held by the Hertfordshire Historic Environment Record (HER) and the National Monuments Record (NMR) database held by Historic England within a 250m radius from the central point of the site, along with historic maps of the area. Pertinent entries are shown on Fig. 1 and selected historic maps are included as Figures 3-8.

1.3.2 Archaeological remains within the study area are extensive, largely due to the presence of a major Roman town just to the south of the site. Verulamium is a Scheduled Ancient Monument (HT 1, 1b and 1d) and the town has received a considerable amount of archaeological investigation since the 19th century. Several features associated with

the town have also been individually designated with scheduled status, including the forum-basilica, an earthwork which may relate to a Claudian fort, earthwork and masonry remains of the town wall, two substantial building complexes and a stretch of Roman road.

1.3.3 Within the study area there are three Grade I, three Grade II and 34 Grade II listed buildings (not shown on Fig. 1). There are no registered parks and gardens or battle fields within the study area.

Previous Archaeological Investigations

1.3.4 In total, the Hertfordshire HER lists 122 archaeological events within the study area and there are a further 19 on the NMR, though some records are duplicates. Due to the number of investigations which have been carried out, the main investigations have been summarised below, with preference given to those undertaken post-1990.

1.3.5 Some of the earliest excavations in Verulamium took place in the 19th century, though these were almost exclusively observations made during digging around St Michael's (Upper) School and St Michael's Church, *c.*200m south-west of the site, between the 1840s and 1860s. Outside the town walls, drainage installations on Mud Lane in 1882 revealed evidence of a Roman cremation cemetery. This road is now Harley Street, which is located around 250m north-east of the site.

1.3.6 Numerous excavations have taken place in the 20th century, most notably by Mortimer Wheeler between 1930–4, A.W.G. Lowther between 1934–40, and Sheppard Frere between 1955–61 (Lowther 1934; 1935; 1937; Wheeler and Wheeler 1936; Frere 1971; 1983). These tended to focus on features in the central and eastern part of the Roman town, particularly in the area around St Michael's School and Church, along St Michael's Street, and at Verulamium Museum, located *c.*180m south-west of the site. Substantial structural remains were revealed during these excavations, including parts of the forum-basilica, Romano-Celtic and classical temples, shops and other street-front buildings, elements of the road system, parts of the town wall, earthworks relating to Late Iron Age activity and a possible Late Iron Age mint.

1.3.7 Between the 1960s and the 1980s, St Albans Museums Service became increasingly active as modern developments continued to expose archaeological remains both within and beyond the limits of the Roman town. In 1965–6, Roman remains were identified during the construction of garages at Gonnerston on Branch Road 200m north-east of the site. In 1973, a trench across No. 133 Fishpool Street, some 210m east of the site, revealed further evidence of Roman activity some distance from the Roman town. However, most excavations during this period continued to focus on areas within the Roman town. In 1966, St Albans and Hertfordshire Architectural and Archaeological Society excavated an area around 100m north-west of the site, between Hemel Hempstead Road and Prae Close, revealing numerous Roman features in Insula XVII (e.g. MHT 14526). In 1974–5 and 1979, excavations at the Six Bells public house, 80m to the south-west of the site, exposed substantial Roman masonry buildings in Insula XIX; that are thought to be a mansio with a bath house attached (MHT 14142).

1.3.8 Since 1990, St Albans Museums Service have continued to provide much of the archaeological mitigation work in the study area, mostly through small-scale excavations or watching briefs. Excavation at the Six Bells on St Michael's Street in 1991, close to the 1970s excavations, exposed Late Iron Age layers. Archaeological monitoring of service trenches on the corner of Bluehouse Hill and St Michael's Street in 1993, 200m to the west, revealed traces of a Roman building, though the post-

Roman levels had been truncated. In 1993, a watching brief on a sewer trench under the river at the Blue Anchor public house on Fishpool Street, 100m east of the site, encountered only modern disturbance. Also in 1993, a watching brief for the replacement of railings on the green near St Michael's Bridge, c.40m east, did not extend below the topsoil layer. Archaeological monitoring at No. 17 St Michael's Street in 1994, 40m to the south of the site, exposed traces of a ditch and a possible building wall. An excavation at Jessamine Cottage adjacent to St Michael's Top School in 1994 revealed Roman features, as well as medieval pottery. Also in 1994, archaeological monitoring adjacent to Kingsbury Manor on St Michael's Street, 90m north-east, encountered only natural deposits. Excavation to the side of Verulamium Museum in 1996, prior to the construction of a new entrance, identified some of Lowther's trenches opened in the 1930s and exposed a tessellated floor and a pit. Also in 1996, monitoring of new drainage and sump at St Michael's Lodge, 210m to the west, failed to reveal any archaeological remains, while the laying of cable trenches in the Kingsbury and Sopwell Lane area, 50m south-west, produced fragments of Roman and post-medieval material. In 1998, a watching brief to the rear of No. 22a Blacksmith's Lane, 50m to the west, noted the presence of demolition layers containing human bone. Part of a Roman street surface was exposed during a watching brief at No. 31 St Michael's Street, located *c*.80m south-west of the site.

1.3.9 One investigation has been undertaken within the immediate grounds of the site. St Albans Museums Service excavated a 1m square trench in 2001, revealing four distinct layers from a depth of 0.73m, including a cobbled surface which may have been part of a Roman road. Finds included 2nd/3rd-century pottery, 16th-century Border ware pottery, and medieval and post-medieval ceramic building material. The test pit reached a depth of 1.05m. However, a hammered test pile revealed archaeological deposits down to a depth of 1.9m, producing brick and tile fragments, charcoal and mortar (EHT 6626; 6627).

1.3.10 Alongside excavations, numerous aerial photographs of Verulamium Park taken between 1928 and 1983 have also revealed much of the archaeology of the Roman town, including two Romano-Celtic temples, a large house fronting the street in Insula XXXIX, a wall bastion in Insula XXXIX between the northeast gate and the London gate, cropmarks of circular structures and a rectilinear enclosure located in Insula XVII, which are also probably Roman.

1.3.11 A programme of test-pitting and geophysical survey was undertaken by Oxford Archaeology in 2000 on the fields within the walled area of Verulamium on the Gorhambury Estate. This was carried out to establish the extent of plough damage to Roman levels in this area. No finds or features are noted on the Historic Environment Record.

Prehistoric (500,000 BP - AD 43)

1.3.12 No features dating prior to the late Iron Age have been recorded within the study area. The NMR includes a record of a Mesolithic tranchet axe which was found at the corner of St Germain's House on St Michael's Street, located around 150m south-west of the site. The few prehistoric features known from the study area relate to the Late Iron Age settlement of Verlamion, which immediately preceded the founding of the Roman town. This is thought to have been a regional, tribal centre of the Catuvellauni. The ditch of a significant Late Iron Age rectilinear enclosure that was later covered by the Roman forum-basilica is located *c*.180m south-west of the site. A short length of ditch located in Insula XIX appears to have been deliberately infilled around the time of the conquest, and may have been part of a wider elaboration of late Iron Age boundaries

associated with the large enclosure. It stretches from the eastern corner of the enclosure for about 160m in a north-east direction towards the site. The ditch comes within 50m of the site to its south, though its onward direction is not known.

1.3.13 A possible Late Iron Age mint was found about 175m north of the ditched enclosure, around 160m north-west of the site. This was represented by a rectangular timber structure, identified from two wall trenches and chalk floors, on the north-east side of Insula XVII. Excavation of the structure produced late Iron Age mint debris in the form of baked clay moulds. Further late Iron Age mint debris was also found nearby on the site of a 1st-century bathhouse at the Six Bells, c.80m south-west of the site, though these finds may have been residual. The mint building was later built over by a substantial, 6m-wide, earthwork bank. The construction of the bank dates to the mid-1st century AD and it was originally interpreted as part of Claudian fort (Frere 1983), implying a short period of military occupation, though this has more recently been questioned (Niblett and Thompson 2005). As the bank pre-dated the Flavian layout of the Roman town, it may have been part of a larger circuit perhaps associated with the Late Iron Age ditches. The bank was located around 125m to the north-west of the site, though how far it continued after this point is not known.

Romano-British (AD43-410)

1.3.14 Verulamium was the third largest town in Roman Britain and the area covered by the settlement is now a Scheduled Ancient Monument (Fig. 1). Verulamium began as a capital of the civitas Catuvellaunorum, perhaps building on the Late Iron Age settlement of Verlamion, and it shortly after achieved municipal status perhaps sometime in the early AD 50s (Wacher 1974, 204). The town was encircled on three sides by a defensive ditch and on the fourth side by the river, though the early settlement was destroyed in the Boudiccan revolt of AD 60. The town acquired a stone forum and basilica by the end of the 1st century AD and a theatre in the 2nd century AD. A considerable burnt layer found in various areas of the town indicates that a fire destroyed perhaps as much as 52 acres of the town, including the central area, around AD 155. A new forum, theatre, and several large town houses were reconstructed soon after. Occupation of the town continued into the post-Roman period, appearing to cease by the middle of the 6th century AD

1.3.15 The town walls were constructed in the 3rd century AD. They were built to a height of around 5m from a 3-metre wide footing of mortared flint rubble with layersof brick bonding, faced with dressed flints. The Roman town wall runs approximately along the line of Blacksmith's Lane, *c*. 50m to the west of the site.

1.3.16 The line of a substantial, masonry-constructed sewer runs downhill between the forum basilica to a point in the northern wall, around 120m north-east of the site.

1.3.17 Under the area now covered by St Michael's Church and St Michael's Top (Upper) School lies the forum-basilica. The full layout of the building is not well known, apart from the Watling Street frontage, particularly the SE corner projecting into the street where some alterations have been recorded. Three internal walls are known from columns found under the church, though it is deeply buried and largely obscured. The front of the basilica lies around 200m south-west of the site.

1.3.18 Aside from the forum-basilica, numerous other timber and masonry buildings have been excavated in the study area, mostly within the Scheduled Ancient Monument, and many more are indicated by occupation debris and associated features. A bathhouse,

possibly constructed in the 1st century AD was identified during excavations of the Six Bells public house in the 1970s, around 80m south-west of the site.

1.3.19 Excavations behind Verulamium Museum in Insula XVIII in the 1970s, about 200m south-south-east of the site, revealed traces of 1st-century buildings which were used for bronze and iron-working. These were replaced in the early 2nd century by a well-appointed masonry building, to which a large extension with hypocausts was added at the beginning of the 3rd century AD. This structure remained in use until AD 330/40. On the same site, another large, multi-roomed building with high quality mosaics and a corndryer was constructed in *c*.AD 370. This building very probably continued to be used into the 5th century (see below).

1.3.20 Another substantial, multi-room, masonry building (or buildings), in Insula XIX has been observed in several excavations at St Michael's Top School and Jessamine Cottage, around 180m to the south-west of the site. Originally seen in 1853, the remains are not well understood due to the piecemeal nature of the excavations. An investigation at the north boundary of the school in 1997 revealed a 3rd/4th-century AD building with internal surfaces and occupation deposits.

1.3.21 About 250m due west of the study site, a timber-framed row of shops with a shared portico fronted Watling Street in Insula XIV.

1.3.22 Two Romano-Celtic temples are known through cropmarks located about 200m west of the site. Although unexcavated, these are clearly of a well-known form consisting of a central cella and a surrounding temenos wall. The buildings are situated within 10m of each other.

1.3.23 At least 10 road sections intersect within the study area. Most of these are located within the Scheduled Ancient Monument. Two, however, extend north-east from the town and cross the River Ver. One was located about 110m north-east, and 150m directly north of the site, close to where it crossed the river. This route appears to have been a continuation of Street 20 recorded in the HER which passed by the forum-basilica, and both sections are thought to have pre-Roman origins. Its relationship with the putative Claudian fort earthwork is, however, uncertain.

1.3.24 Street 19, also referred to as 'Colchester Road', is known to run from the eastern corner of the forum-basilica, where it opened onto a large cobbled area in Insula XIX, for about 650m north-east through the north-east gate. The probable surface of this road, compact gravel layers with flint, was recorded in 2010 immediately behind 21 St Michael's Street just over 50m to the south of the site. From here, the onward route of the road undoubtedly comes close to the site, although the line is largely conjectured (Figs 1 and 2).

1.3.25 Another Roman road may intersect with the Colchester Road to the north. A ditch observed at the St Michael's end of Fishpool Street was dug later than the lowest levels of road metalling found beneath the modern surface outside No. 133. The feature contained 2nd-century pottery, suggesting that Fishpool Street follows the line of a Roman road.

1.3.26 In 2001, St Albans Museums Service excavated a 1m square test pit against the north wall of St Michael's Lower School. Beneath a series of medieval layers, a worn, flint-cobbled surface produced a 2nd/3rd-century AD pottery sherd. Whether this was the Roman road surface or from a building is uncertain (EHT 6626; 6627). Across the road from the school building, Roman building materials were recovered from a junction box (EHT 6593).

1.3.27 Evidence of extramural, roadside settlement outside the Roman town has been encountered at several sites. Remains of buildings have been identified at No. 17 St Michael's Street, less than 40m south of the site. Here, a succession of cobbled floors, apparently from (undated) timber buildings, were identified outside the north-east gate (MHT 14519).

1.3.28 A notable concentration of Roman occupation sites occurs north of the River Ver, in and around the area of Kingsbury Barn on Branch Road, mostly between 120m and 220m north of the site. Part of a masonry building extended northwards beneath Kingsbury Barn itself. The structure had an internal dividing wall and the walls were built using stone rubble and mortar. The southern room had no clear surface, though some tesserae were found, while the northern room had a cobbled surface and contained 3rd/4th-century pottery. In Camlet Way, traces of flint foundations were found alongside pits and ditches which included 2nd-century samian ware pottery. On Branch Road, cobbled floors and flint wall foundations were exposed with two floors, one of which had a tessellated pavement. In the southern area of Kingsbury Farm, a large pit containing animal bone and Roman pottery were seen in a builders' trench in 2002, while observations at Gonnerston on Branch Road identified Roman pottery and building material in two deposits.

1.3.29 Earthworks 170m north-west of the site indicate that the River Ver was revetted for some distance on its northern side, while a trackway was located to the north of this, apparently following the direction of the river. Pottery suggests that these features were constructed in the 3rd century AD, perhaps around the same time as the town walls. How far these features continued south-east in the direction of the site is not known.

1.3.30 The navigability of the River Ver in the Roman period is indicated by the discovery of a wreck of an oared boat in the river in the early 11th century. It was constructed of oak and pitch with pine oars and anchors. The vessel was identified as Roman as it was reportedly discovered while digging for building materials in the remains of the Roman town. The presence of several anchors also suggested that it was a Roman rather than a Viking vessel, which tended to use single anchors.

1.3.31 Two Romano-British cemeteries intersect with the study area, though there is little understanding of their form, extent and chronology. One cemetery was located on a hilltop in Mount Pleasant, around 250m north-east of the site. Numerous Roman cinerary urns and other vessels, plus one inhumation, have been found in the area at various times since the 1880s. These have generally been chance finds and are very poorly documented. A second, mixed-rite cemetery is known to the north of the river, the centre of which is around 450m north of the site. While this is mostly located outside the limits of the study area, aerial photography has shown that it extended south of the river, falling within the limits of the study area. As with the Mount Pleasant cemetery, most of the burials here were discovered in the 18th and 19th centuries. The site is thought to contain several hundred burials, and appears to have been one of the main burial grounds serving the Roman town.

1.3.32 A small, tile-constructed cist containing an infant burial was discovered in 1966 on the outer side of the Roman town wall. The grave was Late Roman in date and was accompanied by a grey beaker-type pot.

Anglo-Saxon to early medieval (AD 410-1065)

1.3.33 Unlike some Roman towns, Verulamium continued into the later 4th century AD and there is historical and archaeological evidence to show that it was occupied in the 5th century AD as St Germanus, the Bishop of Auxerre, supposedly visited the town in AD

429 (Wacher 1974, 220–2). The large late 4th-century building identified in Insula XVIII (see above) almost certainly continued in use in the 5th century, while an excavation in 1987 at Darrowfield House, located 160m south-west of the site, revealed a possible late/post-Roman floor of a building in Insula XIX. A bronze, flat-headed, ribbed Celtic pin which now resides in Verulamium Museum was apparently found within the area of the Roman town and dates to the 5th or 6th century AD.

1.3.34 After the immediate post-Roman period, signs of activity are not seen again until the 10th century. St Michael's Church was traditionally founded by Abbot Wulsin in AD 948, but was more likely built around AD 1000. Little is known about its earliest foundations, but it appears to have been built, perhaps deliberately, over the Roman basilica. The nave and chancel walls are pre-Norman, while the nave was heightened in the 13th century and more alterations were made in the 14th and 15th centuries. St Michael's Church is a Grade I listed building and stands as one of the most important Saxon structures in Hertfordshire.

1.3.35 Sherds of Late Saxon (10th–early 11th century) shelly ware have been recovered during excavations at the Six Bells public house, 60m south-west of the site, and in terracing on the east side of the rear yard of the Black Lion public house, 160m east-north- east of the site. While not *in situ*, these finds indicate the presence of pre-Norman activity in the area.

Medieval (AD 1066-550)

1.3.36 There is no direct evidence of medieval activity within the site itself, but its proximity to other medieval sites within the study area suggests that such evidence may be present.

1.3.37 Located on the north side of the River Ver, approximately 150m north-east of the site, lies Kingsbury Farm. Originating as a monastic estate after the land was acquired by St Albans Abbey in the late 10th century, the site includes three listed buildings: the manor farmhouse (Grade II), a timber-framed barn (known as 'Kingsbury Barn'—Grade II*) and a second barn at the entrance to Dairies Yard (Grade II). Kingsbury Barn was constructed in the late 14th century, one of a group built by John de la Moot, Abbot of St Albans. Several of these buildings can be seen on 1766 map of the Estates of Viscount Grimston (Fig. 3) and the c.1840 Tithe map (Fig. 4).

1.3.38 Just to the south of Kingsbury Farm, over the river, lies Kingsbury Mill. This now exists as a group of 17th/18th-century Grade II listed buildings, but its origins may date back as early as the 11th century. The mill served Kingsbury Manor and may have been one of the St Albans watermills recorded in the Doomsday Book. A malt mill was recorded on the site in 1194, which continued to be owned by the Abbey until 1539,and by 1658 it was known as St Michael's Mills.

1.3.39 A 15th/16th-century tannery is recorded on the site of St Michael's Manor lake, 250m south-east of the site. The tannery belonged to the Gape family who are documented as tanners in Fishpool Street from at least 1456, buying land from the Abbey in 1539. The tannery site was converted into the lake in the grounds during the late 18th/early 19th century, as shown in the *c*.1840 Tithe map (Fig. 4).

1.3.40 Terracing of the east side of the rear yard of the Black Lion public house, *c*.140m west of the site, in 1994 revealed a series of medieval features including six pits and three wells. Pottery ranged from the late 12th to the early 14th centuries, though six sherds of 10th–12th-century shelly ware were also recovered (see above).

1.3.41 A possible medieval floor sequence was recorded outside the Six Bells public house. The upper chalk floor contained post-Roman tile, though no other dating material was found. In the garden behind 176–8 Fishpool Street, 190m east of the site, a medieval well was found which had been cut into by later terracing.

1.3.42 A Grade II listed Wealden house built around AD 1500 lies 160m west of the site at No. 137 Fishpool Street. Since its construction, much of the building has been remodelled. It is characterised by an open hall flanked by jettied ends and a roof of uniform width. In the 18th century, the house was re-fronted in red brick and then later enlarged to the south, which drastically altered its appearance into a two-storey house. A large east range observable on the 1840 map had gone by 1880, while several outbuildings have since gradually disappeared (Fig 8).

1.3.43 Numerous medieval skeletons have been identified within and beyond the present boundary of St Michael's Church graveyard to the south-west of the site. The churchyard was much larger in the medieval period than it is now. Today, St Michael's Upper School lies within its northern boundary and it clearly extended to the south over an area now covered by Verulamium Museum. Six medieval inhumations were discovered in 1938, and another in 1960 during excavations at Verulamium Museum. In 1984, a trench along the kerb outside Verulamium Museum revealed seven medieval inhumations. In 1987, the excavation of a new driveway revealed medieval features associated with the churchyard, including five medieval pits, 47 medieval inhumations and a ditch which may have been an earlier boundary of the churchyard.

Post-medieval (AD 1550-1900)

1.3.44 St Michael's is a Church of England Voluntary Aided Primary School, founded in 1811 by the 2nd Earl of Verulam, becoming a Church School in 1876. The Lower School (the current site) is clearly shown and labelled on the *c.*1878 1st Edition OS map (Fig. 7). Although not a statutorily listed building, the Lower School is locally listed as a structure of historic interest in the St Albans Conservation Area Character Statement (St Albans City and District Council 2016).

1.3.45 Hertfordshire HER records the presence of a malting house on the site, but indicates that it is now covered by terraced housing. The c.1840 Tithe map (Fig. 4) shows two buildings fronting the street, immediately south-east of where the Lower School now stands, backed by a three-sided, courtyard structure (or structures). The terraced housing mentioned on the HER may be modern buildings located to the north-west on Prae Close, or those on the opposite side of St Michael's Street where St Michael's Cottages now stand.

1.3.46 No less than 30 Grade II listed buildings within the study area were built during the post-medieval period, most of which cluster along Fishpool Street and St Michael's Street. Immediately to the south-west of the site is the Grade II listed, Rose and Crown public house. This is an early 18th century, two-storey, three-window construction with a moderately high-pitched, tiled roof with square sectioned eaves cornice. In 2013, as part of the requirements of the listed building consent, an architectural survey recorded a boundary wall at the Rose and Crown which once formed part of the 18th-century outbuildings lying to the west of the pub. This structure can be seen on the 1859 map of St Michael's Parish (Fig. 6).

1.3.47 The building to the north-west of the site is No. 6 St Michael's Street. Both the HER (DHT8461) and the NMR (UID 1173832) plot this as No. 8 St Michael's Street, a Grade II listed building. This is, in fact, incorrect. No. 8 St Michael's Street is part of the Rose

and Crown public house. Today, the pub incorporates both buildings, which can be clearly seen from the road. Two buildings are shown on the *c.*1840 tithe map and both 1st and 2nd Edition OS maps. Map regression also shows that No. 6 is a Victorian building, as it is clearly marked on the 2nd Edition OS map of 1898 (Fig. 8), but it does not appear on the *c.*1878 1st Edition map (Fig. 7). In 1878, the land plot containing No.6 was within the grounds of St Michael's Lower School.

1.3.48 About 65m due west of the site is St Michael's Bridge which crosses the River Ver. This is the only listed structure in the study area which is not a building. It was built in 1765 of brick and stone coping, with flat buttresses and three low arches spanning c.1.5m and *c.*2.4m. It appears to have replaced earlier structures built alongside the ford, since documentary sources refer to a bridge here in 1461 (Hunn 1994, 234). Today, it is regularly used as the main transport route through the area.

1.3.49 Two Grade II* listed buildings are located within the study area. No. 135 Fishpool Street, also known as Manor Garden House, is a 17th-century, two-storey brick house with a plastered front and a high-pitched, hipped-tiled roof. Darrowfield House is located 140m south of the site on St Michael's Street. It is the former Dower House of Gorhambury and is sometimes known as 'New House'. It is a two-storey, brick building, constructed *c.*1700, with a high-pitched, hipped, tiled roof.

1.3.50 Aside from the statutorily listed buildings in the study area, the only locally listed building recorded on the HER is St Michael's Court, located *c.*100m east of the site, just across the River Ver. This is a group of buildings built in 1879, which are said to have been constructed as worker's cottages. It is thought the buildings have timber framed origins, though there have been several alterations and extensions since the late 19th century.

1.3.51 Post-medieval industrial activity is also recorded in the study area. A late 17th–early 18th century, circular lime kiln was revealed during an excavation at the corner of Branch Road and Camlet Way in 2011. It measured 2.5m across and had an integral brick floor. A floor level opening was built into the north side and was accessible from an adjacent pit. The feature appears to have been backfilled with pottery, peg tile fragments, a coin, iron nails, and animal bones. A preceding evaluation on the site revealed a ditch which produced a large deposit of post-medieval peg tile and some bricks with signs of burning. A second post-medieval lime kiln has also been identified to the rear of the Six Bells public house.

Modern (20th century AD)

1.3.52 Comparison of the 1898 2nd Edition OS map with the modern OS map (not illustrated) shows that the site has been largely unchanged since the end of the 19th century. The school was founded in 1811 by the 2nd Earl of Veralum. It became a Church school in 1876. The lower school (the site) is clearly seen and labelled on the *c.* 1878 1st edition OS map.

1.3.53 Two adjacent buildings stood, fronting the road, just 40m west of the site. These were demolished for the construction of Prae Close, the entrance of which is where the buildings once stood. From here, Prae Close road runs 150m north-west and is flanked on both sides by modern housing.

1.3.54 No modern heritage assets are recorded within the site or surrounding study area.

Undated

1.3.55 Several archaeological events have produced undated features within the study area, though most of these appear to be Roman (see below), while several more produced no remains.

Geophysical Survey

1.3.56 As part of the DBA a ground-penetrating radar survey was undertaken by Magnitude Surveys between the 27th and 29th March 2017 (Harris 2017). Two tarmacked areas adjacent to the Lower School building were surveyed. One along the south-east side of the building, across the front entrance of the school, between it and the main gate (Area 3). Another survey took place along the south-west side of the building, between it and the perimeter wall separating the school from the Rose and Crown public house (Area 4). Several anomalies were encountered at the site, primarily in Area 3. These were variously encountered at depths of 0–35cm, 35–70cm and 70–105cm. Some of the anomalies may represent below-ground archaeological features, though without excavation their character remains indeterminate at this stage. Modern drains were encountered in the northern end of Area 4 and the eastern end of Area 3. The results are shown overlain on the Ordnance Survey 2nd edition map in an inset on Fig. 2.

1.4 Acknowledgements

1.4.1 The author would like to thank St Michael's School for commissioning and funding the works. James Drummond-Murray managed the project and James Fairbairn carried out the excavation assisted by Thomas Lucking. The District Archaeologist Simon West monitored the excavation and Gareth Rees carried out the on-site photogrammetry and survey. Alice Lyons would like to thank Stephen Wadeson (OA East) for cataloguing the Romans pottery.

2 Aims and Methodology

2.1 Aims

2.1.1 The original aims of the project were set out in the Brief and Written Scheme of Investigation (Drummond-Murray 2017).

2.1.2 The overall aim of the investigation was to preserve by record the archaeological evidence contained within the footprint of the development area, prior to damage by development, and investigate the origins, date, development, phasing, spatial organisation, character, function, status, and significance of the remains revealed, and place these in their local, regional and national archaeological context.

2.1.3 Based on the recommendations of the District Archaeologist, more specific aims and research questions can be formulated:

- Can any Roman remains be related to the known extra-mural activity in the area?
- Does any evidence for The Bell Inn survive?

2.1.4 The aims and objectives were further developed following the completion of the fieldwork, resulting in a number of site specific research aims.

2.2 Site Specific Research Objectives

Roman

2.2.1 To determine if the wall foundation discovered in the south-east corner of the trench represents evidence of an extra-mural building and if so what its relationship may have been to the Roman road thought to be located to the south of the excavation trench (Street 19; see Section 1.3 above).

Medieval

2.2.2 How does the single possible medieval pit located within the excavation area relate to the known extent and character of medieval activity in the area.

Post-medieval

2.2.3 Can any of the remains relating to the Bell Public House be identified within the excavation area.

2.3 Methodology

2.3.1 The methodology used followed that outlined that in the Written Scheme of Investigation (Drummond-Murray 2017).

2.3.2 Machine excavation was carried out by a tracked excavator using a 2m wide flat bladed ditching bucket under constant supervision of a suitably qualified and experienced archaeologist.

2.3.3 Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.

2.3.4 All archaeological features and deposits were recorded using OA East's *pro-forma* sheets. Trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.

2.3.5 Due to space limitations and construction requirements it was agreed that a foundation trench would be machine-excavated adjacent to the south-west elevation of the school

building within the footprint of the new extension. The overburden was removed and the trench dug to natural, stable geology (2.2m). The total length of the trench was 14.4m and it was on average 0.8m wide. Once the trench had been excavated and recorded the overburden within the remaining confines of the building footprint was then removed to a maximum depth of 0.30m

2.3.6 Entry to the trench was not possible below 0.75m due to health and safety concerns. Surfaces and features encountered at depths greater than 0.75m were recorded from ground level and photographed using photogrammetry (see below). This, and the narrow area exposed, restricted the level of detail possible for both the feature and deposit descriptions.

Photogrammetry

2.3.7 The trench, overburden and the exterior elevation were recorded using photogrammetry tied in to the OS using a Leica DGPS GS08 and a TCR705 total station (Figs 11 and 12). A Sony Alpha 5000 camera with a fixed 20mm lens, mounted on a telescopic pole was used for the photogrammetric survey (Plates 11, 27 and 28). The initial survey consisted of photograghs taken horizontally at the top, middle and bottom of the trench faces at *c*.2m intervals. Detail of the south-west elevation of the school was added with oblique photographs taken from 1m and 3m heights. Pre-printed geo-rectification targets were used locate the photographs. Scaled ortho-photos of the trench (Fig. 11) as well as overall views of the entire area of overburden were created using AgiSoft Photoscan Pro.

Environmental Sampling

2.3.8 A total of 100L of material was taken for sampling or finds identification from seven different contexts. Of this, 70L was bulk processed at OA East's dedicated environmental unit at Bourn. The other 30L is considered to be Roman mortar and was retained for identification purposes only.

Site Conditions

2.3.9 Site conditions were generally good, although the excavation was limited to a small trench that had a maximum width of 1m. This trench had an average depth of 2m and so was unable to be accessed after the initial stripping of the modern layers. This made recording the lower contexts difficult. The section drawing was complimented by rectified photographs and the section drawing was checked against those. The weather during the excavation was mostly dry with just one morning lost to rain.

3 Results

3.1 Introduction

3.1.1 A single 'U' shaped trench (T1) was excavated by machine around the edge of the building footprint, with the internal area subsequently being stripped of overburden to a depth of 0.3m. The trench extended from the south-west facing elevation of the existing school building (Plate 1) and was orientated north-west to south-east, with the main length being parallel to the school (Fig. 2). It measured 14.4m long in total and was on average 0.8m wide and was dug to a depth of 2.20m. The 'arms' located at each end of the trench were orientated south-west to north-east and measured 1.9m and 1.80m respectively, terminating at the school building.

3.1.2 The trench revealed part of a wall foundation possibly related to a Roman building along with layers also tentatively attributed to the Roman period, and a medieval pit. The upper levels within the trench produced evidence of post-medieval activity relating to the Bell Inn or the malting works that had both previously occupied this area of the school playground (see Section 1.3).

3.1.3 The results are described below in stratigraphic order (with cuts in **bold**), supplemented by a trench description and context inventory (Appendix A), a trench plan (Fig. 9), sections (Fig. 10), photogrammetry (Figs 11 and 12) and photographs (Plates 1-28). The Results section is followed by a Discussion (Section 4), with finds and environmental reports included as Appendices B and C.

3.1.4 Three main periods of activity have been identified, with the earliest (Period 1) sub-divided into three sub-phases:

Period 1: Roman

Period 2: Medieval

Period 3: Post-medieval and modern

3.1.5 Dating is provided by a range of finds, notably pottery and ceramic building material (CBM). However, the assemblages are often mixed, particularly from layers, which is likely to be a result of the method of excavation of the deeper deposits given the restricted access for hand excavation, and disturbance from modern services. The presence of medieval and occasionally later finds in the earlier (Roman) deposits has been interpreted as being intrusive but given the narrow areas exposed it is feasible that some of these deposits may have been later.

3.2 Period 1: Roman (mid 1st–early 5th century AD)

3.2.1 Roman activity on the site was restricted to the lower layers of the excavation trench and were often recorded in section only (Fig. 10), with finds being recovered where feasible. Possible levelling or demolition layers were sealed by Roman subsoils, the latter cut by a later (medieval) pit. A masonry foundation were recorded at the very southern end of the trench.

Phase 1 (mid 1st -2nd century AD)

3.2.2 The earliest phase of Roman activity was recorded at the very base of the foundation trench. A light brown loose deposit (127) was recorded at a depth of 2.10m (Plate 20). This deposit had a thickness of 0.30m and consisted of chalk flint and gravel. The deposit possibly represents remnants of degraded mortar (Appendix B5), as although

no lime was found within the material this may have entirely leached out. A piece of broken tegula and Roman pottery dating to the middle of the 1st to 2nd century AD was found within the deposit.

3.2.3 Sealing layer 127 was another apparently mortar-rich layer (110) that was possibly related to a phase of Roman construction or demolition. The loose brownish grey deposit had a thickness of 0.20m and contained sand and gravel along with rounded pieces of ceramic building material. The presence of fine cream flecks could be remnants of lime mortar that have almost completely leached out. No finds were found within this deposit.

Phase 2 (?early 2nd century AD or later)

3.2.4 Overlying loose mortar layer 110 was a thick build-up of green brown silty subsoil (109) that was recorded over a distance of 10.8m. It had a maximum thickness of 0.90m and appears almost bank-like in section (Fig. 10), possibly because it was cut to the north-west by a pit (**126**) (Plate 12). The layer contained Roman brick, glass and pottery, including amphora of early to mid 2nd century-date (eight sherds weighing 1.3kg). Later pottery (medieval; two sherds weighing 19g) was also recovered that was presumably intrusive. Metal finds include several iron nails and a 3rd century coin (SF1) that may also have been intrusive.

3.2.5 Toward the south-east end of the trench, layer 109 was sealed by another dark grey clay silt subsoil (108) which had an exposed width of 3.8m and thickness of 0.80m. This deposit contained occasional small stones along with part of a lump of unworked Hertfordshire Puddingstone, animal bone, shell, slag and several iron nails. Fragments of Roman CBM and pottery were also recovered; the latter (22 sherds weighing 0.86kg) dating to AD120 or later. This layer also produced medieval pottery (11 sherds weighing 0.07kg) and fragments of a late 19th-20th century bottle glass that were presumably intrusive.

Phase 3 (?mid 2nd to early 3rd century AD)

3.2.6 Located at the south-east end of the trench closest to the road was part of a flint wall foundation (118; Plates 17-19), possibly the corner of a building, measuring 1.20m wide and 0.62m deep. This foundation had no discernible cut, but appeared to have been constructed within the upper part of layer 108. Five courses of flint nodules were recorded, with a possible sixth course that had been heavily truncated. The main component of rough unworked flint nodules (Plates 17, 18 and 19) had an average dimension of 0.20m x 0.15m. Although not set in mortar, a deposit of yellowy brown chalk marl mixed with gravel and sand (119) was noted within and surrounding the flint courses. This bonding material may have once contained lime that has subsequently leached out (Appendix B5).

3.2.7 The foundation did continue slightly into the southern arm of the trench but here it had again been heavily truncated by modern drainage work. Furthermore, at this point within the trench the sides were very loose and prone to collapse, and as such it was not possible to see the full extent of the foundation.

3.3 Period 2: Medieval (12th–14th century AD)

3.3.1 Medieval activity on the site was indicated by the presence of a single large possible rubbish pit (**126**) located at the north-west end of the trench (Plate 16) and a scatter of medieval pottery and CBM across the site. Cutting layer 109, this feature may possibly have originated in the Roman period. The pit was only partially exposed and presumably continued beyond the edges of excavation. Its visible width was 2.50m and

it was 1m deep. Pit **126** was also noted in the south-east facing section of the northern arm (Fig. 9) where it continued for a further 1.90m.

3.3.2 The sides of the pit were gently sloping but its base was not revealed. The pit contained at least two fills (114 and 115).The earliest visible fill (115) consisted of a dark brown sandy silt that had a thickness of 0.20m. This fill contained occasional small flints, a small copper-alloy ring (SF12), several iron nails and oyster shell, along with seven Roman pottery sherds including samian (App. B2).

3.3.3 This lower fill was sealed by a dark clay silt (114) that had a thickness of 0.85m. This contained a few sherds (six) of pottery dating to the medieval period (AD 1170-1350), along with residual Roman pottery (18 sherds), a lead weight (SF16) and Roman ceramic building material found in the uppermost part of the fill. The pit was sealed by a post-medieval chalk raft (105, see below).

3.4 Period 3: Post-medieval to modern (*c*.18th–20th century)

3.4.1 The latest activity on the site included a subsoil layer, brick-lined path, chalk raft and a small pit, along with modern service trenches and layers associated with the school and the asphalt-surfaced playground.

3.4.2 Roman foundation 118 and medieval pit **126** were both sealed by a post-medieval layer (107) that was recorded over a distance of 9.22m and had a maximum thickness of 0.42m. This mid grey clay silt contained numerous small to medium stones and produced sherds of (residual) medieval and post-medieval pottery (*c*.1820-1900) as well as residual finds of Roman tegula and roof tile and part of a lava millstone (SF 3).

3.4.3 A crudely constructed pathway (117) was laid on the surface of layer 107, 3m from the north-west end of the trench. This consisted of a layer of very compacted stone and chalk with small fragments of crushed brick and tile. It was exposed for a width of 2.6m (Plate 7) on a north-east to south-west alignment and had a maximum thickness of 0.20m. The northern part of the pathway was marked by *in situ* paviours (Plates 5, 7 and 10) and edging bricks (116), and it is possible that the rest of the path had originally been edged or even surfaced in brick. The paviours date to the 18th century and may have been reused as the edging bricks are of 19th century date (see Discussion).

3.4.4 Layer 107 was cut by a small posthole (**112**) (Plate 13) at the mid point of the trench. This had a diameter of 0.20m and a depth of 0.20m. It contained a number of stones that had been used as post packing (Plate 14).

3.4.5 A thin layer of fine mid grey silty chalk (106) partly sealed layer 107. This had an exposed width of 7.4m and a maximum thickness of 0.10m. A single paviour was found within the layer, that is of post-medieval date (18th century).

3.4.6 All of the above layers and features were sealed by a 19th century chalk raft (105) (Plates 2, 3 and 16). This distinctive levelling/construction layer was exposed along the entire length of the trench and probably extended across the whole playground area on the east side of the school as it could also be seen where the overburden had been removed to the east of the excavation trench (Fig. 10). It had an average thickness of 0.25m but was much thicker at the north-western end of the trench where it increased to 0.60m over the top of pit **126**. The chalk raft was devoid of any finds.

3.4.7 The chalk raft was sealed by a rubble layer (104) (Plate 16) that was almost entirely made up of 19th century red frogged brick and broken tile. The layer continued for the entire length of the trench and into the area of overburden in the central part of the site (Plates 24, 25 and 26). It had a maximum thickness of 0.30m. Other finds from the

layer include slate, clay pipe, glass and pottery of 19th or early 20th century date (Appendix B).

3.4.8 A thin spread of chalk (103) overlay rubble layer 104 and was cut by a small pit (**121**) that was located 5m from the south-east end of the trench. The pit had a width of 0.80m and a depth of 0.30m, with steep sides and an uneven base. The fill (120) consisted of a reddish brown silty matrix mixed with brick. The brick was frogged while pottery from the pit indicates a late 19th or early 20th century date.

3.4.9 A modern service trench (**123**) was located 4.2m from the north-west end of the excavation trench. This had a width 4.2m and a depth of just 0.2m. The sides sloped gently culminating in an uneven base. The fill (122) of the feature consisted of a mid to light brown sandy chalky silt.

3.4.10 Truncating fill 122 was another modern service trench (**125**). This had a width of 0.30m and a depth of 0.20m with steep sides and a flat base. It contained a single fill (124) of mid to light brown sandy clay silt.

3.4.11 Both the chalk raft (105) and brick layer (104) are likely to have been foundation layers for the playground that existed before the current asphalt surface. Layer 104 was sealed by a base layer (102) and the modern asphalt surface (101).

3.5 Finds Summary

Overview

3.5.1 Artefactual evidence indicates that the lower layers of the trench were Roman (although see note in Introduction above) with the exception of pit **126** which may have been re-used or finally infilled in the medieval period. The lower fill of the pit produced Roman material, including pottery and a small Roman ring, while the upper fill produced medieval pottery and post-medieval building material. The upper levels of the trench produced predominantly post-medieval finds of pottery, clay pipe, glass and ceramic building material, although earlier material was also present. These finds would have been discarded and in the case of the CBM used as a construction or base layers.

Pottery

3.5.2 A small assemblage of 56 sherds of Early to Mid Roman pottery was found that includes coarse wares and fine wares. The only specialist pottery found are five large DR20 Southern Spanish (Baetica) olive oil amphora body and handle fragments. The handle fragment is of particular interest as it has a numerical graffito inscribed into its surface: “XX\” – possibly referring to the quantity of its contents.

3.5.3 Post-Roman pottery comprised an assemblage of 99 sherds, weighing 1.656kg, representing a minimum of 54 vessels, the majority of them late 18th-early to mid-19th century. The assemblage spans the medieval period to the 18th and 19th centuries. The condition of the overall assemblage is unabraded to moderately abraded, and the mean sherd weight is moderate at approximately 0.017kg.

Metalwork

3.5.4 Metallic finds were sparse, comprising a Roman ring found in the lower levels of pit **126** along with a Roman nail. Other iron nails attributed to the Roman period were found in layer 109. A single residual coin was also found in layer 109, identified as a 3rd century barbarous radiate.

3.5.5 The only metal find that could be attributed to the medieval period was an incomplete spur rowl in the shape of an eight-pointed star. This object was found by metal detector on the spoil heap.

Ceramic building material and stone

3.5.6 A modest assemblage of ceramic building material (CBM) amounting to 51 fragments weighing 37533g was recovered from eight contexts. The majority (86% by count and weight) is Roman in date, but a small quantity of post-Roman material was also found. The Roman material occurred in early topsoil and subsoil layers and a wall, whilst the later material was found in similar more recent soil deposits and the edging for a path. A fragment of lava ?millstone (SF3) was found in post-medieval layer 107 and may be of Roman origin.

3.6 Environmental Summary

3.6.1 The environmental sampling from this site produced occasional charred and untransformed plant remains that are in poor to moderate condition, with probable contamination from post-medieval and modern material. The possible reason for this contamination is that the samples from the lower contexts were removed with a machine bucket due to health and safety reasons. It is entirely possible that material from the upper features could have been dislodged during this process.

3.6.2 A small faunal assemblage of 22 pieces of animal bone was found mostly in the Roman layers, which produced mixed finds assemblages. The majority of the remains could not be assigned to species and were classified as large mammal, which are likely to be cattle or horse remains. Of those species that could be identified, sheep/goat and cattle were the most common.

3.6.3 A total of 0.055kg of oyster shells was collected by hand from topsoil, subsoil and pit **126**, The shell is relatively moderately well preserved and does not appear to have been deliberately broken or crushed.

4 Discussion and Conclusions

4.1 Introduction

4.1.1 The excavation results are limited as it was not possible to open an area large enough to fully investigate or interpret the features that were revealed. The narrow, deep trench combined with health and safety concerns meant that anything below the top metre (and in some areas of the trench, 0.5m) had to be monitored and recorded from the modern ground level.

4.1.2 This has hampered the characterisation, dating and interpretation of features as other than post-medieval pits and modern services, it was not possible to establish their extents and the finds assemblages appear to have become quite mixed.

4.1.3 Despite these limitations, the fieldwork has revealed a sequence of Roman, medieval and post-medieval occupation that can in part be related to the known archaeology of the (extra-mural) Roman town and subsequent developments.

4.2 Roman

4.2.1 The investigation revealed that Roman deposits were possibly located between 0.80m and 2.2m below the modern ground level. The earliest deposits noted were loose (apparently mortar-rich) layers 127 and 110 recorded at the very base of the excavation trench. These may represent demolition (or construction) layers and appear to date to the mid 1st to 2nd century AD, although too little was exposed to permit further interpretation.

4.2.2 Other probable Roman layers were recorded sealing layers 127 and 110 but similarly the extent of these could not be seen. These layers may represent subsoils or imported soils dating to the early 2nd century or later; the thickness (0.9m) and profile of layer 109 in particular may even suggest the presence of a bank. The finds were very mixed and is possible that this (and layer 108) were disturbed by later activity.

4.2.3 The presence of the substantial (1.20m wide; possibly a corner) flint wall foundation 118 recorded at the south-east end of the trench is of particular note. Too little was exposed to indicate the type or size of the building it may have been the remnants of, but it presumably extended to the south and west under what is today the Rose and Crown public house.

4.2.4 The purported route of the Roman road (Street 19) leading from Verulamium to Camulodunum (Colchester) runs close to the south-east end of the trench (Figs 1 and 2). This combined with the various archaeological sites known in the vicinity (see Section 1.3) is suggestive of extra-mural roadside settlement in this area, and it is feasible that the foundations found during the current excavation formed part of this development.

4.3 Medieval

4.3.1 The only evidence of medieval activity (apart from a scattering of pottery) on the site was represented by pit **126** located at the north-west end of the trench. It is not clear whether this feature was first used in the Roman period and subsequently re-cut or re-used at a later date. A small fragmentary Roman ring was found within the lower fill (115) along with other Roman finds (including seven hand forged nails), but the majority of finds particularly from the upper fill belong to the medieval period (12th-14h century).

4.3.2 This pit may have been related to an earlier building that is known to have stood on the site. The 1799 parish map (not illustrated) shows the plan of a courtyard building on the

site of the later school building (see Section 1.3), which may have been the medieval inn known as 'The Bell' that had stabling for 57 horses in 1756. The Hertfordshire Historic Environment Record (HHER) suggests this was also the site of a later maltings (HHER MHT7073: Former malting St Michaels, St Albans).

4.3.3 Other contemporary 'backyard' activity (such as pits and wells) has been identified in this part of the town including to the rear the Black Lion public house, *c*.140m west of the site, and in the garden behind No. 176–8 Fishpool Street, 190m east of the site (see Section 1.3).

4.4 Post-medieval and modern

4.4.1 Post-medieval activity consisted of construction layers attributed to either a courtyard or the predecessor of the modern school playground.

4.4.2 A wide pathway or surface (117) was located in the northern part of the trench aligned parallel to St Michael's Street. The north-west side was edged with bricks (116) that are of 19th century date (Appendix B5), although some of the paviours are dated to the 18th century. It is possible that this path may have been in use in the latter years of when the Bell Inn was in operation, or may have been related to the later maltings that existed on or close to the site.

4.4.3 The uppermost deposits were all later post-medieval and modern in date, comprising an extensive levelling layer (107) containing mixed Roman and later finds, sealed by a chalk raft (105) above which was a 19th century brick rubble base layer (104). These were presumably laid to provide a stable base over the loose and uncompacted deposits below and may have derived from demolition of the inn or maltings. Finds recovered from layer 104 are all of an 18th or 19th century date. The fragments of clay tobacco pipes (Appendix B.5) dated to the 19th century may have been discarded by the workforce that laid the brick substrate down, or perhaps even by workers at the former maltings prior to its demolition.

4.4.4 Brick rubble layer 104 is most likely to have been laid as a substrate/base layer for the first school playground; cartographic evidence shows that there were no buildings or structures on this spot during the early years of the school. The school was founded in 1811 by the 2nd Earl of Veralum. It became a Church school in 1876. The lower school (the site) is clearly visible and labelled on the *c.* 1878 1st edition OS map (Fig. 7).

4.4.5 This earlier playground has clearly been removed but the brick rubble substrate was retained. At this time some of the services were also removed (**121** and **125**), new foul water drainage laid down above which a modern two-layer asphalt surface was laid to create the playground.

4.5 Significance

4.5.1 Although the excavation area was small and features too deep and inaccessible to fully characterise, it has been possible to shed some light on the development of this part of St Albans and the site's context in relation to the Roman and later town. However, it should be noted that the mixed nature of the finds recovered during the investigation means that it has not been possible to establish a firm chronology for this sequence.

4.5.2 The Roman road to Colchester was not identified (although two mortar-rich possible construction layers were revealed) but the presence of the masonry foundation is of particular significance. This indicates a probable extra mural roadside building was located here, the remains of which may still survive underneath the adjacent Rose and Crown public house.

4.5.3 Medieval remains were sparse, being restricted to a single feature (possibly originally cut in the Roman period), that is broadly indicative of general 'backyard' activity in this area. Post-medieval remains relate to demolition and levelling for the redevelopment of the site. They demonstrate that surfaces relating to the early life of the school and possibly the buildings (such as The Bell) that immediately preceded it still exist beneath the modern asphalt surface.

Appendix A. Trench Description and Context Inventory

Trench 1						
General description					**Orientation**	NNW-SSE
U shaped trench. Excavated to the south-east of the school. Lower layers produced evidence of extra-mural Roman activity and upper layer were attributed to construction in the post medieval period.					**Avg. depth (m)**	2.2
					Width (m)	1.0
					Length (m)	14.25
Contexts						
context no	**type**	**Width (m)**	**Depth (m)**	**comment**	**finds**	**date**
101	Layer	14	0.20	Asphalt	-	Modern
102	Layer	14	0.15	Substrate	-	Modern
103	Layer	1.6	0.06	Thin chalk layer	-	Modern
104	Layer	12.5	0.30	Brick and tile substrate	-	Post medieval
105	Layer	14.5	0.22	Chalk raft	-	Post medieval
106	Layer	7.40	0.10	Silty soil	-	Post medieval
107	Layer	9.22	0.40	Subsoil	-	Post medieval
108	Layer	4.0	0.80	Subsoil	Pottery, bone	Roman
109	Layer	10.8	0.9	Subsoil	Pottery, bone, CBM	Roman
110	Layer		0.10	Demolition layer	-	Roman
111	Fill	0.2	0.2	Fill of 112	-	Post medieval
112	Cut	0.2	0.2	Post hole	-	Post medieval
113	Building			School footing	-	Modern
114	Fill		0.70	Fill of pit 126	Pottery	Medieval
115	Fill		0.2	Fill of pit 126	Metalwork, shell	Roman
116	Layer		0.10	Structure	-	Post medieval
117	Layer	1		Construction	Brick	Post medieval
118	Building	1.2	1	Building foundation	Flint	Roman
119	Mortar	1.2		Material between Flint foundation	-	Roman
120	Fill	0.80	0.20	Fill of pit 121		
121	Cut	0.80	0.20	Pit	Brick	Post medieval
122	Fill	4.2	0.20	Fill of shallow pit 122	-	Modern
123	Cut	4.2	0.20	Shallow pit	-	Modern
124	Fill	0.40	0.3	Fill of pit 125	-	Modern
125	Cut	0.40	0.3	Cut of modern service pit	-	Modern
126	Cut		0.70	Pit	-	Medieval

127	Layer		0.30	Demolition layer	CBM	Roman
128	Fill		0.20	Backfill of service trench		Modern
129	Cut		0.20	Fill of service trench		Modern
132	Fill		0.20	Fill of service trench		Modern
133	Cut		0.20	Service trench		Modern

Appendix B. Finds Reports

B.1 Metalwork

By Denis Sami

Introduction

B.1.1 A small assemblage of metal finds comprising three copper-alloy artefacts (Table 1), 13 iron finds (Table 2) and two lead objects (Table 3) was recovered from subsoil, layers and fill 114 of pit **126** dating to the Roman, medieval and post-medieval periods.

Methodology

B.1.2 The PAS data base has been used as the main reference source for coin SF1, bell SF7 (NLM-5D7E15) and weight SF12 (SF-B26F51). Manning (1985) has been used as a reference for the iron work.

B.1.3 Measurements such as length (L), width (W), thickness (Th) and weight (Wt) are provided in the catalogue.

Results

B.1.4 The assemblage is poorly preserved, iron artefacts are heavily rusted, encrusted and fragmented, while copper-alloy and lead objects present oxidation.

B.1.5 Coin SF1 is a 3rd century “barbarous radiate” emission possibly struck in the south of England. These coins were not copies but local and regional emissions issued by privates to support small scale market during the economic crisis of AD 235–284. The coin is in poor condition but it is possible to observe a bust of emperor facing right and wearing radiate crown. In addition, the letters S […] IVS are visible in the obverse, while the reverse is illegible.

B.1.6 The small bell SF7 dates to the post-medieval period and given its white metal coating the bell was most likely a good quality dress accessory.

B.1.7 A great part of the ironwork consists of medium to large hand-forged nails of Manning type 1b (Manning 1985, 134-35) (SFs 10,11,13-15,17,18,20,22). These nails are common finds and generally indicate possible timber buildings or structures on or near the site. Given their minimal typological variation through the centuries, the chronology for these artefacts can often only be suggested by the stratigraphical sequence. The heavy encrustation on ring SF12 prevents a clear identification of the artefact, and it is possible that it is a circular buckle.

B.1.8 Lead weight SF16 weighs 103g, a little bit less than 1/3 of a Roman *libra* (*triens* 109.6g; *libra* 328.9g). The presence of two small conical fittings on the flat base suggests this weight may have been attached to another object.

Retention, dispersal and display

B.1.9 The majority of the iron objects are nails, which have been catalogued, and could be considered for deselection if appropriate, although the other iron objects and non-ferrous items should be retained.

SF	Context	Sample	Feature	Description	Date
1	109		Layer	A 3rd century Barbarous radiate, Reece period 14. O: S […]IVS, Emperor bust facing right with radiate crown R: illegible Diam: 12.8 mm; Wt: 0.9 g	275-285AD
7	104		Demolition layer	Incomplete copper-alloy open mouthed bell with domed top. A little hole (diam. 1.6 mm) is open in the top part. The bell surface bears white metal plating both inside and outside. H: 12.2 mm; W: 16.3 mm; Th: 0.5 mm; Wt: 1.2 g	Post-med 1550-1850
8	114		Fill of pit	Incomplete, fragmented in three very small parts unidentified foil. Wt: 0.38	

Table 1: Copper-alloy artefact catalogue

SF	Context	Sample	Feature	Description	Date
9	99999		Subsoil	Incomplete spur rowel in the shape of an eight pointed star. Part of the rowel box is still attached on one side through a rivet. L: 28.5 mm; T: 5.3 mm	Post-med 1550-1850
10	109		Layer	Three incomplete hand-forged nails with tapering cross-section stem	Roman
11	114	1	Fill of pit	Incomplete stem of a nail	?Roman
12	115		Fill of pit	Complete ring with oval cross-section (Manning 1989: 138-39). Diam: 26.8 mm	Roman
13	115		Fill of pit	Incomplete hand-forged small nail with tapering stem and sub-circular flat head.	?Roman
14	114		Fill of pit	Four incomplete hand-forged nails with tapering stem and square cross-section (Manning type 1b)	Roman
15	114		Fill of pit	Incomplete hand-forged oval flat head of long nail of building fitting. Small portion of a square in cross-section stem is still visible. L: 44 m; W: 35 mm; T: 11 mm. Stem, section 16 mm x 16 mm	Roman
17	109		Layer	Five hand forged nails with tapering stem and square cross-section (Manning type 1b)	Roman

18	109		Layer	Incomplete hand-forged hook or staple with square cross-section. L: 43 mm; Section: 10 x 10 mm	Roman
20	108		Layer	Seven incomplete hand forged nails with square cross-section and tapering stem (Manning type 1b).	Roman
21	108		Layer	Incomplete, unidentified object consisting of a possibly sub-circular rod slightly flattered on one end. L: 54.7 mm; T: 16.7 mm	?Roman
22	108	5	Layer	Three incomplete hand forget mails (Manning type 1b)	?Roman
23	104		Demolition layer	Incomplete rod of metal with rectangular cross-section. L: 61.8 mm; W: 10.3 mm; T:8 mm	Post-med 1550-1850

Table 2: Iron artefacts catalogue

SF	Context	Sample	Feature	Description	Date
16	114		Fill of pit	An incomplete possible weight. Circular and D shaped in cross-section. The base presents two opposite small conical fittings (Height: 4 mm) located near the edge of the object. Diam: 38.5 mm; T: 10.5 mm; Wt: 103 g	
19	109		Layer	Unidentified lump. Wt:3.9 g	?

Table 3: Lead artefacts catalogue

B.2 Roman Pottery

By Alice Lyons, with catalogue by Stephen Wadeson

Introduction

B.2.1 A total of 56 sherds, weighing 2404g (1.70 EVE), of Roman pottery were collected from a pit and several layers (Table 4). The pottery represents a minimum of 33 fragmentary vessels, none of which were complete or buried *in situ*. Indeed, the pieces are moderately to severely abraded, although the presence of large amphora fragments gives the pottery a substantial average sherd weight of *c*. 43g - without the amphora sherds the average sherd weight for the assemblage is only 12.5g.

Feature	Sherd Count	Weight (g)	EVE	Weight (%)
Roman layers	31	2197	1.24	91.39
Fill of pit 126	25	207	0.46	8.61
Total	**56**	**2404**	**1.70**	**100.00**

Table 4: Quantity and weight of pottery by feature type.

Methodology

B.2.2 The pottery was recorded following the guidelines of the Study Group for Roman Pottery (Barclay *et al* 2016). The total assemblage was studied and a catalogue was prepared (Appendix 1). The sherds were examined using a hand lens (x10 magnification) and were

divided into broad fabric groups defined on the basis of inclusion types present. Vessel forms (jar, bowl) were also recorded. The sherds were counted and weighed to the nearest whole gram and recorded by context. Decoration, residues and abrasion were also noted. OA East curates the pottery and archive.

The Pottery

B.2.3 A total of eight broad fabric groups were recorded (Table 5).

Coarse wares

B.2.4 The oldest pottery comprises a single fragment from a grog tempered (SOB GT) storage jar manufactured in the Late Iron Age tradition, but possibly remaining in use alongside the Early Roman pottery. A Roman grog tempered storage jar fragment was also found (PNK GT), which is commonly made and distributed in the Milton Keynes area during the Early Roman period.

B.2.5 Apart from the large amphora sherds (described below) Verulamium white wares (VER WH) form the largest part of the assemblage by weight. Several forms were recorded including a reeded rim dish (Tyers 1996, 200, fig 255, IVA7), also a flanged bowl and undiagnostic jar and storage jar fragments. These vessels are undecorated, although often smoke fumed on the external surface. They were commonly produced between the mid-1st and mid-2nd centuries AD in several large centres in the vicinity of St Albans, such as Brockley Hill (Tyers 1996, p. 201). A small number of unsourced Sandy red ware flagon sherds were also found and are probably contemporary.

B.2.6 The second most common coarse ware by weight (but most frequent by sherd count) are a variety of unsourced utilitarian local sandy grey ware vessels. Diagnostic forms include a poppy headed beaker inspired by Gaulish design (Tyers 1996, 141, fig 1522, no. 16), also straight-sided dishes with triangular rims of Black burnished ware 2 type (Tyers 1996, 187, fig 232, no IVH5-7). A single sandy grey ware sherd was distinctive with a burnished design that may have been made in the Alice Holt/Farnham industry in between the mid-1st and early 2nd century (Tyers 1996, 180-181).

Fine wares

B.2.7 Gaulish samian are the most common fine ware within this small group (SAM). A single scrap of South Gaulish material was found, the remainder are 2nd century Central Gaulish bowl/dish and cup (Dr33) fragments. In addition, a small piece of Colchester colour coated (COL CC) beaker was found, which dates between *c*. 120AD and the later 3rd century AD.

Fabric and published reference	Vessel form	Sherd Count	Weight (g)	EVE	Weight (%)
Spanish amphora: BAT AM1, BAT AM2 (Tomber and Dore 1998, 84-85; Tyers 1996, 87-89)	Amphora (DR20)	5	1764	0.00	73.38
Sandy oxidised ware: VER WH (Tomber and Dore 1998 154; Tyers 1996, 199-201)	Reeded rim dish, flanged bowl (Dr38 copy), jar/storage jar	13	245	1.38	10.19
Sandy grey ware: SGW; ALH RE (Tomber and Dore 1998, 138)	Jar/bowl, poppy headed beaker, straight-sided dish with a triangular rim, dish (Dr18/31R copy)	22	223	0.32	9.28
Pink grog tempered ware: PNK GT (Marney 1989, 74–5; Tomber and Dore 1998, 210)	Storage jar	1	76	0.00	3.16
Sandy red ware: SREDW	Flagon	4	42	0.00	1.74
Samian: SAM	Dish/bowl, cup (Dr33)	9	32	0.00	1.33

Fabric and published reference	Vessel form	Sherd Count	Weight (g)	EVE	Weight (%)
(Tomber and Dore 1998, 25-41; Tyers 1996, 105-106)					
Grey ware with common grog inclusions: SOB GT (Tomber and Dore 1998, 214	Storage jar	1	18	0.00	0.75
Colchester colour coat: COL CC (Tomber and Dore 1998, 132; Tyers 1996, 167-168)	Beaker	1	4	0.00	0.17
Total		**56**	**2404**	**1.70**	**100.00**

Table 5: The Roman pottery fabrics, listed in descending order of weight (%)

Specialist wares and graffito

B.2.8 The only specialist pottery found are five large DR20 Southern Spanish (Baetica) olive oil amphora body and handle fragments. The handle fragment is of particular interest as it has a numerical graffito inscribed into its surface: "XX\" – possibly referring to the quantity of its contents. Such vessels were imported into Britain from the Late Iron Age into the Roman era, with supply peaking in the Antonine (2nd-century AD) period (Tyers 1996, 87). No mortaria (Tyers 1996, 117-135) or other specialist vessels were found.

Conclusion

B.2.9 This is a small well-recorded assemblage of Early to Mid-Roman pottery, recovered from a single pit and contemporary layers. The group contains both local and imported fabrics and forms previously recorded in the region and informs on what pottery was in use and being discarded in the first few centuries of the Roman occupation.

Roman pottery catalogue

KEY: B = base, C=century, D = decorated body sherd, Dsc = description, E=early, Eval = evaluation, Ex = excavation, H = Handle, L=late M=mid, R = rim, U=undecorated body sherd.

Context	Cut	Category	Fabric Family	Dsc	Form	Sherd Count	Weight (g)	Pot date
108	0	layer	BAT AM 2	H	AMPH	1	500	C1BC-ADC3(C2)
108	0	layer	PNK GT	U	SJAR	1	76	MC1-C3
108	0	layer	SREDW	D	FLAG	2	27	C2-C4
108	0	layer	VER WH	UB	JAR	6	92	MC1-C2
108	0	layer	VER WH	R	DISH	1	35	MC1-E/MC2
108	0	layer	VER WH	R	JAR	1	18	MC1-MC2
108	0	layer	SGW	RUD	JAR	7	94	MC1-E/MC2
108	0	layer	SAM	U	CUP	1	4	AD120-200
108	0	layer	SAM	U	DISH	1	9	AD120-200
108	0	layer	SAM	F	DISH/BOWL	1	6	AD120-200
109	0	layer	SAM	D	CUP	1	1	C2-C4
109	0	layer	VER WH	R	FLAG	1	39	C2-C4
109	0	layer	SGW	U	JAR/BOWL	1	6	MC1-C4
109	0	layer	SGW	D	BEAK	1	13	LC1-E/MC2
109	0	layer	BAT AM 1	U	AMPH	1	21	C1-C2
109	0	layer	BAT AM 2	U	AMPH	3	1243	C1BC-ADC3(C2)
114	126	pit fill	SOB GT	D	SJAR	1	18	C1-EC2
114	126	pit fill	VER WH	U	JAR	2	17	MC1-C2
114	126	pit fill	SREDW	D	FLAG	1	2	C2-C4
114	126	pit fill	SGW	UB	JAR/BOWL	7	52	LC1-C4

114	126	pit fill	VER WH	R	SJAR	1	22	C2-C3
114	126	pit fill	VER WH	R	FBOWL	1	22	C2-C3
114	126	pit fill	COL CC	U	BEAK	1	4	C2-C3
114	126	pit fill	SGW	R	DISH	2	8	C2-C3
114	126	pit fill	SGW	R	BEAK	1	6	LC1-C2
114	126	pit fill	SGW	R	DISH	1	6	LC1-C2
115	126	pit fill	SAM	U	FRAG	1	1	AD70-110
115	126	pit fill	SAM	U	DISH/BOWL	1	1	AD120-200
115	126	pit fill	SAM	UR	DISH/BOWL	2	9	AD120-200
115	126	pit fill	SAM	U	CUP	1	1	AD120-200
115	126	pit fill	SGW	R	DISH	1	13	MC2-EC3
115	126	pit fill	SGW	B	BEAK	1	25	LC2-EC4
127	0	layer	SREDW	D	FLAG	1	13	MC1-C2

B.3 Glass

By Carole Fletcher

Introduction and methodology

B.3.1 A small assemblage of glass (15 shards, weighing 0.489kg) was recovered from layers, including topsoil and subsoil, during the excavation. The glass was scanned and recorded by form, colour, minimum number of vessels (MNV), count, weight and dated where possible (see catalogue below).

Assemblage

B.3.2 Most of the material by weight (six shards, 0.399kg), was recovered from demolition/levelling layer 104, which probably relates to destruction of outbuildings that belonged to the adjacent Rose and Crown public house, or ealrier buildings (such as the maltings) on or near the site. These shards, including pharmaceutical bottles, wine bottles and a vase, probably date to the late 19th or early 20th century. The demolition layer sealed a relict topsoil, 108, which in turn overlay an earlier subsoil, 109. Layer 108 contained fragments of a black glass wine bottle of 18th or 19th century style, while subsoil 109 contained shards that appear to be from a vessel of uncertain date, and a single shard of Roman window glass.

Discussion

B.3.3 The presence of late Victorian material in a demolition (or construction) layer related to earlier buildings on the site was perhaps to be expected, and the recovery of slightly earlier material in the topsoil sealed by the demolition is also unsurprising. Even the Roman window glass is not out of the ordinary within St Albans, and on the edge of the Roman town of Verulamium. The glass probably indicates that a Roman building of some status existed close by.

Glass Catalogue

Context	Form	Description	MNV	No. of shards	Weight (kg)	Glass Date
103	Drinking vessel - tumbler or beaker	A partial tumbler or beaker in clear colourless glass. The glass is slightly iridescent and clouded. Cylindrical vessel with upright simple rounded rim (diameter 80mm) press-moulded decoration in heavy thick glass (3-6mm thick)	1	1	0.053	Late 18th-early 19th century
104	Pharmaceutical bottle	Rim, lip, neck and part of shoulder from a clear, pale blue-green (aqua) moulded glass bottle. Rim diameter 25mm bore 10mm	1	1	0.018	19th-20th century
	Utility bottle - Hamilton-type bottle	Fragment from a clear, slightly green, press-moulded ovate soda or sparkling water bottle	1	1	0.105	19th century
	Miscellaneous - ?vase	Fragment from a thick, opaque, white (milk) glass vessel with moulded, reeded surface. Narrow at point close to ?location of base and flaring outwards, varying from 5mm to 11mm thick. May have been a milk glass vase	1	1	0.047	Victorian
	Pharmaceutical bottle	Body shard, most likely from a rectangular bottle with flat chamfered corners. The glass is clear and almost colourless, with slightly clouded surfaces	1	1	0.004	19th-20th century
	Uncertain	Shard of clear glass with greenish cast, somewhat cloudy surface and iridescence, uncertain of form	0	1	0.004	Not closely dateable
	Utility bottle (wine)	Base sherd from a dark olive green 'black' glass cylindrical bottle with moderate kick (height 33mm). Glass is in good condition, but surfaces partially encrusted with ?lime. Basal diameter 77mm	1	1	0.221	19th century
108	Utility bottle (wine)	Body sherds from a dark olive green 'black' glass cylindrical bottle. The glass is heavily iridised and flaking	1	2	0.010	Late 18th to 19th century
109	Uncertain	SF 6: Fragmented shards of pale blue-green (aqua) glass, possibly from the base or side of a vessel, a small angled shard survives. The glass is crazed internally and is c.6mm thick	1	5	0.007	Uncertain
	Window	SF 5: Single irregular shard of clear blue-green (aqua) glass with slightly cloudy surfaces. One surface is flat, the other slightly irregular; the irregular surface is slightly smoother, the flat surface is slightly matt to the touch. Thickness varies from 2-5mm	0	1	0.020	?Roman
Total			**8**	**15**	**0.489**	

B.4 Post-Roman Pottery

By Carole Fletcher

Introduction

B.4.1 An assemblage of 99 sherds, weighing 1.656kg, representing a minimum of 54 vessels, the majority of them late 18th-early to mid-19th century, was recovered from the site. The assemblage spans the medieval period to the 18th and 19th centuries. The condition of the overall assemblage is unabraded to moderately abraded, and the mean sherd weight is moderate at approximately 0.017kg.

Methodology

B.4.2 The Prehistoric Ceramics Research Group (PCRG), Study Group for Roman Pottery (SGRP), The Medieval Pottery Research Group (MPRG), 2016 *A Standard for Pottery Studies in Archaeology* and the MPRG *A guide to the classification of medieval ceramic forms* (MPRG 1998) act as standards.

B.4.3 Recording was carried out using OA East's in-house system, based on that previously used at the Museum of London. Fabric classification has been carried out for all sherds, and previously described medieval and post-medieval types named using Cambridgeshire fabric types (Spoerry 2016), where pottery types found in Hertfordshire are the same. The Museum of London Archaeology medieval and post-medieval pottery codes (http://www.mola.org.uk/medieval-and-post-medieval-pottery-codes) are used for 18th century and later pottery.

B.4.4 Where samples were taken from which pottery was recovered, the pottery has not been examined when hand excavation of the contexts or their equivalent have already produced pottery. All other sherds have been counted, classified and weighed on a context-by-context basis and the minimum number of vessels (MNV) established. The assemblage is summarised in the catalogue at the end of this report and recorded in an Access Database. The pottery and archive are curated by Oxford Archaeology East until formal deposition or dispersal.

Assemblage

B.4.5 Ceramic fabrics used in the report and the fabric codes used in the catalogue, the total sherd count and weight of all fabrics are given in Table 6.

Fabric	Fabric Code	MNV	No. Sherds	Weight (kg)	% of Assemblage by weight
Bone China	BCHIN	2	6	0.016	1.0
East Anglian Redwares	EAR	2	2	0.088	5.3
East Anglian Redwares (late medieval)	EAR (L)	2	2	0.009	0.5
Hertfordshire Grey ware	HERTS	9	10	0.148	8.9
Late Medieval Hertfordshire Glazed ware	HERTG	1	1	0.010	0.6
London-type ware	LOND	1	1	0.021	1.3
Medieval Sandy ware	MSW	2	3	0.022	1.3
Modern Redware	MODR	1	1	0.026	1.6
Pearlware	PEARL	1	3	0.006	0.4
Pearlware with blue transfer-printed decoration	PEARL TR	18	35	0.533	32.2
Pearlware with painted decoration	PEARL PNTD	1	1	0.036	2.2
Pearlware with sponged or splattered decoration	PEARL SPON	4	15	0.144	8.7
Refined White Earthenware	RFWE	2	3	0.142	8.6
Refined White Earthenware with slip decoration	RFWE SLIP	1	2	0.014	0.8
Shelly Sandy ware	SSHW	1	1	0.005	0.3
Unprovenanced	UNPROV	1	1	0.028	1.7
Unprovenanced Glazed ware	UPG	1	1	0.042	2.5
Yellow ware	YELL	3	10	0.340	20.5
Yellow ware with slipped decoration	YELL SLIP	1	1	0.026	1.6
Total		**54**	**99**	**1.656**	**100**

Table 6: Fabrics present in assemblage

Pottery by Ceramic Period

B.4.6 The assemblage is relatively small and produced a moderate range of material, mostly from layers across the site.

B.4.7 The medieval-late medieval assemblage is relatively small, only 22 sherds weighing 0.373kg, including sherds from a minimum of nine Medieval Hertfordshire Greyware vessels. With the exception of the pottery recovered from pit **126**, most of the medieval assemblage is residual. It is possible that the paucity of medieval pottery is due to 18th century clearance and building.

18th and 19th century pottery

B.4.8 The bulk of the pottery recovered consists of Pearlwares of various forms and decoration types, the most common being blue transfer-printed patterns, both floral and willow pattern-type. Also present are sherds of Yellow ware, including slip-decorated vessels, and Bone China, including a sherd from a sprig-decorated saucer.

Provenance

B.4.9 There is a moderate range of fabrics of local and non-local origin present in the assemblage, from a moderate range of sources, with the bulk of the 18th and 19th century pottery originating in the industrial potteries of Staffordshire and other areas.

Form

B.4.10 The vessels present in the assemblage are primarily domestic in nature, the medieval forms present including the normal range of bowls, jars and jugs, with no specialist vessels present. The 18th and 19th century pottery includes tablewares, tea drinking vessels, serving vessels, kitchen wares and a piece of sanitary ware, in the form of a partial base from a hand basin or a toilet.

The Assemblage in Relation to Archaeological Features

B.4.11 Context 114, the upper fill of pit **126**, produced only local Hertfordshire Greywares. This pit also produced Roman pottery, so it is unclear if the post-Roman pottery is intrusive or if the Roman material is residual.

B.4.12 The remainder of the pottery was recovered from layers. Layer 108 produced 38 sherds of pottery, the majority of which are Roman (see Lyons section B2), however, 11 sherds were identified as medieval or later, including a decorated jug sherd, tentatively identified as London ware, and local Hertfordshire Greyware vessels.

B.4.13 Context 109, described as a subsoil, produced a single sherd from a late East Anglian Redware vessel, and a medieval Hertfordshire Greyware sherd. The context also produced a number of Roman sherds, including amphora, and 109 may be later medieval with residual Roman material.

B.4.14 A further subsoil context, 107, produced a sherd of Medieval Sandy ware, alongside a sherd from a slip-decorated Yellow ware jug, *c*.1820-1900.

B.4.15 Context 103 produced ten Pearlware sherds, including a fragment from a saucer, alongside 18th-19th century vessel glass.

B.4.16 Context 104 produced the largest quantity of post-Roman pottery, 67 sherds weighing 1.176kg, mostly comprising Pearlwares (*c*.1770-1840). However, the context dates to the 19th century or later, and includes sherds from a Refined White Earthenware jar and Yellow ware bowls (*c*.1820-1900).

B.4.17 External surface 117 produced a sherd from an East Anglian Redware vessel, alongside a Late Medieval Hertfordshire Glazed ware sherd, possibly from a dripping dish. No other pottery was recovered, and the surface may date to the late medieval period.

Discussion

B.4.18 The pottery recovered is mostly late 18th-19th century, and most likely relates in part to rubbish deposition, but also to clearance and levelling on the site. Medieval pottery is sparse, and it seems likely that most, if not all, medieval features have been disturbed or removed by later development, and what little survives relates to rubbish deposition or site levelling.

Post-Roman Pottery Catalogue

Context	Cut	Fabric	Form	MNV	Sherd Count	Weight (kg)	Pottery Dates
103		PEARL	Saucer	1	3	0.006	1770-1840
		PEARL TR	Bowl	1	2	0.017	1770-1840
		PEARL TR	Bowl - serving vessel	2	3	0.091	1770-1840
		PEARL TR	Plate	1	2	0.009	1770-1840
104		BCHIN	Drinking vessel - cup	1	1	0.003	1794-1900
		BCHIN	Saucer	1	5	0.013	1794-1900
		MODR	Bowl	1	1	0.026	1800+
		PEARL PNTD	Bowl - serving vessel	1	1	0.036	1770-1840
		PEARL SPON	Bowl	2	6	0.103	c.1800-1840
		PEARL SPON	Drinking vessel - mug	2	9	0.041	c.1800-1840
		PEARL TR		1	1	0.003	1770-1840
		PEARL TR	Bowl - serving vessel?	1	1	0.122	1770-1840
		PEARL TR	Drinking vessel - mug or tankard	1	1	0.027	1770-1840
		PEARL TR	Jar	1	1	0.055	1770-1840
		PEARL TR	Jug	2	12	0.093	1770-1840
		PEARL TR	Plate	7	8	0.050	1770-1840
		PEARL TR	Platter	1	4	0.066	1770-1840
		RFWE	Paste jar	1	2	0.005	1805-1900
		RFWE	Sanitary ware - pedestal base	1	1	0.137	1720-1780
		RFWE SLIP	Drinking vessel - mug	1	2	0.014	1805-1900
		UPG	Jug	1	1	0.042	1200-1500
		YELL	Bowl	3	10	0.340	1820-1900
107		MSW		1	1	0.004	1150-1500
		YELL SLIP	Jug	1	1	0.026	1820-1900
108		EAR	Jug/jar	1	1	0.040	1200-1500
		EAR (L)		1	1	0.003	1300–1500
		HERTS	Jar	1	1	0.011	1170-1350
		HERTS	Bowl	1	1	0.016	1170-1350
		HERTS		2	2	0.035	1170-1350
		LOND	Jug	1	1	0.021	1240-1350
		MSW		1	2	0.018	1150-1500
		SSW		1	1	0.005	1150-1400
		UNPROV		1	1	0.028	1150-1500
109		EAR (L)		1	1	0.006	1300–1500
		HERTS		1	1	0.013	1170-1350
114	**126**	HERTS		4	5	0.073	1170-1350
117		EAR		1	1	0.048	1200-1500
		HERTG	Bowl or dish	1	1	0.010	1350-1450
Total				**54**	**99**	**1.656**	

B.5 Clay Tobacco Pipe

By James Fairbairn and Carole Fletcher

Introduction and Methodology

B.5.1 During the excavation, 18 fragments weighing 42g of white ball clay tobacco pipe were recovered from post-medieval rubble layer 104. The assemblage comprises 14 broken stems, two stems with partial bowls attached and a further two fragments of bowl (Table 7). Terminology used in this report is taken from Oswald's simplified general typology (Oswald 1975, 37–41) and Crummy (Crummy 1988, 47-66). The pipes have been assigned a type, based on the chronology of bowl types devised by Atkinson and Oswald (1969 7-11), which more closely matches the late forms of 19th century pipes in the assemblage. The catalogue is based on the recording methods recommended by the Society for Clay Pipe Research (SCPR 1994). Stem borehole diameter recording has not been undertaken on this assemblage due to its limited size.

B.5.2 A.1.1 The assemblage is probably locally produced and dates from the 19th century, mostly from the mid 19th century onwards. Two of the bowl fragments (with attached stem) are decorated with relief moulded leaves. Crummy describes this type of pipe as 'plain bowls with relief decorated seams', and one in particular matches the site examples very closely (1988 56-7 fig 60 2920). Crummy discusses dates of *c*.1820-60 or 1860-90, using two difference sources. These two decorated pipe bowls have no spur or foot and might be considered a decorated version of Atkinson and Oswald type 30, copy of briar *c.*1850-1910 (Atkinson and Oswald 1969). These partial pipes and a third broken stem (in two fragments) are also decorated on their stems with a relief rope design on both sides. Two also bear the incused mark ST ALBANS on one side of the stem. This mark is complete on two examples, on the third the letters are indecipherable. The broken stem has a second incused mark inside the second relief rope design C.KIFF. Higgins illustrates the St Albans design on a stem and dates it to the 19th century (Higgins 1985 354, 360 fig 12 140).

B.5.3 One partial bowl is stamped/incused with the words L. BISHO[P] "EAGLE" LEIGHTO[N]. Higgins illustrates relief-moulded pipe stems with the lettering BISHOP/LEIGHTON and an incused bowl, stamped BISHOP LEIGHTON from 27 George St, Hemel Hempstead (Oswald, 1975 160; Higgins 1985 349, 355, fig 9, 104, 106 and 107). Higgins suggests two possible makers: a Mrs E. Bishop (*c*.1877) and the firm Bishop & Reynolds *c*.1847-90. The Eagle referenced on the pipe is almost certainly a pub of that name.

B.5.4 The final bowl sherd retains part of its rim. Below this, on what is likely to be the front of the bowl, is a partial incused mark, in a circular pattern around a single central letter or mark. The only clearly visible surviving letters are (from the rim clockwise) WOR arranged around an O or C. The form of the bowl is uncertain and cannot be closely dated, however, it is also likely to be 19th century.

B.5.5 The presence of the pipes indicates the consumption of tobacco on, or in the vicinity of, the site. It would appear that at least some of the pipes are of local manufacture and that 19th century pipes could also be portable advertising, both for the pipe maker and for the hostelry from where the smoker had obtained them. The fragmentary nature of the

assemblage means it is of little significance, other than to suggest that the pipe fragments were discarded at the time layer 104 was laid down, or possibly imported along with the building rubble.

Context	Form	No of pipe stem fragments	No of complete bowls or fragments	Description	Weight (g)	Date
104	Pipe stem	11		Broken plain pipe stem fragments, measuring between 21mm to 63.1mm in length and diameters ranging from 4.92 to 8.66mm. Oval in profile with slightly flattened sides and obvious, but trimmed, mould lines	22	Not closely datable
	Pipe stem	1		Pipe stem fragment 50.58mm in length, oval in profile (6.93mm) with well-trimmed mould lines. Shows signs of burning and warping	3	Not closely datable
	Pipe stem	2		Two joining fragments of pipe stem, relief-moulded with the words ST ALBANS surrounded by a twisted rope pattern and C.KIFF on the other side. 53mm long, sub-rounded, trimmed moulded seams. Similar to partial bowl and stem fragment, plain bowl with relief decorated seams (Atkinson and Oswald Type 30)	3	19th century
	Plain bowl with relief decorated seams		1	Fragmentary bowl (back of bowl 35mm) and stem (42mm). The stem is embossed by a twisted rope pattern which on one side surrounds the word ST ALBANS and on the other is blank. The heel of the pipe is decorated with an embossed branch and leaf pattern. There is a small plug of clay in the base. Atkinson and Oswald type 30	5	19th century
	Bowl fragment		1	Partial bowl 33x16mm. Cartouche incused on the rear of the bowl reads L. BISHO[P] “EAGLE” LEIGHTO[N]	2	19th century
	Bowl fragment		1	Bowl fragment 24x19mm, with part of stem (44mm) surviving. The stem has a partial twisted rope pattern on each side with unclear incused lettering on one side. The heel of the pipe is decorated with a moulded branch and leaf pattern, similar to others in 104	5	19th century
	Bowl fragment		1	Partial bowl with surviving length of rim, incused cartouche on the rear, WOR surrounding a central O or C	2	19th century
Total		**14**	**4**		**42**	

Table 7: Clay Tobacco Pipe

B.6 Roman and Post-Roman Ceramic Building Material

By Cynthia Poole

Introduction

B.6.1 A modest assemblage of ceramic building material (CBM) amounting to 51 fragments weighing 37533g was recovered from eight contexts. The majority (86% by count and weight) is Roman in date, but a small quantity of post-Roman material was also found

(Tables 8 and 9). The Roman material occurred in former topsoil and subsoil layers and a wall, whilst the later material was found in similar more recent soil deposits and the edging for a path.

B.6.2 The assemblage has a very high mean fragment weight of 736g, which varies very little between the post-medieval (763g) and Roman (732g); it is not known to the specialist whether this reflects on-site sampling policy or the nature of the contexts from which it was recovered. Most pieces are fresh and unabraded or only lightly worn. No complete tiles survived amongst the Roman tile and though substantial parts were present, the only complete dimension in most cases was thickness except for one brick with a complete width. Amongst the post-Roman CBM are three complete brick paviours, two of which were sampled from a path kerb.

Methodology

B.6.3 The assemblage has been fully recorded on an Excel spreadsheet in accordance with guidelines set out by the Archaeological Ceramic Building Materials Group (ACBMG 2007). The record includes quantification, fabric type, form, surface finish, forms of flanges, cutaways, markings and evidence of use/reuse (mortar, burning etc). The terminology for Roman tile follows Brodribb (1987); coding for markings, tegula flanges, etc. follows that established by OA for the recording of CBM with tegula cutaway types linked to the coding established by Warry (2006). Fabrics were characterised with the aid of x10 hand lens.

Roman CBM

Fabrics

B.6.4 Fabric A: This is the most common fabric. It is a hard, red very fine sandy micaceous clay, sometimes faintly laminated with diffuse cream streaks containing sparse quartz sand. Colour varies from dark red and maroon, to orange-red, pinkish red or brown and sometimes with a thin dark grey core present. Some overfired examples are dark grey or blue-grey in colour with a thin maroon or red skin. The presence of coarse inclusions was very variable, sometimes entirely absent, others containing small grits, whilst some bricks contain large calcined flint pebbles up to 25mm.

B.6.5 Fabric B: This is a hard red, orange, brown or brownish red micaceous clay containing coarse quartz sand in varying densities, small stone grits, including flint, quartzite and ironstone up to 12mm and small red iron oxide inclusions.

B.6.6 Fabric D: This is composed of a fine sandy micaceous clay, fired orange in colour, containing some medium – coarse quartz sand, but generally few or no coarse inclusions.

B.6.7 Fabric E: Red, orange or brown fine sandy micaceous clay sometimes with fine black speckling visible and containing variable quantities of coarser quartz sand, buff siltstone or silty clay pellets and red ferruginous clay pellets up to 8mm. In some examples the clay is strongly laminated.

B.6.8 The fabrics are not distinctly differentiated, except for E, which may be equivalent to the Museum of London fabric 3023/3060, which was produced at Radlett, Hertfordshire. The remaining fabrics are similar to Museum of London fabrics 2452, 3004 and 3006 produced at Brockley Hill, Hertfordshire: fabric A is closest to MoL 2452 and D is similar to MoL2459. The Brockley Hill and the Radlett production areas lie a few kilometres to the south of St Albans on Watling Street. Other tile kilns are also known in the area such as 'Black Boy' pits kiln (Davey 1932) at Bricket Wood. Similar suites of tile fabrics have been found in the region around St Albans (Poole 2012, 136; Poole unpub.) and where no detailed fabric analysis has been applied are commonly described as a hard red fabric (Neal *et al*, 167).

Forms

B.6.9 The Roman tile comprises predominantly brick together with a small quantity of roof tile, including both the flat flanged tegula and curved imbrex.

Tegulae and flat tile

B.6.10 The tegulae were mostly made in fabric D with one in fabric B. The three in fabric D all have knife trimming along the outer edges of the flange and measure 21-24mm thick. All three had lower cutaways surviving. Two of these (context 107), both lower left hand corners, have near identical flanges and cutaways. The flanges are curved type F2 with a finger groove along the top outer angle and a curved internal angle with a shallow finger groove. The flanges are tapered measuring 24-31mm wide and 40 and 46mm high. The cutaways equate to Warry's type C5, which is a composite type formed by an insert in the mould creating a rectangular recess 7-8mm wide in the flange side, with a triangular wedge up to 40mm wide and 23mm high subsequently cut out from the base angle. Neither has a complete length surviving. Warry suggests the type C group cutaways date to AD160-260. The third fragment (context 114) from the lower right hand corner of the tegula has a large more rectangular flange (type A4) measuring 35mm wide and 47mm high. The cutaway appears to be a later type closer to Warry's type D16 dating to AD260-360. It was made in the same manner as the earlier type, but the cut section is at a steeper angle removing a taller wedge from the flange base. The fourth tegula (context 127) in fabric B is noticeably thicker than the others at 32mm and has a type A4 flange measuring 25mm wide and 59mm high.

B.6.11 Fragments of flat tile measuring 23-29mm thick are all likely to be fragments of tegula. They were made in fabrics B and E. Two of those in fabric B have finely striated top surfaces, rough bases evened off by wire cutting and the edges knife trimmed, all features typical of tegulae finishes.

Imbrex

B.6.12 The imbrex are all fairly small fragments, made in fabrics B and D and characterised by the curvature of the tiles. They measures 15-22mm thick increasing to the edges and corners to 21-24mm.

Brick

B.6.13 Brick forms the major component of the assemblage accounting for two thirds of fragments or 88% by weight of the Roman tile. The maximum thickness of the bricks ranges from 30 to 52mm with the majority clustering around 40mm. A number exhibit a variation in thickness of up to 7mm, usually being thickest at the edges. One complete width or length of 280mm indicates the brick to be at least *pedalis* size. The thickness and surviving lengths/widths (100-225mm) suggest most were of the more common *pedalis* or lydion size. The finish was quite rough in many cases with several rough irregular top surfaces, and others wiped and striated. Most bases are typically rough sanded, but some are quite even and regular. Most edges are rough and sanded, though a few are smooth or knife trimmed.

Markings

B.6.14 Marks are few and occurred only on three bricks in the form of three very lightly swiped signature marks. There are two marks of recognisable common forms: one (fill 114 in pit **126**) is a standard semicircle starting at the edge of the brick and measuring 70mm high; the second (layer 108) is a very faint curving finger mark forming a wide arc from the tile edge probably forming a loop 155mm high with no tails. The third mark (layer 108) was initially dismissed, but on observing the faintness of the two certain examples, it is likely that that two faint grooves sweeping from the corner of a brick did form part of a large

steeply sloping arc. Similarly faint or shallow signature marks were also noted on bricks from Bricket Wood (Poole unpub.a) and may be a feature of a particular tilery in the area.

Conclusions

B.6.15 The Roman tile is dominated by brick, which was normally used in the construction of hypocausts and their floors, other flooring and in walls. A large number of the bricks are coated in lime mortar (contexts 108, 109, 114), which covers broken edges, indicative of reuse. This suggests that the brick had been re-used in a wall or some form of mortared structure. The re-use of brick and tile during the later Roman period was not uncommon in London and the surrounding region, as primary production declined during the 3rd and 4th centuries. The dominance of brick in assemblages has been noted elsewhere in the locality at Bricket Wood (Poole unpub.a) and on sites along the M1 near Hemel Hempstead (Poole 2012). Close to an urban area such as Verulamium, there would have been ample opportunity for reclamation and reuse of building materials.

	Count			Weight		
Forms	**RB**	**Med-Pmed**	**Total Nos**	**RB**	**Med-Pmed**	**Total Wt (g)**
Brick paviour		3	3		4779	4779
Roof		4	4		562	562
Brick RB	30		30	28341		28341
Flat tile	6		6	1955		1955
Tegula	4		4	1433		1433
Imbrex	4		4	463		463
Mortar?	3		3	3		3
Total	**47**	**7**	**54**	**32195**	**5341**	**37536**

Table 8: Quantification of CBM forms

Fab Form	**A**	**B**	**C**	**D**	**E**	**F**	**Total Nos**
Brick paviour					2	1	3
Roof			3	1			4
Brick RB	27	1			2		30
Flat tile		2			4		6
Tegula		1		3			4
Imbrex		3		1			4
Total Nos	**27**	**7**	**3**	**5**	**8**	**1**	**51**
Fab Form	**A**	**B**	**C**	**D**	**E**	**F**	**Total Wt (g)**
Brick paviour					2801	1978	4779
Roof			511	51			562
Brick RB	26998	361			982		28341
Flat tile		921			1034		1955
Tegula		297		1136			1433
Imbrex		370		93			463
Total Wt (g)	**26998**	**1949**	**511**	**1280**	**4817**	**1978**	**37533**

Table 9: Quantification of CBM forms in relation to fabric

Mortar

B.6.16 Samples of mortar were taken from three contexts and examined macroscopically and with a x10 hand lens. One (Sample 7) could be chalk marl cob, but similar mixes of chalk and flint in a calcareous marl can occur entirely naturally as superficial deposits on the chalk. The remaining two samples are loose sediment comprising sand, grit and flint pebbles and gravel. One is more silty and may be flecked with fine calcareous or chalky grits. Neither can be described as mortar. It is possible these represent the coarse aggregate residue of a lime mortar, of which the lime has been entirely leached out.

Context 110, sample 3; 370g

B.6.17 Grey (dry) / brownish grey (damp), loose friable sediment comprising medium-coarse grained sand, subangular, predominantly quartz, containing coarse grits (2-6mm) and rounded pebbles and gravel up to 30mm size, predominantly flint; rare rounded piece of CBM up to 10mm. No evidence of lime mortar, though fine cream flecks could be calcareous material derived either from natural deposits or be remnants of lime mortar that has almost entirely leached out.

Context 127, sample 4; 340g

B.6.18 Light (dry) / mid (damp) brown loose friable sediment comprising fine silty matrix, containing medium-coarse grained sand, subangular, predominantly quartz, coarse grits (2-6mm) (rounded and angular) and rounded pebbles and gravel up to 28mm size, predominantly flint with quartzite. No evidence of lime mortar, though fine cream flecks & sand-sized grains could be calcareous material derived either from natural deposits or be remnants of lime mortar that has almost entirely leached out.

Context 119, sample <7> 270g

B.6.19 Chalk marl: yellowish brown chalk marl (calcareous clayey silt) mixed with small chalk grit c.2mm and larger lumps of chalk and flint gravel up to 40mm. This could be a natural deposit or a marly chalk cob.

Medieval and post-medieval ceramic building material

Fabrics

B.6.20 Fabrics D and E were also used during the post-Roman period, which reinforces the evidence for the use of local clay sources. In addition two other fabrics were also identified.

B.6.21 Fabrics D and E were also used during the post-Roman period, which reinforces the evidence for the use of local clay sources. In addition two other fabrics were also identified.

B.6.22 Fabric C: orange or red fine sandy micaceous clay, which contained a high density medium-coarse quartz sand <0.8mm, well sorted, plus a low density of black iron oxide sand, occasional silty pellets and small quartzite and flint grits 1-2mm.

B.6.23 Fabric F: red; hard fine sandy clay.

Roof Tile

B.6.24 Flat roof tile was found in post-medieval soil and subsoil layers (contexts 106 and 107). These have a fairly regular finish, measured 14-18mm thick and three had a circular peg hole surviving. The peg holes measure 12, 16 and 18mm diameter and two have a thickened halo of surplus clay around the base. Dating of peg tile is imprecise, as the form changed little since its first appearance in England *c* 1200 until mechanisation was

introduced during the 19th century. Whilst earlier medieval tile tends to be thicker and cruder with a rougher finish and more irregularities and during the 13th-14th centuries was commonly glazed, later medieval peg tile is more regular and even, differing little from much post-medieval roof tile. Characteristics such as the thickened halos of clay around the underside of pegholes have been observed on medieval tile from Oxford as well as handmade 19th century tiles from Kent (Poole unpub. b). The coarser sandy fabric C is more typical of medieval tile, and the finer fabric D is possibly later. Based on the various characteristics present the roof tile probably dates between the 15th and 18th century.

Paving bricks

B.6.25 A pair of paving bricks or paviours was sampled from the edging (116) for a path (117) and another single paviour was recovered from a soil layer (106). The single paviour was made in a fabric F and is quite roughly finished with a rudimentary frog in the form of a narrow groove shallowly scooped out with a finger. The paviour measured 230mm long, 110mm and 42mm thick. Hard white lime mortar covered the top and base surfaces with the impression of another brick present on the top. The pair of paviours or edging bricks were smaller and near identical in size measuring 197-8mm long, 99-100mm wide and 40-43mm thick. They were light pink in colour with a buff base and made in fabric E. One had faint 'kiss' marks on the edge an effect arising from the stacking of the bricks in the kiln resulting in the variation in firing colour of exposed and unexposed surface areas.

B.6.26 Paviours or paving bricks first appear in the 18th century and the crude finish of the single example from layer 106 suggests it is of this date. The bricks from context 116 are much neater, but hand-made in a stock mould and are probably of mid to late 19th century date. They are slightly smaller than the other paviour and it is possible that they are purpose made edging bricks rather than paviours.

Conclusions

B.6.27 Though the roof tile is difficult to date precisely, there is a strong possibility that it is broadly contemporary with the paving brick with which it was associated in layer 106. This suggests the post-Roman CBM relates to a single phase of building activity in the later post-medieval period.

B.7 Non-Building Stone

By Carole Fletcher

Introduction and Methodology

B.7.1 A large fragment of basaltic Niedermendig lava quern/millstone (SF3) was recovered from post-medieval layer 107. The functional category used was defined by Crummy (1983 and 1988; category 4: household utensils and furniture) and a basic description of the item including weight and material type has been recorded.

Description

Category 4: Household utensils

B.7.2 Post-medieval layer 107 produced a single large fragment of mid grey vesicular lava (SF3), weighing 3.928kg. The piece is slightly weathered and slightly friable but retains several diagnostic features, indicating it is from a very large rotary lava quern or small mill upper stone. There is enough surviving of the outer edge to estimate the original diameter of the stone as 640mm and the edge thickness is also measurable at 152mm. The upper surface is recessed about 5mm, inset 90mm from the outer edge. On the lower surface,

which is angled 10° upwards from the edge towards the eye, the stone is dressed with simple radial grooves, and there is also a deeper groove around the circumference, 45mm in from the outer edge. This fragment represents approximately 5% of a complete upper stone, which would therefore have had a weight of around 80kg, probably too heavy to have been turned by a single human hand.

Discussion

B.7.3 The quern/millstone fragment is likely to have originated in a domestic setting, strongly linked to agriculture. Lava querns from the Mayen-Niedermendig area of the Eifel Hills region of Germany were imported into Britain (as blanks) from the Late Iron Age onwards. This example is very thick, with a large diameter for a quern, although small for a millstone, suggesting animal power was used. The concave lower grinding surface and simple radial dressing style both suggest an Early Roman date for the stone (Lepareux-Couturier 2014; Watts 2016). Perhaps the most unusual feature is the partial circular groove that appears to cut across the radial grooves, and this may be a later modification.

B.7.4 The layer from which the lava fragment was recovered also produced medieval pottery (13th-14th century) and the lava is almost certainly residual.

B.8 Post-Roman Building Stone

By Carole Fletcher

B.8.1 A total of 0.012kg of slate was recovered from context 104. Basic recording only has been undertaken, with material type, basic description and weight recorded in the text. Layer 104 produced a single fragment (0.010kg) of blue or blue-black slate, with mortar traces on all faces, and a single fragment of a slightly more plum-coloured slate; both are roofing slates.

B.8.2 The slate recovered is likely to be 19th century, as it was found alongside Pearlwares, Refined White Earthenwares and Modern Redware. The larger fragment of slate is probably Welsh slate, which became a common material for roofing in the early 19th century.

B.9 Metalworking Debris

By Carole Fletcher

Introduction and Methodology

B.9.1 Fragments of mostly undiagnostic slag, weighing 0.010kg, were collected from samples (from a Roman or medieval pit and possible Roman layer). The slag was weighed and rapidly recorded, with description and weight recorded in the text.

Assemblage

B.9.2 Smelting slags and formless undiagnostic slags, mid to dark grey with some purple colouration, moderately dense and vesicular, with rough surfaces were retrieved. From pit **126**, sample <1>, four prill fragments (0.007kg) were recovered from upper fill 114, alongside three undiagnostic fragments (0.001kg), all of which are magnetic. Sample <2>, from the lower fill of this pit (115), produced a single fragment (<0.001kg) and indicates bloomery iron smelting of uncertain date. The upper fill, from where the prill fragments were recovered, produced medieval pottery, while the lower fill produced only Roman material.

B.9.3 Layer 108 produced a single fragment of undiagnostic, slightly glassy, vesicular slag with ?ceramic material embedded in the surface. The slag is not closely datable and the layer produced both Roman and medieval pottery.

Discussion

B.9.4 The slag assemblage is fragmentary, difficult to date and its significance is uncertain, other than to indicate iron smelting close to the area excavated. Alternatively, the material may represent the disposal of waste (possibly amongst imported soil), as only small quantities were recovered.

Appendix C. Environmental Reports

C.1 Faunal Remains

By Hayley Foster

Introduction and Methodology

C.1.1 This animal bone assessment details the analysis of the animal bone recovered from St Michael's Lower School, St Albans. The material mainly originates from Roman layers and features, with a small amount of bone coming from medieval and post-medieval layers. The assemblage is small and recovered by hand-collection and from environmental samples. The number of recordable fragments totals 22 and the species represented includes cattle (*Bos taurus*), sheep/goat (*Ovis/Capra),* pig (*Sus scrofa.*), rabbit (*Oryctolagus cuniculus*) and mallard (*Anas sp*). Vertebrae fragments that could not be identified to species were classified based on size, as were long bone shaft fragments.

C.1.2 The method used to quantify this assemblage is based on that used for Knowth by McCormick and Murray (2007) which was modified from Albarella and Davis (1996). As the assemblage was small, vertebrae were included with recordable elements and assigned based on size long, bone shaft fragments were also included.

C.1.3 Identification of the faunal remains was carried out at Oxford Archaeology East. References to Hillson (1992), Schmid (1972), von den Driesch (1976) and Cohen & Serjeantson (1996) were used where needed for identification purposes.

Results

C.1.4 The faunal remains from this assemblage are in good condition but fairly fragmentary. The majority of the remains could not be assigned to species and were classified as large mammal, which are likely cattle or horse remains. Of those species that could be identified, sheep/goat and cattle were the most common.

C.1.5 There is no evidence of burning, gnawing or weathering noted, yet there are two cases of butchery on cattle femora. However, these examples were both from layers (108 and 109) that produced mixed finds assemblages, containing both Roman and later material.

C.1.6 There is not a bias in terms of skeletal element distribution as front and rear limbs are represented, as are mandibles. Ageing data indicated the presence of a very young sheep/goat as a mandible aged to 1.5-3 months of age at death in layer 109. Long bones all have fused epiphyses, indicating a lack of other young specimens.

C.1.7 Measurements could be taken for four elements and one estimated shoulder height could be calculated from a pig calcaneus with an ESH of 75.86 cm.

Context	Period	Species	Element	Measurement (mm)
109	Roman (1.2)	Sheep/goat	Metatarsal	BP=19.6
108	Roman (1.2)	Pig	Calcaneus	GL=81.22
108 <5>	Roman (1.2)	Sheep/goat	Metacarpal	BP=21.1
108 <5>	Roman (1.2)	Mallard	Tarso-Metatarsus	BD=11.51

Table 10: Table of Measurements

C.1.8 The small amount of faunal remains does not allow for significant interpretations to be made regarding dietary preferences or husbandry practices on site. The presence of heavy chop marks is evidence of activity indicating that cattle were exploited for meat. Pigs would have been exploited for meat when reaching an optimum weight, the presence of young sheep/goat may be indicative that sheep/goat were raised locally or on site.

C.1.9 The reliance on domestic animals for food, along with the few wild species, rabbit and duck, fits well with known period patterns for this region. Duck remains were found at sites nearby including Folly Lane, Verulamium (Locker 1999) and Gorhambury (Locker, 1990), rabbit remains were also retrieved from Gorhambury (*ibid*).

Date/Period	Context	Species	Element	# of fragments	Retrieval method
Post- Med/3	104	Large mammal	Humerus	1	Hand collection
Post- Med/3	104	Rabbit	Mandible	1	Hand collection
Post- Med/3	107	Large mammal	Thoracic vertebra	1	Hand collection
Roman/1.2	108	Pig	Calcaneus	1	Hand collection
Roman/1.2	108	Cattle	Radius	1	Hand collection
Roman/1.2	108	Cattle	Femur	1	Hand collection
Roman/1.2	108 <5>	Sheep/goat	Metacarpal	1	Enviro samples
Roman/1.2	108	Sheep/goat	Scapula	1	Hand collection
Roman/1.2	108 <5>	Mallard	Tarso-metatarsus	1	Enviro samples
Roman/1.2	109	Cattle	Femur	1	Hand collection
Roman/1.2	109	Pig	Loose mandibular incisor	2	Hand collection
Roman/1.2	109	Sheep/goat	Metatarsal	1	Hand collection
Roman/1.2	109	Sheep/goat	Metatarsal	1	Hand collection
Roman/1.2	109	Large mammal	Tibia	1	Hand collection
Roman/1.2	109	Sheep/goat	Mandible	1	Hand collection
Med/2	114	Cattle	Humerus	1	Hand collection
Med/2	114	Large mammal	Tibia	1	Hand collection
Med/2	114 <1>	Large mammal	Mandible	1	Enviro samples
Roman/Med	115	Large mammal	Humerus	3	Hand collection

Table 11: Number of fragments according to species and element

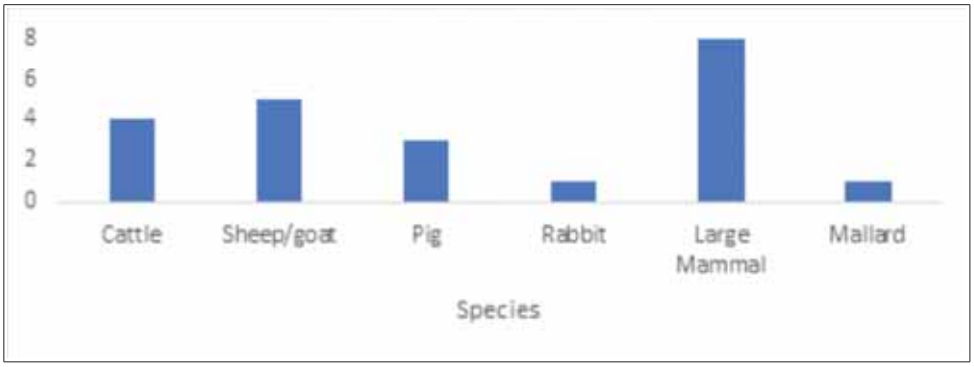

Chart 1: Number of Identifiable fragments by species

Discussion and Conclusion

C.1.10 The faunal remains are in good condition yet somewhat fragmentary, therefore very few elements could be measured. As the assemblage is of such a small size, it is unlikely to yield any further significant data regarding diet and husbandry practices of the region. Furthermore the mixed nature of the contexts from which the animal bone was recovered suggests that their provenance is not particularly secure.

Retention, Dispersal and Display

C.1.11 Overall, there is little research potential from the assemblage beyond the general taxonomic composition. No material was dispersed after assessment, and no material is deemed particularly suitable for display.

C.2 Environmental Remains

By Rachel Fosberry

C.2.1 Seven bulk samples were taken from features within the excavated area at St. Michael's School, St. Albans, Hertfordshire in order to assess the quality of preservation of plant remains and their potential to provide useful data as part of further archaeological investigations. Three of the samples were taken specifically for mortar analysis App. B6). The four remaining samples were taken from features that were initially thought to be Roman but were found to contain later material.

Methodology

C.2.2 The total volume (up to 18L) of each of the samples was processed by tank flotation using modified Siraff-type equipment for the recovery of preserved plant remains, dating evidence and any other artefactual evidence that might be present. The floating component (flot) of the samples was collected in a 0.3mm nylon mesh and the residue was washed through 10mm, 5mm, 2mm and a 0.5mm sieve.

C.2.3 The dried flots were scanned using a binocular microscope at magnifications up to x 60 and an abbreviated list of the recorded remains are presented in Table 12. Identification of plant remains is with reference to the Digital Seed Atlas of the Netherlands (Cappers *et al.* 2006) and the authors' own reference collection. Nomenclature is according to

Zohary and Hopf (2000) for cereals and Stace (1997) for other plants. Plant remains have been identified to species where possible. The identification of cereals has been based on the characteristic morphology of the grains and chaff as described by Jacomet (2006).

Quantification

C.2.4 For the purpose of this initial assessment, items such as seeds and cereal grains have been scanned and recorded qualitatively according to the following categories:

= 1-5, ## = 6-25, ### = 26-100, #### = 100+ specimens

C.2.5 Items that cannot be easily quantified such as charcoal and molluscs have been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

Results

C.2.6 Preservation of plant remains is poor to moderate; many of the flots contain rootlets which may have caused movement of material between contexts and untransformed seeds are frequent. These include brambles (*Rubus* sp.) and thistles (*Carduus/Cirsium* sp.). Charred cereal grains are present in all of the samples, mainly as single specimens although upper fill 114 of pit **126** contains a moderate number of charred wheat grains. The grains have a compact, rounded morphology suggesting that they are a free-threshing variety that was most commonly cultivated in the post-Roman period. The lower fill of pit **126** contains seven seeds of kiwi (*Actinidia* sp.), a fruit that was not imported into Britain until the last century. This feature has produced a mixed assemblage of pottery and is thought to be heavily contaminated.

Sample No.	Context No.	Feature No.	Feature Type	Volume processed (L)	Flot Volume (ml)	Charcoal	Cereals	Legumes	Modern seeds	Pottery	Large mammal bones
1	114	126	Pit	14	25	+++	###	#	#	##	##
2	115	126	Pit	6	2	+++	#	0	##	#	#
5	108	-	Layer	12	2	++	#	0	#	##	#
6	109	-	Layer	14	5	+++	#	0	#	##	#

Table 12: Environmental samples from XHTSMS17

Discussion

C.2.7 The samples from this site have been taken from contexts that appear to have been contaminated by post-medieval and modern material. This precludes further interpretation of the occasional charred and untransformed plant remains recovered.

C.3 Mollusca

By Carole Fletcher

Introduction

C.3.1 A total of 0.055kg of shells was collected by hand during the excavation. The shells recovered are all edible examples of oyster *Ostrea edulis*, from estuarine and shallow coastal waters. The shell is relatively moderately well preserved and does not appear to have been deliberately broken or crushed.

Methodology

C.3.2 The shells were weighed and recorded by species, with complete or near-complete right and left valves noted, where identification can be made, using Winder (2011) as a guide.

Assemblage

C.3.3 The shells were recovered from topsoil, subsoil and a single pit **126**, where they probably became incorporated into the fill of the pit as general rubbish deposition and into the subsoil and topsoil through reworking of deposits. No context contains enough mollusca shells to indicate a single meal of oysters alone, however, they may have been combined with other foods. The largest number of shells were recovered from pit **126**, including from sample <1>, although two shells (right valves) and two fragments is too small a sample to draw any but the broadest conclusions, in that shellfish were reaching the site from the coastal regions, indicating trade with the wider area. No shells show definitive evidence of opening or 'shucking', in the form of small 'V' or 'U' shaped hole on the outer edge.

Discussion

C.3.4 The shells indicate the use of food sources from beyond the immediate area and surrounding hinterland, most likely arriving by river transportation, and shellfish are known to have formed part of the Roman, Late Saxon, early medieval and medieval diets. The shells represent general discarded food waste and, although not closely datable in themselves, may be dated by their association with pottery or other material also recovered from the features.

Context	Cut	Species	Common Name	Habitat	No. shells or frags	No. left valve	No. right valve	Description/Comment	Weight (kg)
108		*Ostrea edulis*	Oyster	Estuarine and shallow coastal water	3			Three powdery fragments possibly from a single shell	0.009
109		*Ostrea edulis*	Oyster	Estuarine and shallow coastal water	1			Large fragment from right valve	0.011
114	**126**	*Ostrea edulis*	Oyster	Estuarine and shallow coastal water	4		2	One near-complete and one partial right valve and two fragments from ?left valves	0.017
	<1>	*Ostrea edulis*	Oyster	Estuarine and shallow coastal water		1		Near-complete left valve	0.018
Total									**0.055**

Table 13: Mollusca

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APPENDIX E. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	oxfordar3-291681		
Project Name	Excavation at St Michaels School, St Albans		
Project Dates (fieldwork) Start	12-07-2017	Finish	25-07-2017
Previous Work (by OA East)	No	Future Work	No

Project Reference Codes

Site Code	XHTSMS17	Planning App. No.	5/16/3666
HER No.		Related HER/OASIS No.	

Type of Project/Techniques Used

Prompt: Planning condition

Please select all techniques used:

☐ Field Observation (periodic visits)	☒ Part Excavation	☐ Salvage Record
☐ Full Excavation (100%)	☐ Part Survey	☐ Systematic Field Walking
☐ Full Survey	☐ Recorded Observation	☐ Systematic Metal Detector Survey
☐ Geophysical Survey	☐ Remote Operated Vehicle Survey	☐ Test Pit Survey
☐ Open-Area Excavation	☐ Salvage Excavation	☒ Watching Brief

Monument Types/Significant Finds & Their Periods

List feature types using the NMR Monument Type Thesaurus and significant finds using the MDA Object type Thesaurus together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
Building	Roman 43 to 410	CBM	Roman 43 to 410
Pit	Roman 43 to 410	Ceramics	Roman 43 to 410
Post hole	Post Medieval 1540 to 1901	Ceramics	Medieval 1066 to 1540

Project Location

County	Hertfordshire	Site Address (including postcode if possible)	
District	St Albans	St Michael's Street, St Albans Hertfordshire AL3 4SJ	
Parish	St Michaels		
HER	St Albans City and District		
Study Area	40sqm	National Grid Reference	TL 513753 207439

Project Originators

Organisation	OA EAST
Project Brief Originator	St Albans District Council
Project Design Originator	OA East
Project Manager	James Drummond-Murray
Supervisor	James Fairbairn

Project Archives

Physical Archive	Digital Archive	Paper Archive
Verulamium Museum	OA East	Verulamium Museum
XHTSMS17	XHTSMS17	XHTSMS17

Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	☒	☐	☒
Ceramics	☒	☐	☒
Environmental	☒	☐	☒
Glass	☒	☐	☐
Human Bones	☐	☐	☐
Industrial	☐	☐	☐
Leather	☐	☐	☐
Metal	☒	☐	☐
Stratigraphic		☐	☐
Survey		☐	☐
Textiles	☐	☐	☐
Wood	☐	☐	☐
Worked Bone	☐	☐	☐
Worked Stone/Lithic	☐	☐	☐
None	☐	☐	☐
Other	☒	☐	☐

Digital Media	Paper Media
☒ Database	☐ Aerial Photos
☐ GIS	☒ Context Sheet
☐ Geophysics	☐ Correspondence
☒ Images	☐ Diary
☒ Illustrations	☒ Drawing
☐ Moving Image	☐ Manuscript
☐ Spreadsheets	☐ Map
☒ Survey	☐ Matrices
☒ Text	☐ Microfilm
☐ Virtual Reality	☐ Misc.
	☐ Research/Notes
	☒ Photos
	☒ Plans
	☒ Report
	☒ Sections
	☒ Survey

Notes:

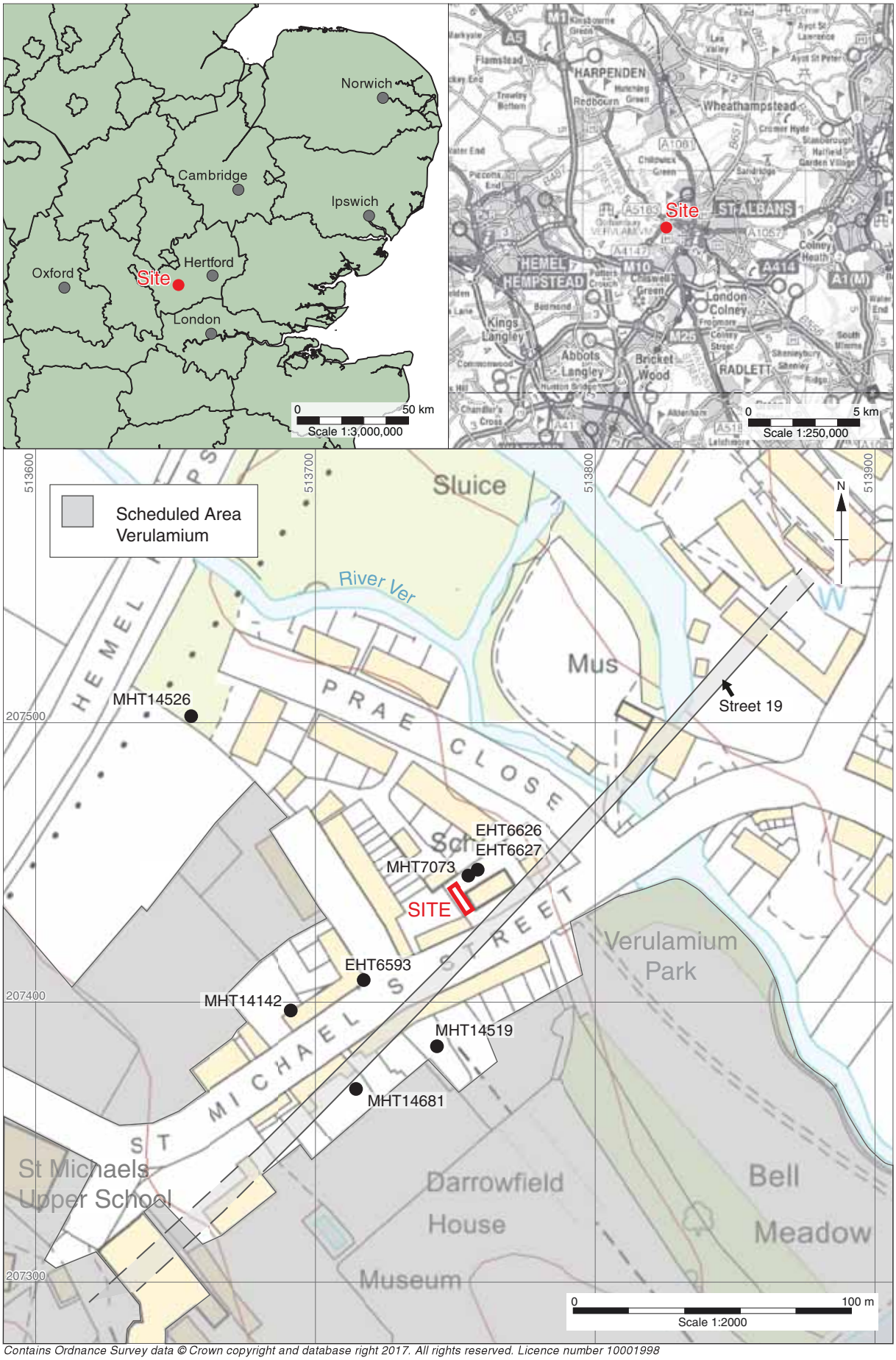

Figure 1: Site location showing nearby HER entries and scheduled area of Verulamium

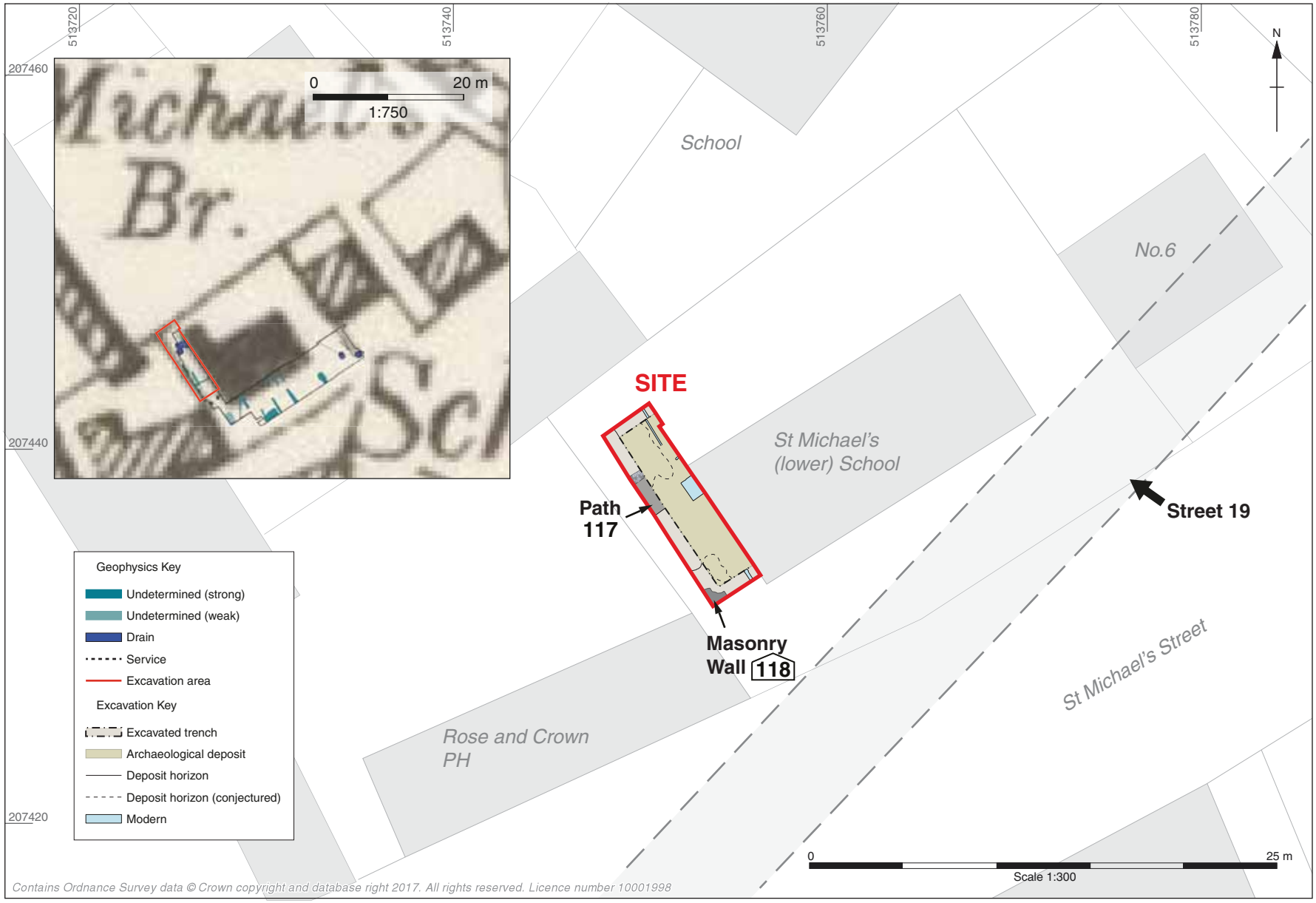

Figure 2: Detailed location of excavation area with inset of geophysical interpretation overlying historic mapping (OS 2nd edition, 1888-1913)

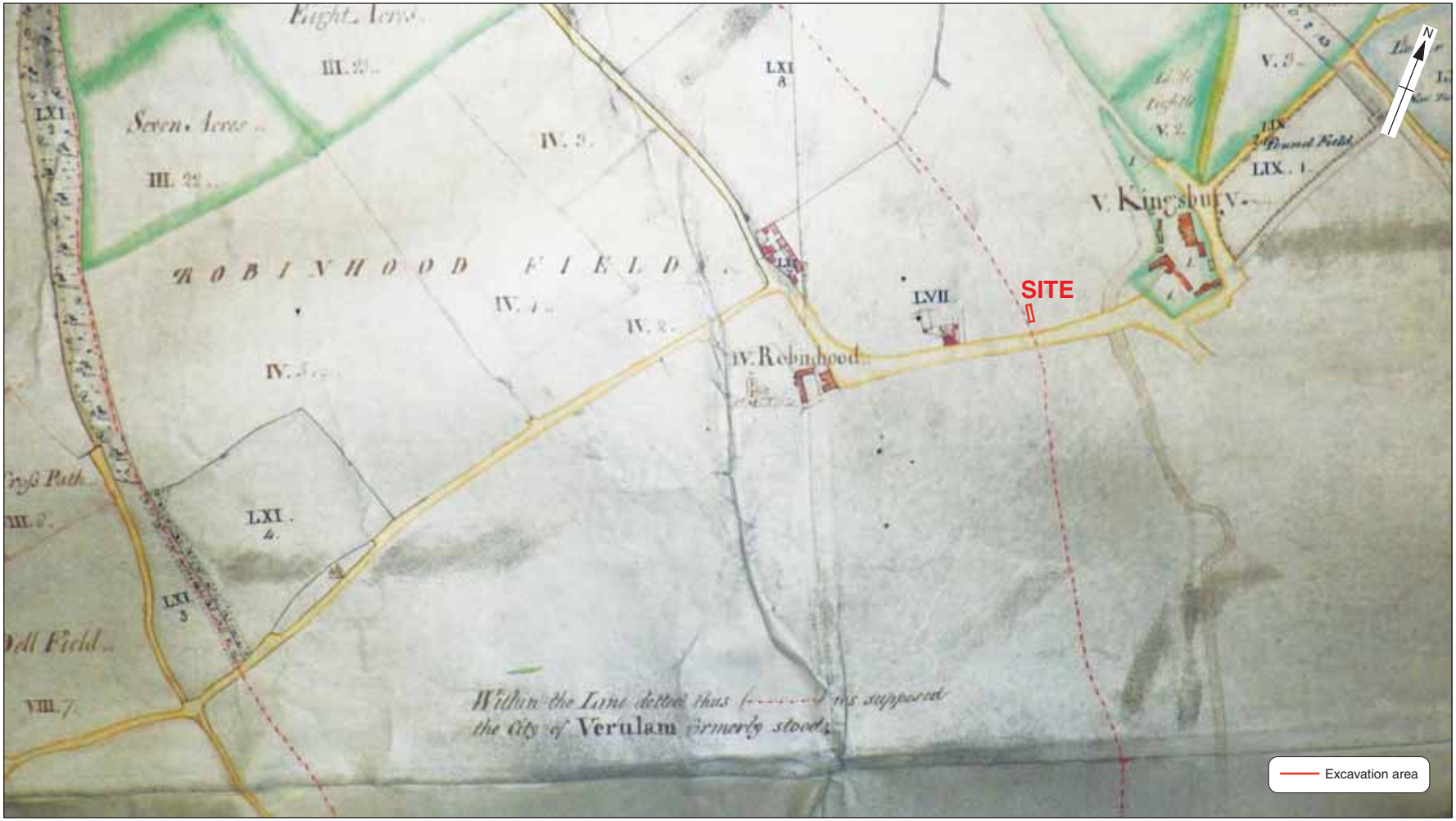

Figure 3: Map of the estates of the Rt. Hon. James Lord Viscount Grimston (1766)

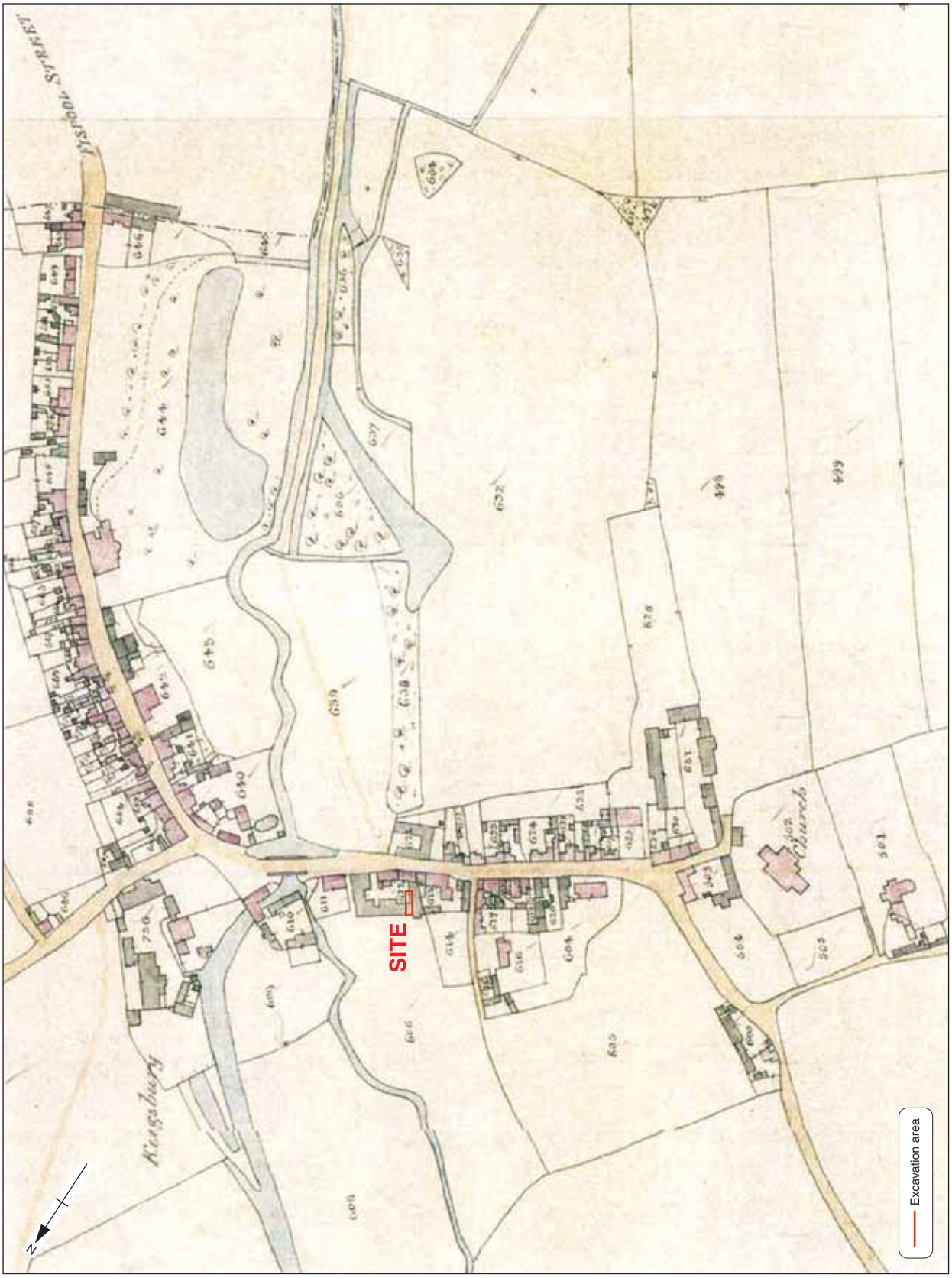

Figure 4: Tithe map of Fishpool Street and St Michael's Village *c.*1840

Figure 5: Map of property plots in St Michael's Parish (Phillip Page, surveyor, 1850)

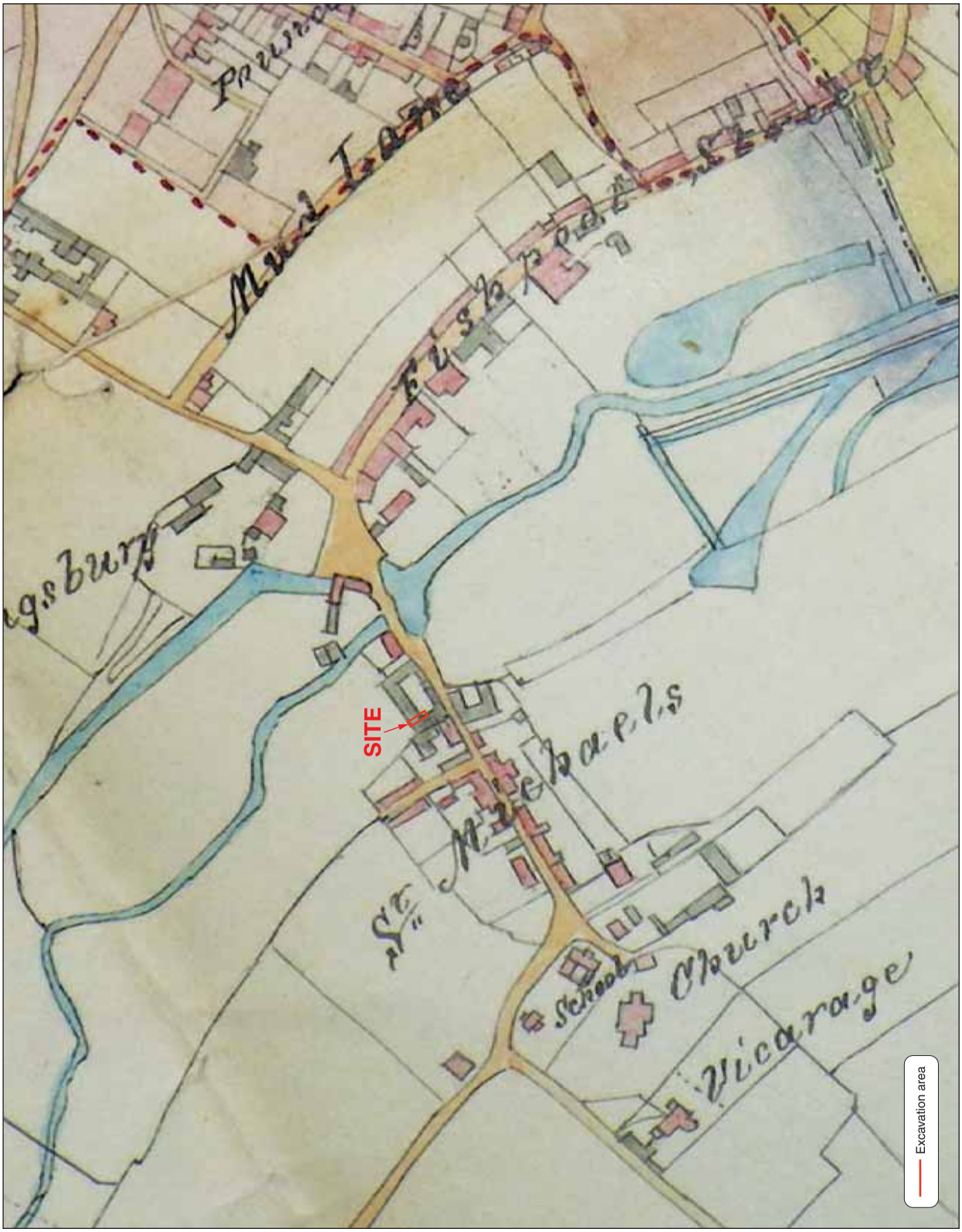

Figure 6: Map of parts of St Michael's and St Peter's Parish (1859)

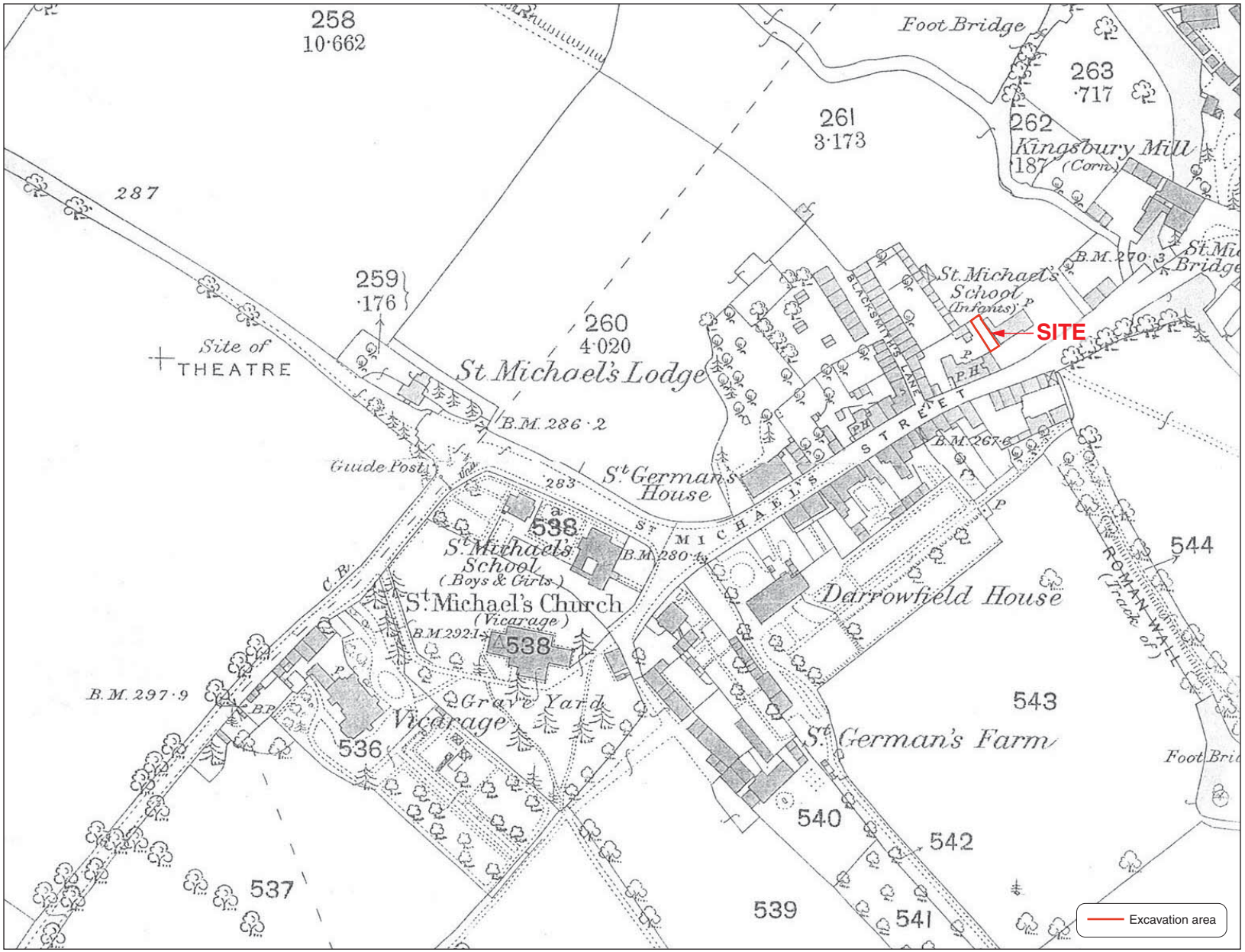

Figure 7: Ordnance Survey map 1st edition (*c.*1878)

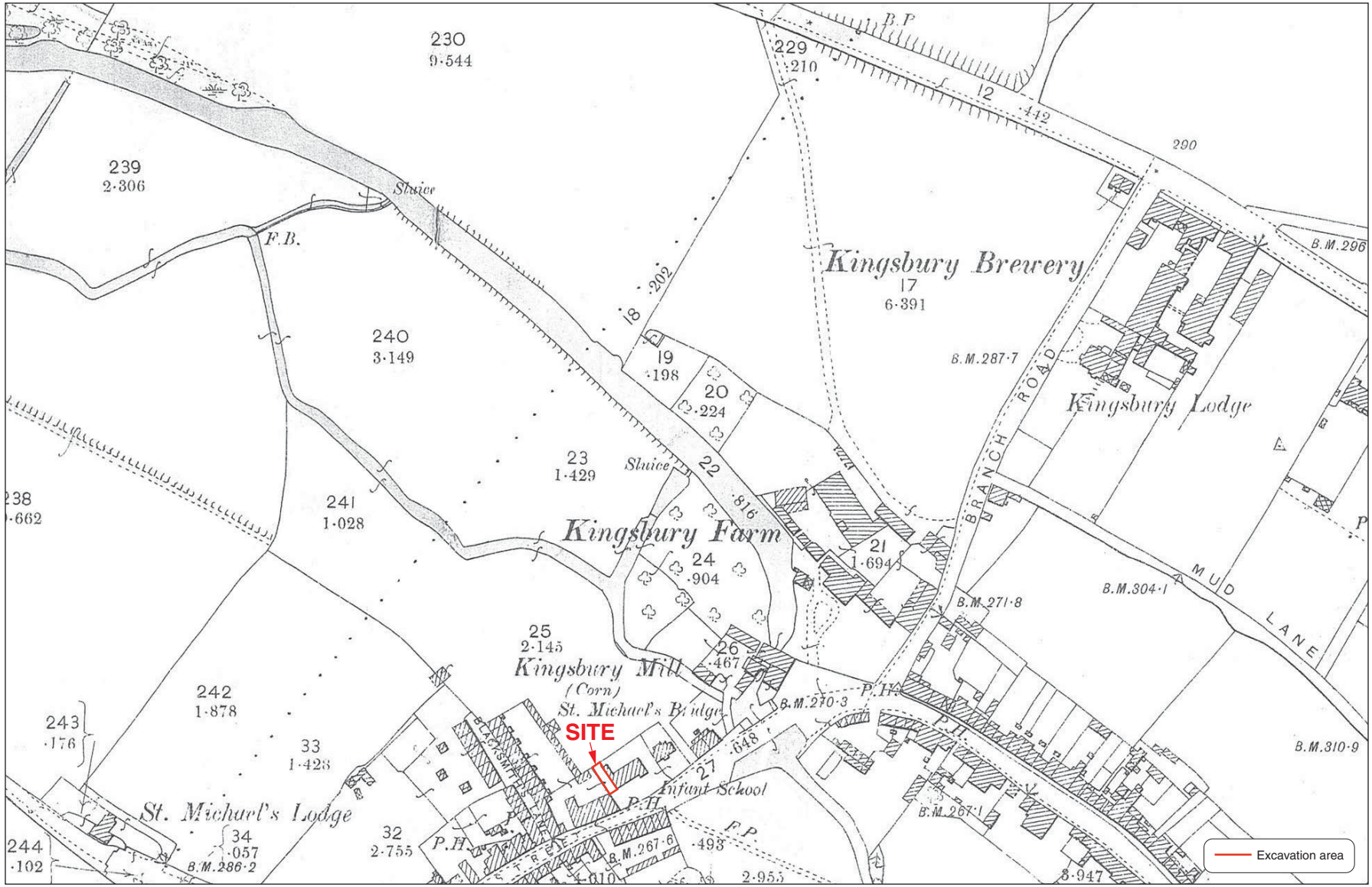

Figure 8: Ordnance Survey map 2nd edition (*c.*1898)

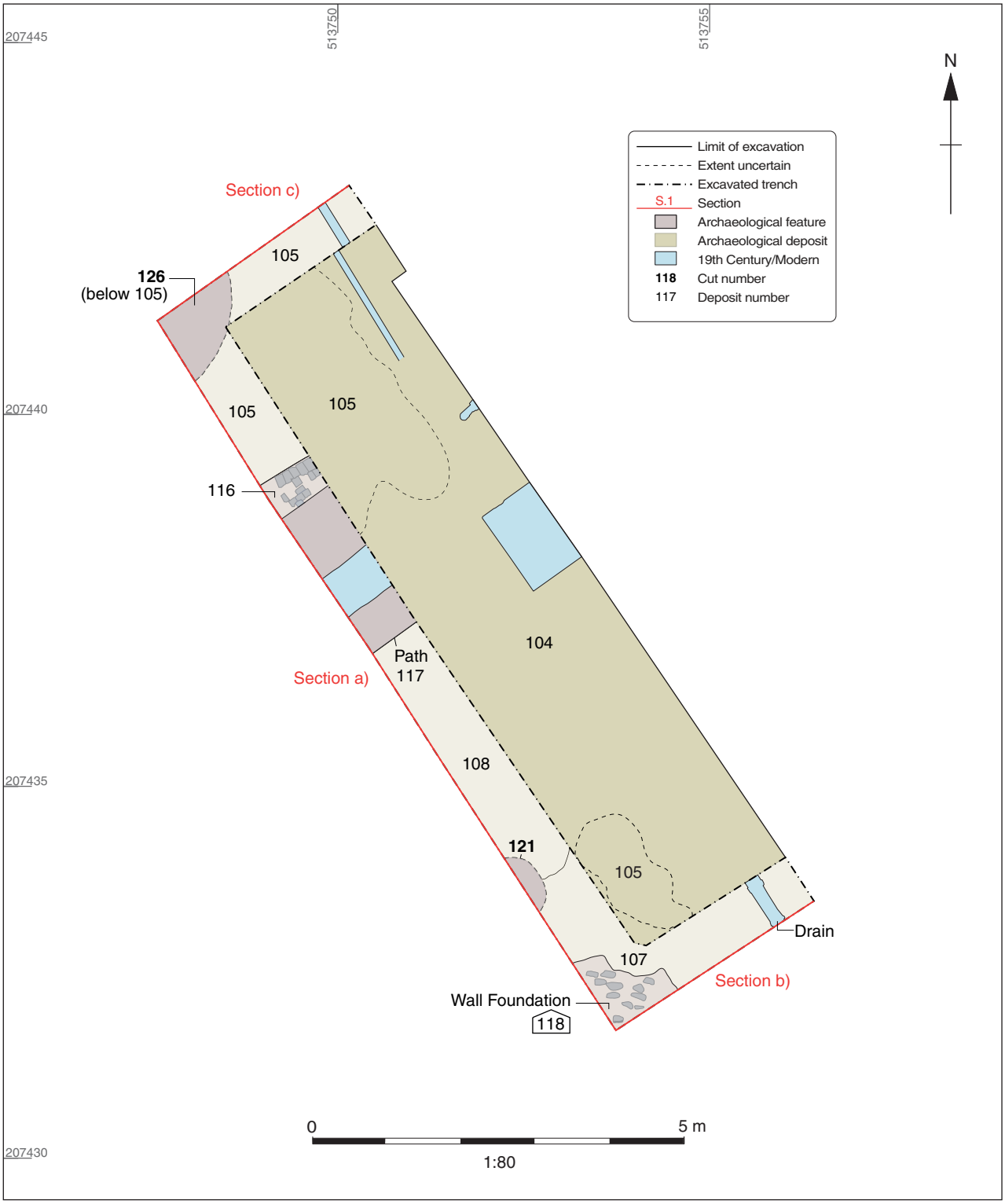

Figure 9: Trench plan

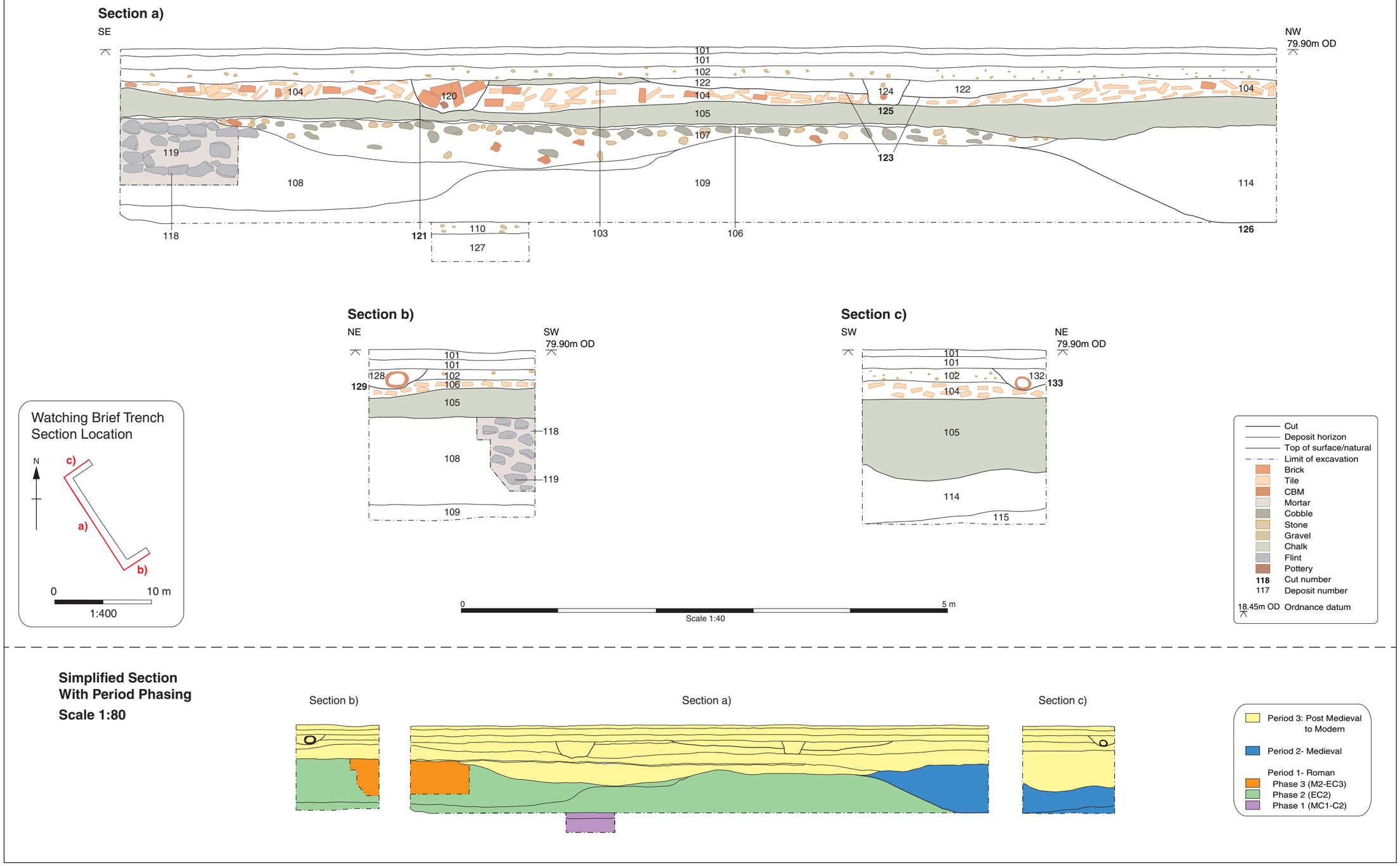

Figure 10: Trench section with phasing

Figure 11: Photogrammetric image of the excavation trench

Figure 12: Photogrammetric image of the south-west elevation of the school

Plate 1: General view of excavation, viewed from the north-west

Plate 2: Chalk raft 105, viewed from the south-east

Plate 3: Detail of chalk raft 105

Plate 4: School foundation truncating chalk raft 105, viewed from the south-west

Plate 5: Plan view of brick edging 116 for path 117 possibly relating to the Bell Inn

Plate 6: Path 117, viewed from the north-west

Plate 7: Detail of path 117

Plate 8: Recording path 117

Plate 9: Working shot

Plate 10: Detail of brick edging 116 to path 117

Plate 11: Photogrammetric recording of structural remains

Plate 12: Medieval pit **126** beneath chalk raft 104, viewed from the south-east

Plate 13: Plan view of undated post hole **112**

Plate 14: Post packing retrieved from post hole **112**

Plate 15: North-west end of the trench showing both Roman and-post medieval levels

Plate 16: Detail of modern build up, viewed from the south-west

Plate 17: Roman building foundations 118, viewed from the east

Plate 18: Roman building foundations, viewed from the north-west

Plate 19: Detail of Roman building foundation 118, viewed from the north-west

Plate 20: Lower levels of the trench, showing mortar layers 110 and 127

Plate 21: Lime rich mortar layer 127 *in situ*

Plate 22: Detail of lime mortar 127

Plate 23: Post-excavation photograph of trench, viewed from the north-west

Plate 24: Working shot. Removing over burden

Plate 25: Over burden removed, revealing post medieval layers, viewed from the north-west

Plate 26: Oblique view of the south-west elevation of the school

Plate 27: Photogrammetric recording of the excavation area

Plate 28: Working shot of photogrammetric recording

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