

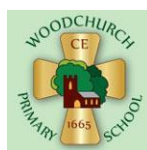
The Woodchurch Big Dig: Test Pitting Report



Autumn 2016

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Summary

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1. PROJECT SUMMARY

The Woodchurch Big Dig was a community archaeology project conducted by Big Heritage C.I.C. on behalf of Woodchurch Church of England Primary School. The public element of the project commenced in October 2016 and concluded at the end of June 2017. Excavation was undertaken between 7th October and 3rd of November 2016. The project was a test pitting exercise focused on the historic core of Woodchurch (NGR SJ 27584 86871). Fifteen test pits were excavated, supported by geophysical survey. These were undertaken in residential and business premises.

The project demonstrated that geophysical survey can be successfully implemented in the area. However, due to significant re-landscaping of the open areas little survives of notable archaeological interest. The test pitting was more successful in detecting earlier activity at the core of the village. Ceramic material was recovered, dating from the 13th century onward, which is comparable with the date of the upstanding Holy Cross Church at the centre of the study area. Activity appears to increase during the 15th-17th centuries, with a surge in activity noted from the 19th century onward.

This report documents the results of the 2016 excavation season.

2. INTRODUCTION

The Woodchurch Big Dig was a community archaeology project conducted by Big Heritage C.I.C. on behalf of Woodchurch Church of England Primary School. The public element of the project commenced in October 2016 and concluded at the end of June 2017. Excavation was undertaken between 7th October and 3rd of November 2016. The project was a test pitting exercise focused on the historic core of Woodchurch (NGR SJ 27584 86871) (see Figs. 1 and 2). Fifteen test pits were excavated, supported by geophysical survey. These were undertaken in residential and business premises.

The workforce consisted of local volunteers from the Woodchurch and Wirral area and local school pupils and teachers, supervised by Big Heritage staff. Volunteers also undertook the initial post-excavation process: cleaning, sorting and bagging the bulk and small finds.

The primary aim of the project was to bring a community closer together, provide training for volunteers in a number of activities and generate new information about the character and development of the settlement.

3. SITE DESCRIPTION

3.1. Overview

Woodchurch is now a large suburban estate on Wirral, part of Birkenhead, Merseyside. It is comprised of a mixture of private and social housing. The community consists of a diverse demographic mix, both in terms of age, socio-economic status and educational background.

3.2. Location

Woodchurch is located south-west of Birkenhead, in the northern part of the Wirral Peninsula, 5km from the Irish Sea and 6km east-north-east of the Dee Estuary. Woodchurch is comprised of a late 1940's housing estate with a medieval historic core centred on Holy Cross Church, NGR SJ 27584 86871 (see Fig. 1). The project focussed its research area on the historic core and environs, 380x312 m² in size (see Fig. 2).

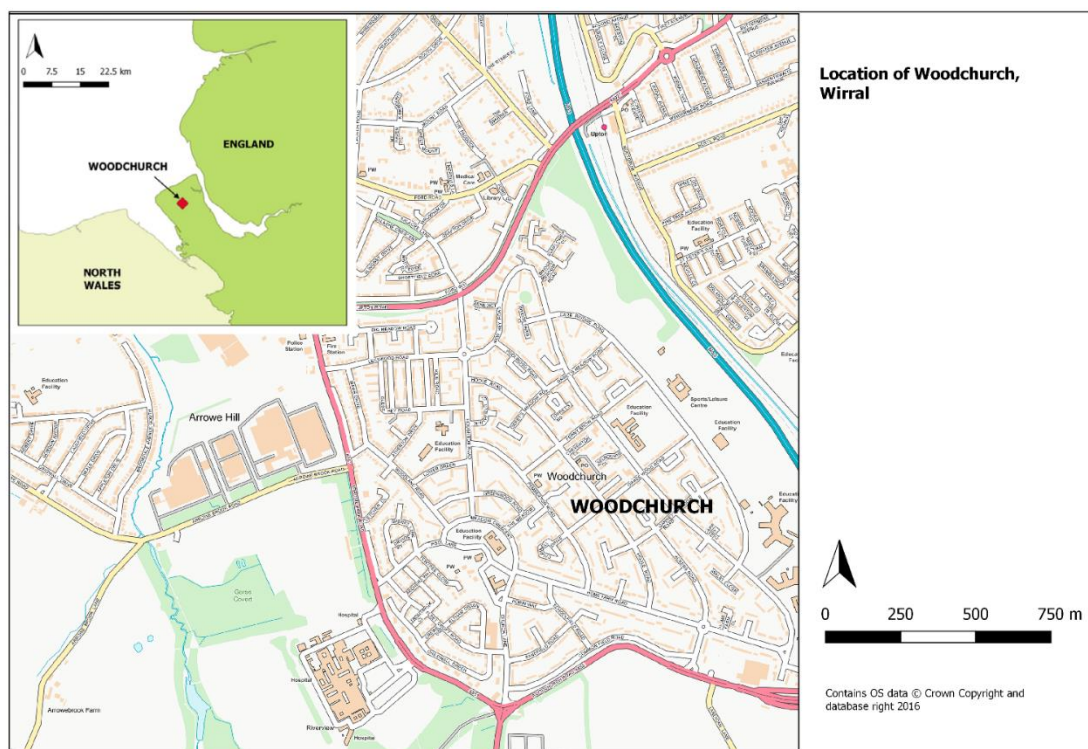


Fig. 1: Location of Woodchurch, Wirral

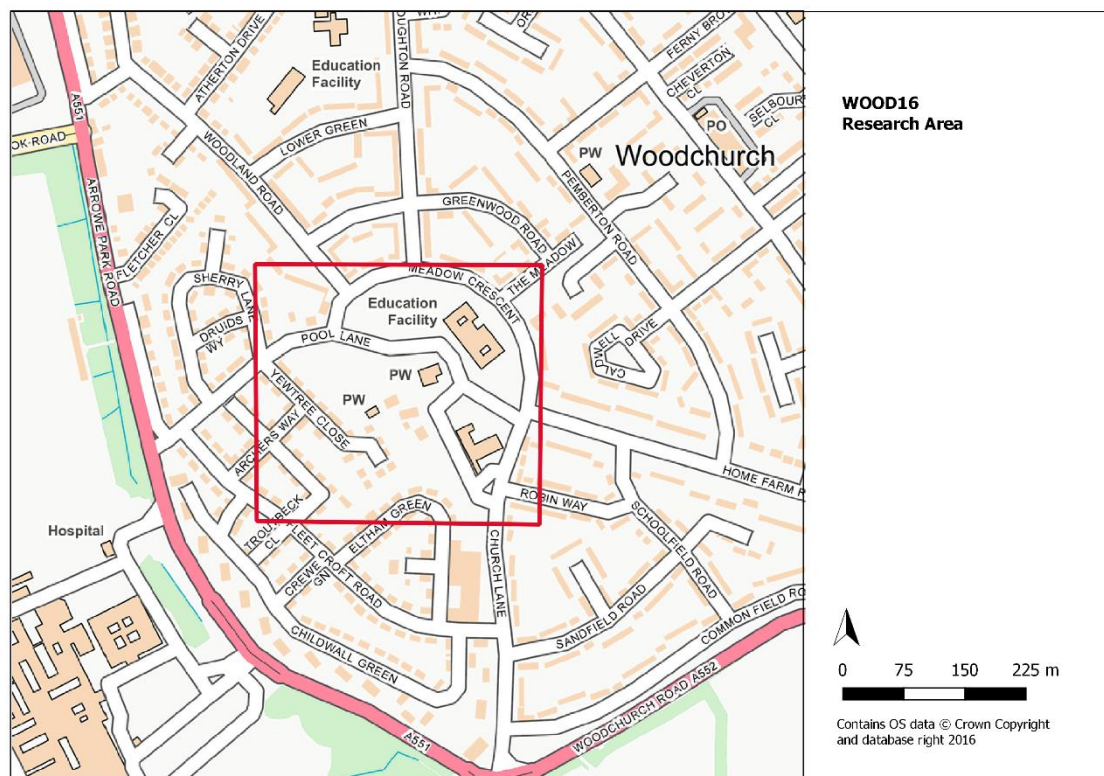


Fig. 2: Research area centred on historic core of Woodchurch

3.3. Geology and Topography

3.3.1. Geology

The underlying geology comprises sedimentary bedrock of mudstone from Sidmouth Formation; no superficial deposits have been recorded (British Geological Survey 1:50,000). The soils consist of slowly permeable seasonally wet, slightly acid but base-rich loamy and clayey soils (Soilscapes, 2016).

3.3.2. Topography

Woodchurch falls under Natural England's National Character Area '*Wirral*' (Natural England 2014). This is described as 'largely based on formal landscapes of former large country estates, rural areas, natural coastal scenery and wooded sandstone ridges,' (Natural England 2014, 3). The area also contains 'a mixture of traditional sandstone buildings and modern post-Second World War housing development' (Natural England 2014, 9). The settlement is comprised largely of private and council owned residences, with commercial properties and local authority buildings, such as schools and day centres.

Woodchurch is situated on a lower prominence between Bidston Hill and Thurstaston Hill. The River Fender bounds Woodchurch to the east. The Fender joins the Birket, before discharging into West Float and then into the River Mersey. To the east of the settlement runs the M53, the main motorway connecting Wirral and to the north, is Upton, with little distinction evident between the two areas. To the west and south is green fields associated with Arrowe Park and the historic village of Landican (see below).

4. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Table 1: Summary of British archaeological periods and date ranges.

Period	Date Range
Palaeolithic	30,000 – 10,000 BC
Mesolithic	10,000 – 4,000 BC
Neolithic	4,000 – 2,500 BC
Bronze Age	2,500 – 700 BC
Iron Age	700 BC – AD 43
Romano-British	AD 43 – AD 410
Early Medieval	AD 410 – AD 1066
Medieval	AD 1066 – AD 1485
Post-medieval	AD 1485 – c.1750
Industrial and Modern Period	c. AD 1750 - Present

4.1. Prehistoric

4.1.1. Palaeolithic and Mesolithic Periods (10,000 to 4000 BC)

The earliest evidence of human occupation in Wirral dates to the Mesolithic Period, with numerous occasional finds combined with concentrations of surface scattered chert debitage at the northern end of the peninsular at Greasby and Thurstaston. It has been suggested that it is evidence of a base-camp that was revisited by hunter-gatherers (Cowell 1992; Cowell and Innes 1994). The geographical spread of Mesolithic flints suggests that hunter-gatherers were exploiting wetland and coastal areas for hunting, fishing and possibly collection of flint/chert from beaches (*ibid*).

The areas surrounding Woodchurch, including Greasby, Thurstaston and Irby, produced Mesolithic assemblages with a wide range of flint reduction material and tool forms found. Greasby also produced stone lined pits dating to the Mesolithic (Cowell 1992).

4.1.2. Neolithic and Bronze Age Periods (c. 4000 to 700 BC).

Evidence of settlement in Wirral during the Neolithic and Bronze Age is rare. In Merseyside evidence for the Neolithic is restricted to single find spots (Cowell and Innes 1994). The Portable Antiquities Scheme documents a Neolithic arrowhead found at Greasby and a broken stone axe head recovered in 2014 at Caldy.

Bronze Age burial vessels have been discovered at West Kirby and on nearby Hilbre Island with additional Bronze Age and Iron Age settlement activity discovered during excavations in Irby (Philpott and Adams 2010). The excavation at Irby uncovered one circular structure with pottery, along with possible oven fragments and bronze working debris (*Ibid.*).

4.1.3. Iron Age (c. 700 BC to AD 70)

Excavations at Mill Hill Road, Irby has shown evidence of probable Iron Age settlement set within an enclosure, although the scale of the excavations did not allow for definite confirmation (Philpott and Adams 1999, 66).

4.2. Romano-British

Woodchurch lies between the Roman fort of Deva (Chester) and the trading port of Meols, which had trading links to the Roman world before, during and indeed after the military Roman occupation of Britain. It is, therefore, surprising that Roman finds within Woodchurch (and indeed Wirral as a whole) are somewhat sparse. An Iron Age farmstead in Irby continued to be occupied throughout the Roman period (Philpott and Adams 2010), and casual coin loss is recorded throughout Wirral. However, these are in no great concentrations outside of Meols.

The only notable Romano-British find from Woodchurch was seemingly uncovered in 1923. This was a spearhead, a miniature bronze cauldron, and possibly Roman coins, found by workmen (MME 10763). However, the precise location of this discovery was not documented, and the location of the artefacts are currently unknown. It is, therefore, difficult to date this material or discuss

context for them in conjunction with the settlement. No other material culture from the Roman period is known from the settlement at this time.

Whilst evidence for Romano-British activity is slight on the Wirral, the opportunity for discovery through test pitting is evident, as recent test pitting in Bromborough (8.5 km to the south-east) undertaken by Big Heritage in 2013 and 2014 did uncover evidence for a concentration of Roman material at the core of the historic village, focused on St Barnabas' Church (Kirton 2016). Sherds of pottery and a single example of ceramic building material were recovered in sufficient quantity to suggest occupation in this area during the Romano-British period. The exact location of the occupation remains unclear, as the material was not associated with any definitive archaeological features but the concentration of material was clear around the church. The discovery indicates that Romano-British settlement, possibly in the form of farmsteads, may be more prevalent than presently understood on Wirral, masked by currently occupied settlements.

4.3. Early Medieval

Wirral is first mentioned in the Anglo-Saxon Chronicle for the year AD 893 which records that a group of Danes occupied a "deserted city in Wirral which is called Chester." (Trans, Swanton 1998, 88). The port of Meols continued to be an important trading site for Wirral (Griffiths *et al* 2007, 399-406), and the former Roman fort of Chester is mentioned as a *civitas* by Bede and re-founded as an Aethelflaedian *burh* and a key economic hub for the wider North West in AD 907 (Higham 1993, 107). The most prolific early medieval material culture found on the Wirral is a significant assemblage of stone sculpture, notably collections are located at Bromborough and Neston (Bailey 2010).

To date no definitive early medieval material has been uncovered in Woodchurch. However, a carved circle-headed cross was recovered during renovations to Holy Cross church in the 20th century (Bailey 2010, 146-7). Due to its fragmented survival and the lack of dateable decoration, it is impossible to assign a pre- or post-conquest date and has, therefore, been dated to the Saxo-Norman period by Richard Bailey (2010, 146-7).

The first reference to Woodchurch was in 1093, noted as 'Wude Church' in a grant to the Abbot and Convent of Chester (Hansall 1823, 638). The date suggests that this church may in fact be

pre-conquest in date. Derivations of the name Woodchurch appear throughout the Norman and Medieval period, such as 'Hwodekirk' c.1240, 'Wodekirke' c. 1250 and 'Wodchurch' in 1511 (Dodgson 1972).

Together, the place-name evidence and Saxo-Norman sculpture, indicate that there has likely been a church on the site from as early as the 11th century, preceding the 13th century foundations of the current extant church.

Finally, the morphology of the churchyard may be indicative of a pre-Conquest church. The churchyard is curvilinear in shape, which is often deemed an indicator of their antiquity. Eighteen such examples have been noted in Cheshire by Thacker (1987, 286-92). Whilst, Higham (1993, 82-3) suggests this is not definitive proof of an earlier origin, the proximity of Landican (*lann* meaning church in Welsh) does suggest earlier church activity in the area. It has also been suggested that the reference to a church with a priest at neighbouring Landican in Domesday might, in fact, refer to the church at Woodchurch (Irvine and Bezley 1901, 139; Hansall 1823, 638), as Landican, Woodchurch and Arrowe were collectively owned at this time and, therefore, the church at Woodchurch may have serviced the entire area and been simply part of the large manor of Landican prior to Domesday.

4.4. Medieval

After the Norman Conquest Landican, Woodchurch and Arrowe were granted to the Abbey of St Werburgh's in Chester. The three locations were subsequently split into individual manors (Irvine and Bezley 1901, 140). This division of the estate may have initiated the building of the 13th century church that stands today, now known as Holy Cross Church. Parts of this early stone build still survives in the north wall and chancel. It was remodelled and expanded in the 14th century with a nave, wide south aisle and three-bay chancel and tower to the west added (MME 846).

4.5. Post-Medieval

Holy Cross church continued to serve the people of Woodchurch and surrounding areas into the post medieval period, being retained by the church until the Dissolution when it passed to the Crown. After the Dissolution Woodchurch was granted to private ownership to Peter Grey, Esq (Irvine and Bezley 1901, 141). A series of rapid sales to various landowners followed until the early 19th century.

The various landowners continued to invest in Woodchurch and the village seemingly flourished. In the 16th century further work was undertaken to enlarge the aisle of the church and a porch added. Additional build work was undertaken to add heavy buttresses to support the tower in 1675 (MME 846).

The 17th century also witnessed the expansion of everyday life in Woodchurch with the creation of a Rectory/Parsonage in 1631, which subsequently underwent multiple builds. The first recorded build in 1631 is commemorated by a stone that still survives in the current cellar. Reference is made to this building as consisting of 6 bays, four of which belonged to the house, a barn and an out building (MME 10761). In close proximity to both the church and the rectory was a 17th century pigeon house that backed onto the parsonage/rectory, the location of which is preserved in the tithe apportionments (MME 854). In 1709, this building was noted as decayed and the then Rector, Thomas Green, received permission to pull it down and begin again, completing the works in 1719 (Hansall 1823, 638).

Similarly, the construction of a small school sometime after 1655 within the grounds of the churchyard, the first recorded school on the Wirral, indicates increasing activity (MME 848). Hansall (1823, 638) also notes that a well-equipped library was attached to the school with some 300 volumes available.

The presence of the inhabited rectory, the ongoing repairs to the church and the foundation of a school for the area are all indicative of an active village settlement centred at the heart of the current historic core of Woodchurch from the 17th century onwards.

4.6. Industrial and Modern

Woodchurch continued to flourish in the 18th and 19th centuries. The school was rebuilt in 1873 on a slightly different site, to the south of the original building, and the Rectory in 1861, the latter of which still survives today. The school was demolished in 1926 to be replaced several times throughout the 19th century and parts of the Rectory's outbuildings were demolished by 1960.

In the late 1940's the historic core of the village subsequently became the centre of the modern Woodchurch Estate. The area now covered by Woodchurch Estate was purchased by Birkenhead Corporation in 1926, becoming part of Birkenhead Civil Parish. Construction of a new housing estate and associated amenities began immediately after the end of World War II. Very little of the original village survived, with the exception of Holy Cross Church, the Rectory and adjoining school (as discussed above). Today the housing estate has a population of approximately 9000 residents.

4.7. Gazetteer of Merseyside Historic Environment Records within Research Area

Table 2: List of CHER Records located within research area

MHER Record	Location	MHER ID
1. Holy Cross Church and Early Medieval Cross head	SJ 327572.8/386842.3	MME 846
2. 19th century well	SJ 327495.3/386887.6	MME 849
3. 17th century dovecote	SJ 327478.3/386839.7	MME 854
4. Holy Cross Medieval Churchyard	SJ 327582.4/386824.5	MME 847
5. Medieval stone cross	SJ 327572.6/386813.3	MME 10759
6. Rectory	SJ 327565.1/386771.0	MME 10761
7. Site of school 1665-1926	SJ 327548.3/386808.8	MME 848

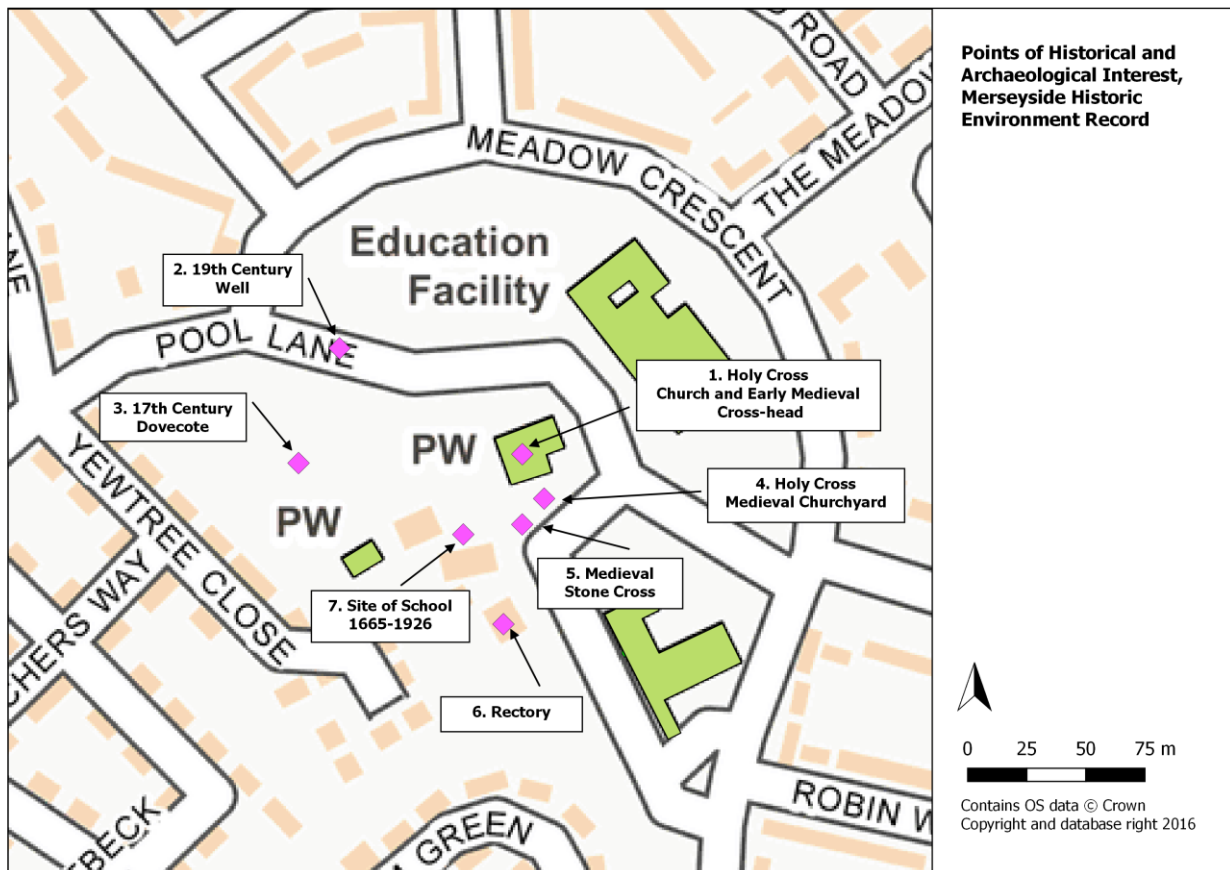


Fig. 3: Locations of Merseyside Historic Environment records found within research area.

4.8. Conclusion

Extant Archaeology

The research area is largely covered by twentieth century housing and the accessible greenfields have been subject to landscaping. Map regression demonstrates that the old field systems have been lost beneath the housing development. The survival of upstanding remains was, therefore, deemed unlikely prior to the project beginning.

Subsurface Archaeology

The potential to recover prehistoric remains was deemed low at the commencement of the project, as no artefacts, monuments or settlement had been noted within the study area or the immediate locale.

Woodchurch's proximity to Meols, the activity noted at Bromborough and the stray finds from the Wirral, including the possible small Roman hoard found in Woodchurch in 1923, indicated that Roman material may be recovered throughout the course of the project, and there was, therefore, a low to moderate possibility of unearthing activity from the Romano-British period.

Earlier settlement and agricultural activity in Woodchurch has been recorded in historical texts, such as Domesday. The presence of a Saxo-Norman cross-head and 13th century architecture at Holy Cross Church suggested there was a moderate potential for Saxo-Norman material to survive. The continued repairs and improvements to the church throughout the medieval period also indicated that there was a moderate potential to encounter material or features from this period.

The potential to uncover evidence for post-medieval agricultural practice and settlement was deemed high, as both have been noted on early maps and through various historical documents. There was a high potential for medieval and post-medieval ridge and furrow, drainage ditches and "grubbed-out" field boundaries to be present in the research area. Various building stages at the Rectory and around the school had also been documented, alongside various Historic Environment Records (see Table 2) detailing additional activity from this period in the research area. Consequently, it was estimated that it was highly likely that further material and possibly structural elements associated with these buildings would be recovered during the course of the project.

5. ARCHAEOLOGICAL OBJECTIVES

5.1. Aims

- Bring the community together to explore their heritage, give them a wider understanding of Woodchurch's history with a greater sense of pride in their community and a sense of place.
- Highlight how archaeology can be a unifying agent bringing community groups and individuals together under a common goal.
- Explore how archaeology can be used to introduce people to gentle exercise and encourage interaction of individuals and groups with the hope of making a positive impact on people's health and wellbeing.
- Ensure that volunteers learn new archaeological skills, such as excavation, post-excavation and recording.
- Expand knowledge of the archaeological potential of Woodchurch.

5.2. Objectives

- Minimum of 1200 volunteer hours.
- Complete 15 1 m x 1 m test pit excavations within Woodchurch and its environs.
- Involve volunteers in as many stages of the archaeological process as appropriate.
- Assess the archaeological potential of Woodchurch.

5.3. Intended Outcomes

- Improve public and academic understanding of the historic environment of Woodchurch and its environs and the contribution this historic environment makes to a contemporary sense of place.
- Characterise and phase the development of Woodchurch and its environs.
- Identify, if any, further avenues of investigation within Woodchurch.
- Foster a greater sense of community pride.

6. METHODOLOGY

6.1. Rationale

Test pitting offers opportunities for reassessing medieval settlements and for generating information regarding the origins, growth and change of settlements. Where present, they also provide data regarding previous activity on the site pertaining to earlier periods.

1 m test pits have been successfully used on a variety of archaeological projects resulting in the recovery of meaningful data, contributing to the archaeological knowledge of many currently occupied settlements. The methods used were developed by the Shapwick Project in Somerset in the 1990s (Gerrard and Aston 2010), and by the Whittlewood Project in Northamptonshire and Buckinghamshire in the early 2000s (Jones and Page 2007) and has been used extensively by ACA in their HEFA [Higher Education Field Academy] programme and in community excavations within East Anglia since 2005 (Lewis and Ranson 2011, 14).

Test pitting is a cost-effective approach that allows for a broad and rapid assessment of the village's potential archaeology. It is a methodology particularly well-suited to local community participation, as it is easily implemented and completed within a short period (usually two days). This allows volunteers to experience the full archaeological process from de-turfing to recording. The simplified nature of the archaeological process, within a small area, means that training can be delivered within a short time-period and supplemented during the excavation process. The small working area also means that large areas of complex features will not be exposed - so are suitable for novices. Furthermore, it creates little mess, causing minimal disruption to site owners. Community involvement also improves the community's awareness and increases appreciation of their local environment (Wrathmell 2012, 265).

6.2. Test Pit Locations

Test pit locations were based upon the constraints of access and consent and were limited to the historic core of Woodchurch with the exception of Test Pit 11. A total of fifteen test pits were excavated. Test pit locations are shown in Fig. 4.

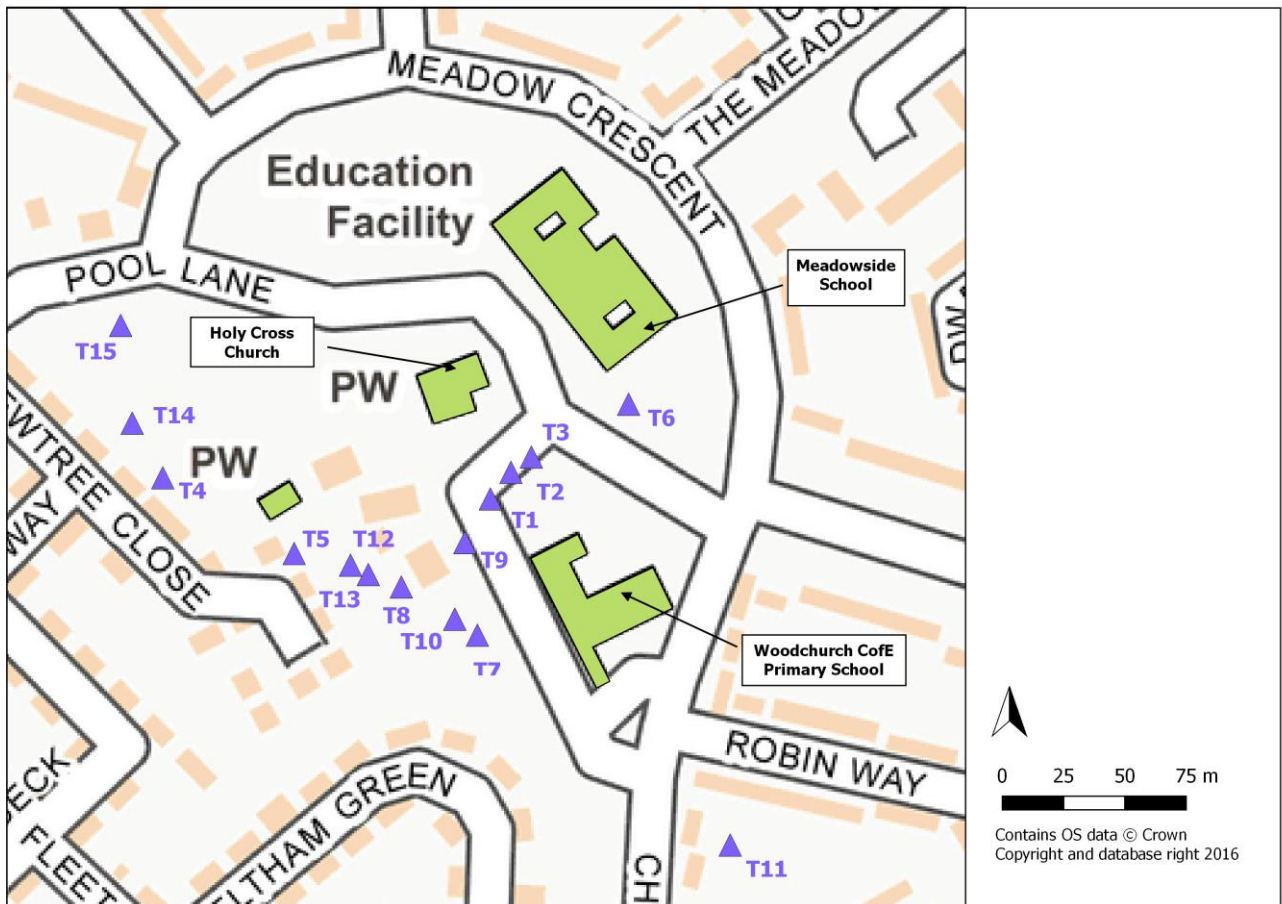


Fig. 4: Test Pit Distribution 2016

6.3. Excavation Methods

Each test pit was supervised by a member of the Big Heritage team with a group of at least 3 volunteers. Volunteers were given access to the 'How to Test Pit' film (<http://vimeo.com/70215277>) and handbook prior to excavation, which was also available throughout the excavation process. Additional support and training was provided by Big Heritage supervisors throughout the test pitting process. These covered the excavation and recording process, artefact identification and health and safety instructions. Participants were then divided into teams with a mixture of adults and children, where possible. Each team was provided with a test pit kit, which comprised all the equipment they would need for the test pit, recording information specific to their site and standard pro-forma recording sheets, on which all excavation data was entered.

The test pits excavated throughout the Woodchurch Big Dig project followed the standard procedure outlined below, unless otherwise stated.

- A 1x1 m square was marked out with string and pegs (unless otherwise stated)
- Turf, if present, was removed in squares using spades.
- The test pits were excavated in a series of 20 cm spits to provide a guideline for inexperienced volunteers. The 20 cm spits were used as a safeguard to prevent volunteers digging holes and all test pits were monitored by a member of Big Heritage staff who recorded changes in contexts as they presented in the trench. This process was undertaken to a maximum depth of 1.2 m (although occasional small sondages were excavated to test the depth of the final context) but often the natural was present before this depth (see Fig. 34) for collated information about test pit depth).
- Each context was recorded using pro-forma sheets. These were primarily 'Deposit Sheets'. Each deposit had its composition, inclusions, compaction, colour, thickness and extent (where known), proportion excavated, method of excavation, condition of excavation, stratigraphic relationship and associated finds recorded. This was accompanied by an interpretation and photographic record.
- Cut features, if encountered, were excavated sequentially. They had their own recording sheet and were also drawn in plan at a scale of 1:20 where appropriate.
- Masonry walls, if encountered, were carefully cleaned, recorded and left *in situ*.
- Deposits were assessed for their paleoenvironmental potential. No deposits required sampling.
- A member of Big Heritage inspected each test pit before it was closed down. A small sondage was occasionally excavated within the bottom of the pit to examine whether or not natural had been reached. Some test pits were stopped above natural or 1.2 m on encountering a feature (ancient or modern) which it was deemed inadvisable or impossible to remove, or had to finish at a level above natural due to time constraints.
- Once each test pit was completed, all recording forms were completed, photographs were taken of the sections and limit of excavation, plans and sections were drawn where necessary. The test pit location was measured-in using a Leica Builder 409.
- Test pits were then backfilled and the turf replaced neatly to restore the site.

6.4. Recording

Each context was recorded using pro-forma sheets (deposit/cut/masonry/group). Each sheet has been scanned and now forms part of the digital archive. A Context Catalogue and Test Pit Catalogue were kept for ease of reference. Each sheet has been scanned and now forms part of the digital archive. The context sheets were supplemented by photographs and drawings where appropriate. Each has been digitised and forms part of the digital archive, accompanied by a photographic database.

6.5. On-site Finds Identification and Retention

Based on previous test-pitting projects in the region the most common archaeologically significant finds from test pit excavations in areas that are currently occupied are pottery, faunal material, ceramic building material and metalwork. The upper-layers, which commonly represent modern deposits generally have the most material. This is normally modern material (post-1900), occasionally mixed with earlier objects due to disturbance or random loss.

- All soil was screened for artefacts using sieves with a standard 6 mm mesh, with the exception of very heavy clay soils and all artefacts were retained during the excavation process.
- Any finds that were believed to be of particular importance were recorded individually with a unique 'small find' number and record.
- All artefacts, excluding metal, slag, fabric and any other material deemed too delicate, were washed and dried in preparation for analysis.
- Artefacts were sorted into their material type i.e. ceramic, lithic, metal, plastic, glass etc. and grouped by context.
- Each material from each context was then counted, weighed and bagged with relevant information noted on the bag and a Tyvek label, which was inserted into the bag. This was repeated for each context from each trench.
- Artefacts were then recorded by material and context using an Access Database.
- Each material type was then dispatched for specialist analysis where appropriate.

- A discard policy was agreed between Big Heritage and the Museum of Liverpool prior to deposition of the archive. Modern metal, modern glass, slag and plastic were not retained but were recorded in the digital and paper archive. Examples of all were kept for reference.

6.6. Dissemination and Archival Strategy

The archaeological records and finds have been retained by Big Heritage for analysis, reporting and archiving. Upon completion, the project will be signposted on the OASIS website, <http://ads.ahds.ac.uk/project/oasis>, the report submitted to the Merseyside Historic Environment Record [MHER] and digitally disseminated through the Archaeology Data Service [ADS]. A copy of this report will also be available through the Big Heritage website: www.bigheritage.co.uk

The site archive will be deposited with the Museum of Liverpool. The accession number is **MOL.2017.94**. The archive was compiled following guidelines supplied by Museum of Liverpool (2014).

6.7. Project Team

The fieldwork and post excavation processing was managed by the Big Heritage Project Manager, Joanne Kirton, supported by Karen Gavin. The report was written by Dr Joanne Kirton and illustrations prepared by Joanne Kirton. The finds reports have been written by Paul Blinkhorn, Dr Rose Broadley, Dr David Higgins, Ian Smith and Dr Robert Philpott. The archive has been prepared by Joanne Kirton, Karen Gavin and Bryony Fisher.

7. RESULTS

Below are the results from each of the individual fifteen test pits. The data for each test pit is discussed in this section, listed in numerical order. Each entry includes a distribution map, table of bulk finds and reflection on the material unearthed, including the small finds. Synthesis of the data from all the test pits follows in the next section.

7.1. TEST PITS 1-15

7.1.1. Test Pit 1

Test Pit 1 was located within the north-west corner of Woodchurch Church of England's Primary School's playing field.

Test Pit 1

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327591.612	327590.651	327591.25	327592.205
Northing	386800.54	386800.205	386798.326	386798.592

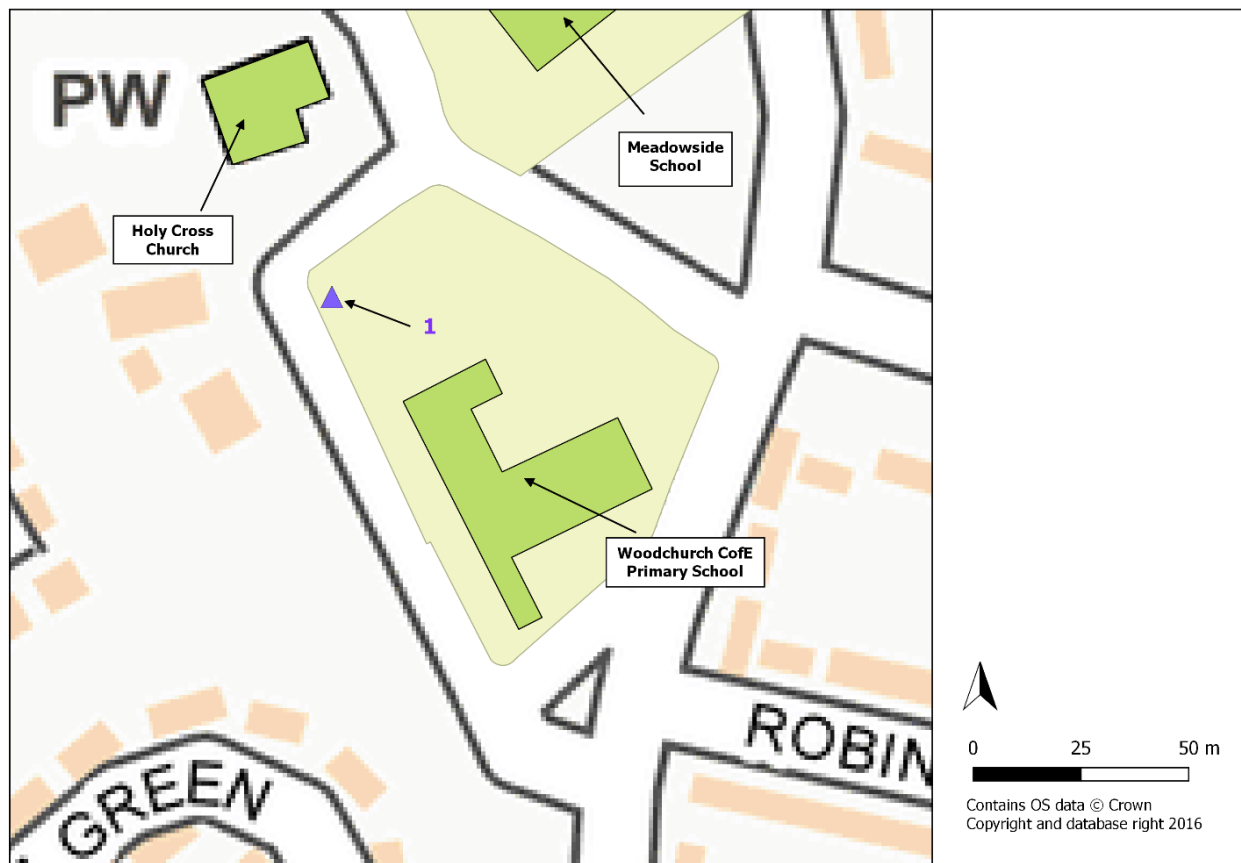


Fig. 5: Location of Test Pit 1

Test Pit 1 was a 2x1 m² trench, half-sectioned at 0.13 m and excavated to a final depth of 0.96m in the southern half. The test pit was opened and excavated by pupils from Woodchurch Church of

England Primary School over the course of a single day and completed by local volunteers. The trench was in close proximity to the school boundary, which was fenced by large trees, subsequently, the ground was heavily disturbed by roots throughout the depth of the test pit.

The topsoil (101), covered by turf, was a firm, light yellowy-brown sandy-silt with small sub-angular stone inclusions, ranging from 1-10 cm in size, 0.13 m thick. The subsoil (102) was a stiff, light yellowy-brown sandy-silt matrix with sub-angular stone (1-10 cm) inclusions, 0.83 m thick. Context (102) is most likely a dumping and/or levelling event based on inclusions of broken stone paving slabs and CBM. The end of the context was not reached due to time constraints.

One small find, SF101, was recovered from context (101). This was a sherd of 13th century decorated Ewloe-type ware, probably from a jug (See Fig. 6). The sherd was found in a disturbed context but comparable material has been found in close proximity, indicating that this area of Woodchurch was occupied from at least the 13th century.

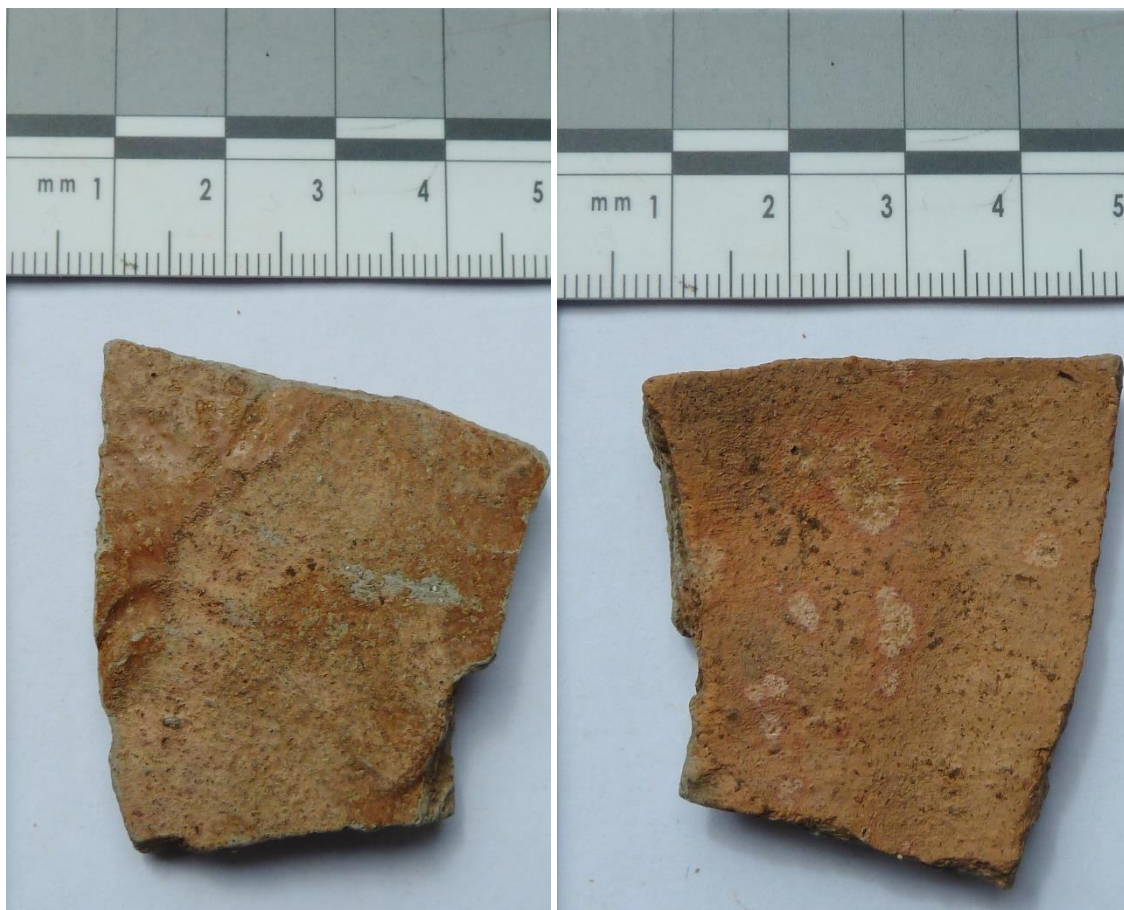


Fig. 6: SF101

Table 3: Summary of bulk find materials excavated from TP1

Context	Slate		Slag		Shell		Pottery		Plastic		Plaster	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
102	12	238	3	4	1	<1	51	250	1	<1	31	87

Context	Misc			Metal		Lithic		Glass		Clay Tobacco Pipe		CBM	
	Total	Wt (g)	Description	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
102	10	525	Concrete fragments	4	7	1	2	38	92	4	7	35	494

7.1.2. Test Pit 2

Test Pit 2 was located on the northern boundary of Woodchurch Church of England's Primary School's playing field. This was the western most of two test pits situated here.

Test Pit 2

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327599.848	327599.102	327600.481	327599.745
Northing	386810.959	386810.388	386810.154	386809.591

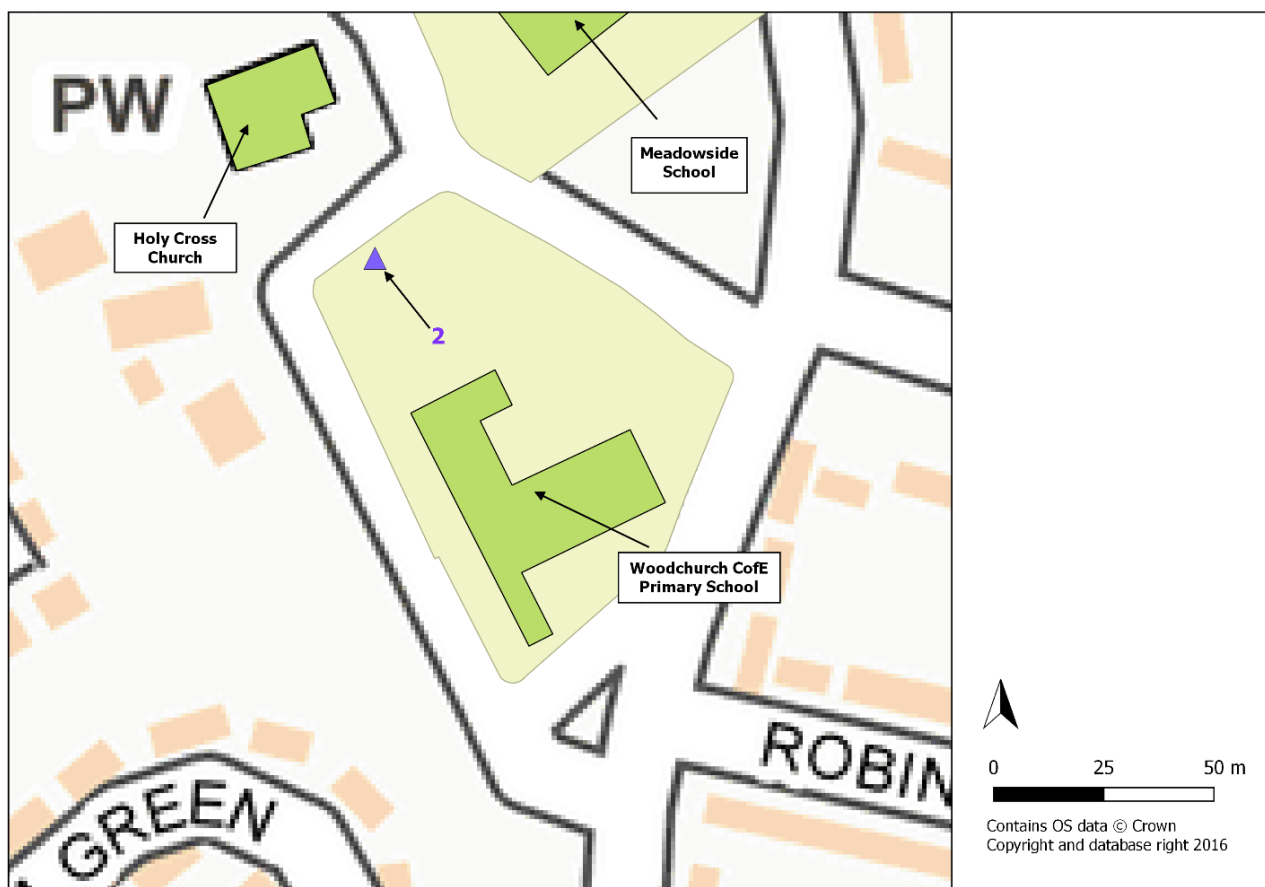


Fig. 7: Location of Test Pit 2

Test Pit 2 reached a final depth of 0.9 m. The topsoil (201), covered by turf, was a compact, mid greyey-brown sandy-silt, 0.31 m thick. The subsoil (202) was a compact, mid greyey-brown sandy-silt with angular stone and pebble inclusions, less than 7cm in size, 0.17 m thick. Context (203) was a

hard, fine grained mid-orangey brown sandy-silt deposit with small (0-10cm) sub-angular stone inclusions mixed with CBM, pottery and metal material. This context was 0.22m thick. Below (203) was a shallow context (204), a hard, mid greyey-brown gritty-silt with large quantities of mortar mixed with CBM. This appeared to be a layer of re-deposited building material, 0.09m thick. Another shallow context, (205), was a friable, mid greeny-brown clayey-silt with inclusions of sand, 0.11 m thick. The end of the context was not reached due to time constraints but appeared to be natural.

Table 4: Summary of bulk find materials excavated from TP2

Context	Slate		Slag		Shell		Pottery		Plastic		Plaster	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
201	2	28	3	5			20	72				
202	12	71	42	429	3	4	14	65	3	3		
203	19	150	3	4	2	7	30	100			13	76
204	4	75	11	44	3	1	13	47	4	3		

Context	Misc			Metal		Lithic		Glass		CBM	
	Total	Wt (g)	Description	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
201				4	28	1	13	25	94	4	16
202	1, 1	1, 1	Unknown - rod (?), lino fragment	9	51			53	225	24	253
203	2	26	Concrete fragments	1	8			11	16	20	395
204	8, 2, 1, 1	300, 23, 2, <1	Concrete fragments, tarmac fragments, lego (?), sole of shoe fragment (?)	8	222			9	41	5	49

7.1.3. Test Pit 3

Test Pit 3 was located on the northern boundary of Woodchurch Church of England's Primary School's playing field. This was the eastern most of two test pits situated here.

Test Pit 3

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327608.423	327607.501	327608.776	327607.74
Northing	386817.185	386816.843	327608.776	386815.922

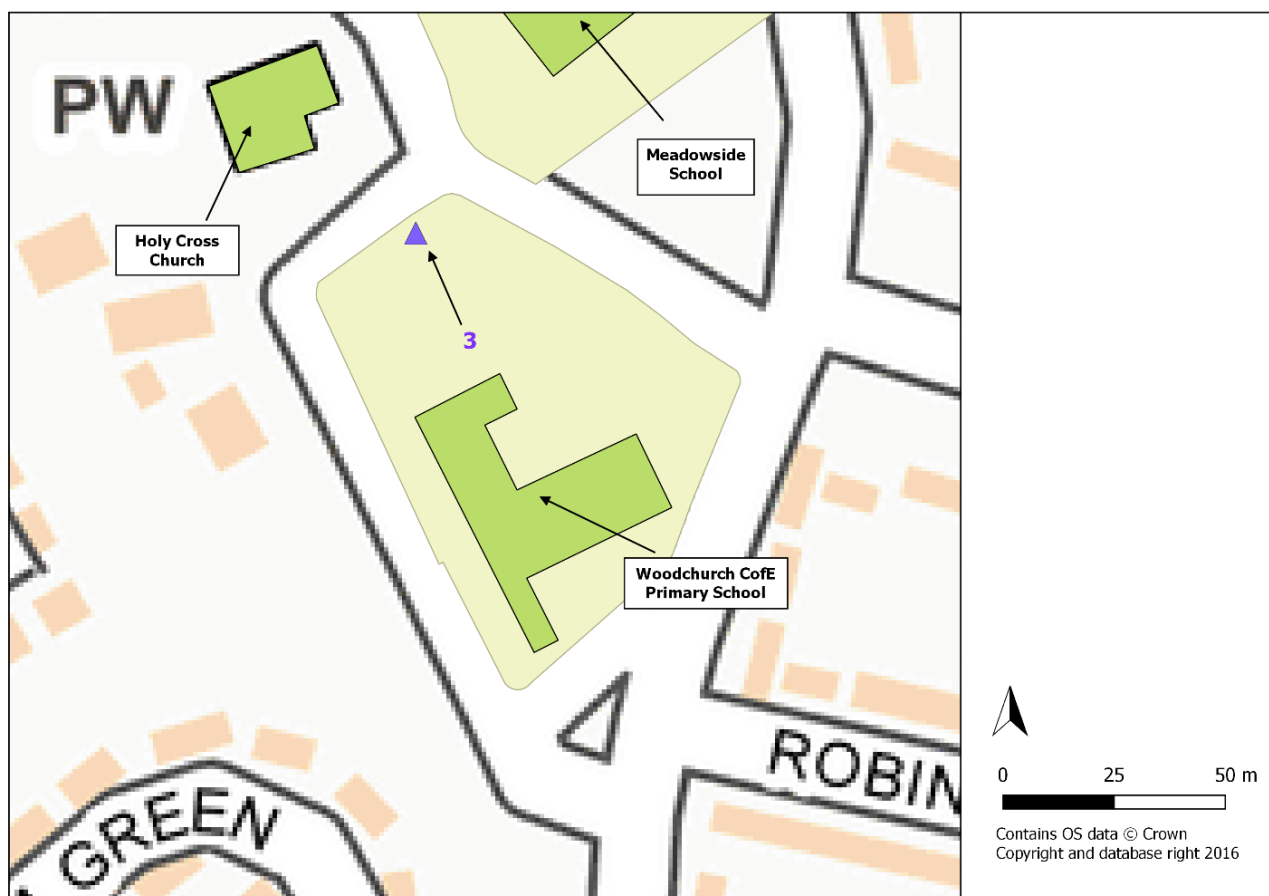


Fig. 8: Location of Test Pit 3

Test Pit 3 was half-sectioned at 0.58 m and reached a final depth of 0.83 m in the eastern half of the test pit. The trench was in close proximity to the school boundary, which was fenced by large trees.

Subsequently, the ground was heavily disturbed by roots throughout the depth of the test pit and extremely dry.

The topsoil (301), covered by turf, was a stiff, mid brownish-grey sandy-silt mixed with occasional pebble inclusions (1-10 cm), 0.24 m thick. The subsoil (302) was a stiff, mid brownish-grey sandy-silt with small sub-angular stones (0-15 cm) inclusions, 0.6 m thick. This context appeared to be a levelling event, consisting of a heavily compacted matrix with CBM and stone rubble. This possibly relates to the re-landscaping of the school grounds in the 1980's (School Caretaker, pers. comms). This context produced a number of small finds; SF301, which is a 15th-17th century sherd of Midland Purple ware and SF302, a possible worked lithic.

Context (303) was a hard, mid orangey-brown clay deposit. This context was unexcavated due to time constraints. No material culture was evident on the exposed surface.

Table 5: Summary of bulk find materials excavated from TP3

Context	Slate		Slag		Shell		Pottery		Misc		
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Description
301			4	44			11	36			
302	33	324	32	155	1	<1	65	178	5, 6	77, 28	Cement fragment, lino fragments

Context	Metal		Lithic		Glass		Clay Tobacco Pipe		CBM		Animal Bone	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
301	3	5			7	15			5	95	2	1
302	20	186	1	1	14	26	5	18	22	963	3	3

7.1.4. Test Pit 4

Test Pit 4 was located in the rear residential garden of 11 Yew Tree Close, CH49 5PA.

Test Pit 4

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327458.243	327457.338	327458.321	327457.374
Northing	386813.258	386813.102	386812.227	386812.149

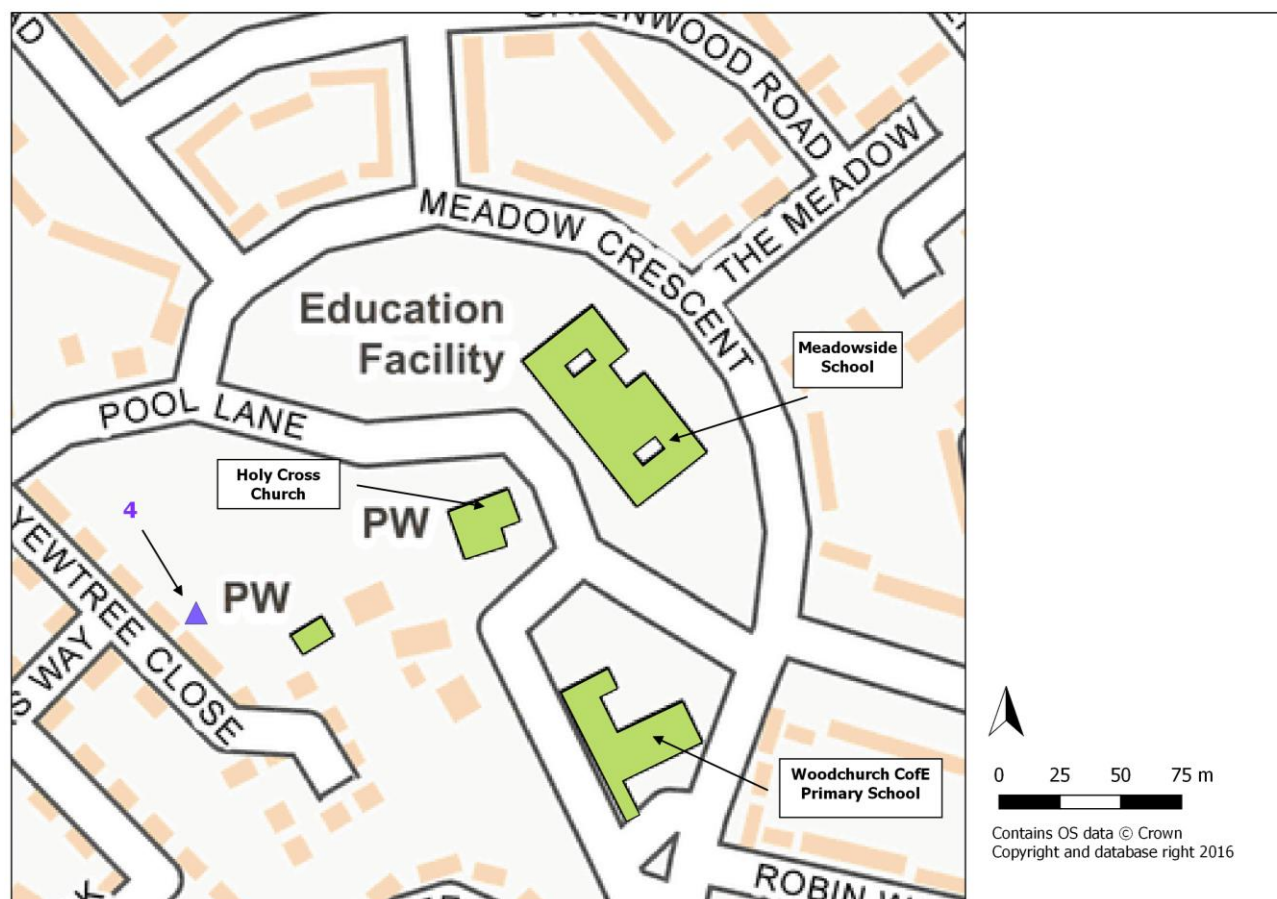


Fig. 9: Location of Test Pit 4

Test Pit 4 was half-sectioned at 0.41 m and reached a final depth of 0.62 m in the western half of the test pit. The excavation area was undertaken in a residential turfed garden. The topsoil (401) was a fine, light greyey-brown sandy-silt mixed with angular stones, 1-4 cm in size, and lime fragments. This context was 0.36 m thick. The subsoil (402) was a stiff, mid yellowy-brown sandy-clay, 0.2 m thick, with rounded sandstone fragment (1-10 cm) inclusions. This context was heavily disturbed by tree

roots. Context (403) was a hard, dark reddy-brown clay with angular stone inclusions and rounded sandstone fragments, ranging from 1-15 cm in size. This context remained largely unexcavated due to time constraints, as it was difficult for the volunteers to excavate. There were no finds from (403) and its appearance suggested natural had been reached.

Table 6: Summary of bulk find materials excavated from TP4

Context	Slate		Slag		Shell		Pottery		Plastic		Metal		Glass		Clay Tobacco Pipe		CBM	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
401			14	82	2	<1	25	88	1	<1	3	54	12	40	3	7	22	175
402	6	32	4	53			8	18					13	19			14	34
403	13	34	2	4			1	6					1	3			5	13

7.1.5. Test Pit 5

Test Pit 5 was located in the rear residential garden of 27 Yew Tree Close, CH49 5PA.

Test Pit 5

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327511.501	327510.626	327512.053	327511.153
Northing	386777.872	386777.382	386777.002	386776.51

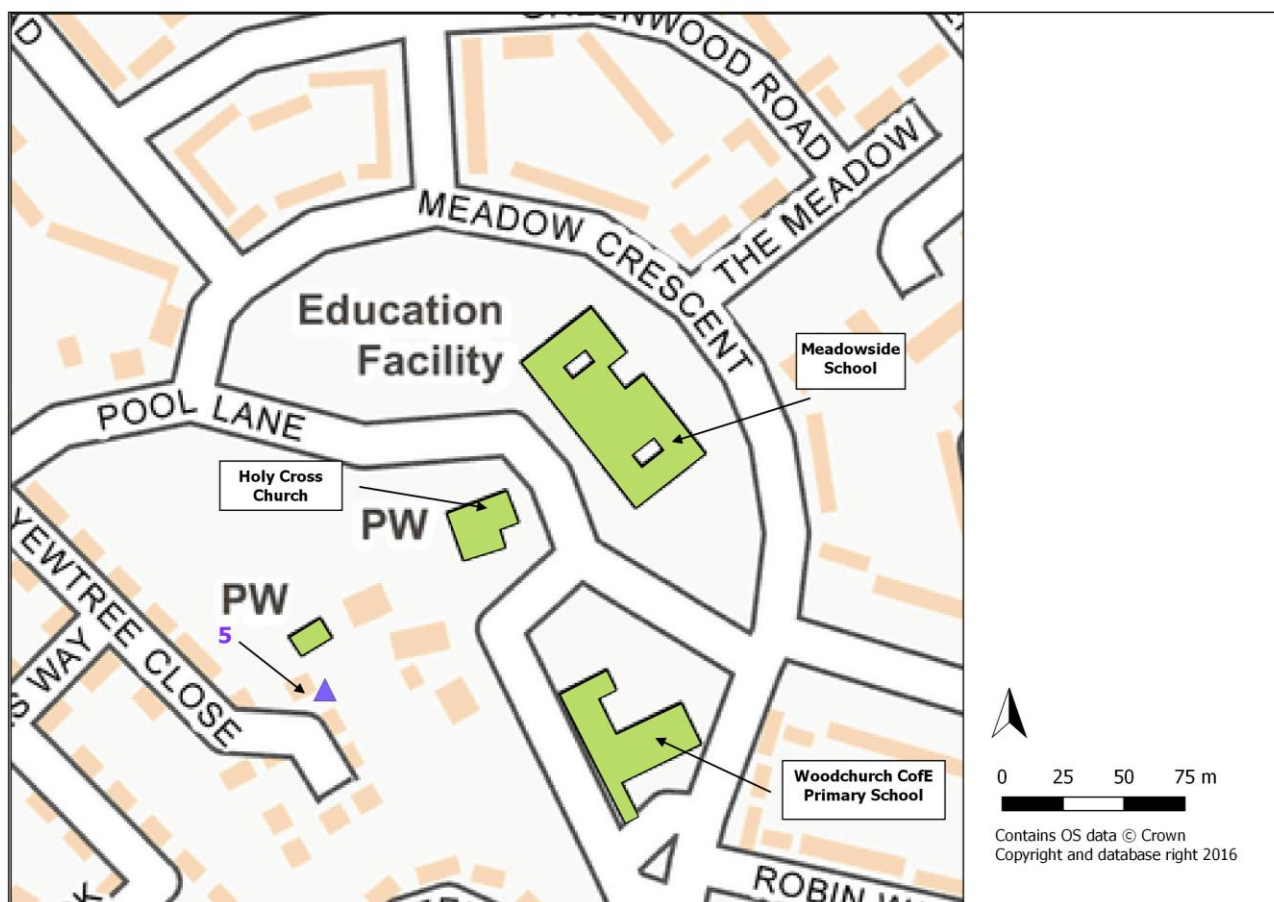


Fig. 10: Location of Test Pit 5

Test Pit 5 was half-sectioned at 0.31 m, quarter-sectioned at 0.32 m and reached a final depth of 0.52 m in the south-west quadrant of the test pit. The excavation area was undertaken in a residential turfed garden. The topsoil (501) was a stiff, mid brownish-grey sandy-silt, 0.10 m thick, with inclusions of loose gravel, likely from the surrounding path. The subsoil (502) was a shallow, stiff, brownish-grey

sandy-silt, 0.06 m thick, with inclusions of sub-angular stones (1-5 cm) mixed with rubble CBM, pottery and cement. The latter may relate to the creation of the housing estate in the 1980's and the infilling of the rectory pond (Homeowner, pers. comms). Context (503) was a compact, light brownish-grey gritty-gravel, mixed with CBM rubble. This was another shallow context, only 0.11 m thick. The context was half-sectioned due to the presence of an electrical cable. Context (504) was a stiff, mid greyish-brown sandy-silt with the occasional presence of rubble at the interface between (503/504). The context was not fully excavated due to time constraints.

Table 7: Summary of bulk find materials excavated from TP5

Context	Slate		Slag		Pottery		Plastic		Plaster		Misc		
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Description
501	21	200	9	74	35	75	6	6			1	<1	Phalange?
502	10	24			11	17	5	3	6	5			
503	1	22	1	3	1	32							
504	2	44	11	57	9	69	1	<1					

Context	Metal		Lithic		Glass		Clay Tobacco Pipe		CBM		Animal Bone	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
501	4	257	1	13	27	75	3	6	37	617	1	19
502	7	86			9	23			37	525		
503					1	7			19	565		
504	1	3			4	17			21	576		

7.1.6. Test Pit 6

Test Pit 6 was located in the grounds of Meadowside School to the south-east of the main school building.

Test Pit 6

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327648.1	327647.1	327648.4	N/A
Northing	386838.7	386838.3	386837.8	N/A

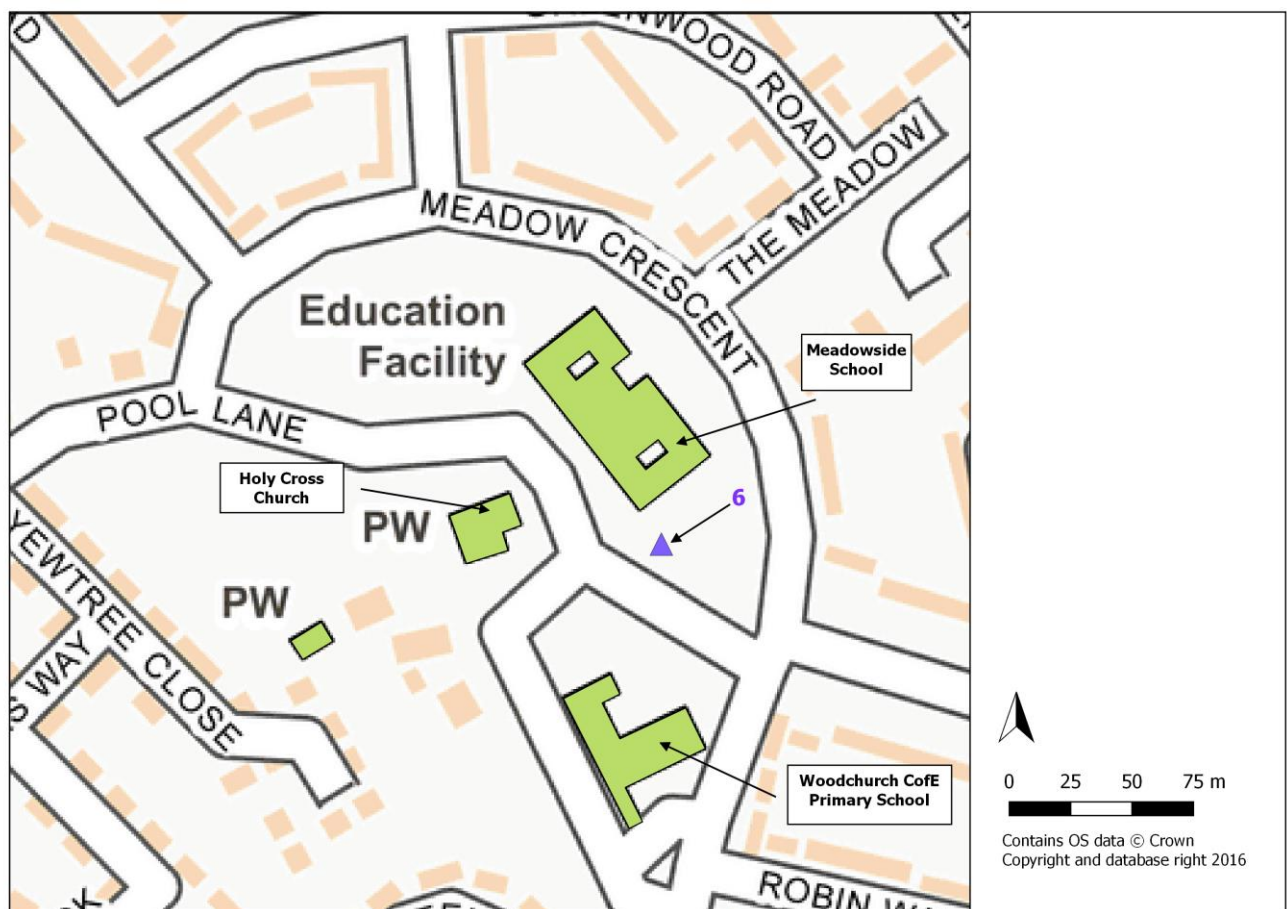


Fig. 11: Location of Test Pit 6

Test Pit 6 was opened as an activity day for pupils at Meadowside School. The school caters for children with moderate to severe learning difficulties. The topsoil and subsoil were excavated by the pupils and the remainder by Big Heritage staff over the course of a single day.

Test Pit 6 was half-sectioned at 0.35 m and excavated to a final depth of 0.68 m in the northern half of the test pit. The topsoil (601), covered by turf, was shallow (0.11 m thick) consisting of a loose, mid brownish-grey silty-loam with sub-angular stones and sandstone fragments, 1-10 cm in size. One small find was recovered from this context, SF601. This was a sherd of 15th-17th century Midland Purple ware.

Context (602) was a strongly cemented, mid reddish-brown gravelly-clay, 0.12 m thick, with large sub-angular stone inclusions (0-15 cm). The inclusion of gravel with CBM rubble suggests that this was a dumping/levelling layer, likely related to the construction of the school and/or the perimeter fence. The shallow topsoil and subsoil both indicate that this area is anthropogenic in nature, having been re-landscaped in the recent past.

Context (603) was a weakly cemented, mid brownish-grey sandy-clay with sub-angular stones, 1-10 cm in size, 0.17 m thick. This was a deposit of re-deposited material covering approximately 85% of the open test pit. The north-west corner of the test pit was covered by (604), again 0.17 m thick, which appears to be another dump of re-deposited material abutting (603). (604) was a weakly cemented, greyish-red sandy-clay with sub-angular stone (1-2 cm) inclusions. Both (603) and (604) cover deposit (605), which was an indurated, light brownish-yellow sandy-clay with sandstone fragments, ranging from 1-8 cm in size. Although this material appeared natural, with no associated material culture, based on the re-landscaping in this area this conclusion is unlikely. It is possible that this re-deposited material is from elsewhere on the site.

Table 8: Summary of bulk find materials excavated from TP6

Context	Slate		Slag		Shell		Pottery		Metal		Glass		Clay Tobacco Pipe		CBM		Animal Bone	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
601	1	2	1	20	3	4	23	94	1	57	3	14			6	196	1	1
602	1	572					3	33					1	2				
603							5	8							5	141		

7.1.7. Test Pit 7

Test Pit 7 was located in the grounds of the Rectory to the south of the building. It was the southern most of all test pits excavated within the grounds.

Test Pit 7

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327586.225	327585.396	327586.802	327585.971
Northing	386744.57	386743.973	386743.704	386743.147

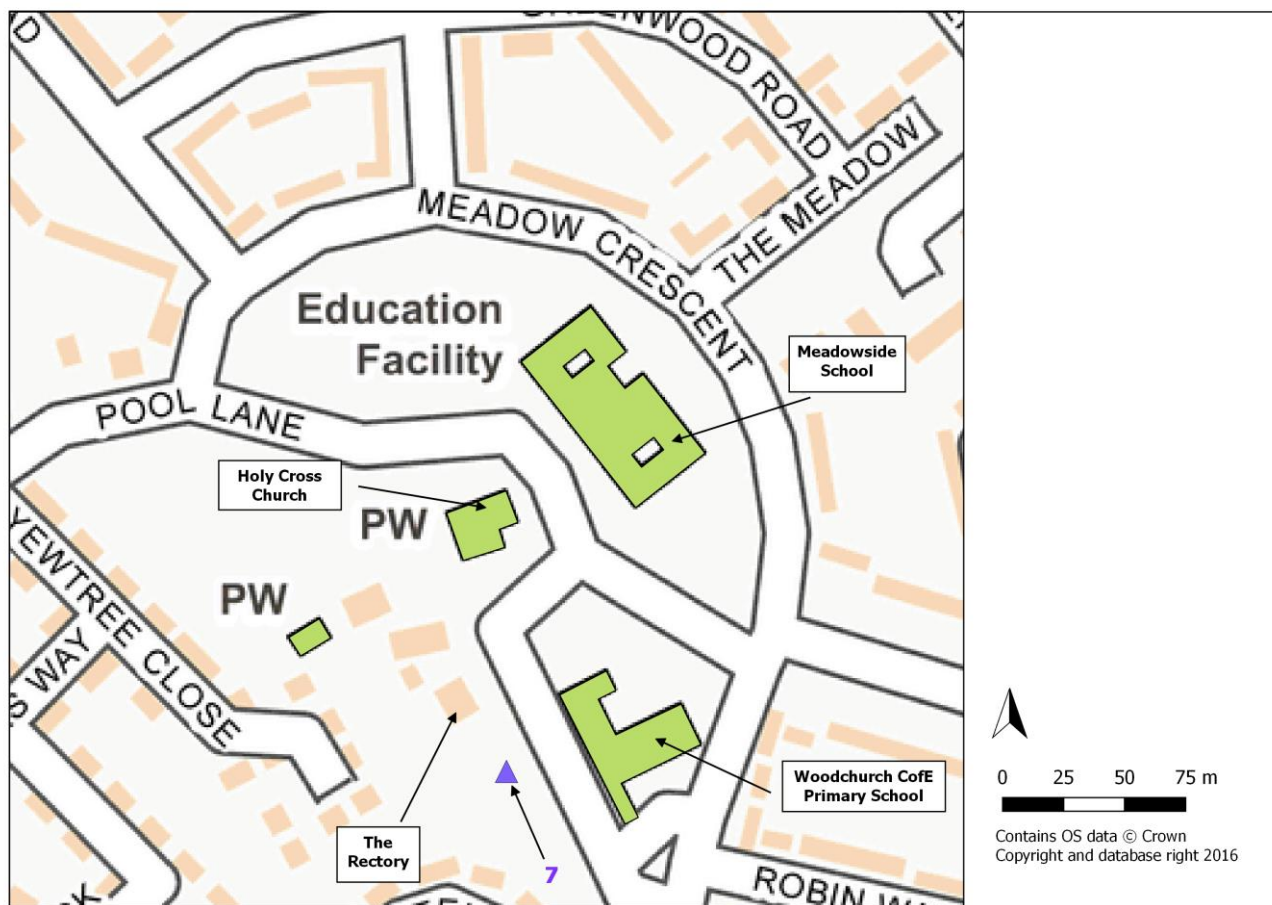


Fig. 12: Location of Test Pit 7

Test Pit 7 was half-sectioned at 0.32 m and reached a final depth of 0.51 m in the western half of the test pit. The topsoil (701), with turf, was a firm, mid greyey-brown sandy-silt, 0.22 m thick, with small sub-angular stone inclusions (1-5cm). Test Pit 7 seemed largely undisturbed by modern activity based

on the lack of modern material culture evident across the test pits outside the Rectory. This indicated that the Rectory grounds have largely been untouched since at least the early 20th century. Two small finds were recovered from the topsoil. SF704 was a sherd of 15th-17th century Midland Purple ware and SF701 was a sherd of 13th-14th century Coal Measure ware from a jug (See Fig. 13). Comparable ceramic sherds of a similar date were found throughout the Rectory test pits with the exception of Test Pit 10.

Context (702) was a firm, mid yellowy-brown clayey-silt with small pebble (1-5 cm) and charcoal inclusions, 0.10 m thick. Two small finds were recovered from this context; SF703 was a sherd of 15th-17th century Cistercian ware (See Fig. 13) and SF 702 (See Fig. 14) was 9 sherds of 15th-17th century Midland Purple ware.

Context (703) was a weakly cemented, light reddy-brown silty-clay with no inclusions and no material culture. The context was not completed due to time constraints.

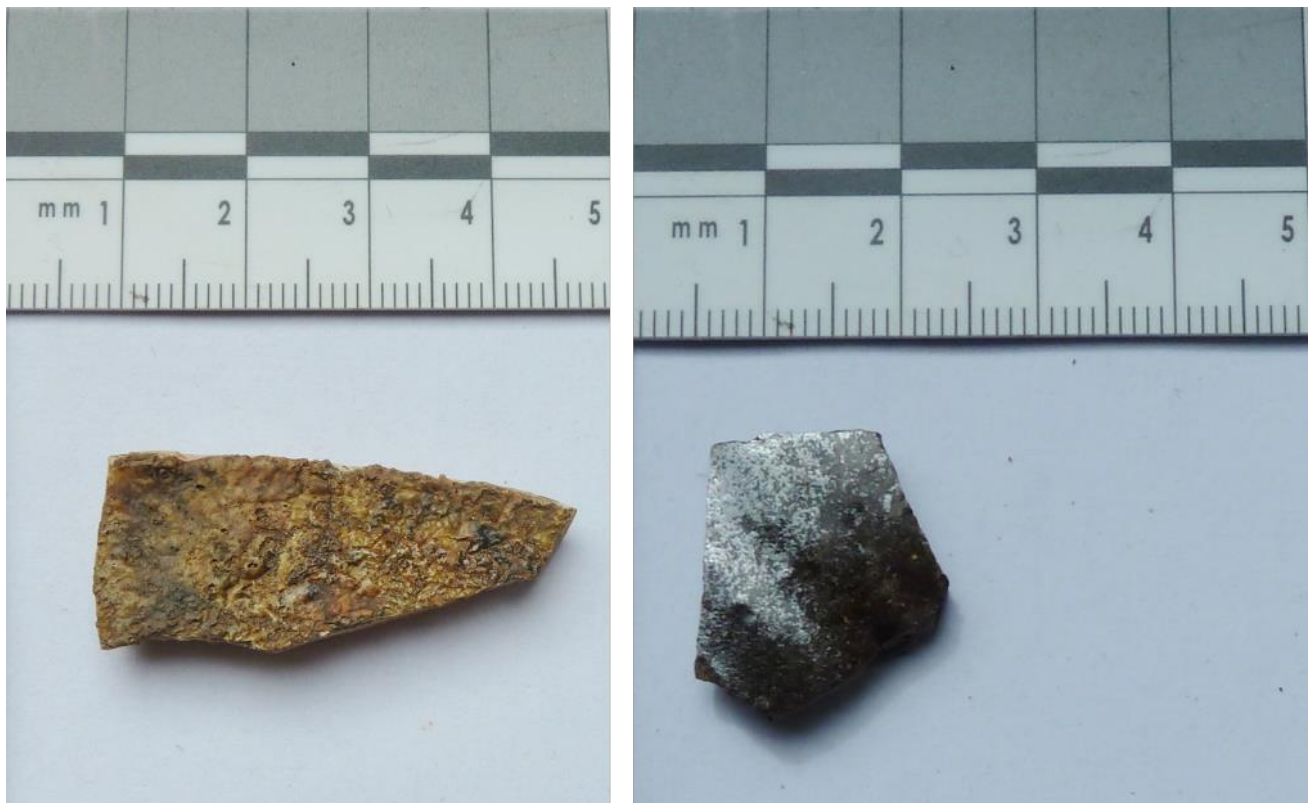


Fig. 13: SF701 and SF703



Fig. 14: SF702

Table 9: Summary of bulk find materials excavated from TP7

Context	Slate		Pottery		Lithic		Glass		Clay Tobacco Pipe		CBM		Animal Bone	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
701	2	3	15	46			3	20	10	21	2	21		
702			21	158	1	11	10	48	5	5			1	1
703			1	1										

7.1.8. Test Pit 8

Test Pit 8 was located in the grounds of the Rectory to the west of the building

Test Pit 8

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327555.253	327554.396	327555.747	327554.874
Northing	386764.208	386763.736	386763.27	386762.846

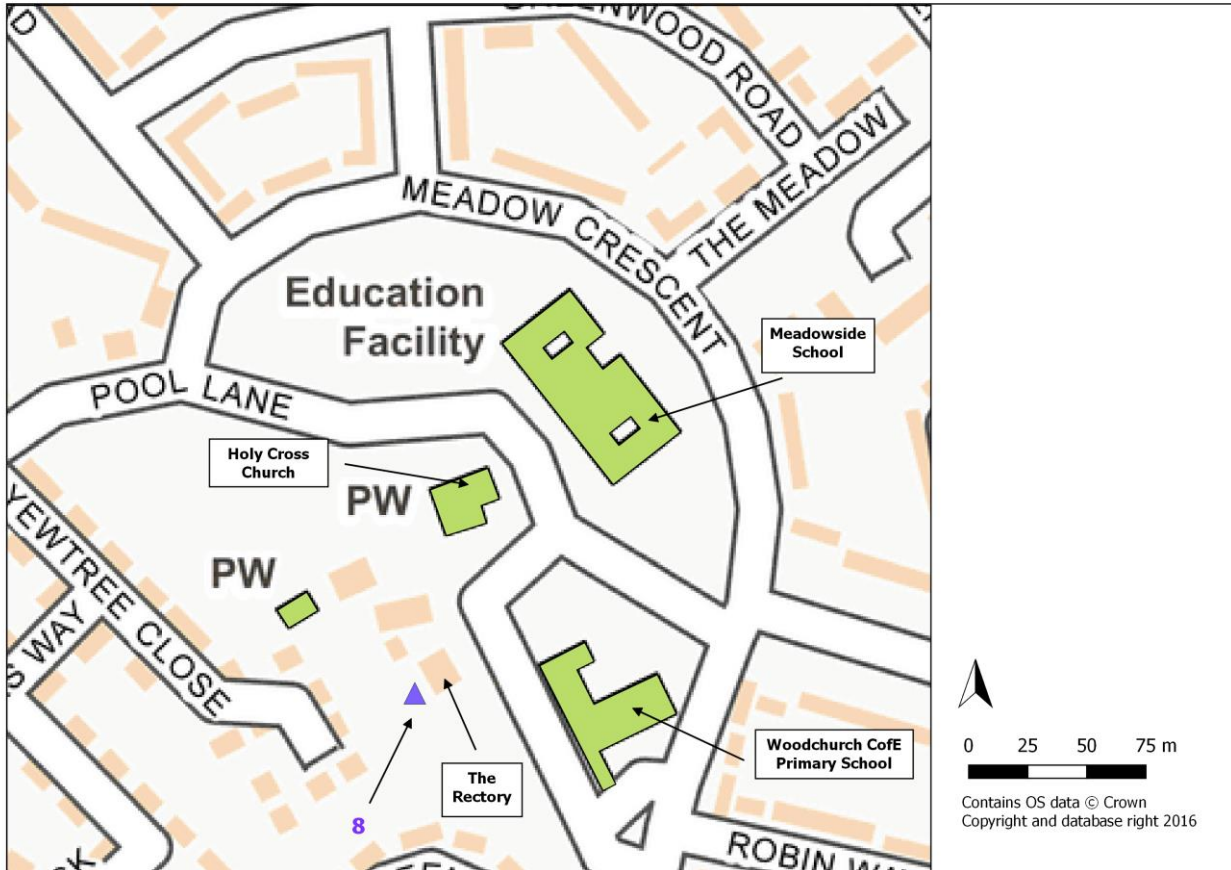


Fig. 15: Location of Test Pit 8

Test Pit 8 reached a final depth of 0.5 m. The topsoil (801), with turf, was a loose, light brownish-grey sandy-silt, 0.17 m thick, with sub-angular stone inclusions, ranging from 1-12 cm in size. Two small finds were excavated from this context; SF801 was a single sherd of 15th-17th century Midland Purple ware and SF802 was a 17th century brick fragment (see Fig. 16). The latter may pertain to the construction of the earliest known Rectory in 1631 or an associated building (see above)



Fig. 16: SF 802

The subsoil (802) was a firm, dark browny-red clayey-silt with sub-angular stones (1-15 cm) and charcoal inclusions, 0.32 m thick. The excavation of the material revealed stone rubble (804) along the southern and eastern section sides (See Figs. 17 and 18). The stone rubble along the southern edge of the trench appeared larger and sub-angular in comparison to the small, angular stones on the eastern edge, possibly indicating two distinct 'spreads' abutting one another. Context (803) was a firm, dark greyey-brown silty-clay. (803) was the matrix in which the stone rubble (804) was situated, 0.11 m thick. Amongst the stone rubble was CBM, slate and charcoal, indicating that

this spread was related to the construction and possible demolition of an earlier building (than the current structure) on the Rectory site. (804) was left *in situ* and (803) was not completed due to time and space restrictions.



Fig. 17: Test Pit 8 facing south

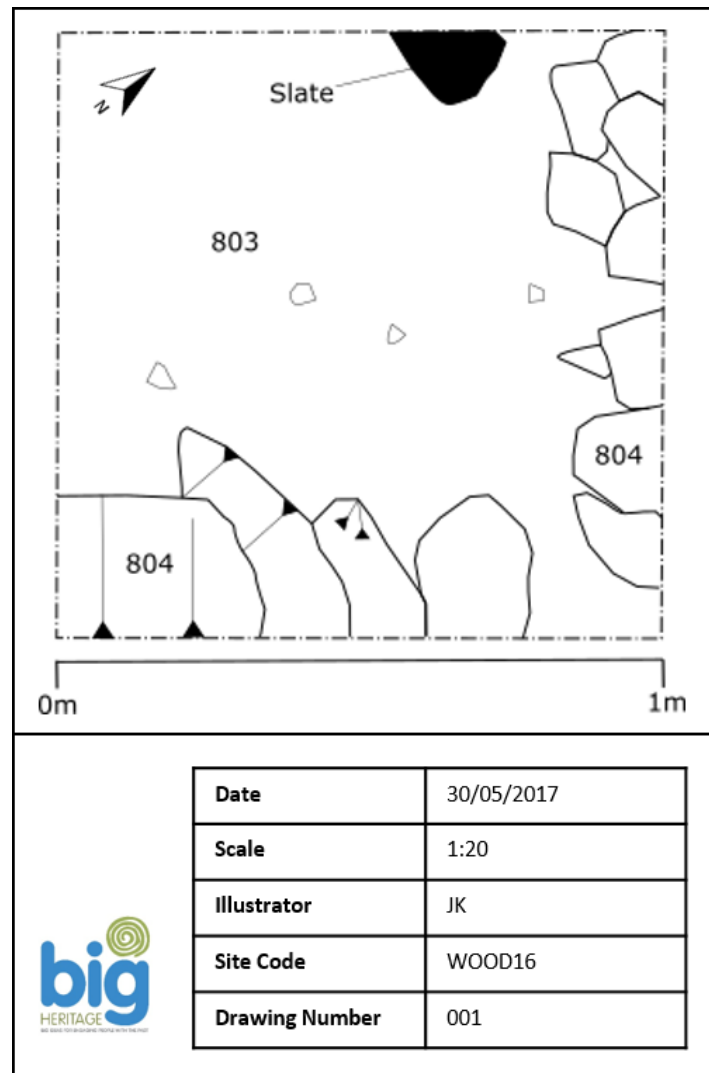


Fig. 18: Test Pit 8 in plan

Table 10: Summary of bulk find materials excavated from TP8

Context	Slate		Slag		Pottery		Plaster		Metal		Glass		Clay Tobacco Pipe		CBM	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
801	14	27	1	8	4	109	1	2	1	2	3	2			39	312
802	54	2665			5	12			1	5	13	25	3	4	63	343
	7	412									1	1			2	3

7.1.9. Test Pit 9

Test Pit 9 was located in the grounds of the Rectory to the east of the building.

Test Pit 9

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327581.089	327580.24	327581.646	327580.874
Northing	386782.343	386781.721	386781.57	386780.89

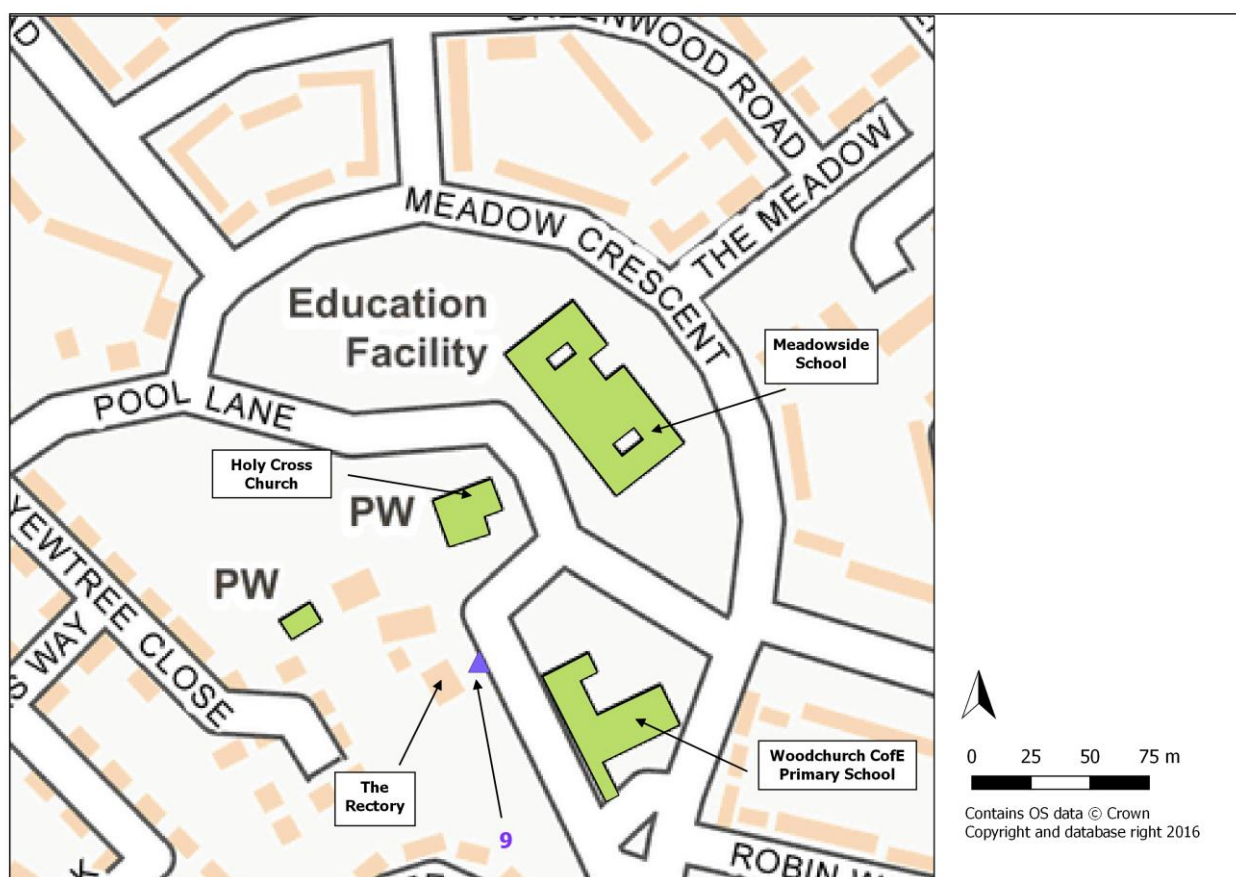


Fig. 19: Location of Test Pit 9

Test Pit 9 was excavated to a final depth of 0.54m. This area of the Rectory has been re-landscaped in the past 50-60 years to accommodate a tarmacked driveway, suggesting some disturbance to the topsoil and subsoil should be anticipated. The topsoil (901), with turf, was a friable, dark brown-red silt with small rounded and sub-angular (1-5 cm) stone inclusions, 0.13 m thick. The subsoil (902) was a shallow, friable, light greyey-brown silty-sand, 0.07 m thick with small pebble inclusions, 1-2 cm in

size. Context (903) was a thin, compacted, mid browny-red gravelly-silt with inclusions of coal, 0.05 m thick. Small finds were located in this context; SF 901 was a 13th-14th century Coal Measure ware sherd from a jug (See Fig. 20) and SF905 was 7 sherds of 15th-17th century Midland Purple ware. Context (904) was a friable, mid greyey-brown gritty-silt with round and sub-angular stone inclusions (1-7 cm), 0.29 m thick. This context produced a wide range of artefacts, including the most small finds from any context; SF 902 was a further two sherds of Midland Purple ware, SF904 was a sherd of 13th-14th century Ewloe Type ware from a jug (see Fig. 20), SF903 was 4 sherds of 15th-17th century Cistercian ware (See Fig. 21) and SF906 and SF907 were examples of Potash glass (pre-1835) from vessels and window glass (See Fig. 22). Test Pits 7, 8 and 9 all provided similar ceramic assemblages, suggesting a concentration of activity in this area from at least the 13th-14th centuries (See Fig. 31).

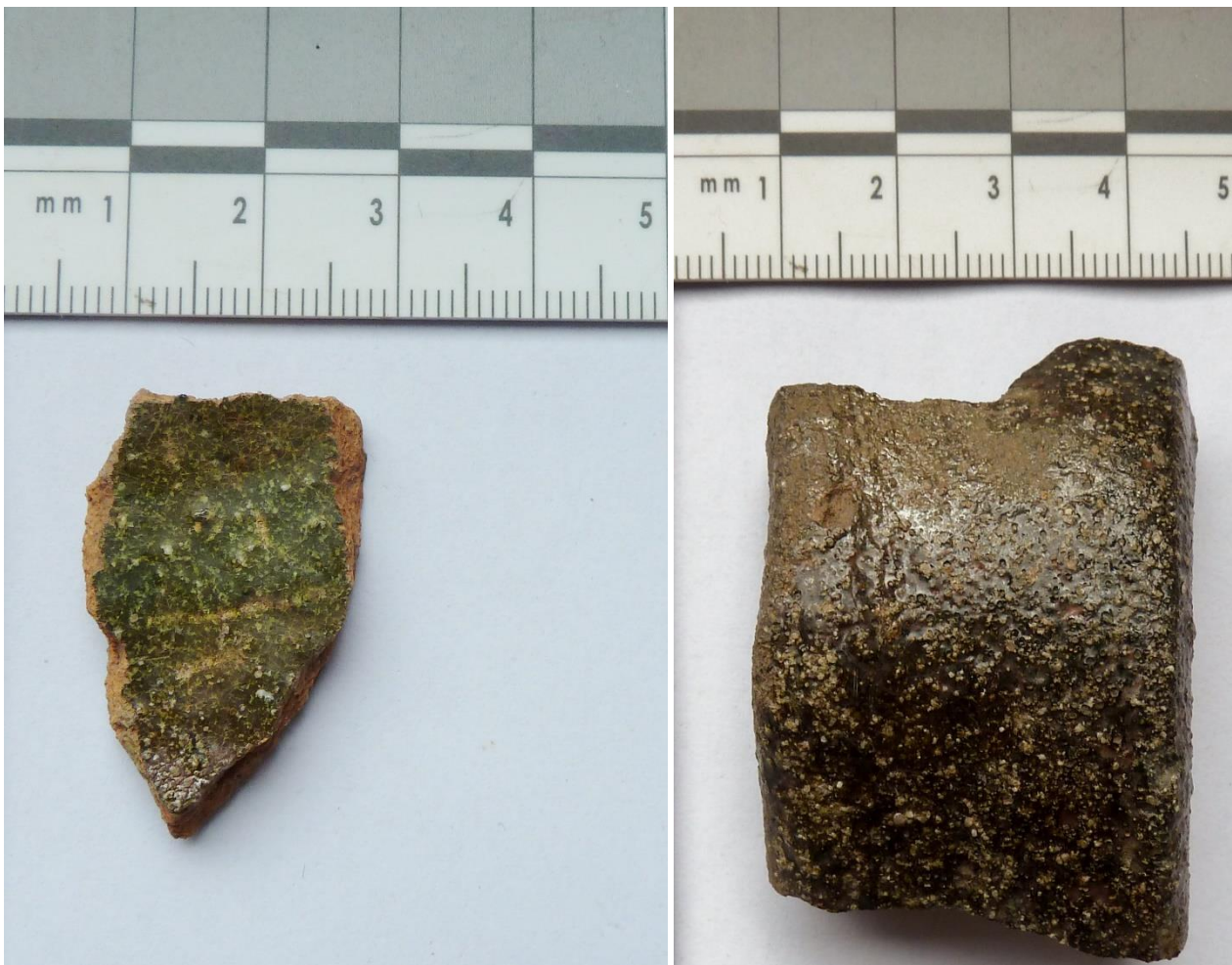


Fig. 20: SF901 and SF904

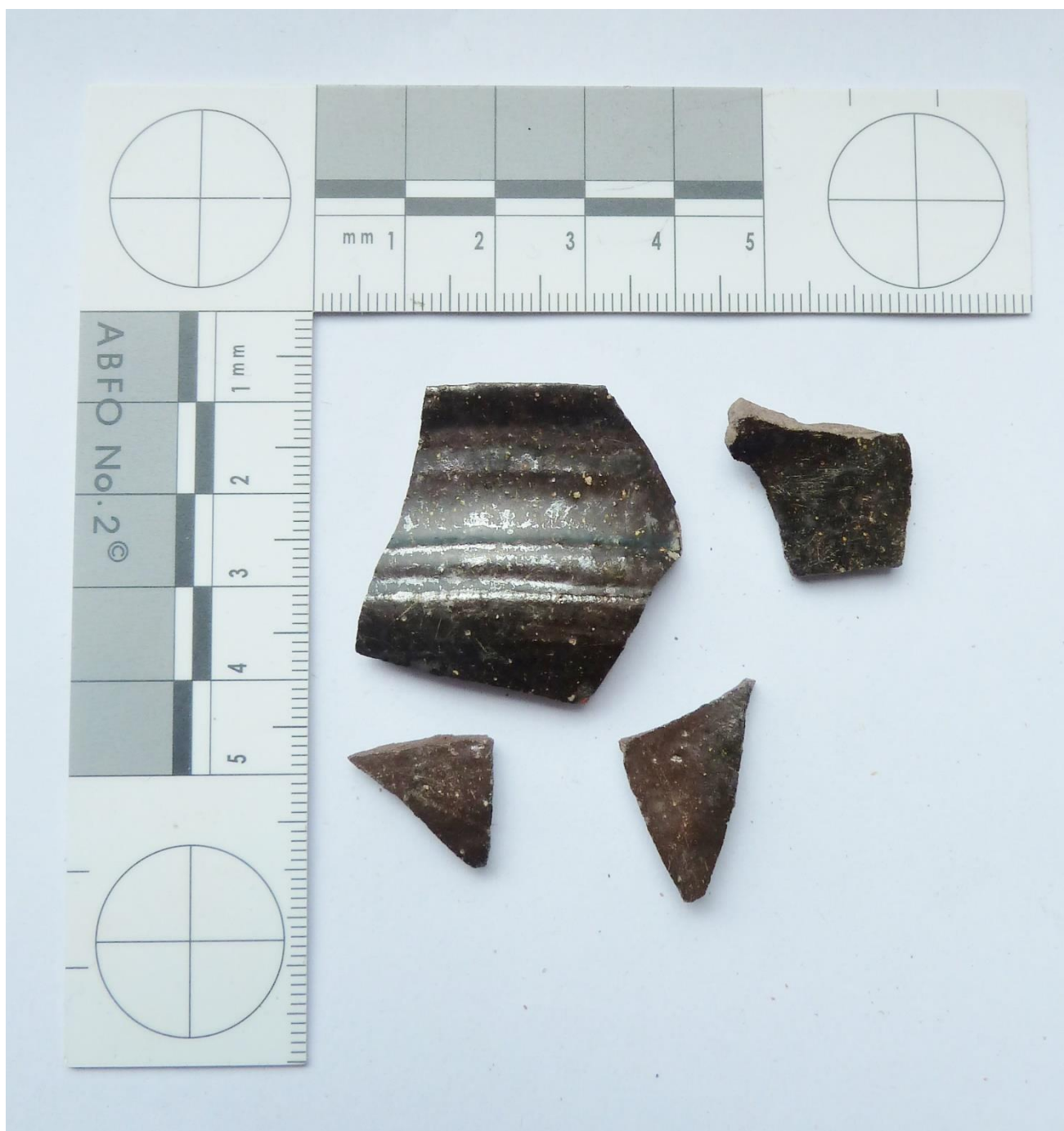


Fig. 21: SF903

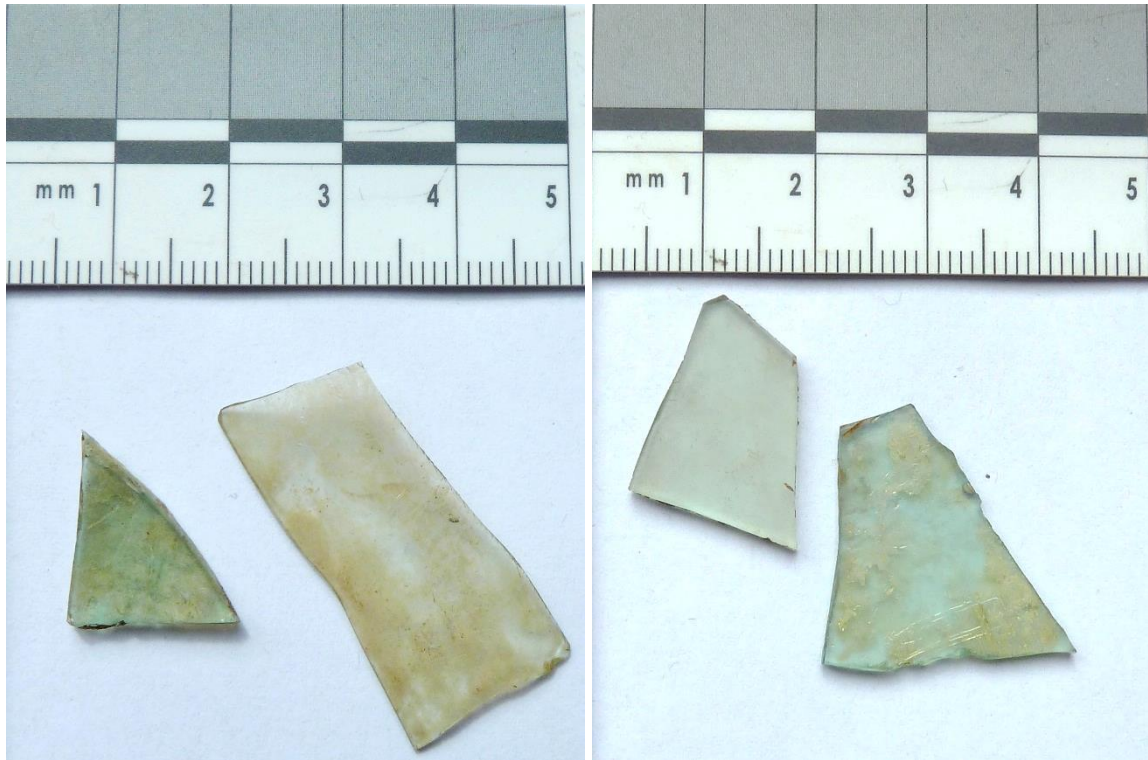


Fig. 22: SF906 and SF907

Table 11: Summary of bulk find materials excavated from TP9

Context	Slate		Pottery		Metal		Lithic		Glass		Clay Tobacco Pipe		CBM		Animal Bone	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
901			4	9			1	<1								
902	28	637	1	1	2	33			4	7			22	79		
903	3	21	1	1			1	2			1		2	38		
904			22	117	1	7					3	10			10	26

7.1.10. Test Pit 10

Test Pit 10 was located in grounds of the Rectory to the south of the building, closest to the Rectory building.

Test Pit 10

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327577.09	327576.204	327576.706	327577.549
Northing	386751.002	386750.559	386749.664	386750.142

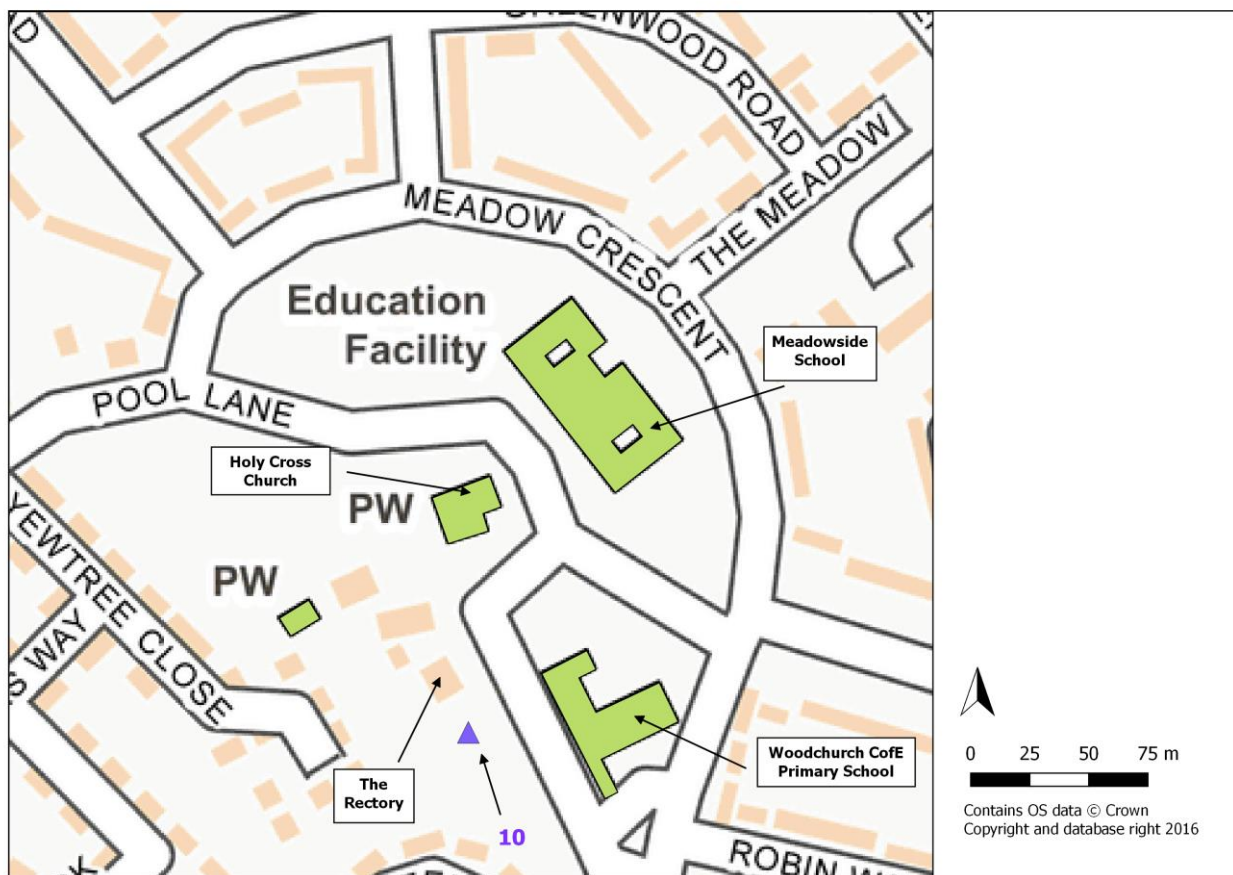


Fig. 23: Location of Test Pit 10

Test Pit 10 was excavated to a final depth of 0.54 m. The topsoil (1001) was a soft, dark brown clayey-silt, 0.16 m thick, with sub-angular stone inclusions, ranging from 1-5 cm in size. The subsoil (1002) was a soft, mid reddy-brown clayey-silt with sub-angular sandstone fragments (1-10 cm) and charcoal

fleck inclusions, 0.10 m thick. Context (1003) was a weakly cemented, light yellowy-brown silty-clay with small pebble inclusions. Sat within (1003) was deposit (1004). (1004) was a firm, orangey-grey silty-clay deposit encountered at 0.38 m and measuring 0.38 x 0.39 m. However, the western portion was truncated by the trench edge, so its full dimensions remain unknown. The context remained unexcavated due to time constraints but it appeared to be the possible fill of a potential cut. However, this would need further investigation to confirm this interpretation.

Table 12: Summary of bulk find materials excavated from TP10

Context	Slate		Pottery		Lithic		Glass		Clay Tobacco Pipe		CBM	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1001	11	22	14	46	1	4	10	53	2	5	17	79
1002			10	123			5	6			11	65
1003			3	9								

7.1.11. Test Pit 11

Test Pit 11 was located on the external school field belonging to Woodchurch Church of England Primary School. The test pit was excavated in the north-western corner of the field overlooked by residential gardens.

Test Pit 11

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327689.83	327688.727	327689.83	327688.739
Northing	386658.755	386658.767	386657.669	386657.675

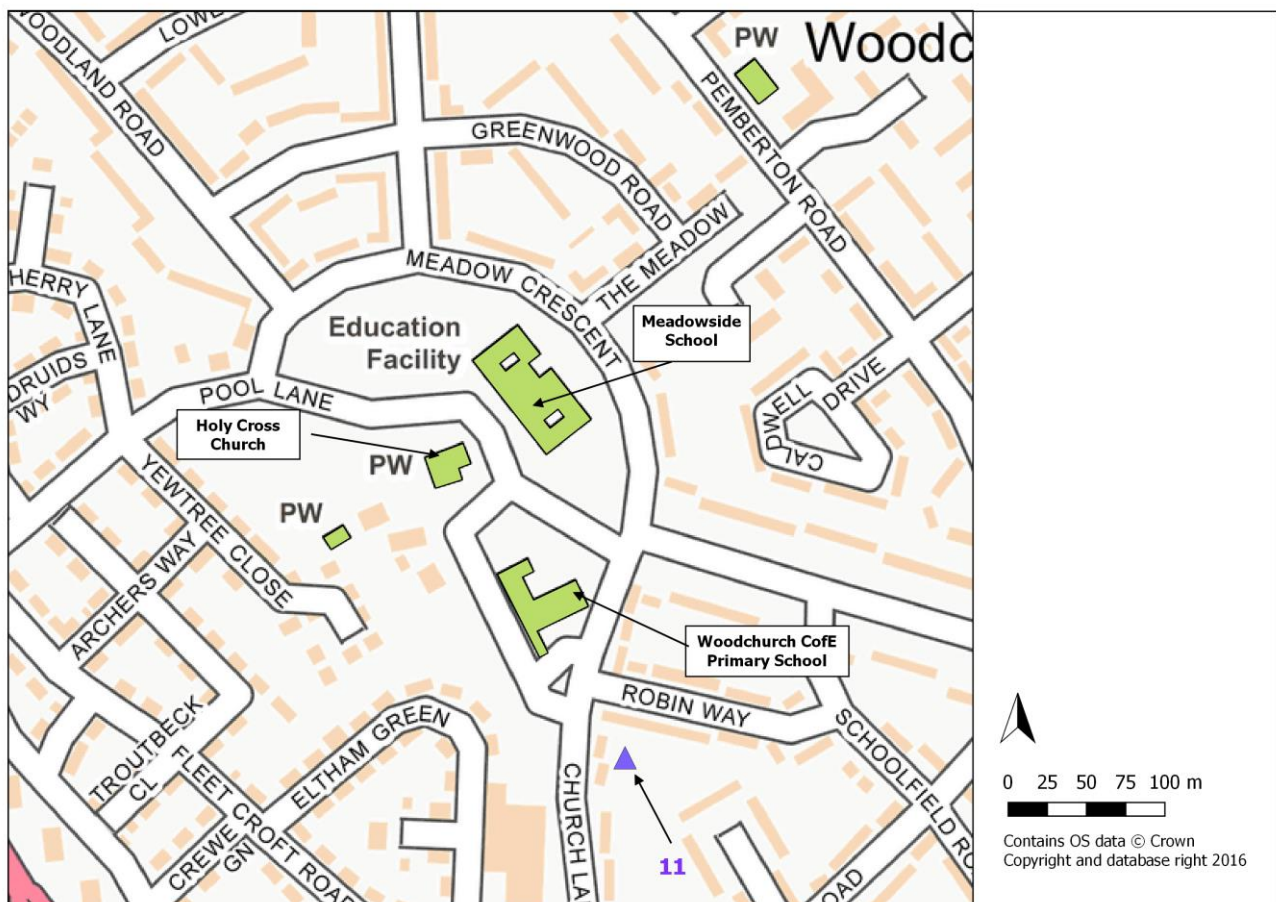


Fig. 24: Location of Test Pit 11

Test Pit 11 was excavated to a final depth of 0.31 m. It was opened as an activity with the local play scheme for children 4-11 years of age. The depth of the trench reflects this focus. The topsoil (1101), with turf, was a soft, mid brownish-grey sandy-silt, 0.27 m thick, with small round and sub-angular

stones (1-5 cm). Context (1102) was a soft, dark browny-red sandy-silt with rounded and sub-angular stone inclusions (1-5 cm). This context was not completed due to time constraints.

Table 13: Summary of bulk find materials excavated from TP11

Context	Slate		Pottery		Plastic		Misc			Metal		Glass		CBM	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Description	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1101			3	3	15	9	1, 1	16, 16	Alloy (?) Hammer head frag (?)	19	386	31	136	28	562
1102	2	2	3	3						1	8	6	17	5	43

7.1.12. Test Pit 12

Test Pit 12 was located west of the Community Parish Hall on open grass abutting the northern perimeter wall of the Rectory garden.

Test Pit 12

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327534.395	327533.708	327535.037	327534.308
Northing	386773.068	386772.465	386772.361	386771.716

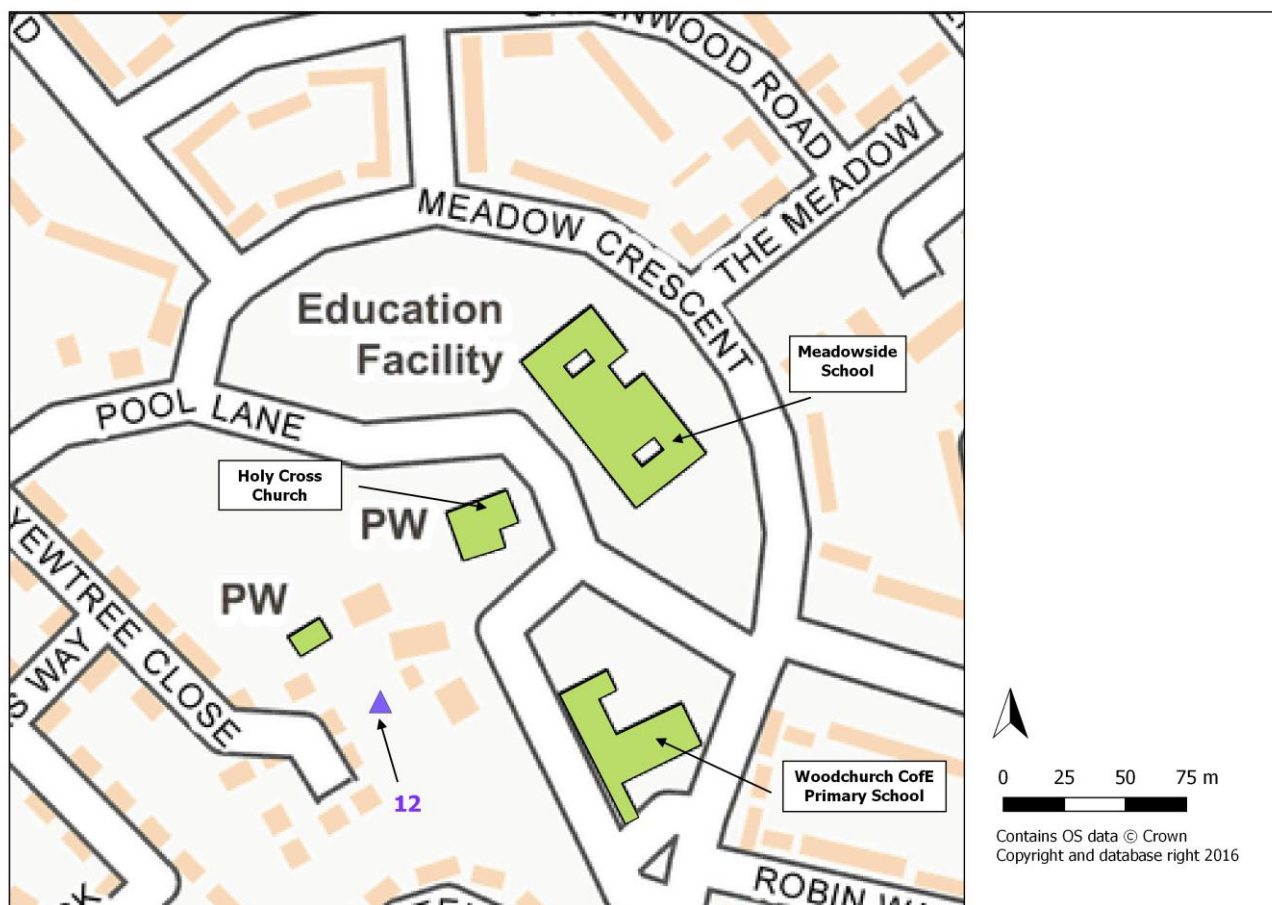


Fig. 25: Location of Test Pit 12

Test Pit 12 was half-sectioned at 0.42 m and quarter-sectioned at 0.55 m, reaching a final depth of 0.7 m in the south-western quadrant. The topsoil (1201), with turf, was a soft, mid greyey-brown sandy-silt, 0.31 m thick. Mixed with the soil was rubble CBM and slate, indicating a rubble dump. The

thin (0.04 m) subsoil (1202) was a soft, mid reddy-brown sandy-silt, with rounded and sub-angular stone (1-5 cm in size) inclusions. Context (1203) first appeared in the north-east corner of the test pit. Upon excavation, this context covered the whole test pit. It was a compact, mid browny-red gritty-clay, 0.16 m thick, with sub-angular stones (1-7 cm in size). Continued excavation revealed the presence of a significant slate deposit (See Fig. 26) beneath areas of (1203), specifically under the raised area in (1203). This suggests that the ground surface was not even when (1203) was laid down in this area. The depth and extent of the slate deposit was not determined due to time constraints.



Fig. 26: Slate deposit in Test Pit 12

Table 14: Summary of bulk find materials excavated from TP12

Context	Slate		Slag		Shell		Pottery		Metal	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1201	39	773					15	80	11	45
1202	14	320	2	2	1	1	15	137	4	74

Context	Lithic		Glass		Clay Tobacco Pipe		CBM		Animal Bone	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1201	1	1	52	128			135	4765	1	2
1202			12	32	1	1	3	18		

7.1.13. Test Pit 13

Test Pit 13 was located west of the Community Parish Hall. The test pit was opened directly abutting the external face of the northern perimeter wall of the Rectory garden.

Test Pit 13

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327541.779	327541.003	327542.227	327541.453
Northing	386769.191	386768.831	386768.368	386767.934

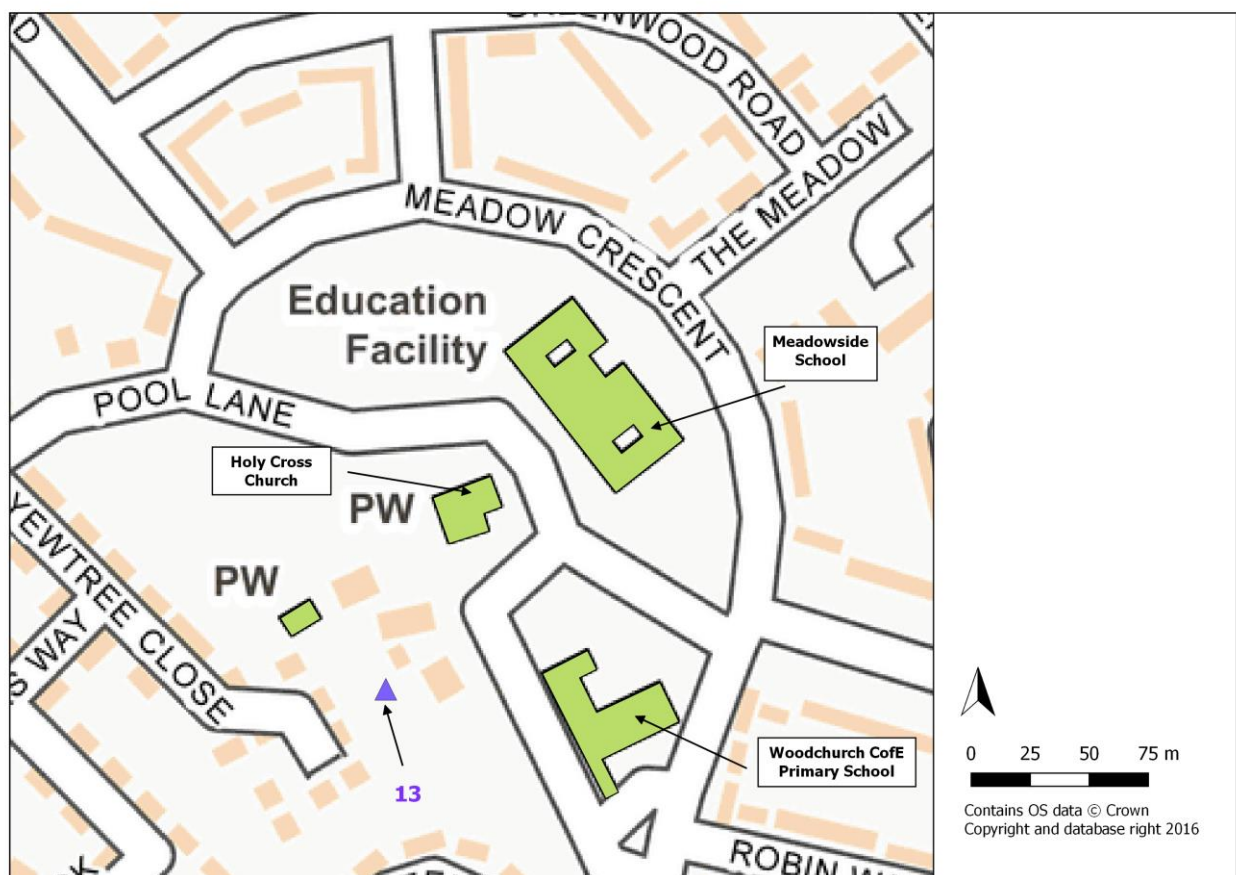


Fig. 27: Location of Test Pit 13

Test Pit 13 was excavated to a depth of 0.89 m. The test pit was excavated to explore the exterior of the Rectory's perimeter wall (1306). The topsoil (1301), with turf, was a soft, greyey-brown sandy-silt with sub-angular stone inclusions, ranging from 1-5cm in size. The context ranged from 0.13 m at

its shallowest to 0.26m at its thickest. Context (1302) was a weakly cemented, mid brown gritty-clay, 0.13 m thick, with sub-angular stones (3-5 cm). Context (1303) was a friable, mid reddy-brown silty-clay, interpreted as possible re-deposition of natural material, 0.49 m thick. Context (1304) was a friable, mid reddy-brown sandy-silt with sub-angular stone inclusions (5-10 cm), 0.14 m thick. This context produced one small find: SF1301, which is a sherd of 15th-17th century Midland Purple ware. This context, like all the previous contexts directly abuts the exterior of Rectory's perimeter wall. In addition, (1304) is situated directly above the wall foundation (1305).

(1305) was a stone block and brick foundation, mortared together at the base of the wall (1306), running E-W. (1306) was a brick and mortar perimeter wall with a squared finish. Regular courses and an English Garden Wall bonding.



Fig. 28: Exterior wall of Rectory Garden

Table 15: Summary of bulk find materials excavated from TP13

Context	Slate		Slag		Shell		Pottery		Plastic		Plaster	
	TotalE-W	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1301	19	420					13	76	3	12		
1302	9	145			1	<1	4	50				
1304			1	15	1	110	4	46			1	6

Context	Misc			Metal		Glass		CBM	
	Total	Wt (g)	Description	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1301	1	3	Coconut shell (?)			11	71	64	966
1302				1	16	3	10	1	39
1304						3	10	1	1

7.1.14. Test Pit 14

Test Pit 14 was located in the rear residential garden of 13 Yew Tree Close, CH49 5PA.

Test Pit 14

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327445.877	327444.768	327445.871	327444.777
Northing	386830.875	386830.879	386829.782	386829.79

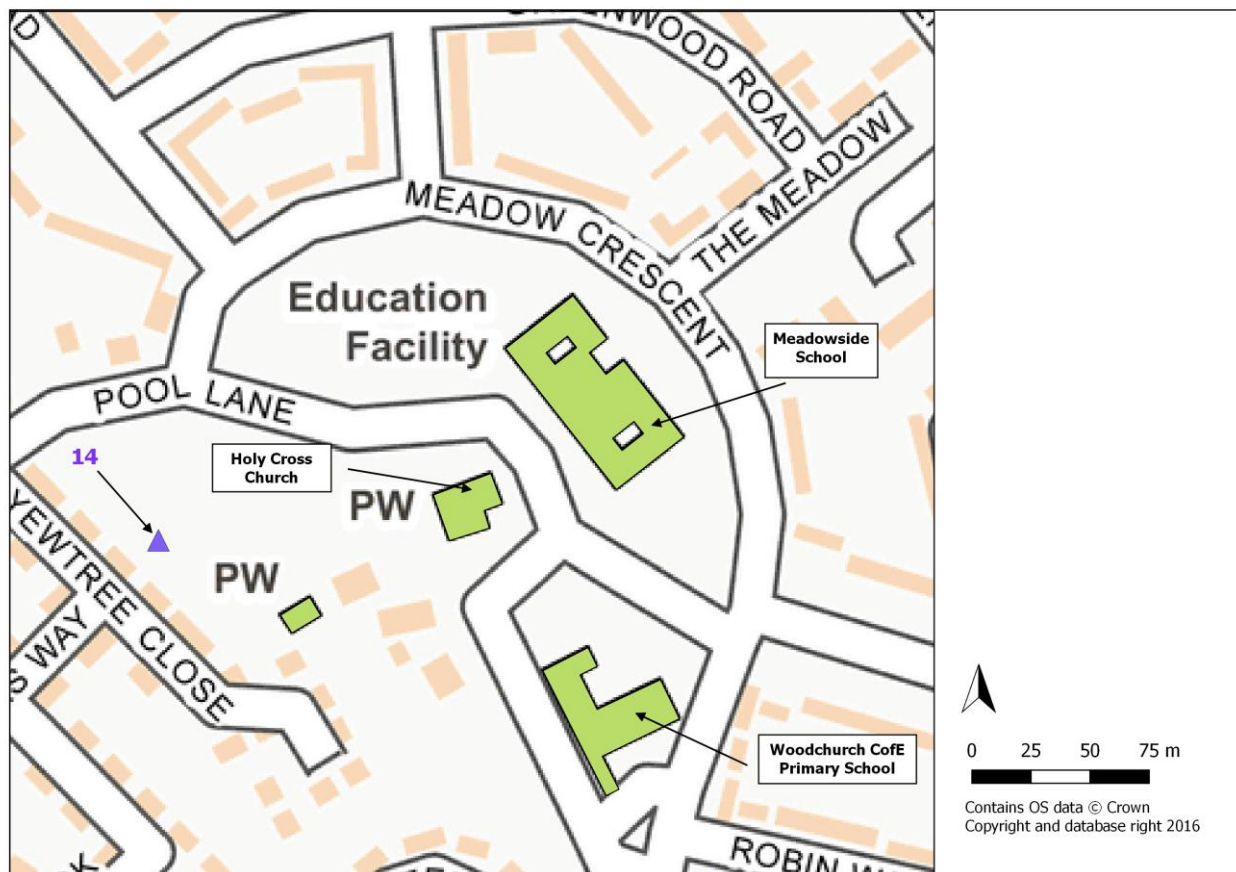


Fig. 29: Location of Test Pit 14

Test Pit 14 reached a final depth of 0.95 m. The topsoil (1401), with patchy turf, was a stiff, mid yellowy-brown sandy-silt, 0.11 m thick. The subsoil (1402) was a stiff, light yellowy-brown sandy-silt, 0.53 m thick. During excavation of this context a concrete wall (1402) was located running N-S through the trench, 0.1 m wide. This appears to be a linear foundation for a probable outhouse. (1402) then continued only to the west side of the foundation wall. As (1402) covers both the

foundation wall (1404) and (1403) this is clearly the later context. Context (1403) was a weakly cemented, light greyey-brown clayey-silt, 0.23 m thick, located to the east of the cement wall only. The excavation of (1402) and (1403) was not concluded due to time constraints and lack of space within the 1x1 m² test pit.

Table 16: Summary of bulk find materials excavated from TP14

Context	Slate		Shell		Pottery		Plastic		Plaster		Metal		Glass		CBM		Animal Bone	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1401			1	>1	1	1			19	51					3	26		
1402	2	18	1	1	6	16	3	1			13	47	8	16	11	175	1	1
1403											148	1229						

7.1.15. Test Pit 15

Test Pit 15 was located in the extension to the graveyard, west of Holy Cross church. The test pit was opened at the northern-most extent of the space.

Test Pit 15

	NE Corner	NW Corner	SE Corner	SW Corner
Easting	327441.019	327440.009	327441.134	327440.144
Northing	386870.709	386870.636	386869.778	386869.612

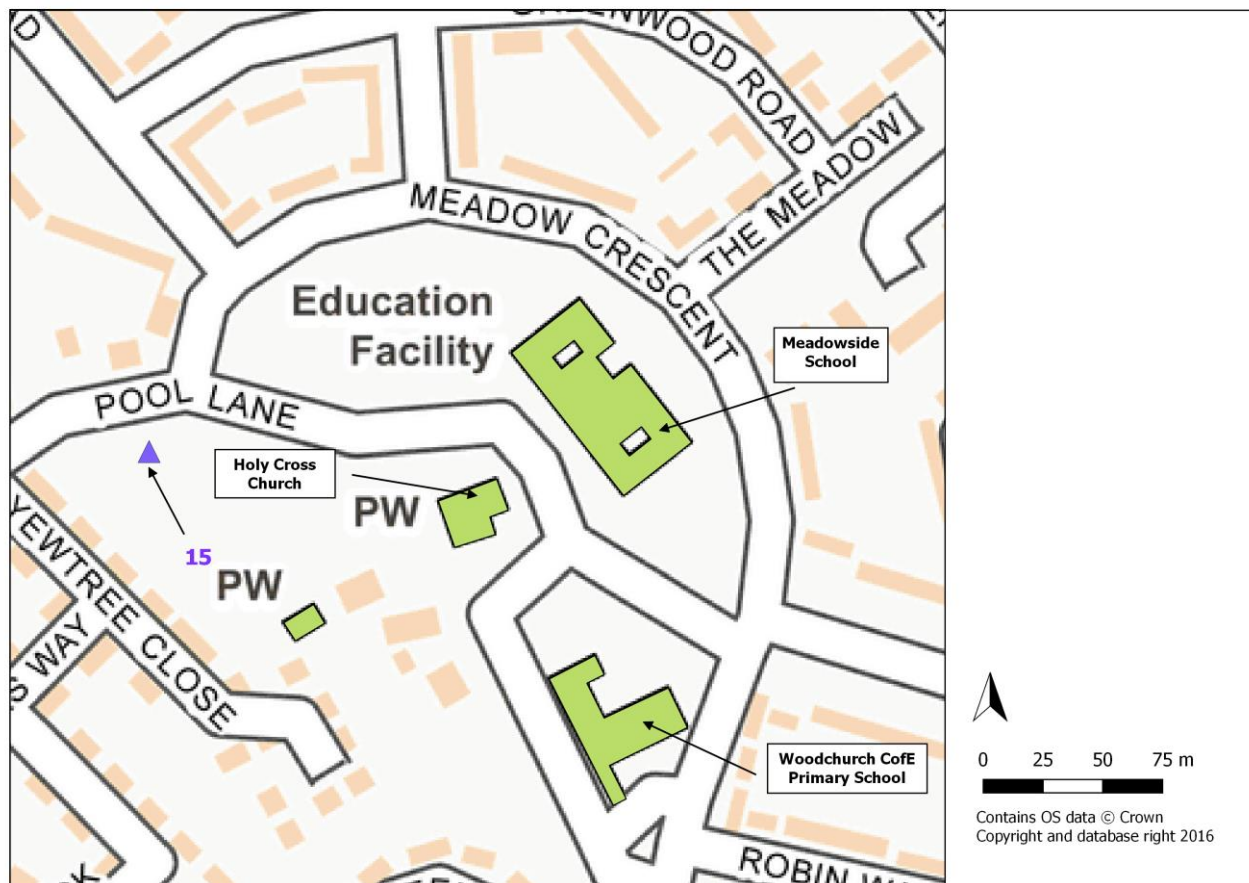


Fig. 30: Location of Test Pit 15

Test Pit 15 was half-sectioned at 0.22 m, quarter-sectioned at 0.43 m and reached a final depth of 0.49 m in the north-east quadrant. It was opened in the grave-yard extension to Holy Cross Church. Notably, this was the only test pit opened on land of a comparable height to that of the church and churchyard, which is lower than the surrounding areas.

The topsoil (1501), with turf, was a compact, mid greyey-brown silt, 0.18 m thick, with round and sub-angular stone inclusions (7-10 cm). The subsoil (1502) was a shallow, weakly cemented, mid reddy-brown sandy-clay. Context (1503) was a strongly cemented, mid reddy-brown sandy/clayey-silt, 0.15 m thick, with sub-angular stones (1-5cm). (1504) was encountered in the south-east corner of the trench, 0.51x0.28 m, ranging from 0.01 to 0.14 m thick. It consisted of a strongly cemented, mid reddy-brown gritty-silt. The extent of the feature was unknown as it was truncated by the west facing section. Below both (1503) and (1504) was context (1505). (1505) was a strongly cemented, mid yellowy-grey silty-clay with sub-angular stones ranging from 1-8 cm in size. The context appeared sterile and may represent the natural in this area but only further investigation would allow for a firm interpretation. As this is the lowest area we excavated this is a good contender for the local natural, which is the base-rich loamy and clayey soils noted above.

Table 17: Summary of bulk find materials excavated from TP15

Context	Slate		Slag		Pottery		Metal		Glass		CBM	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1501	2	3	4	26	2	12	1	2	6	29	4	60
1502	6	23	13	63	4	6	5	100	2	7	5	67

8. DISCUSSION

The project saw the excavation of 15 test pits around the historic core of Woodchurch. Hundreds of artefacts were recovered. These were predominantly pottery and building material, totalling 2606 individual finds (see Figs. 32 and 33). The majority of the finds were from the post-medieval or modern era. However, the project did unearth artefacts from as early as the 13th century.

Each test pit provides a snapshot of the area under investigation, as presented in Section Seven. However, test pitting information is most useful when all the information from each individual test pit is analysed and synthesised alongside all the data from other test pits in the study area. This type of broader analysis helps provide an overview of an areas development throughout its history.

Woodchurch is currently occupied, which does influence the sampling strategy employed by the project, as it was dependent on areas with open space and the consent of multiple landowners to work on their respective properties (see Fig. 4 for distribution of test pits). Outlined below are the results of the test pitting.

8.1. Prehistoric

The project recovered no evidence for prehistoric activity in the research area. Based on the lack of finds or features associated with this period within the study area, as recorded by the Merseyside Historic Environment Record, this was not unexpected.

8.2. Romano-British

The test pitting recovered no evidence for Romano-British activity in the study area. This is consistent with the current documented evidence for Woodchurch.

8.3. Early Medieval

The project recovered no evidence for early medieval activity in the research area. Based on the lack of finds or features associated with this period, as recorded by the Merseyside Historic Environment Record, this was not unexpected.

8.4. Medieval

The earliest ceramic material recovered from the research area were examples of 13th-14th century Ewloe-type ware and Coal Measure ware (see Fig. 31. for distribution and 11.4.5 for further discussion of the pottery assemblage). These clustered around the historic core, namely the Rectory and the current school field, both of which are in close proximity to Holy Cross Church. This is indicative of medieval activity within the vicinity of this concentration. This is not unexpected, as activity is documented in this area in historical sources and Holy Cross Church was in use from at least the 13th century.

8.5. Post-Medieval

There is a clear surge in artefacts dating to the post-medieval period in Woodchurch, most notably the pottery assemblage. The earliest examples from this period are a collection of twenty-three sherds of Midland Purple Ware, dating from the 15th-17th centuries (see 11.4.5 for further discussion of the pottery assemblage), which straddle the medieval and post medieval periods. In addition, five sherds of Cistercian ware were also recovered from comparable locations, also dating to the 15th-17th centuries. Most of the ceramics sherds are unabraded, many are large and some are clearly from the same vessel, indicating that most of the pottery is not from manuring or other agricultural practices but is likely to be related to occupation in the immediate area (see Fig. 31 for distribution of small finds). In addition, one brick fragment has been identified as post-medieval, dating from the 17th century, possibly from the earliest recorded Rectory or one of the associated outhouses. The concentration of material around the historic core, the documentary evidence and extant buildings in the area all indicate ongoing occupation of this area throughout the post-medieval period. The material assemblage supports this evidence.

Test Pit 8 produced the only evidence of probable post-medieval features, in the form of rubble, SBM (stone building material) and CBM (ceramic building material) spreads in the grounds of the Rectory. Whilst this cannot be definitively assigned to this period, the associated material assemblage, proximity to the extant Rectory and the documented activity on site indicate that these features may relate to previous Rectory buildings and/or associated outhouses.

8.6. Industrial and Modern

The Industrial and Modern periods are well represented by pottery, CBM and animal bone (See Appendix A, Figs. 32, 33 and 35). This material is also supplemented by modern metalwork, plastics, fabrics and glass in bulk, all of which are typical of early modern and modern occupational activity.

Geophysical survey conducted by Magnitude Surveys as a community training event (Full report: <http://bigheritage.co.uk/files/2016/01/MSSJ53-53-Geophysical-Survey-Report-at-Woodchurch-School.combined.compressed-3.pdf>) located no evidence of activity on the open fields surrounding Meadowside school to the north-east of Holy Cross Church (the only open area available for investigation). The magnetic survey responded well to the survey area's environment. No anomalies of possible or probable archaeological origin were identified. The development of Woodchurch Estate from the late 1940's and the site being closely surrounded by housing and schools may have obscured any features of possible archaeological origin should they be present. The results primarily reflect modern metallic debris (Torruella 2017), suggesting that the land has been heavily disturbed in modern times and likely re-landscaped during the construction of Meadowside School.

9. CONCLUSION

Overall, the test pitting project undertaken at Woodchurch in the autumn of 2016 was successful in meeting its Aims and Objectives. Firstly, the project demonstrated that geophysical survey can be successfully implemented in the area and that features and material of archaeological interest survive in this part of Woodchurch despite development over the past century. The test pitting project also recovered a significant artefactual assemblage, the oldest artefact dating to the 13th-14th century. The main body of material pertained to the post-medieval period or later, which was not unexpected given the historical evidence and surviving extant buildings (see above).

Test pitting is a demonstrably useful and practical methodology for exploring currently occupied settlements, particularly ones that are as densely developed like Woodchurch. Future work should endeavour to increase the density of the test pit distribution to develop a better understanding of how the historic core, covered by the research area, may have been utilised.

Other areas of future interest include Arrowe Park (MME 855) to the south-west of the Woodchurch Estate and an earthwork noted by the Merseyside Historic Environment Record (MME 853). The latter has not been archaeologically explored, meaning its date and character has yet to be ascertained. Both sites may benefit from geophysical survey if appropriate targets could be identified.

Secondly, Woodchurch also demonstrated the value of archaeology in terms community impact. Volunteers donated approximately 2726 hours of time to the project, the equivalent of £22,716 (Source: HLF 2016). We worked with over 300 members of the public who came together to undertake geophysical survey, test pitting, finds washing and processing, digitisation and participated in training offered by local specialists. We also worked with Woodchurch Church of England Primary School to curate the objects the community found and create mini museums in their school and a publication to go out to all local residents. The Woodchurch Big Dig served as a focal point for this community to come together and engage in new and interesting ways, working toward a common goal.

In addition, the Woodchurch Big Dig also provided the opportunity for volunteers to learn new archaeological skills, such as excavation, post-excavation and recording. Big Heritage also facilitated additional outputs where individuals and groups expressed a desire to build on the skills

acquired through the initial activities, with participants undertaking work experience for school and college and activities that contributed to Duke of Edinburgh awards.

The activities and results have demonstrated how the methodology set out above, and followed throughout the course of the project, can shed light on a settlements development, particularly if the settlement is currently occupied with limited areas to investigate.

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11. APPENDICES

11.1. Appendix A: additional figures

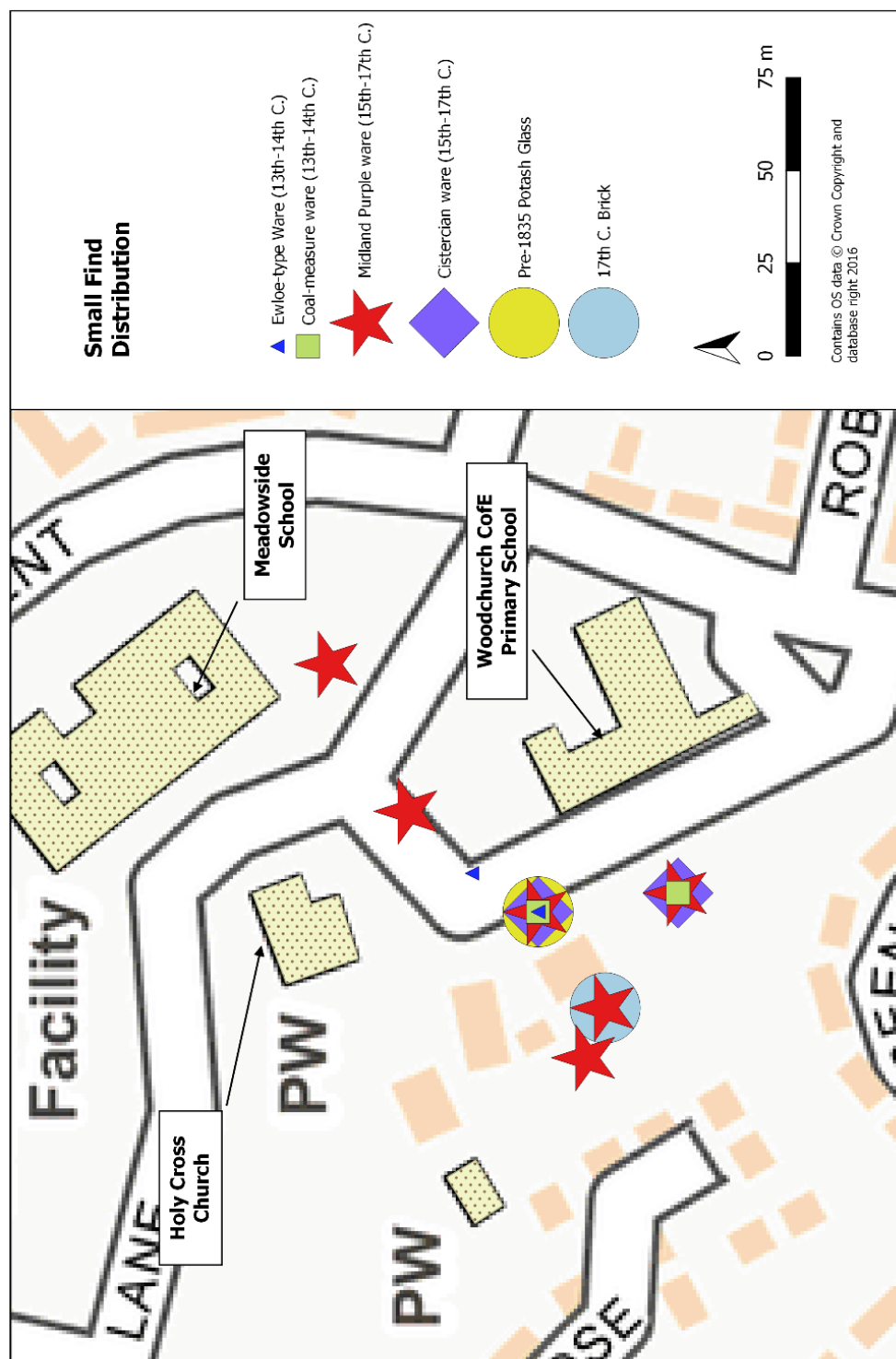


Figure 31: Datable Small Finds

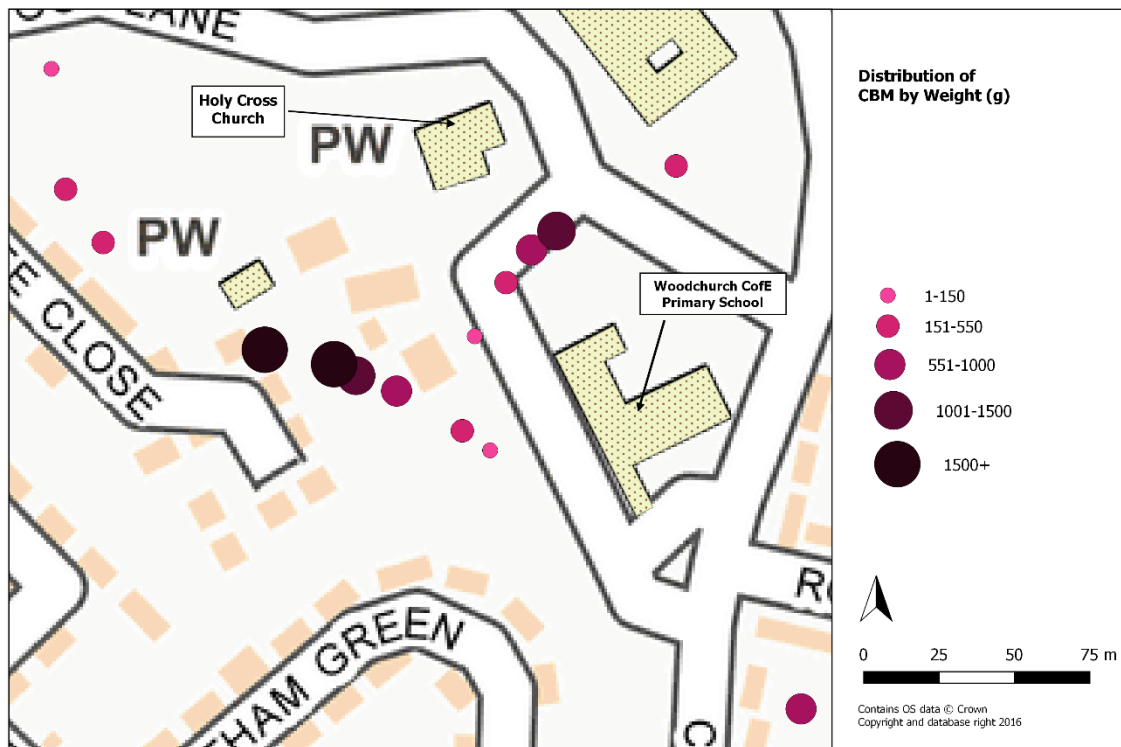


Fig. 32: Distribution of CBM by Weight (g)

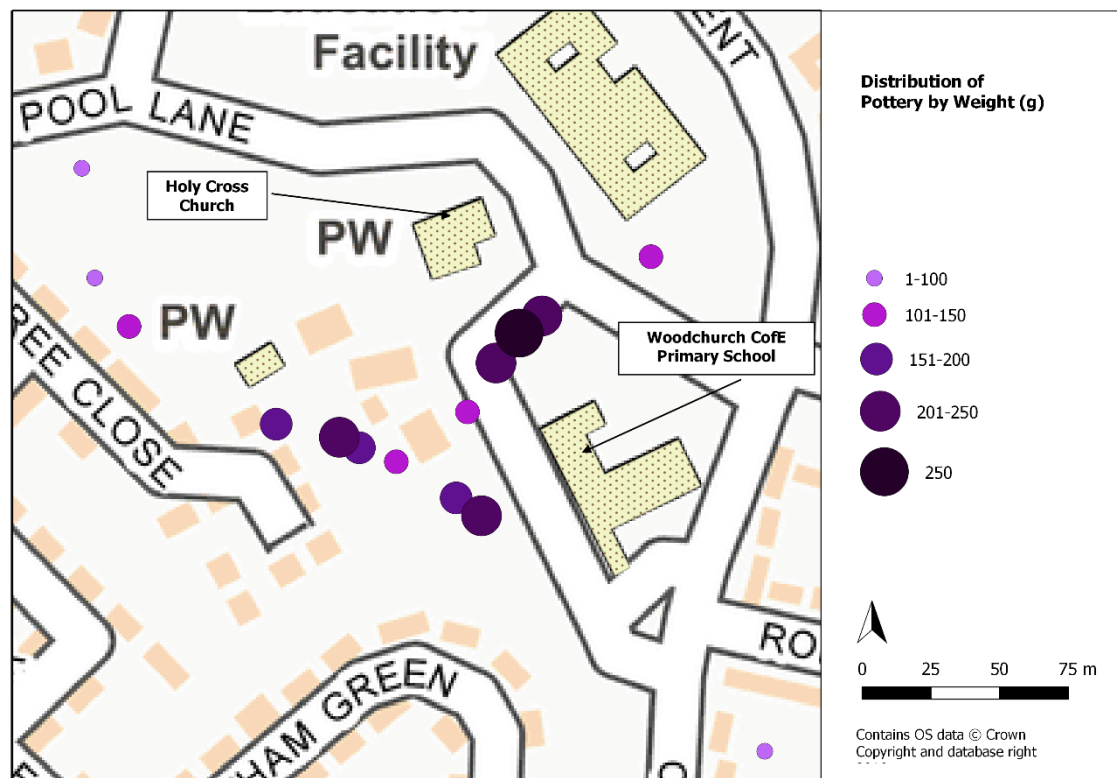


Fig. 33: Distribution of Pottery by Weight (g)

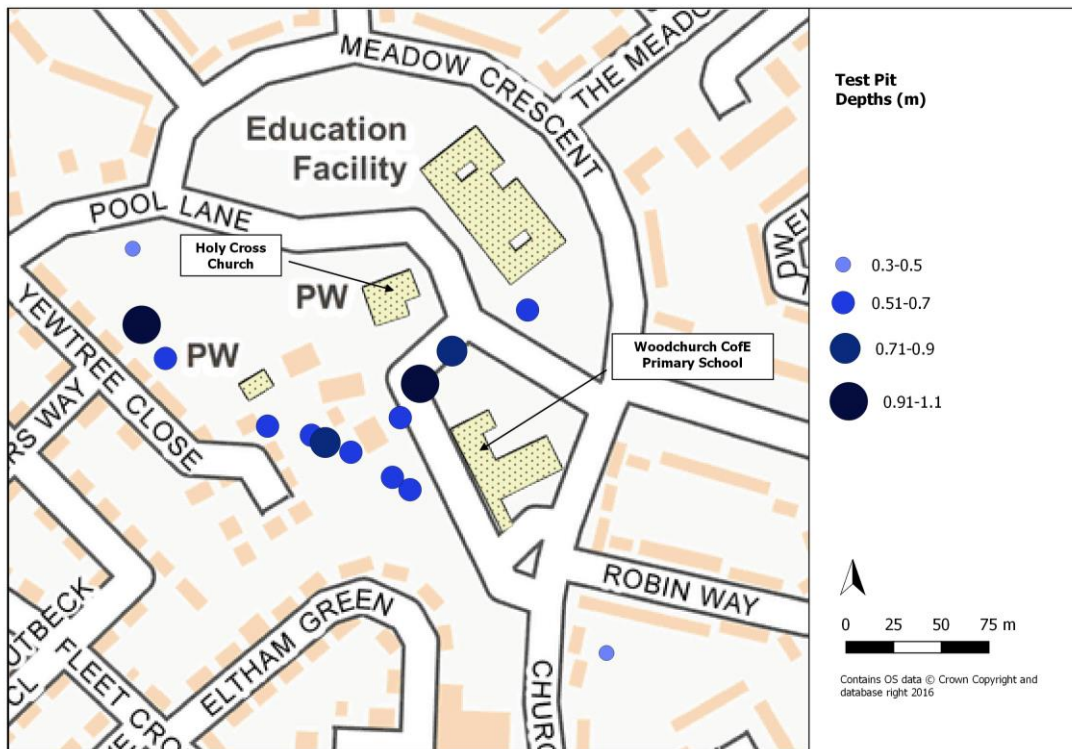


Fig 34: Test Pit Depths (m)

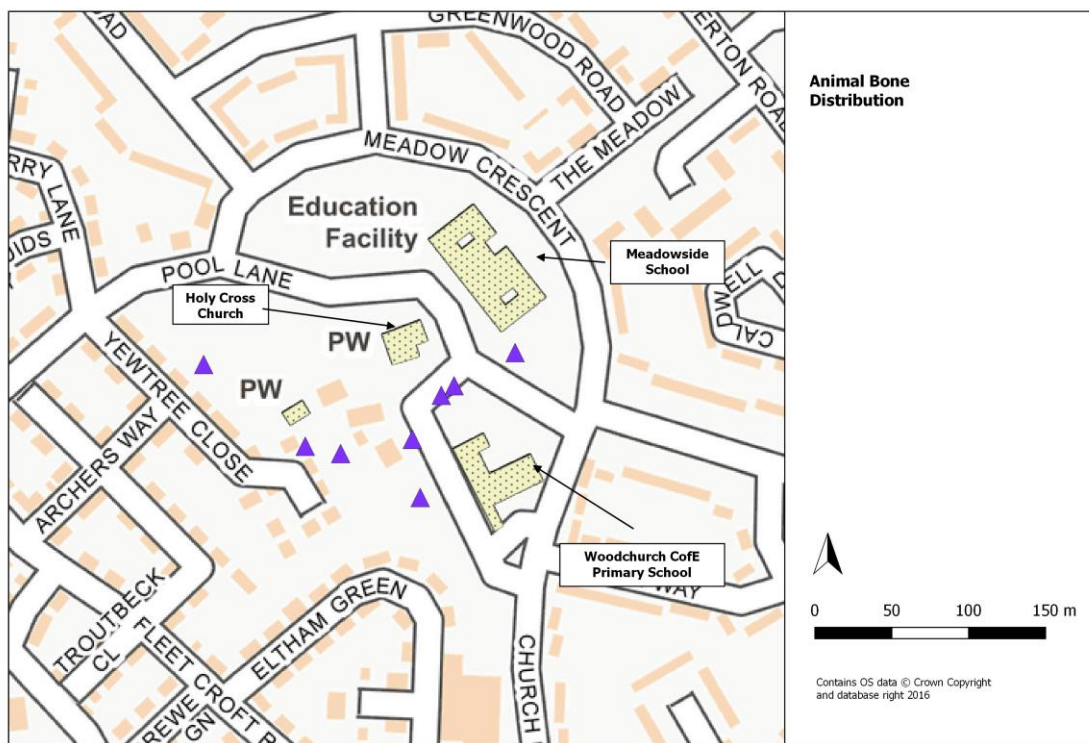


Fig 35: Distribution of Animal Bone

11.2. Appendix B: context descriptions

Test Pit No.	Context No.	Type	Fill of	Context interpretation	Description	L(m)	W(m)	Thickness (m)
1	101	Layer		Topsoil	Firm light yellowish brown sandy silt. Sub angular stone inclusions less than 10cm, up to 5%.	2.00	1.00	0.13
1	102	Layer		Dumping deposit	Stiff light yellowy brown sandy silt. Sub angular stone inclusions less than 10cm, up to 5%. Deposit included broken paving slabs and CBM.	2.00	1.00	0.83 although full depth unknown as excavation concluded before full extent reached
2	201	Layer		Top soil	Compact mid greyey brown sandy silt. Stone inclusions up to 7cm diam. Less than 5%.	1.00	1.00	0.31
2	202	Layer		Sub soil	Compact mid greyey brown sandy silt. Stone inclusions up to 7cm diam. Less than 5%. Soil very dry	1.00	1.00	0.17
2	203	Layer		Sub soil	Hard mid brownish brown sandy silt. Sub angular stones 1-10cm. Less than 5%	1.00	1.00	0.22
2	204	Layer		Layer of redeposited building material	Hard greyey brown silty grit.	1.00	1.00	0.09
2	205	Layer		Clayey silt, possibly natural	Friable mid greyey brown clayey silt, with sand inclusions.	1.00	1.00	0.11
3	301	Layer		Topsoil	Stiff mid brownish grey sandy silt. Sub angular stones 0-10cm less than 5%.	1.00	1.00	0.24
3	302	Layer		Levelling event	Stiff mid brownish grey sandy silt. Sub angular stones 0-15cm, 10-20% Heavily compacted with CBM and rubble.	1.00	1.00	0.60
3	303	Layer		Clay	Hard mid orangey brown clay. Small stone inclusions 0-	1.00	0.50	Unknown as not fully excavated.

					5cm. No material culture in context.			
4	401	Layer		Top soil	Very fine light greyey brown sandy silt. Plentiful stone and lime inclusions.	1.00	1.00	0.36
4	402	Layer		Sub soil	Stiff medium yellowish brown sandy clay. Stone and sandstone inclusions 1-10cm.	1.00	1.00	0.20
4	403	Layer		Clay	Hard dark reddish brown clay. Sub angular stone and sandstone inclusion 1-5cm.	1.00	1.00	0.06 context not fully excavated.
5	501	Layer		Topsoil	Stiff mid brownish grey sandy silt. Loose gravel inclusions.	1.00	1.00	0.10
5	502	Layer		Sub soil possible dumping deposit	Stiff brownish grey sandy silt. Sub angular stone inclusions 1-5 cm. Occasional rubble and stones.	1.00	1.00	0.06
5	503	Layer		Deposit	Compact light brownish grey gritty gravel. Rubble inclusions.	1.00	1.00	0.11
5	504	Layer		Deposit	Stiff mid greyish brown sandy silt. Occasional rubble inclusions.	1.00	0.50 then 0.25	0.32 context not fully excavated.
6	601	Layer		Topsoil	Loose mid brownish grey silty loam. Sub angular sandstone inclusions 1-10cm	1.00	1.00	0.11
6	602	Layer		Dumping deposit	Strongly cemented mid reddish brown gravelly clay. Sub angular stone inclusions 0-15cm. Occasional brick rubble.	1.00	1.00	0.12
6	603	Layer		Levelling deposit of sandstone and clay	Weakly cemented mid brownish grey sandy clay. Sub angular sandstone inclusions 1-10cm, 20%	1.00	0.62	0.17
6	604	Layer		Deposit	Weakly cemented greyish red sandy clay. Sub angular stone inclusions 0-5cm.	0.41	0.38	0.17
6	605	Layer		Deposit	Hard/indurated light brownish yellow sandy clay.	1.00	1.00	0.35

					Sub angular sandstone inclusions 1-8cm. Sterile layer but unlikely natural at this depth, possibly redeposited natural.			
7	701	Layer		Topsoil	Firm mid greyish brown sandy silt. Sub angular stone inclusions 1-5cm.	1.00	1.00	0.22
7	702	Layer		Subsoil	Firm mid yellowish brown clayey silt. Pebble inclusions 1-5cm. Sub angular inclusions 5-15cm. Charcoal inclusion at 10%	1.00	1.00	0.10
7	703	Layer		Sterile, possibly natural	Weakly cemented light reddish brown silty clay.	1.00	1.00	0.19
8	801	Layer		Topsoil	Loose light brownish grey sandy silt. Sub angular stone inclusions 0-12cm.	1.00	1.00	0.17
8	802	Layer		Levelling event	Firm dark brownish red clayey silt. Large and small stone inclusions 0-15cm. 5% charcoal inclusions.	1.00	1.00	0.22
8	803	Layer		Rubble spread	Firm dark greyish brown silty clay. Sub angular sandstone inclusions 1-25cm. Slate and roof tile inclusions. Large lumps of charcoal.	0.75	0.75	0.11
8	804	Masonry		Rubble spread or 2 stone linears.	Rounded angular stones 2-x20cm and 10-20cm.	1.00 1.00	0.30 0.20	N/A
9	901	Layer		Topsoil	Friable brownish red silt. Rounded and sub angular stones 1-5cm. Less than 5%.	1.00	1.00	0.13
9	902	Layer		Subsoil	Friable light greyish brown silty sand. Rounded and sub angular stone inclusions 1-5cm. Less than 5%.	1.00	1.00	0.07
9	903	Layer		Gravel layer	Compact mid brownish red gravelly silt. Minimal stone inclusion 1-10cm.	1.00	1.00	0.05

					Small amounts of coal.			
9	904	Layer		Sub soil	Friable mid greyish brown gritty silt. Round and sub angular stone inclusions 1-7cm. Small amount of coal inclusions.	1.00	1.00	0.29
10	1001	Layer		Top soil	Soft dark brown clayey silt. Occasional sub angular stone inclusions 1-5cm.	1.00	1.00	0.16
10	1002	Layer		Subsoil	Soft mid reddish brown clayey silt. Sub angular sandstone inclusions 1-10cm. Regular charcoal inclusions.	1.00	1.00	0.10
10	1003	Layer		Clay	Weakly cemented light yellowish brown silty clay. Pebble inclusions 1-5 cm. Small flecks of charcoal.	1.00	0.61	0.28
10	1004	Possible fill of cut		Possible fill	Firm light orangey grey silty clay. Sub angular stone inclusions 1-3cm. Less than 5%.	0.38	0.39	Unknown, not excavated.
11	1101	Layer		Topsoil	Soft mid brownish grey sandy silt. Round and sub angular stone inclusions 1-5cm.	1.00	1.00	0.27
11	1102	Layer		Subsoil	Soft dark brownish grey sandy silt. Rounded and sub angular stone inclusions 1-5cm.	1.00	1.00	0.04
12	1201	Layer		Top soil	Soft mid greyey brown sandy silt. Sub angular stone inclusions 1-5cm less than 5%. Brick and slate inclusions.	1.00	1.00	0.31
12	1202	Layer		Subsoil	Soft to firm mid reddy brown sandy silt. Round and sub angular stone inclusions 1-5cm less than 5%.	1.00	1.00	0.03
12	1203	Layer		Clay and mudstone deposit.	Compact mid brownish red gritty clay. Sub angular stone inclusions 1-7cm.	1.00 1.00	1.00 0.50	0.16 half sectioned at 0.08

12	1204	Layer		Slate dump/deposit	Slate tile deposit.	0.25	0.25	Unknown, not fully excavated
13	1301	Layer		Top soil	Soft greyey brown sandy silt. Sub angular stone inclusions 1-5cm, less than 10%.	1.00	1.00	Min 0.13 Max 0.26
13	1302	Layer		Subsoil	Weakly cemented mid brownish grey gritty clay. Sub angular stone inclusions 3-5cm. Less than 10%	1.00	1.00	0.13
13	1303	Layer		Clay and Mudstone	Friable mid reddy brown silty clay. Sterile, possibly redeposited natural.	1.00	1.00	0.49
13	1304	Layer		Sub soil	Friable mid reddy brown sandy silt. Sub angular stone inclusions 5-10cm	1.00	1.00	0.14
13	1305	Masonry		Foundation of brick wall	Stone blocks and bricks, mortar bond regular. No finish/facing. Facing north.	1.00 length of trench. 0.63 brick 0.37 stone	N/A	N/A
13	1306	Masonry		Brick wall	Brick and mortar wall. Regular courses, finish is squared. Bonding mortar. English garden wall.	1.00 length of trench	N/A	N/A
14	1401	Layer		Topsoil	Stiff mid yellowish brown sandy silt with charcoal deposits.	1.00	1.00	0.11
14	1402	Layer		Sub soil	Stiff light yellowish brown sandy silt. Mortar/concrete wall remains.	1.00	0.65	0.53
14	1403	Layer		Clay	Weakly cemented light greyish brown clayey silt.	1.00	0.23	0.31 extent not reached as not fully excavated.
14	1404	Masonry		Mortar wall	Bricks either mortar or cement, Individual bricks 23cm long by 10cm deep. Finish rough facing south east. Bonding mortar.	1.00 length of trench.	N/A	Unknown.
15	1501	Layer		Topsoil	Compact mid greyey brown sandy clay. Rounded and	1.00	1.00	0.18

					sub angular stones and sandstone inclusions 7-10cm.			
15	1502	Layer		Subsoil	Weakly to medium cemented mid reddish brown sandy clay. Rounded and sub angular stone inclusions 1-10cm. Up to 5%.	1.00	1.00	0.04
15	1503	Layer		Sandy clay/silt	Strongly cemented mid reddy brown sandy clay silt. Sub angular stone inclusions 1-5cm. Less than 10%.	1.00	1.00	0.15
15	1504	Layer		Clay	Strongly cemented mid reddish brown gritty silt. Up to 20% small sub angular stone inclusions 1-2cm. Possibly been exposed to heat.	0.51	0.28	Min 0.01 Max 0.14
15	1505	Layer		Possibly natural	Strongly cemented mid yellowish grey silty clay. Sun angular stone inclusions 1-8cm. Less than 5%.	0.25	0.25	0.06

11.3. Appendix C: small finds catalogue

Test Pit	Context	Material	Description	Total	Weight (g)	Period	SF Number
1	102	Ceramic	Ewloe Type ware jug sherd	1	15	13th Century	101
3	302	Lithic	Flint (worked?)	1	5	Prehistoric (?)	302
3	302	Ceramic	Midland Purple ware	1	2	15th-17th Century	301
6	601	Ceramic	Midland Purple ware	1	12	15th-17th Century	601
7	701	Ceramic	Midland Purple ware	1	6	15th-17th Century	704
7	701	Ceramic	Coal Measure ware jug sherd	1	3	13th-14th Century	701
7	702	Ceramic	Cistercian ware	1	2	15th-17th Century	703
7	702	Ceramic	Midland Purple ware	9	143	15th-17th Century	702
8	801	Ceramic	Midland Purple ware	1	1	15th-17th Century	801
8	801	CBM	17th century brick fragment	1	99	17th century	802
9	903	Ceramic	Coal Measure ware jug sherd	1	3	13th-14th Century	901
9	904	Ceramic	Midland Purple ware	2	56	15th-17th Century	902
9	904	Ceramic	Ewloe Type ware jug handle	1	34	13th-14th Century	904
9	903	Ceramic	Midland Purple ware	7	27	15th-17th Century	905
9	904	Ceramic	Cistercian ware	4	11	15th-17th Century	903
9	904	Glass	Potash vessel glass - pre 1835	2	1	pre-1835	906
9	904	Glass	Potash window glass - pre 1836	2	2	pre-1835	907
13	1304	Ceramic	Midland Purple ware	1	31	15th-17th Century	1301

11.4. Appendix D: finds reports

11.4.1. *Animal Bone by Ian Smith, OANorth*

Current Curation

The assemblage consists of one small box of hand collected bone. The material is clean and bagged by context number.

Aim

The aim was to assess the potential of the material.

Recovery

All spoil was screened for finds using sieves with a standard 10mm mesh, with the exception of very heavy clay soils which were hand-searched.

Methods

Fragments were identified using the author's modern comparative collection. Reference was also made to Halstead and Collins (1995). The assemblage was quantified with regard to countable, ageable and measurable specimens following Baker and Worley (2014). Countable specimens here include all elements zoned by Serjeantson (1996) or Cohen and Serjeantson (1996). Fragments where there is limited surface survival are generally classed as "large mammal" (cattle or horse sized) and "medium mammal" (sheep size).

Given the lack of mandibular or maxillary rows the methodology regarding counts of these elements is not included. Fusion state totals are of numbers of specimens (not numbers of "ends") from amongst the scapulae, pelves, major long bones, calcanei, metapodia and phalanges 1 and 2 that will produce at least one record (i.e. proximal or distal) of epiphyseal fusion. Specimens are counted as measurable if they include measurement points illustrated and defined in von den Driesch (1976) or Davis (1992, 1996). Counts are made of any complete, butchered, gnawed, root etched and

burnt specimens. Bone surface preservation is assessed as “excellent”, “good”, “fair” and “poor” to reflect states of preservation corresponding approximately with Harland *et al* (2003).

Results

Surface preservation varies between “good” and “poor” Harland *et al* (2003). There are two burnt specimens. Bone surface preservation is such that some states of butchery can be recognised amongst the cattle and sheep/goat.

The assemblage is small but includes the remains of cattle, sheep/goat, pig and rabbit (Table 1). There is little age structure evidence, since there are no mandibular rows or epiphyseal fusion states. Only five anatomical elements would count following Serjeantson (1996). There are no standard measurements available (following von den Driesch (1976) or Davis (1992, 1996).

However, there are bones of interest. From within the grounds of the Rectory, Trench 9, there are refitting parts of the lateral proximal articular end of a cattle metacarpal which bears fine cut marks. These cut marks are oriented transverse to the length of the metacarpal and approximate to Lauwerier 1 (Lauwerier 1988, 201). This butchery may represent either skinning or dismemberment but since the marks extend over 40mm from the articulation, the former appears plausible to the author. Alternatively, however, they could represent the work of a relatively inexperienced butcher searching for the point of articulation.

Also from context (904) there is a cattle tooth, a fragmented fourth deciduous premolar. It is not possible to accurately estimate the age at death on the basis of a single loose tooth although the occlusal wear stage “c” (Grant 1982) suggests it was probably in its first year of life (ie killed when a calf or yearling).

The fragments of “large mammal” include a proximal rib section from Trench 5 (501) which is cut marked. This rib is classed as “large mammal” since there is no surviving “tubercle” or “head” (following the terminology of Sisson and Grossman (1938, 130) that might have added weight to a species identification. However, its size and the morphology of the costal groove suggest it is probably a beef rib. This rib bears fine cut marks which were made with a sharp knife. These cut marks do not

correspond to any in Lauwerier (1988). They are near the most proximal part on the dorsal/lateral aspect, just distally of the tubercle, and continue onto the "neck" (Sisson and Grossman (1938, 130). They most plausibly relate to filleting, since, it is judged, they continue too far from the articulation to relate to dismemberment. In addition, some are oriented parallel with the length of the rib and not transverse to the length (as one would expect with dismemberment). They could well relate to the carving of a beef joint at the Sunday table, rather than being the work of a butcher.

From trenches 3 and 14 there are medium sized mammal vertebrae which bear marks suggest the splitting of carcasses (into left and right sides). These specimens are probable sheep vertebrae and most plausibly represent butchered lamb or mutton joints.

Rabbit is represented from Trench 12 (1201) by a left-hand side femur (mid-shaft cylinder). This femur bears post-depositional fractures. Pottery was recovered from this context, but whether the rabbit relates to human activity is not clear.

Briefly, much of the assemblage most probably relates to domestic waste disposal from joints of beef, mutton and pork.

Potential

Given the small sample sizes, there is no real potential for the reconstruction of species ratios or age structures amongst the domestic stock.

A feature of some interest here, since bone survival is notoriously poor in much of rural north-west England, is the presence of bone in at least one potentially relatively early context (904, which produced some fragmentary cattle bones as well as Cistercian ware and Midlands Purple). This issue is worthy of some consideration after the pottery and small finds reports are completed and date ranges are arrived at. It would be of interest to note the date of this context and whether there were/are any signs of disturbance, or intrusive finds.

Table 1: Animal bone fragment count by context

Taxa/ anatomical element	Context									
	201	301	302	501	601	702	904	1201	1402	Total
cattle totals							6			6
deciduous 4th premolar							2			2
maxillary tooth							1			1
metacarpal							3			3
large mammal totals				1	1	1	3			6
limb bone							1			1
rib				1						1
unidentified					1	1	2			4
medium mammal totals	1	2	3						1	7
limb bone		2								2
unidentified	1									1
vertebra									1	1
vertebra thoracic			3							3
pig total				1						1
lateral phalanx				1						1
rabbit total								1		1
femur								1		1
Total	1	2	3	2	1	1	9	1	1	21

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11.4.2. *Ceramic Building Material by Dr Rob Philpott*

Nature of the material

The assemblage consists of a range of ceramic and non-ceramic material. There is ceramic building material (brick, roof tile, floor tile) but also other building material, including lime mortar, and glazed tile. There are also a few fragments of pink or red shale (context 102, 202 and 1101), an industrial by-product derived from colliery waste.

The ceramic building material consists largely of brick, but there are also floor tiles and roof tiles. Many small fragments of fired clay material with fabrics consistent with brick but which lack diagnostic surfaces that make an attribution certain. Some abraded soft orange fired clay (e.g. contexts 1002, 701 and 902), is not diagnostic of date, but does not appear to derive from the well-fired later post-medieval (19th-century and later) brick and may represent earlier material.

There are a few fragments of salt-glazed drainage pipe, and several fragments of curved earthenware tile, derived from ceramic field drain.

Non-ceramic material includes a few fragments of lime cement with small stones and a thin composite material of roofing tile. There are several groups of lime mortar and plaster (contexts 102, 203, 502, 1401) with individual pieces from contexts 81 and 1304.

Condition

Roof tile and floor tile

There is only one complete example of a floor tile, and no complete roof tiles. Thicknesses can be measured but there are no other complete surviving dimensions.

Bricks

The material is highly fragmented with very few bricks retaining a complete dimension which could be measured. The highly fragmented nature of the brick suggests a site which has seen the demolition of buildings followed by removal of any usable intact brick, leaving behind unusable broken fragments.

Other materials

The lime mortar or plaster is friable and in many cases, is highly fragmented.

Methodology

The material was scanned visually, focusing on the material, and functional type, and a brief description made on an Access database. Any significant surviving dimensions were recorded (e.g. thickness of tile or brick). Much of the material retains no diagnostic features, such as surfaces or formal characteristics, but fabrics are consistent with brick or tile.

Detailed fabric analysis was not undertaken for the brick and tile. The material is very fragmentary, rarely large enough to have measurable dimensions surviving. It is not closely dated, although much of it appears to be of relatively recent date – 19th or 20th century, and its value for the regional study of ceramic building material is low. The contextual information indicates that many of the deposits contain 19th-century material, with some earlier material in some cases which indicates earlier activity on the site.

Characterisation

Brick

The assemblage is dominated by fragments of heavily broken brick, the material which is left behind after the demolition of structures. The assemblage contains no intact brick, suggesting that such material was removed for recycling, leaving behind the unusable broken fragments.

Most of the brick is machine-pressed with dense orange or light red fabrics, and well-fired, of even colour throughout, indicating good control over the firing process, and sometimes with very smooth surfaces, or deliberately textured rustic surfaces. Some modern machine-pressed brick has an orange fabric with buff or cream surface, from slurry or applied thin clay slip wash (contexts 302, 401).

The bulk of the brick consists of very small fragments, often lacking the surfaces which contain the most useful diagnostic features to determine the method of manufacture. The hard dense closely-textured fabrics are likely to come from machine-pressed brick, although a number of lower-fired sandy fabrics with more open texture may be the hand-made products fired in clamp kilns, prior to the industrialisation of brick production from the end of the 18th century.

A few contexts have fragments of handmade brick, characterised by sandy fabrics often with stones and pebbles, and variable colour of firing due to variable conditions in clamp kilns (e.g. 1001). In context 1002 are two fragments of handmade brick with impressions of vegetable matter burnt out from the matrix, probably straw mixed with the clay as a bonding material during manufacture. Another example (in context 801), this time probably of 17th-century date from the thin dimensions, appears to have been set to dry on straw, as vegetable impressions are present on the surface.

The identification of brick or tile predating the 18th century is difficult in the absence of corroborative data. If earlier pottery or other finds were present, then the likelihood of an earlier

date would be increased. Only one unusually thin brick at 45mm (context 801) can be assigned to the 17th century with any confidence.

Undiagnostic fired clay

Several contexts (notably 801, 802, 1001, 1002, 903, 701) contain small amounts of soft orange sandy fired clay, usually without surviving surfaces. This appears to have been less highly fired than the majority of the brick, and the degree of abrasion indicates that the material has been subject to post-deposition disturbance and movement, leaving the edges rounded and surfaces removed. The material is generally highly fragmented, so other than the fabric, colour and firing temperature, it lacks diagnostic features. The fragments may be simply abraded fragments of handmade brick, of 17th- or more likely 18th-century date. This is supported by the large group of finds from context 802. Here a large quantity of small fragments displays a range of abrasion from sharp rough edges to heavily rounded fragments, but the similarity of the matrix suggests the effect is in part due to the hardness of firing. Higher-fired fragments are better preserved, while the softer lower-fired are more prone to abrasion.

Context 801 in the same trench has also produced a large collection of small abraded fragments. This context contains some late medieval and early post-medieval pottery so this material is a good candidate for early hand-made brick or other sources of fired clay. In this context, one of only two bricks with an intact surviving dimension, at 45mm thick, is a handmade example, with poorly finished surfaces. Thinner bricks are characteristic of the 17th century, generally measuring between 44mm and 64mm, although in the following century bricks became thicker, and those consistently over 50mm thick belong to the early 18th or later (Campbell and Saint 2002, 181).

However, the lack of diagnostic forms makes it possible that some are earlier in date. Similar material has been found on medieval and earlier sites, where it represents the heavily abraded remnants of such structural features as clay ovens, hearths, or fired wall daub, in some cases (though not here at Woodchurch) forming recognisable elements) and the dating is confirmed by its presence in early contexts. An early date for the Woodchurch fragments is possible, as residual material in later

contexts, but the presence of datable medieval or earlier material would be required to support such an interpretation.

Relevant material comes from context 1001, which has a group of nine fragments of very abraded mid orange sandy fired clay, with no surviving surfaces. As with context 1002, where the ceramic finds are also largely 18th- to 19th-century in date, this may also represent the date of the undiagnostic fired clay. In context 903 a fragment of abraded fired clay which could be brick or tile though again the lack of diagnostic features makes this highly uncertain. The lack of 18th- or 19th-century pottery from this context enhances the likelihood of a medieval or early post-medieval date. Context 701 also has fired clay in a light orange sandy fabric; the context has some 17th- to 19th-century pottery so the fired clay may be abraded poorly fired handmade brick, but an earlier date is possible.

Mortar

Several contexts (102, 203, 502, 801, 1304, 1401 and 1501) have lime mortar, rich in sand, and in some cases with smooth lime-washed surfaces, indicative of interior wall finishes. Such material is derived from demolition, but is not closely datable.

Floor tiles

There is a group of glazed floor tiles, which post-date the development in about 1840 of pressed tile manufacture by compressing clay dust.

A small number of floor tiles are present, including one self-coloured glazed example in context 1101. This is later 19th-century or later in date, from the machine-moulded reverse pattern.

Alongside 31 sherds of 19th-century or later ceramics, context 501 produced a small intact square tile 53mm square and 13.6mm thick, with impressed inscription in relief 'T W / No 4' and four raised ribs; the surface and matrix are light yellowish buff.

One tile in the current assemblage with the maker's mark Dennis of Ruabon (context 302) can be dated to after 1934. In 1878 the brick and tile factory known as Hafod Brickworks was established by Henry Dennis in North Wales, changing its name in 1934 to Dennis Ruabon Ltd, and was still manufacturing the same style of tile into the early 21st century (<http://www.scottishbrickhistory.co.uk/dennis-ruabon/>).

Roof tile

A number of roof tiles are present. No complete dimensions are present. Many have the well finished smoothed surfaces of machine mould-pressed tiles, in evenly fired orange or mid red fabrics. Occasional examples have moulded lugs on the edge and a few have nail holes. One from 1201 has a reverse incuse stamp reading [...] 13/25 / [...]E, presumably a pattern number and maker's mark. They are in general likely to be 19th century in date. A number of later tiles, in light orange fabrics, mould-made, with very pure fabrics, have the moulded form of modern interlocking tiles, and date to the later 20th century.

Burnt shale

Contexts 1101, 102, 202 and 501 each have one pinkish orange fragment of burnt shale. A by-product of colliery waste, this was widely used in the 19th and 20th centuries as durable and well-drained surfacing material, and was frequently used for yards and paths.

Sewer/drainage pipes

Fragments of cylindrical drain pipes in brown salt-glazed stoneware are present in 1402, 601 and 501, all contexts which have also produced 19th-century ceramics. Salt-glazed drainage pipes and sanitary ware were a development of the mid 19th century, largely an innovation of Henry Doulton who established a company, Henry Doulton and Co. at Lambeth, London in 1846 to make salt-glazed drain pipes. Within a decade or so demand from growing industrial cities led to production at several factories in the West Midlands and in the North West at Prescott and St Helens. Similar material was made well into the 20th century.

Fragments of clay earthenware field drain are present in both context 501 and 1301. The precise form of the drains is uncertain, as the small fragments of the curved element may indicate a horseshoe or more likely a tubular drain. If the latter, the development of extrusion manufacture in 1845 (Robinson 1986) which led to the creation of the tubular drain provides a *terminus post quem*. In general, a 19th to mid 20th-century date for these forms of drain is likely. Both contexts have 19th-century ceramics. Another tile with an irregular curved surface is present in 1201, but is certainly not extruded so may be an earlier field drain or a roof tile fragment.

Discussion

The introduction of brick to Cheshire in the 16th century was relatively late compared with much of eastern and southern England. Some of the earliest use in Cheshire saw the material employed for selected features such as chimneys, but not yet for the whole house (J. Axworthy pers. comm.). Later in the century whole buildings were constructed in the new material. At Over Peover the hall was begun in brick by Sir Randle Mainwaring in 1585 while at Bramall, the hall range was rebuilt by the Davenport family probably in the 1590s with brick chimneys (Hartwell *et al.* 2011, 24; 519). Brick did not become a common building material until the 17th century. Pevsner noted that the architecture in the north was 'exceedingly conservative' in the 17th century, although new ideas were introduced by wealthy landowning families with the resources to invest in fashionable styles of building. An example of the introduction of styles which were current in southern and eastern England was Crewe Hall, begun in 1615, a fine Jacobean house in an innovative style, constructed in brick (Phillips and Smith 1994, 15-16).

Handmade brick was widely made locally, as and when it was needed for construction. The boulder clay (glacial till) which forms the natural subsoil over much of Cheshire provides an abundant raw material. The maps of Cheshire drawn up through the provisions of the Tithe Commutation Act of 1836 record no fewer than 564 field or plot names which incorporate the word 'brick'. Many of these refer to 'brick field' and often occur explicitly as 'brick kiln' field-names, leaving no doubt that bricks were fired at that location. This provides a measure of the extensive nature of local brick production across the county prior to the mid 19th century, reflecting the previous two centuries or

so of local manufacture in fields and small plots close to clay sources, at a time when the centralised industrial production was beginning to dominate the supply of brick and tile. The maps also capture the intensely local scale of production, which saw exploitation of boulder clay deposits for production to meet demand from the immediate vicinity, often for individual construction projects.

The North Wales brick industry based on the clay-bearing Carboniferous Coal Measures is probably the source of much of the 19th century and later ceramic brick and tile, becoming a dominant supplier in the region.

By the later 18th century the ceramics industries at Buckley in Flintshire, and by the 19th century in nearby Ruabon, provided a local source for brick and tile. The brick and tile industry at Buckley developed through a combination of an existing ceramics industry, producing earthenwares, with improved communications by way of the newly canalised Dee (1737) which facilitated transport of bulky commodities such as brick. The coming of the railways improved communications and enabled convenient transportation of heavy bulk items to the port at Connah's Quay for export widely across Britain and the world. Buckley had no fewer than 25 brickworks, exploiting the local Coal Measures clays and coal of the Wrexham-Ruabon-Buckley area, and creating a range of specialised products in the 19th and 20th centuries. The brickworks were established in the period from the 1760s to mid 1860s and by the beginning of the 20th century there were 19 in operation. The discovery of deposits of Etruria marl stimulated the growth of the industry, which by the early 20th century employed 2000 workers (<http://www.penmorfa.com/bricks/wales1.html>) However, the number of factories had declined to 11 by 1950, and the last factory making bricks, Hanson's, closed in 2003. Many of the Buckley products from the 19th and 20th centuries were machine-made products, with brand names such as Adamantine, Obsidianite or Etna, emphasising the durability of the products. They are distinguished by very hard purple surfaces and were claimed to be acid- and heat-resistant, as well as hard wearing.

Only one maker could be identified with certainty; a tile from context 302 is marked 'Dennis Ruabon [Ltd]'. A tile marked 'TW' from context 501 probably represents the maker's initials.



Fig. 1: A stamped floor tile DENNIS RUA[BO] from context 302

CONTEXT	MATERIAL	TYPE	FORM	TOTAL
102	CER	DRA	2 fragments of brown salt-glazed stoneware sewer pipe	2
102	MOR	MOR	31 fragments of white to off-white lime mortar, 4 with lime-washed smooth surface	31
102	CER	BRK	29 fragments, some large, or brick; 1 sandy and poorly fired is handmade, others probably machine pressed with closed dense fabrics of orange to light red colour. C19?	29
102	CER	BRK	1 very small dense and evenly fired chip of brick or tile with smoothed surface, modern	1
102	CER	FCL	2 very small abraded fragments of fired clay, sandy orange fabric, possibly low-fired brick	2
102	STO	SHA	1 fragment of orange burnt shale	1
201	CER	BRK	4 fragments of brick, one with handmade finished; others abraded all orange to orange-red	4
202	CER	BRK	2 fragments of rusticated brick, one with cream smooth slipped surface on other face; C19-20, machine made	2
202	STO	SLA	1 fragment of burnt shale, orange-brown in colour	1
202	CER	TIL	1 fragment of brown unglazed floor tile, sanded flat underside thickness 14.8mm	1
202	CER	BRK	15 mixed frags of brick, two with cream surface, one with adhering mortar, others very small and undiagnostic	15
202	CER	BRK	3 fragments of machine-made brick with smooth surface, and wire lines on one surface	3
202	CER	BRK	2 fragments of moulded red brick, with smooth surface; L19 or later	2
203	CER	BRK	19 fragments of light orange to red brick, one with light buff slurry surface; 3 only have traces of surface;	19

CONTEXT	MATERIAL	TYPE	FORM	TOTAL
203	CER	POT	1 fragment of moulded earthenware, in light orange fabric, with row of dots in relief	1
203	MOR	MOR	13 fragments of white to off-white lime mortar, sandy fabric	13
204	CER	BRK	5 fragments of brick; one surface is smooth machine-pressed brick C19-20	5
301	CER	BRK	4 fragments of brick, one large piece has very smooth surfaces, machine made , with cream slip on one face; modern	4
301	CER	BRK	Probable brick fragment in mid reddish orange sandy fabric, handmade?	1
302	CER	TIL	Four fragments of 'quarry tile, brown glazed on all surfaces; one stamped 'DENNIS / 54 RUA[BON], another identical tile fragment inscribed 'IN WAL[.../ g M; underside has parallel moulded raised ribs	4
302	CER	BRK	12 undiagnostic fragments of brick, no surfaces;	12
302	CER	BRK	2 frags of machine-pressed brick, one with cream slurry surface; 4 smaller fragments of machine made brick with small areas of rusticated surface present	6
401	CER	BRK	6 small fragments of rusticated brick, with light buff to orange fabric	6
401	CER	BRK	12 fragments of machine-pressed brick, with dense fabric and very smooth surface, probably from same brick or batch	12
401	CER	BRK	2 fragments of machine-pressed brick with cream slurry surface	2
401	CER	TIL	2 small fragments of modern machine moulded clay curved drain/tile	2
402	CER	BRK	13 very small brick fragments in light red to orange red - more than one brick present; dense ?machine-pressed fabrics	13

CONTEXT	MATERIAL	TYPE	FORM	TOTAL
402	CER	TIL	Fragment of handmade roof tile, handmade, with striations on upper surface from smoothing surface, in mid orange red very sandy fabric. Not closely datable but probably pre-19th century. Thickness 12.9mm	1
403	CER	BRK	5 very small brick fragments, small area of surface on one; 3 purplish red, machine made; 2 orange fabrics, uncertain type	5
501	CER	POT	1 body sherd of dark-glazed vessel, glazed internally only, externally red-orange fabric C19	1
501	CER	TIL	small intact square tile 53mm square (Thickness 13.6mm), with impressed inscription in relief T W / No 4 and four raised ribs; the surface and matrix are light yellowish buff	1
501	STO	SHA	1 fragment of burnt shale, orange colour	1
501	CER	DRA	2 fragments of brown salt-glazed stoneware sewer pipe, C20; thickness 16mm	2
501	CER	DRA	1 fragment of cylindrical earthenware field drain, thickness 12mm	1
501	CER	TIL	3 fragments of white- glazed wall tile, buff body, C19-20; broad moulded ribs on reverse	3
501	CER	TIL	6 fragment of orange tile, very smooth surfaces, one has modern interlocking pattern	6
501	CER	BRK	3 light orange ?brick fragments, sandy possibly tile?	3
501	CER	BRK	1 brick frag with rusticated finish, machine pressed	1
501	CER	BRK	2 fragments of handmade brick with dense sandy light orange fabric	2
501	CER	BRK	15 fragment of brick, no surfaces, orange to red, undiagnostic	15
501	STO	SST	1 small fragment of sandstone ,dark brown	1

CONTEXT	MATERIAL	TYPE	FORM	TOTAL
501	POT	UNG	1 small fragment of unglazed earthenware base, with throwing rings, ?plant-pot	1
502	CER	BRK	26 fragments of brick, orange to red; one only has good surfaces (this is machine pressed brick);	26
502	MOR	MOR	5 very small abraded fragments of buff lime mortar, no surfaces survive	5
502	CER	TIL	4 fragments of roof tile, one with lug, all machine-moulded, thickness 9-12mm	4
502	CER	TIL	2 fragments of smoothly finished interlocking roof tile, in light orange clay	2
503	STO	SST	1 very small chip of buff sandstone	1
503	CER	BRK	1 fragment of brick in light orange-red fabric with rusticated surface C19-20	1
503	CER	BRK	1 fragment of firebrick in light yellow clay with grey interior, C19-20	1
503	CON	CON	1 fragment of concrete, grey cement with gravel/stone inclusions, modern	1
503	CER	UNC	5 fragments, joining, of buff ceramic roundel; , moulded upper surface with pattern which is nor readable; underside flat; uncertain decorative object? D about 75mm, max ht 17mm	5
503	CER	TIL	2 fragments of roof tile, with smooth surfaces, modern interlocking type	2
503	CER	BRK	8 fragments of brick; one extruded machine pressed with wire cut marks and smooth surfaces so modern;	8
503	CER	BRK	1 large fragment of brick, handmade in sandy orange-red Farbic with some large pebbles to 10mm; 69mm thick	1
504	CER	TIL	11 fragments of flat roof tile, two with lugs, one with nail hole, all moulded, with smooth surfaces, in dark red fabric	11

CONTEXT	MATERIAL	TYPE	FORM	TOTAL
504	CER	BRK	5 fragments of brick, one with cream slip and machine made surface; one other possibly handmade; other undiagnostic	5
504	CER	TIL	5 fragments of modern interlocking roof tile, with smooth pale orange surfaces, and adhering mortar C20	5
601	CER	PIP	1 fragment of brown salt-glazed drainage pipe, with straight edge later 19th-C20; T 16mm	1
601	CER	BRK	5 fragments of brick, two with rough surfaces, not modern machine-pressed; red to orange in colour	5
603	CER	BRK	5 brick fragments, poorly wedged white clay in two large fragments; mid orange, 3 small purple fragments, hard fired machine pressed	5
701	CER	FCL	1 large fragment of soft low fired clay in sandy orange fabric, with two abraded surfaces.	1
701	CER	BRK	1 small fragment of orange fabric brick, no surfaces, highly fired	1
801	MOR	MOR	Small fragment of pinkish buff mortar with smoothed plaster surface	1
801	CER	BRK	40 fragments of orange brick, with similar fabric, sandy; one is 45.2mm thick, handmade with poorly mixed clays	40
802	CER	BRK	58 fragments of brick, from large handmade bricks with rough surfaces, to very small abraded rounded fragments in similar orange sandy fabric	58
802	CER	BRK	2 small broken fragments of brick, light orange, undiagnostic	2
802	STO	STO	1 broken pebble, natural, no sign of utilisation	1
802	STO	SST	2 small chips of buff sandstone, smaller with attached mortar from former structural use	2

CONTEXT	MATERIAL	TYPE	FORM	TOTAL
803	CER	BRK	2 very small fragment of light orange ?brick; no surfaces; undiagnostic	2
902	CER	BRK	22 small fragments of brick, - no surfaces intact, 2 worn and abraded; some is handmade with sandy fabrics	22
903	CER	BRK	1 fragment of ?handmade brick , open fabric with voids and sandy fabric	1
903	CER	FCL	1 fragment of fired clay heavily abraded, dense light orange fabric with some sand, and some poorly mixed in lighter clay	1
1001	CERAMIC	FCL	nine fragments of very abraded mid orange sandy fired clay, with large inclusions, with no surviving surfaces; later post-medieval handmade brick; one fragment has poorly mixed white and red clay	9
1001	CER	BRK	1 fragment of reddish orange brick with many vegetable (straw?) impressions in fabric, from manufacturing; handmade 18th century?	1
1001	CER	BRK	7 very small fragments of brick in mid orange fabric; one with machine pressed surface, others uncertain	7
1002	CER	BRK	6 fragments of orange sandy brick, 2 with numerous voids from vegetable matter (straw?), handmade brick	6
1002	CER	FCL	5 fragments of sandy orange fired clay, very abraded; undiagnostic; possibly not brick	5
1101	CER	TIL	6 fragments of pale orange roof tile, moulded, smooth surfaces modern interlocking design,	6
1101	STO	UNC	1 small chip of quartz-like mineral - not anthropogenic	1
1101	CER	BRK	15 fragments of brick, several smoothed extruded surfaces, modern; light red to orange	15
1101	CER	TIL	1 fragment of glazed floor tile, press-moulded with pattern of small incuse squares for keying adhesive. Cream glaze on white fabric, late 19th-20th century Thickness 10.3mm	1

CONTEXT	MATERIAL	TYPE	FORM	TOTAL
1101	CER	TIL	4 fragments of roof tile, one with hole for nail; 13.5mm thick; pale red; sanded underside C19?	4
1101	STO	SHA	2 fragments of pinkish orange burnt shale, by-product of colliery waste; one has dark grey core	2
1102	CER	BRK	5 fragments of brick, in hard dense fabric with lightly rusticated finish	5
1201	CER	BRK	85 fragments of orange-red to red brick, a few with surfaces with white mortar, and rough finished surfaces, most undiagnostic and no surfaces	85
1201	CER	BRK	1 fragments of orange-red brick, handmade, poorly finished, cracked external surface, C18?	1
1201	CER	BRK	20 fragments of dark purplish red brick, intact surfaces on 3 are cream slipped; wire cut; variable reduced dark grey to purple interiors	20
1201	CER	TIL	27 fragments of roofing tile, smooth on both faces, orange to dark red, one with reversed stamp]12/35/....]E, one with lug; thickness 9.7-12.6mm; C19-20	27
1201	CER	TIL/DR N	One fragment of orange earthenware with curved external surface indicating probably a field drain. Not extruded so possibly horseshoe drain. Another flat fragment may be from the same kind of drain, or a roof tile; both in sandy fabrics, and handmade.	2
1202	CER	TIL	1 fragment of mid orange roof tile thickness 18.1mm; slight sanding on one surface C18-19?	1
1202	CER	BRK	2 very small undiagnostic brick fragments	2
1301	CER	TIL	5 clay unglazed roof tile, 5 fragments 10.0-11.5mm thick; in mid red brown clay; both surfaces where present are smooth	5
1301	CER	BRK	2 rough surface bricks in mid purplish orange fabric with wire drawing marks	2

CONTEXT	MATERIAL	TYPE	FORM	TOTAL
1301	CER	BRK	3 fragments of coarse dense brick with cream slip on surface, machine-made	3
1301	CER	BRK	1 fragment of brick, hard purple fabric, machine-pressed and extruded	1
1301	CER	TIL	1 fragment of floor tile 'non-slip' with rows of rounded pimples on upper surface, moulded flat ribs on rear C20; T 14.7mm	1
1301	COM	TIL	6 small fragments of roof tile in thin red composite material, with black adhesive on underside; Mid C20 onward? Thickness 2.7mm	6
1301	CER	DRA	1 frag clay earthenware unglazed drain T13.5mm; cylindrical form	1
1301	CER	BRK	45 fragments of brick; some with sanded orange fabric and rough surfaces, handmade; others less clear or lack surfaces	45
1302	CER	BRK	Fragment of orange brick with irregular surfaces. Handmade?	1
1304	MOR	MOR	1 small fragment of whitewashed lime mortar, walling material thickness 10mm	1
1304	CER	BRK?	One fragment of mid grey-brown ceramic with highly sandy body with a variety of other inclusions; brick or tile, date uncertain	1
1401	CER	BRK	1 fragments from same brick, hard fired machine pressed with very smooth surfaces, C20	2
1401	CER	TIL	white-glazed floor/wall tile, with buff body, moulded into square pattern on reverse, C19-20	1
1401	MOR	MOR	16 fragment of lime mortar, heavily sanded, grey to off-white; 3 small fragments of white plaster	19
1402	CER	BRK	7 fragments of undiagnostic brick - one pale orange clean fabric, others dense close fabric	7

CONTEXT	MATERIAL	TYPE	FORM	TOTAL
1402	CER	DRA	fragments of brown salt-glazed stoneware sewer pipe, C20; thickness 17mm	3
1402	CON	CON	1 fragment of concrete flooring - grey cement matrix with small stones	1
1402	CER	UNC	1 fragment of pinkish brick with heavy sand content	1
1501	MOR	MOR	fragment of lime mortar with black mineral inclusions	1
1501	MOR	MOR	fragment of mortar, in pale pinkish buff with neatly smoothed surface ; heavily sanded fabric	1
1501	STO	SST	1 small fragment of fine-grained sandstone	1
1501	CER	BRK	small undiagnostic fragment of light purplish red brick	1
1502	CER	BRK	5 fragment of brick, undiagnostic, 3 orange, two dark purple	5

Dating information from Ceramics - Overview

102: Dumped deposit with a sherd of late medieval Ewloe ware and 17th-19th century pottery.

201-204 inc: All contexts include significant quantities of modern (19th century or later) ceramics.

301-302: Both contexts include significant quantities of modern (19th century or later) ceramics but there is possibly late medieval, and some 17th/18th century activity in 302.

401-403: All contexts contain modern (19th century or later) ceramics, although possible 17th-18th century activity from ceramics in 401 and 402.

501-504: All contexts contain some modern material although 18th century activity present, and possibly 17th century.

601: All contexts contain some modern material although 18th century activity present, and possibly late medieval from 'Midlands purple'.

701: Low level of activity in late medieval/early post-medieval period onwards.

801-802: Low level of activity in late medieval/early post-medieval period onwards.

901-904: Low level of activity from the 14th century onwards.

1001-1003: Little activity before the 18th century.

1101-1102: the small amount of pottery indicates use of the site in 17th-18th century and later.

1201-1202: Most pottery is modern (19th century onwards) but a little 17th/18th century activity is present.

1301-1304: Most pottery dates to the 18th or 19th century.

1401-1402: All post-medieval activity from 18th and 19th centuries.

1501-1502: All post-medieval activity from 19th century.

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11.4.3. *Clay Tobacco Pipes and Stone Marbles by Dr D. A. Higgins*

Background

In 2016 a series of 15 test pits was excavated around the core of the historic settlement in Woodchurch on the Wirral, Merseyside, by Big Heritage C.I.C. of Chester. It is the clay tobacco fragments from these test pits that are considered in this report.

The Clay Tobacco Pipes

In 2016 a total of 15 test pits were excavated as part of a community archaeology project at Woodchurch, towards the northern end of the Wirral in Merseyside. The test pits were clustered around Holy Cross Church, a medieval foundation situated at the core of the historic settlement. Clay tobacco pipe fragments were found in ten of the test pits and the assemblage as a whole comprises 41 pieces (4 bowl and 37 stem fragments), which were recovered from 12 different archaeological

contexts. The pipe fragments have been individually examined and details of them entered into a context summary (Table 1).

Table 1: Context summary of pipe fragments

Cxt	B	S	M	Tot	Decoration	Range	Deposit	Comments
102		4		4		1720-1920	1800-1920	Four plain stem fragments, the oldest of which could date from the eighteenth century (c1720-1800) but most are of nineteenth century or later date (c1800-1920). Overall, the pipes in this deposit range from c1720-1920 with the majority of the pieces probably dating from the nineteenth century (c1800-1900).
302	1	4		5	Leaf dec seams x1	1800-1920	1800-1900	The four stems are all likely to date from the nineteenth century (c1800-1900), although there is a low possibility that they could even be a little later in date. There is one fragment of a bowl/stem junction that had leaf decorated seams. The sharp angle of the bowl junction and the simple style of the leaf decoration shows that this is an early nineteenth century style, which was produced from c1800-1860. It is a typical design of this period for the North-West of England.
401	1	2		3		1700-1920	1850-1920	One of the stems has a larger bore, and could date from the eighteenth century but the other is of nineteenth century type. There is one bowl fragment from a pipe with quite a short, plain, rounded bowl with fairly thick walls. Part of the square cut rim survives. This style of pipe was introduced in around 1850 and continued in popular use through to the First World War and beyond. This fragment was probably from a short-stemmed or 'cutty' pipe that workmen favoured, because it was short enough to be held in the teeth when being smoked and then easily slipped in a pocket when it was not.
501		3		3		1630-1920	1800-1920	Three stem fragments of differing dates. One long piece with a large bore that dates from c1630-1710; one small piece that dates from the eighteenth or early nineteenth century and a burnt piece of nineteenth century or later date. Although the largest piece is 300 to 400 years old, the later pieces found with it show that this layer was still being disturbed until at least the nineteenth or early twentieth century.
602		1		1		1740-1900	1740-1900	One fragment of stem that is hard to date accurately, since it is of a type that could have been made anywhere between about 1740 and 1900.

701		10		10		1610-1920	1800-1920	The stems in this context represent a range of ages. The oldest pieces are the two thick, freshly broken pieces, which fit together. The granular fabric of which they are made can be best seen on the fresh break and shows that this pipe was made of a local clay obtained from the Coal Measures. These white firing clays are quite rare nationally and were exploited from the early seventeenth century in this region for making pipes, particularly in and around Rainford. This area developed an important pipemaking industry that supplied the whole of the North West region from north Cheshire up to the Lake District. These particular pieces also have a burnished surface, showing that they came from a high quality pipe. Burnishing was the process of smoothing and compressing the clay before it was fired, resulting in a whole series of closely spaced shiny lines covering the surface. This was done with a special polishing rod, probably made of agate or polished steel, and took extra time to do. Pipes with this type of polished surface always cost more than plain ones and can be used to show when good quality pipes were being used. Four of the other stems probably date from the eighteenth century (those with slightly thicker stems and larger stem bores), while the remaining four probably date from the nineteenth century or later. The range of pipes represented in this context shows that people were discarding their domestic waste in this area for at least three hundred years.
702	2	3		5		1610-1750	1680-1750	Although all rather small fragments, these pieces all suggest a slightly earlier date than for Context 701. There is one small chip from a very thick seventeenth century stem made of a local Coal Measures clay. The other two stems are of seventeenth to mid-eighteenth century date and made of a finer clay, probably imported from the south-west of England. This type of clay was used by most of the pipemakers in Chester, which has an important pipemaking industry. The two bowl fragments are both body sherds from different bowls, one of which is very softly fired and has eroded very badly. Both of these pieces probably date from somewhere in the late seventeenth to mid-eighteenth century.
802		3		3		1610-1720	1610-1720	The three stems from this context are all of quite an early date. The long, thin, piece dated from the seventeenth century and is made of a local Coal Measures clay. The other two pieces join (freshly broken) and made of a finer, probably imported, clay. They date from the seventeenth or early eighteenth century.
903		1		1		1760-1900	1760-1900	A single plain stem fragment of a type that was produced from around 1760-1900.
904		3		3		1610-1710	1660-1710	Three stem fragments, all of which are of seventeenth century types. The largest piece is very thick, indicating that it comes from a pipe produced after about 1660. The two larger pieces are made of local Coal Measures clay but the small chip is from a much finer imported clay. All three pieces have been burnished, showing that they come from good quality pipes.

1001		2		2		1650-1800	1700-1800	Two pieces of stem, the thicker dating from c1650-1710. This is made of a local fabric with quite a lot of sandy inclusions as well fine mica flecks. It is very soft fired so that it has weathered badly leaving the inclusions clearly visible in its surface. The thickness of the stem shows that it came from a pipe dating from after c1650. The other piece comes from a much harder fired imported clay without any visible inclusions. It probably dates from the eighteenth century.
1202		1		1		1700-1800	1700-1800	One piece of plain pipe stem that probably dates from the eighteenth century.
Total	4	37	0	41				

Table 1: Context summary of the clay tobacco pipes from Woodchurch. The contexts number (Cxt) is followed by a count of the bowl (B), stem (S) and mouthpiece (M) fragments from that context, followed by the total number of pieces (Tot). A note of any decorated pieces is then given, followed by the overall date for all the fragments and then the likely deposit date for the group, based on an assessment of the pipe group itself and/or the latest pieces.

Discussion

Although quite a number of pipe fragments were recovered, this particular sample did not produce any whole bowls, nor any pieces with maker's marks on them. While this limits what can be said about the nature and origin of the pipes being used, it is still possible to make a number of general observations about the assemblage collected – with the caveat that this is a relatively small sample and so these observations may need to be revised if further evidence is collected.

First, the pipe fragments were well distributed across the sampled area, showing that artefactual evidence for occupation exists right across the historic core area of Woodchurch. Having said that, the nature of the evidence appears to differ slightly from area to area, for example, fragments dating back to the seventeenth century were only found in test pits 5, 7, 8, 9 and 10. These pits all clustered in the area of the Rectory and may indicate a greater prevalence of smoking and/or a different pattern of waste disposal around this larger/higher status building.

The second point is also related to the distribution pattern of the pipes in that, where it was possible to determine the surface finish of the earlier pipes, the majority of them were burnished. Burnishing added to the value of a pipe by producing a more attractive and better-quality product –

and one which retailed for a higher price. The clustering of these higher quality pieces around the Rectory may in part be a reflection of the higher social status of this site.

The third point is in relation to the origin of the pipes. Many of the early pipe fragments are made of a slightly off-white fabric with inclusions that are clearly visible under a hand lens. This clay was obtained from the local Coal Measures deposits, particularly in the Rainford area, where an important early pipemaking industry grew up. In contrast, the pipemakers of Chester tended to use a finer clay that was imported from the south west of England. There are a few early pieces made of this finer clay but the majority appear to be of Coal Measures clay, suggesting that many of the pipes used at Woodchurch were obtained from across the Mersey in Rainford, rather than having come up the Wirral from Chester.

Finally, the pipes contribute to the dating of the archaeological layers from which they were recovered. About a half of the pieces came from topsoil deposits, which would be expected to contain a mixture of material, right up to the modern day. The remainder came from a variety of subsoil or levelling deposits, many of which also show signs of having been relatively recently disturbed. Earlier groups of pipes containing just seventeenth to mid eighteenth century fragments were found in contexts 702 and 802, but both of these contained more modern ceramics as well. The only pipe bearing context that may represent an undisturbed earlier deposit is 904, a subsoil deposit from the Rectory grounds, which only produced pipe fragments ranging from around 1660-1710 in date.

11.4.4. Glass by Dr Rose Broadley

Overview

A total of 404 fragments of glass were found, weighing a total of approximately 1280 grams. The glass assemblage is entirely Post-Medieval, and most of the diagnostic fragments date to the early and mid-twentieth century. Approximately 59% of the glass by sherd count is vessel glass, and the remainder is window glass. Most of the identifiable vessel glass comes from a variety of different small and medium-sized bottles.

The earliest fragments are two small, pale green vessel sherds from test pit 9 (C904) SF906. They are both laminating, and the larger is very thin and from a vessel. It features some regular undulations in the surface, suggesting an optic-blown pattern that unclear due to the fragment size. The two vessel sherds were found alongside two window fragments, both small, thin and pale green, and one of which is laminating SF907. It is likely that all four fragments are potash glass, and that the window glass in particular dates to before c. 1835, when mechanised drawing techniques were introduced into window glass production. Another potentially early item within the site assemblage is a complete pale green bottle stopper found in test pit 5, with a typical colour and shape, probably from a late nineteenth to early twentieth century soda bottle (particularly common prior to the invention of the Codd marble bottles for carbonated drinks in the 1870s).

Sherds with seams form a noticeable sub-group, and indicate manufacture using moulds formed of two or more pieces. Similarly, the site assemblage features a number of sherds with pressed patterns, which were mass-produced but usually intended to imitate cut glass. Both are key identifiers of pressed glass, a production technique invented in the USA in the 1820s. A good example is a base fragment from a small colourless pressed glass vessel with 'FOREI...' on the underside, found in test pit 3. This is probably the start of the word 'foreign'. The bottle probably dates from the late nineteenth or early twentieth century when some glass and ceramics made abroad for the UK market were labelled in this way. The sides preserve the base of angular vertical fluting in the style of lead crystal glassware.

Sherds from a range of utility bottles in different colours and shapes were found, including: a colourless bottle fragment with a raised shield-shaped outline and lettering on one side ('...P', '...ED' and '&') and a brown ovoid bottle base with two rows of raised dots around the edge and numbers in the centre, including '...50...' from test pit 1; colourless base fragments from different vessels from test pit 2, with the largest measuring 8cm in diameter and rows of letters on the base ('B.../R B 1/UGB'), one with '?A42...' and one small concave base with '1903/C' on the underside; a purple sherd with a seam from test pit 3; thick olive green bottle with a mottled and abraded surface, and one from an opaque black vessel decorated with thin, opaque white/pale blue uneven stripes from test pit 7; colourless fragments from a base with raised dots around the edge and letters around the

edge (?...LMA...'), a fragment from near the rim, and a body sherd with the letters 'EXP' on one side from test pit 11; the corner of a multi-faceted pale blue bottle from test pit 13; and a colourless ovoid base with a symbol resembling an 'S' on the base, probably from a pharmaceutical bottle, from test pit 15. These bottle fragments are difficult to identify or date precisely. However, it is likely that most date from the first half of the twentieth century.

As is still the case today, in the nineteenth and early twentieth centuries bottles were used for containing a wide range of liquids, including perfumes, medicines, and chemicals as well as alcoholic and non-alcoholic beverages. It is likely that the few thick olive-green bottles represented contained alcoholic drinks, and the remainder contained medicines, sauces, non-alcoholic drinks or toiletries. Interestingly, the site assemblage appears to be dominated by the latter group - medium to small sized bottles (where size can be estimated), and by colourless and pale coloured bottles, whereas post medieval archaeological assemblages usually feature a much higher proportion of large black or dark green or brown bottles most commonly used for alcoholic drinks.

Regarding the window glass, the majority is modern, thin and colourless. However, the window glass assemblage includes a sub-group of obscured glass (with a pattern on one side to let light in but retain privacy). There were also two fragments of wire mesh glass (invented in 1896) from test pits 12 and 13.

One fragment of mirror glass was found in test pit 4, and a blue-green marble with a yellow-white opaque twist in the centre was found in test pit 2 (C202).

Potential

The potential of the assemblage for further research is considered to be limited, and no further work is recommended.

Catalogue

Test Pit 1

Context: 102

43 fragments: 35 vessel glass fragments (89g). Twenty colourless sherds, including two rims and four sherds from a bottle with a raised shield-shaped outline and lettering on one side. Those visible are '...P', '...ED' and '&'. Eleven brown glass, one of which is from an ovoid bottle base with two rows of raised dots around the edge and numbers in the centre, including '...50...'. One other fragment features the same dots and is almost certainly from the same bottle. Three olive green body sherds, one of which is laminating and probably older than the rest of the context assemblage, and one pale green bottle rim. 3 window fragments, two colourless and one pale green (3g).

Test Pit 2:

Context: 201

25 fragments. 17 fragments of vessel glass (72g), comprising eight sherd of brown bottle glass, seven colourless sherds, three featuring the same deep ridged decoration and one part of a printed letter or number in green, one blue-green bottle rim, and one olive green bottle fragment containing a noticeable bubble. 8 fragments of colourless/very pale blue-green window glass, seven of which have the same slight texture on one side (22g).

Test Pit 2:

Context: 202

51 fragments. 35 vessel fragments (172g). 26 colourless (143g). One wide everted rim, too large to be from a bottle. One with a seam. Three base fragments from different vessels, with the largest measuring 8cm in diameter and rows of letters on the base ('B.../R B 1/UGB'), one with '?A42...' and one small concave base with '1903/C' on the underside. Two colourless body sherds with moulded features, one with '...SE...' visible, and the other a repeating pattern featuring a simple four-pointed star between two bands. 14 brown (27g). 1 olive green (2g). 7 sherds of colourless window glass (3g), one with a pattern on one side to obscure visibility. 2 colourless chips, one with a patch of pale opaque blue glass attached (0.5g). 1 blue-green marble with a yellow-white opaque twist in the centre (5g). 3 olive-green vitreous lumps (20g).

Test Pit 2:

Context: 203

11 fragments. 8 vessel sherds (19g). Five colourless sherds, including one very thick fragment with a pattern of linear ridges pressed on one side and a second featuring different pressed pattern. Two pale green, one featuring a seam, and one thick olive-green fragments. 3 window glass fragments (3g), two colourless and one blue-green.

Test Pit 2:

Context: 204

10 fragments. 1 colourless vessel glass fragment, with one abraded surface giving an opaque appearance (1g). 7 sherds of window glass (40g), one of which is very thick, pale blue-green glass and has one mottled surface to obscure vision. The remaining window glass sherds are colourless. 1 large chip of colourless glass (2g).

Test Pit 3:

Context: 301

9 fragments. 4 vessel glass fragments, two from a brown bottle, including one rim sherd, one thick olive-green sherd, and one small colourless sherd (7.9g). 3 window fragments, all colourless (6.2g).

Test Pit 3:

Context: 302

14 fragments. 12 vessel glass fragments (24g). Four thick olive-green bottle sherds, three amber fragments, two colourless fragments, one thick pale blue-green fragment probably from the rim of a bottle, one purple sherd with a seam, and one base fragment from a small colourless pressed glass vessel with 'FOREI' on the underside. The sides preserve the base of angular vertical fluting in the style of lead crystal glassware. 2 fragments of colourless window glass (2g).

Test Pit 4:

Context: 401

13 fragments. 11 vessel glass (39g). 3 thick olive-green bottle glass, including a fragment from the base. 7 colourless fragments, all thick. 1 thick pale green sherd. 1 globule of pale blue-green glass (1g).

Test Pit 4:

Context: 402

15 fragments. 7 vessel glass fragments (15g). Four thick colourless sherds and three smaller, thin, pink-purple sherds with a pressed rhomboid or zig zag pattern. 6 colourless window glass fragments (4g). 2 flat, colourless fragments with patches of metal adhering to one side only (2g). One of the two also features a bevel and is probably mirror glass.

Test Pit 4:

Context: 403

1 colourless vessel glass fragment (3g).

Test Pit 5:

Context: 501

27 fragments. 17 vessel fragments (66g), comprising one complete pale green bottle stopper, one pale green everted rim fragment, two pale green bottle body fragments (one a neck fragment), three thick colourless body fragments, one colourless fragment with a pressed pattern of fine dots on one surface, and six brown fragments, three thick olive green fragments. 8 window glass sherds (9g), seven colourless and two blue green, with one colourless sherd featuring traces of an obscuring pattern on one side. 1 colourless chip.

Test Pit 5:

Context: 502

9 fragments. 4 vessel glass sherds (7g), one bright green from a bottle, two colourless, and one pink and with a pressed pattern on one side. The latter probably dates to the early to mid-20th century. 4 window glass sherds (5g), three colourless and one thin and pale green. One colourless sherd has a pattern on one side to obscure visibility. 1 large colourless vitreous globule featuring traces of iron staining (11g).

Test Pit 5:

Context: 503

1 olive green bottle fragment (7g).

Test Pit 5:

Context: 504

4 fragments. 3 vessel glass sherds (8g), two of which are pale green and probably from the same bottle featuring lettering (the letters 'NE' are visible on one). The third is a thick colourless sherd featuring a seam. 1 sherd of thick blue-green window glass with one completely straight edge and a vertical ridge or seam (9g).

Test Pit 6:

Context: 601

3 fragments of colourless window glass (3g), although all of different thicknesses. The largest and thickest is from obscured glass in a relatively modern design of linear ridges.

Test Pit 7:

Context: 701

3 vessel glass fragments, one from a thick olive-green bottle with a mottled and abraded surface, one from an opaque black vessel decorated with thin, opaque white/pale blue uneven stripes, and one thin and flat olive green fragment that also has a pitted and scratched surface (19g).

Test Pit 7:

Context: 702

10 fragments. 3 vessel glass sherds, all thick olive-green bottle glass (41g). 5 window glass sherds, with two olive green and the others paler shades of green (3g). 2 glassy globules, one colourless and transparent, the other pale green and opaque (4g).

Test Pit 8:

Context: 801

3 fragments of colourless window glass (3g), although all of different thicknesses.

Test Pit 8:

Context: 802

13 fragments. All modern window glass (25g). Four blue-green, four pale green, three colourless but opaque, and two colourless. One of the pale green sherds has damaged surfaces on both sides.

Test Pit 8:

Context: 803

1 small fragment, flat and colourless and weighing less than 1g (0.3g).

Test Pit 9:

Context: 902

4 fragments. 3 small vessel sherds (6g), one thick and colourless, one brown and one thin and olive green. 1 thin, pale green window glass sherd (1g).

Test Pit 9:

Context: 903

4 fragments. 2 vessel sherds (2g) SF906, both small, pale green sherds, and both laminating. The larger is very thin and from a vessel, not a bottle. It has some regular undulations in the surface, suggesting an optic-blown pattern. 2 window fragments (1g) SF907, both small, thin and pale green. One is laminating.

Test Pit 10:

Context: 1001

10 fragments. 9 vessel sherds (52g). Four sherds of thick olive-green bottle fragments, four pale green bottle sherds, one with a seam, and one colourless fragment from a ridged bottle neck, also featuring a mould seam. 1 small pale green window glass fragment (1g).

Test Pit 10:

Context: 1002

5 fragments. 3 small olive green vessel fragments (5g), one of which has damage to both surfaces. 2 thin pale green window fragments (1g).

Test Pit 11:

Context: 1101

33 fragments. 25 colourless vessel fragments and one brown (127g). The colourless fragments may all be bottle glass, and from perhaps only two bottles. They include nearly half of a thick base, a fragment from a different base with raised dots around the edge and letters around the edge

(?'...LMA...'), a fragment from near the rim, and a body sherd with the letters 'EXP' on one side. 4 colourless window glass sherds (8g). 2 colourless chips of glass (1g).

Test Pit 11:

Context: 1102

7 fragments. 6 vessel fragments (17g), with five colourless and one small bright green sherd. The largest features traces of a seam.

Test Pit 12:

Context: 1201

53 fragments. 45 fragments of window glass, including one large thick fragment of wire mesh glass (124g). 7 fragments of vessel glass (14g), six colourless including one rim, one multifaceted sherd and one featuring parts of pressed letters. One amber vessel sherd.

Test Pit 12:

Context: 1202

13 fragments. 11 sherds of colourless or very pale blue-green window glass (31g). 1 fragment of colourless vessel glass (1g).

Test Pit 13:

Context: 1301

11 fragments. 4 sherds of vessel glass (44g), including one thick base from a medium-sized pale green bottle, two thick colourless sherds, one featuring a band of dots on one side, and one olive green sherd. 7 fragments of window glass, one thick blue-green fragment of wire mesh glass (invented 1896), three pale blue fragments, and three colourless fragments (27g).

Test Pit 13:

Context: 1302

3 fragments. 1 vessel fragment (10g) from an amber bottle. 2 window glass fragments (3g), one colourless and modern, one pale green and laminating.

Test Pit 13:

Context: 1304

3 fragments. 1 vessel fragment (2g) from the corner of a multi-faceted pale blue bottle. 2 window fragments (8g), both pale green, one laminating and the other with traces of surviving grout or paint.

Test Pit 14:

Context: 1402

8 fragments. 7 colourless vessel fragments (13g), all similar, although one features a seam. 1 fragment of pale blue-green window glass (3g).

Test Pit 15:

Context: 1501

6 fragments. 4 vessel glass fragments (23g), all colourless. One is an ovoid base with a symbol resembling an 'S' on the base and is probably from a pharmaceutical bottle. One features a sharp seam. 2 window glass sherds, both colourless (6g).

Test Pit 15:

Context: 1502

3 fragments. 2 vessel glass fragments (7g). One probably from the base of a thick olive-green bottle, and the other from a thick colourless vessel with two mould-blown horizontal ridges.

11.4.5. *Pottery by Paul Blinkhorn*

The following pottery types occurred:

BEW: *Buckley-type Earthenware*, 17th – 19th century (Crossley 1994, 252). Hard red earthenware, usually with a black or dark purple glaze.

BSL: *Buckley-type Slipware*, late 17th – 18th century. Slip-decorated wares, fabric as BEW (ibid.).

CIST: *Cistercian Ware*: c. AD1470-1600. Hard, smooth fabric, usually brick-red, but can be paler or browner. Metallic purple/black/dark brown glaze. Few visible inclusions, except for occasional quartz grains. Range of vessel forms somewhat specialized mainly drinking vessels, and usually very thin-walled (c. 2mm). Rare white slip decoration. Manufactured at a number of centres, with Ticknall in Derbyshire being one of the most important (Boyle 2002).

CMW: *Coal Measures Wares*, 13th – 14th century (Papazian and Campbell 1992, 53). Hard, white or off white iron-free fabric, with moderate quartz and rare rock inclusions. External green glaze. Occurs across the west midlands and north Wales.

CPW: *Cheshire Plain Ware*, late 13th – 14th century (ibid. 55). Orange or grey./brown sandy fabric, wide range of glaze and unglazed vessels.

EW: *Ewloe-type Ware*, 14th – 15th century (Davey 1977, 92). White/pink grey sandy glazed ware in a range of medieval forms.

MOD: *Modern*, 19th century +. A wide range of different types of pottery, including stoneware, porcelain and earthenwares, particularly the white earthenware, cups, plates and bowls with transfer-printed blue decoration.

MP: Midland Purple ware, 15th – mid 17th century. Hard-purplish grey ware, purple to black glaze (McCarthy and Brooks 1988, 427).

NOT: Nottinghamshire/Derby Stoneware, 18th – 19th century. Hard grey stoneware with chocolate brown metallic slip. Wide range of utilitarian vessel forms.

SMW: Staffordshire Manganese Mottled Ware, late 17th – 18th century (Crossley 1994). Hard buff fabric with distinctive purplish-brown glaze. Usually fine drinking pottery, but chamber pots and other more utilitarian vessels also known.

SS: Staffordshire Slipware, mid 17th – 18th century (ibid.). Fine cream fabric and pale yellow lead glaze, commonest decoration is feathered dark brown trailed slip. Chiefly press-moulded flat wares, although small bowls and mugs etc are known.

SWSG: Staffordshire White Salt-Glazed Stoneware, AD1720-1780 Hard, white fabric with a distinctive white 'orange peel' textured glaze. Range of fine tablewares such as mugs, tea bowls and plates (Mountford 1971)

The range of fabric types is fairly typical of sites in the region. The pottery occurrence per test-pit is shown in Appendix 1.

References

Boyle, A. 2002. The Cistercian ware products of Ticknall, South Derbyshire, *Medieval Ceramics*, 26-27, 113-18

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McCarthy, M.R. and Brooks, C.M. 1988. *Medieval Pottery in Britain AD900-1600*, Leicester University Press

Mountford, A. R. 1971. *The Illustrated Guide to Staffordshire Salt-Glazed Stoneware*, Barrie and Jenkins, London

Papazian, C. and Campbell, E. 1992. Medieval Pottery and Roof Tile in Wales AD1100-1600, *Medieval and Later Pottery in Wales* 13, 1-107

Appendix 1: Results

Test Pit 1

		EW		BEW		NOT		BSL		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date Range
	102	1	14	17	124	2	31	3	18	28	62	1400-1900

Most of the pottery from this test-pit is post-medieval, and dates to the 17th – 19th centuries, but there is also a single sherd of medieval material, showing that there was activity at the site at that time

Test Pit 2

		BEW		NOT		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	Date Range
2	201	2	12			18	60	1600-1900
2	202	5	11			9	54	1600-1900
2	203	3	14	2	3	25	83	1600-1900
2	204	3	23			10	24	1600-1900

All the pottery from this test-pit is post-medieval, and suggests that there was little activity at the site before the 19th century, although some of the BEW may be of 17th or 18th century date

Test Pit 3

		MP		BEW		BSL		SMW		SWSG		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date Range
3	301			1	1							10	35	1600-1900
3	302	1	2	11	37	4	10	1	4	2	5	37	91	1400-1900

This test-pit produced mainly Victorian pottery, but the small quantities of other types present indicate that there was also activity here in the 17th and 18th centuries, and possibly also in the late medieval period.

Test Pit 4

		BEW		NOT		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	Date Range
4	401	2	4			23	84	1600-1900
4	402	2	2			6	16	1600-1900
4	403			1	6			1700-1800

All the pottery from this test-pit is post-medieval, and suggests that there was little activity at the site before the 19th century, although some of the BEW may be of 17th or 18th century date

Test Pit 5

		BEW		SMW		NOT		SWSG		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date Range
5	501			4	13					31	64	1700-1900
5	502							1	3	10	14	1720-1900
5	503									1	32	1800-1900
5	504	5	64			2	1			2	4	1600-1900

This test-pit produced mainly Victorian pottery, but the small quantities of other types present indicate that there was activity here in the 18th centuries, and possibly also 17th century.

Test Pit 6

		MP		BEW		SWSG		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	Date Range
6	601	1	12	1	4	1	1	21	83	1400-1900
6	602							3	33	1800-1900
6	603			3	5			2	3	1600-1900

This test-pit produced mainly Victorian pottery, but the small quantities of other types present indicate that there was activity here in the 18th centuries, and possibly also in the late medieval period.

Test Pit 7

		CMW		CIST		MP		BEW		SS		SMW		NOT		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date Range
7	701	1	3			1	6	7	38	1	1	1	2			6	5	1200-1900
7	702			1	2	9	143	20	68	4	5	4	17	1	50	7	9	1400-1900
7	703							1	1									1600-1700

The wide range of pottery from this test-pit shows that there was low-level activity here in the late medieval or early post-medieval period, and that this continued through the 17th and 18th centuries and into the Victorian era.

Test Pit 8

		MP		BEW		SS		SMW		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date Range
8	801	1	1	3	108			1	1			1400-1700
8	802			1	2	1	5	1	1	2	4	1600-1900

The wide range of pottery from this test-pit shows that there was low-level activity here in the late medieval or early post-medieval period, and that this continued through the 17th and 18th centuries and into the 19th century..

Test Pit 9

		EW		CPW		CIST		MP		BEW		SS		SMW		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date Range
9	901															4	9	1800-1900

9	902													1	1			1700-1800
9	903			1	3			7	27			1	1					1270-1600
9	904	1	32			4	9	2	56	18	115	2	2					1300-1700

The pottery types from this test pit show that there was low-level activity which possibly lasted throughout the medieval period, but certainly from the 14th century onwards. This then appears to have continued without a break during the post-medieval period and into the 19th century.

Test Pit 10

TP	Cntxt	BEW		SS		SMW		MOD		Date Range
		No	Wt	No	Wt	No	Wt	No	Wt	
10	1001	7	31	1	3	1	4	5	8	1600-1900
10	1002	8	118			1	3	1	2	1600-1900
10	1003	3	9							1600-1700

All the pottery from this test-pit is post-medieval, and suggests that there was little activity at the site before the 18th century, although some of the BEW may be of 17th or 18th century date

Test Pit 11

TP	Cntxt	BEW		SS		MOD		Date Range
		No	Wt	No	Wt	No	Wt	
11	1101	1	1			2	2	1600-1900
11	1102			2	2	1	1	1650-1900

This test-pit did not produce very much pottery, but the single sherd of SS shows that people were using the site in the 17th or early 18th century.

Test Pit 12

		BEW		SS		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	Date Range
12	1201	2	6	1	6	12	73	1600-1900
12	1202					15	137	1800-1900

Most of the pottery from this test-pit is modern, but there was definitely activity here in the 17th or 18th century, albeit at a very low level..

Test Pit 13

		MP		BEW		BSL		SMW		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Date Range
13	1301			2	44	1	2	1	1	9	29	1600-1900
13	1302			2	48					2	2	1600-1900
13	1304	1	31	2	31					2	15	1400-1900

Most of the pottery from this test-pit date to the 18th or 19th century, but there was some earlier activity in the late medieval or early post-medieval period,

Test Pit 14

		BEW		MOD		
TP	Cntxt	No	Wt	No	Wt	Date Range
14	1401			1	1	1800-1900
14	1402	1	8	5	8	1600-1900

The small amount of pottery from this test-pit shows that there was very little activity here, and that it was all in the post-medieval period.

Test Pit 15

		BEW		MOD		
TP	Cntxt	No	Wt	No	Wt	Date Range
15	1501	2	12			1600-1700
15	1502			4	5	1800-1900

The small amount of pottery from this test-pit shows that there was very little activity here, and that it was all in the post-medieval period.