

Dig Blacon: Test Pitting Report



Autumn 2015

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Summary

Project Name: Dig Blacon

Location: Blacon, Chester

NGR: SJ 338775 368334

Type: Test Pitting

Date: 11.09.2015 – 24.10.2015

Location of Archive: To be deposited with the Grosvenor Museum, Chester

Accession Number: CHEGM 2015.200

Site Code: BL15

Title:	Dig Blacon: Test Pitting Report
Authors:	Joanne Kirton, Project Manager joanne.kirton@bigheritage.co.uk
Derivation:	n/a
Origination Date:	14 th January 2016
Reviser(s):	Karen Gavin Dean Paton
Date of last revision:	
Version:	1.0
Status:	Finished
Circulation:	For all stakeholders
Required actions:	None
Filename and location	Blacon Test Pitting Report
Approval:	Given

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1. PROJECT SUMMARY

Dig Blacon was a community archaeology project conducted by Big Heritage C.I.C. on behalf of Cheshire West and Chester Council's Public Health Team. The public element of the project commenced in June 2015 and concluded at the end of October 2015. Excavation was undertaken between 11th September and 23rd of October 2015. The project was primarily a test pitting exercise focused on the north-east area of Blacon Estate, to the north west of Chester (NGR SJ 384 675). Twenty test pits were excavated, supported by geophysical survey. These were undertaken in residential and business premises and on open public land.

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 Blacon despite development over the past century. The earliest evidence for human activity recovered during the course of the project was a 4th century Roman coin. However, the remainder of the assemblage was 15th century or later, with a surge in activity noted from the 19th century onward.

This report documents the results of the 2015 excavation season.

2. INTRODUCTION

Dig Blacon was a community archaeology project conducted by Big Heritage C.I.C. on behalf of *Cheshire West and Chester Council's* Public Health Team. The public element of the project commenced in June 2015 and concluded at the end of October 2015. Excavation was undertaken between 11th September and 23rd of October 2015. The project was primarily a test pitting exercise focused on the north-east area of Blacon Estate (see Fig. 2), to the north west of Chester (NGR SJ 384 675). Twenty test pits were excavated, supported by geophysical survey. These were undertaken in residential and business premises and on open public land.

The workforce consisted of local volunteers from the Blacon area, post-graduate students from the University of Chester 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 use the heritage of a specific settlement, specifically Blacon, to improve the community's health and well-being. Please see Appendix C for more information on these specific outputs. It was also the intention of the project 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

Blacon is now a large suburban estate in Cheshire, with a mixture of private and social housing with a large industrial estate to its south-west. The community consists of a diverse demographic mix, both in terms of age, socio-economic status and educational background.

Today the housing estate has a population of approximately 13,600 residents (CWAC 2015, 1). 64% of Blacon residents are currently classed as deprived (CWAC 2015, 12), based on the *Indices of Deprivation* (also known as the Index of Multiple Deprivation or IMD). This is a measure of relative deprivation at a small area level and is based on levels of unemployment, rate of pay, health

deprivation and disability, crime levels, access to services and housing, plus the general living environment (CWAC 2013, 4-5). For example, Over 20% of Blacon's children have special educational needs and 26% require free school meals. 22.9% of Blacon residents are limited in their day-to-day activities by health problems and 11% of residents are providing unpaid care. It was also noted that Blacon has problems with anti-social behaviour, particularly drug-use (CWAC 2015, 4, 8 and 15). Consequently, Blacon ward comprises five areas which experience multiple types of deprivation, severe enough to rank in the 10% most deprived areas nationally (CWAC 2013, 9).

Based on the above, Blacon was identified by Big Heritage and CWAC's Public Health Team, as a location that would benefit from a project geared toward introducing interesting and thought-provoking activities that would have health and well-being benefits for participants of all ages.

3.2. Location

Blacon is a suburb of Chester and lies approximately one mile to the north west of the city (see Fig. 1). Centred at NGR SJ 384 675. The project focussed on a research area in the north east of the estate, 750x460m² in size (see Fig. 2).

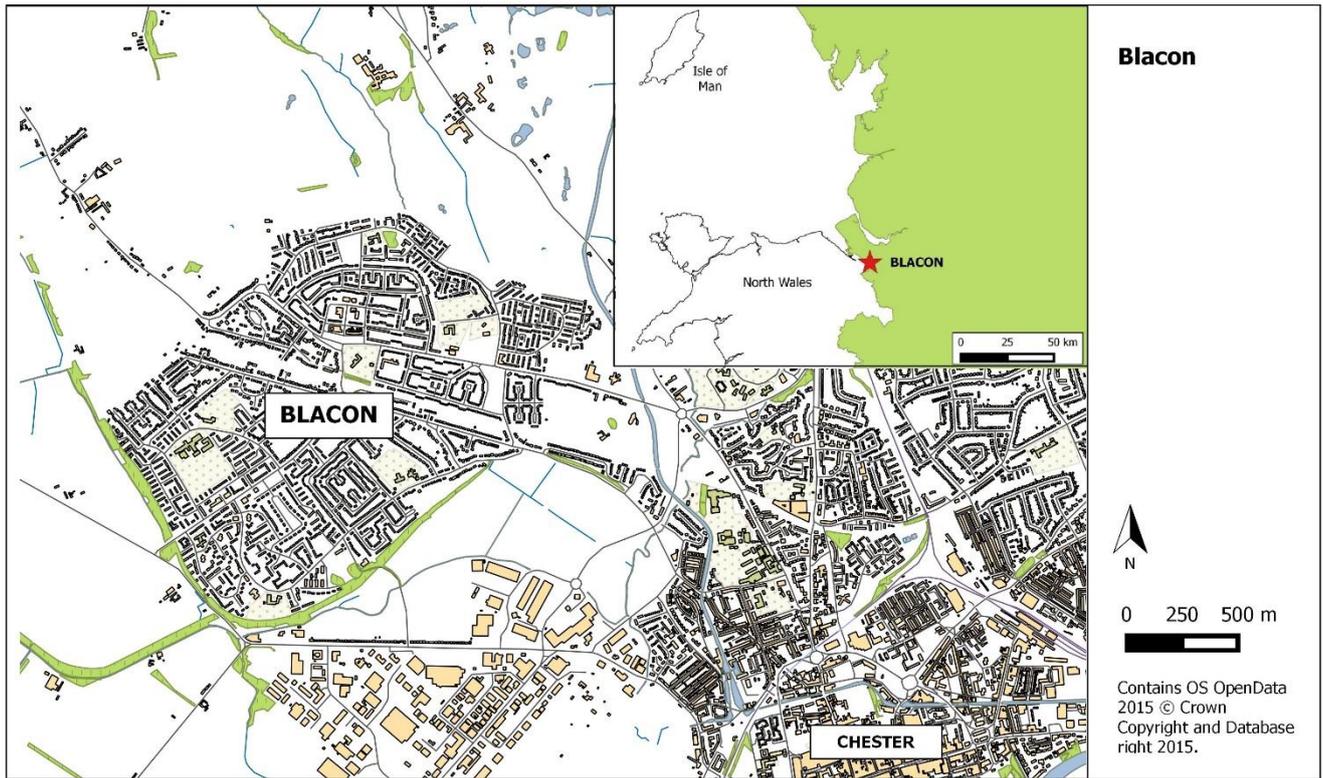


Fig. 1: Blacon in relation to Chester

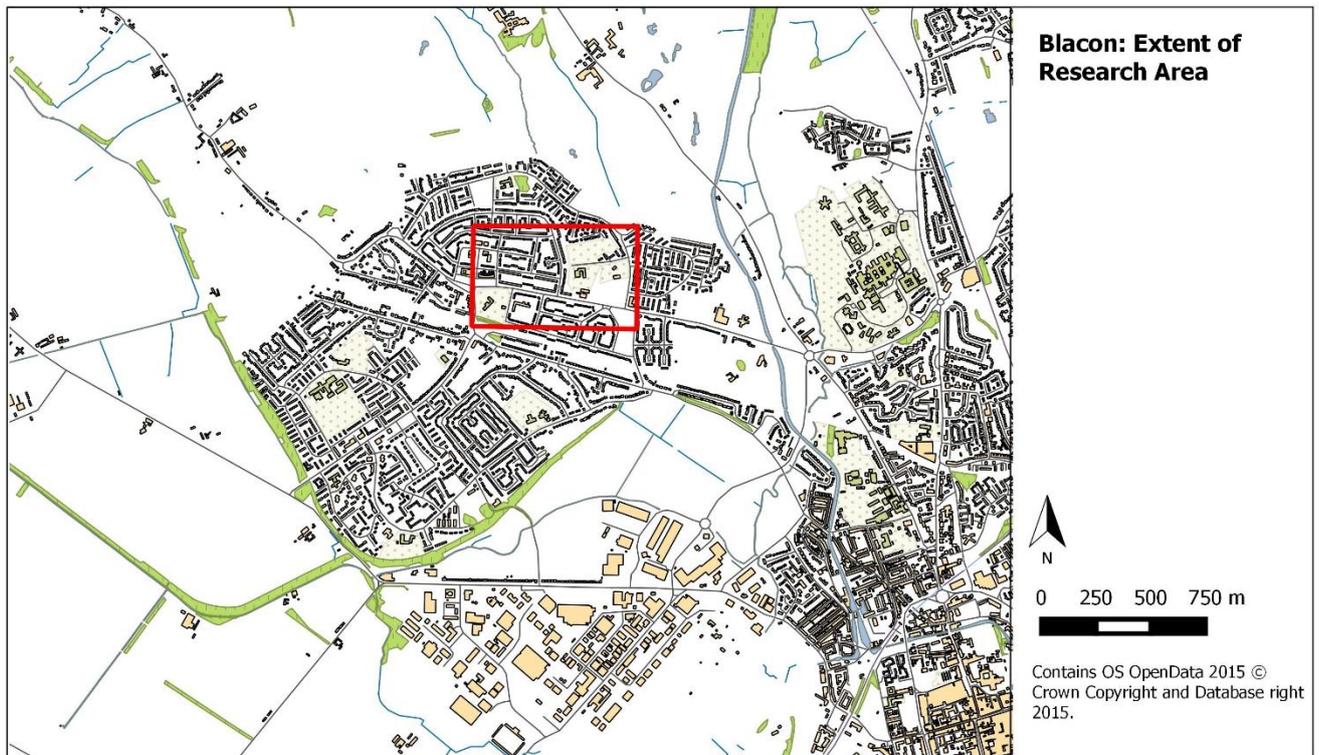


Fig. 2: Dig Blacon Research Area

3.3. Geology and Topography

3.3.1. Geology

The underlying solid geology is of Kinnerton Sandstone formation with superficial deposits of Devension-Diamicton Till (British Geological Survey sheet 109, 1:50 000). The soils found in Blacon are slightly acid loamy and clayey soils with slightly impeded drainage (Cranfield University Soil Resources Institute).

3.3.2. Topography

Blacon falls under Natural England's National Character Area '*Shropshire, Cheshire and Staffordshire Plan*' (Natural England 2014). This is described as a flat or gently undulating, lush, pastoral farmland (Natural England 2014, 2). The area also contains 'strong field patterns with generally well maintained boundaries, predominantly hedgerows' (Natural England 2014, 8). The settlement is comprised largely of private and council owned residences, with several high rise tower blocks, commercial properties and local authority buildings, such as schools and day centres. Blacon is situated adjacent to the Welsh border and is located on a hill, one mile to the north-west of Chester. It is surrounded by flat or gently undulating land purposed for agricultural fields to the north and west. An industrial park with numerous commercial properties, Sealand Road, is found to the south-west of the settlement. To the south of Blacon and Sealand Road, lies the re-directed River Dee.

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 Period	c. AD 1750 – 1901
Modern	Post-1901

4.1. Prehistoric

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

The nearest known Palaeolithic remains were recovered from Carden Park south east of Chester. The material recovered from this site, flint microliths and debitage, burnt stones and hazelnut shells, has provided evidence of occupation from the Palaeolithic to the Bronze Age. However this is at a distance of over 18km from Blacon (Beckley, Campbell and Collens 2014, 6-7).

Isolated Mesolithic objects have been recovered in Chester, including a microlith found during excavation at the amphitheatre (Beckley, Campbell and Collens 2014, 7). However, no objects dating to the Mesolithic have been recovered within the environs of Blacon.

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

The only upstanding Neolithic remains to be found in Cheshire are the Bridestones in Congleton, a distance of 74km from Blacon, which are the remains of a once impressive Neolithic funerary monument. Isolated objects dating to the Neolithic have been found within the city of Chester,

including waste flakes at Bridge Street (Beckley, Campbell and Collens 2014, 7), and a hand axe on Hunter Street (Newstead 1928). However, no Neolithic or Bronze Age remains have been recovered from the environs of Blacon.

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

Evidence for permanent settlement within the city of Chester consists of buildings remnants, fence lines and farming, uncovered during excavation at the amphitheatre (Ward 2009, 5). In addition, pottery dated to the Iron Age has been found at Abbey Green and Frodsham Street (Beckley, Campbell and Collens 2014, 7). However, no evidence of Iron Age occupation has been recovered from the environs of Blacon.

4.2. Romano-British

The earliest evidence for human activity in Blacon is a Roman Denarius coin dating to AD 96-98 (Cheshire HER: 1800/10). The find spot falls just within the southern limit of the research area. It was found on Lincoln Road in Blacon in 1953 (see Fig. 3). Evidence for Romano-British occupation at Blacon is sparse and falls outside the research area. However, a R.A.F. aerial photograph from 1945 suggests earthworks. These earthworks, badly affected by ridge and furrow, have been interpreted as a timber Roman lookout fort or military camp (Cheshire HER: 8596). The siting of this is debated and its existence has not been proven. Notably, Philpott (1998, 341-53) did not list this site as one of the Roman camps known in Cheshire. Unfortunately, later development has completely eradicated the site, making further fruitful investigation unlikely. Analysis of aerial photographs has revealed around a dozen Roman practice camps within 2 to 3 miles of Chester located in an arc to the northeast and east (Ward 2009, 21). These small rectangular, ditched enclosures, which essentially represent 'mini forts' may have been present in the Blacon area but the extensive modern development means future identification through remote sensed methods is improbable.

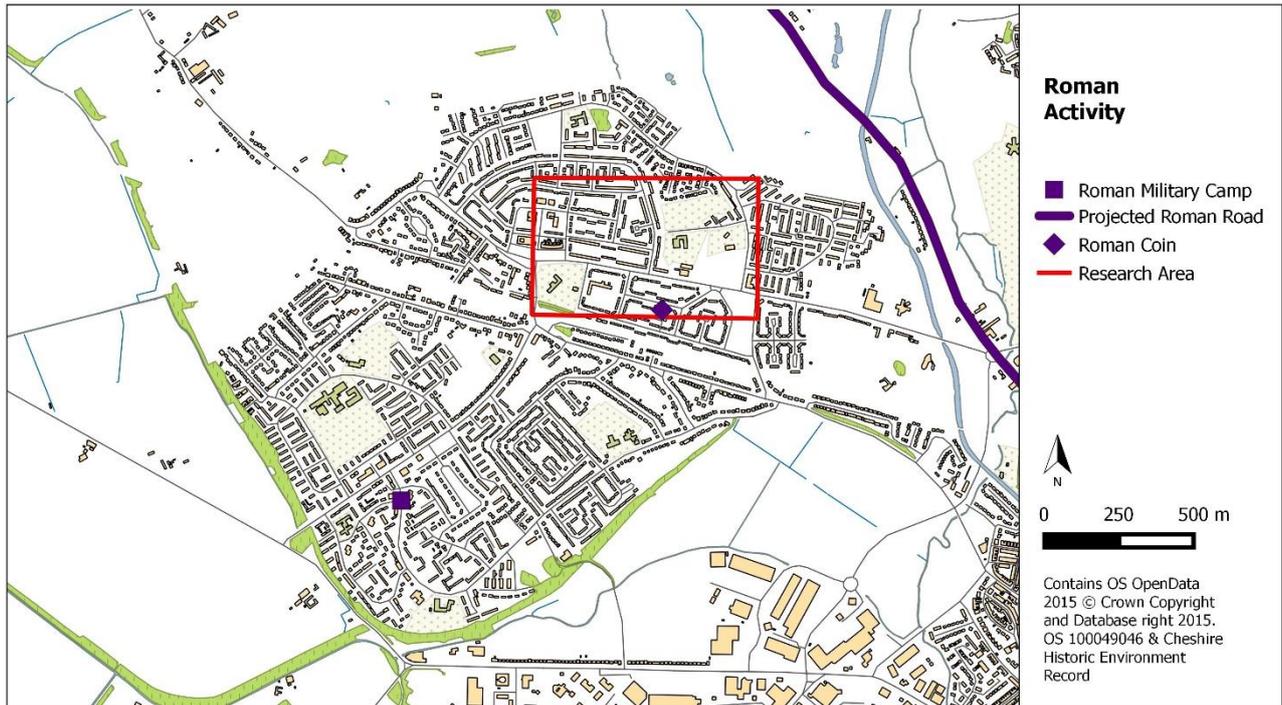


Fig. 1: Roman activity noted in Blacon

Blacon lies just 2km north east of Chester, the location of the large Roman fort of Deva (Ward 2009, 7). Roman material is, therefore, not unexpected. There is also the possibility that a Roman road skirts the settlement to the north east, running from the Northgate in the City of Chester to Mollington. There is the possibility that this road runs within the boundaries of Blacon at the junction of Blacon Ave and Countess Way (See Fig. 3).

4.3. Early Medieval

At present there is no physical evidence for early medieval activity in Blacon. However, pottery evidence from Chester demonstrates a small amount of trade with the Mediterranean in the 5th and 6th centuries (Ward 2009, 23). However, significant settlement evidence does not occur in Chester until the late ninth/early tenth century (Mason 2007, 36).

The earliest known historical evidence for Blacon is found in the Domesday Survey of AD 1086 (Blacon History Group 1990, 2). Domesday records that Blacon had 12 households living there, land for four ploughs and a fishery, holding a value of £2 to the Lord which had risen from £0.70 in 1066

(the year of the Norman Conquest). Estimates put the number of individuals within this settlement at approximately 50 (Blacon History Group 1990, 2). At the time of the Conquest Blacon was held by Thorth of Wroxeter. Post Conquest this passed to Ranulph de Mesnilwarin who held the land by the time of the Domesday survey (Blacon History Group 1990, 2-3).

4.4. Medieval

Ranulph de Mesnilwarin, as noted above, held the manor of Blacon from c. AD 1066. The manor of Blacon remained with the same family, the Mainwarings, and their descendants the Trussels and Veres, until 1580 when it was sold to the Crewes of Crewe (Ormerod 1882, 576-7). In the 12th century Randal Mescines created a large forest, stretching across Wirral, in which Blacon was situated (Stainthorp 2004, 4).

4.5. Post-Medieval

The manor of Blacon was sold to the Crewes of Crewe in 1580 and was held by the family until 1921 (Ormerod 1882, 576). Blacon Manor House, which belonged to the Crewe family, was present as early as the 16th century, as it appears in Leland's (1535-43, 91) description of Wirral. He notes

*'Half a myle lowere [than Porte Pool on the River Dee] ys Blkenhedde, as
an armlet of the ground pointing out. At this is an olde manor place
belonging to the erle of Oxford'* (Leland 1535-43, 91).

It is noted as *Blacon Hall* on the Christopher Saxton map of 1577 (Saxton 1577) (Fig. 4) and *Blaken Hall* on the John Speed map of 1610 (Speed 1610) (Fig. 5).



Fig. 2: The Cestriae Comitatus (Saxton 1577)



Fig. 3: The County Palatine of Chester with that most Ancient Citie described (Speed 1646 reprint)

However, during the English Civil War, between the years of 1643-45, Randle Holmes described how many buildings and structures in and around Chester were either demolished or destroyed. Blacon Hall and the cottages surrounding it were pulled down during this turbulent period according to Holmes (Hemingway 1831, 196-7).

'Thus of the moste anchante and famous cittie of Chester, in times past; but now beholde and mark the ruines of it in these present, within these few years 1643, 1644, 1645, the particular demolitions of it, now moste grievous to the spectators, and more woeful to the inhabitants thereof.'

He goes on to describe the destruction of various buildings:

'10. Blacon-hall, Sir Randall Crue's, with cottages belonging' (Randle Holmes recounted in Hemingway 1831, 196-7)

Long after the destruction of Blacon Manor in the Civil War, a more detailed map was produced covering the county of Cheshire by Burdett in 1777 (Harley and Laxton 1972) (Fig. 6). Burdett's map notes a *Blacon House* at Blacon Point built in 1734 (Blacon History Group 1990, 4).

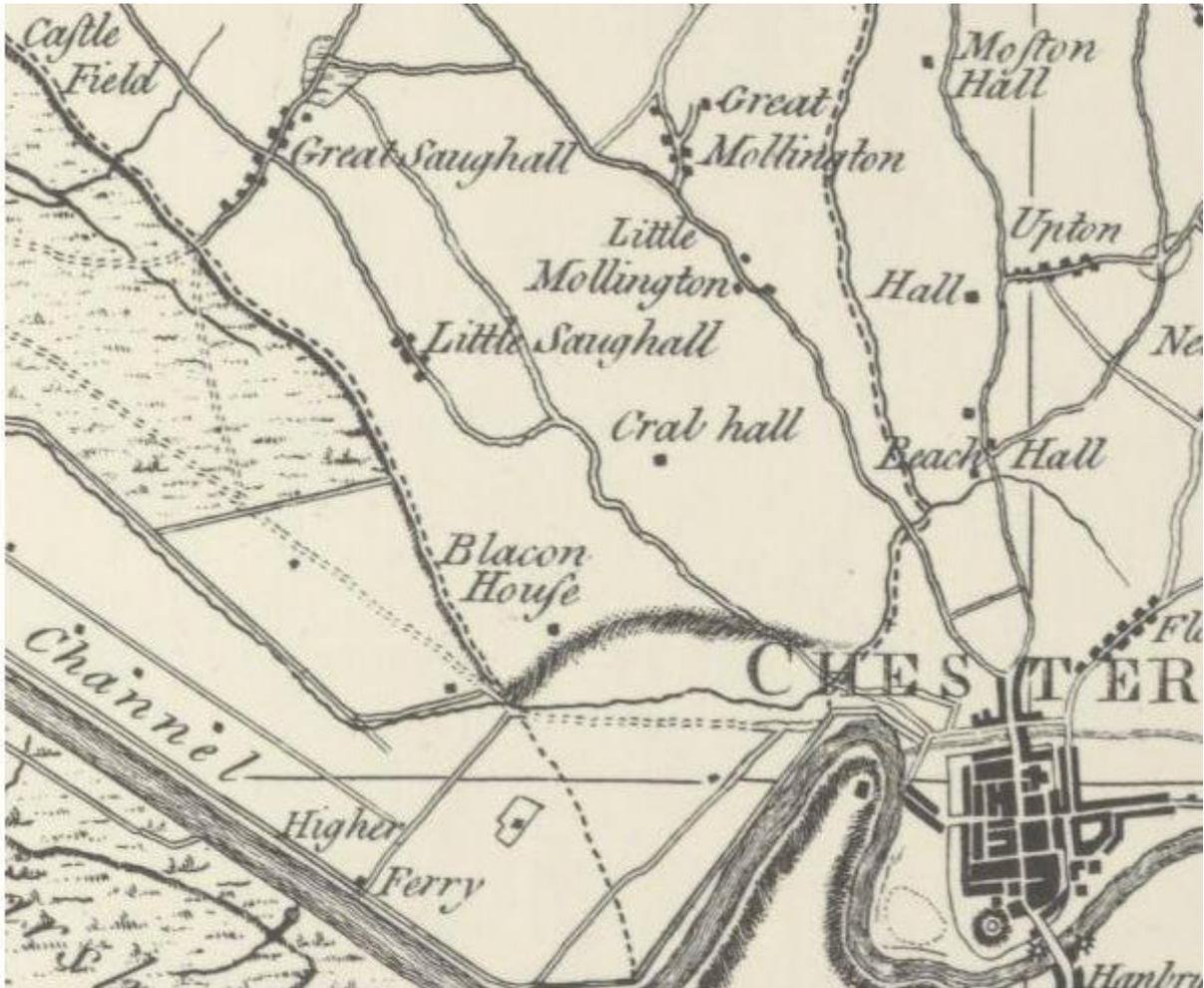


Fig. 4: A Survey of the County Palatine of Cheshire P. P. Burdett 1777 (Harley and Laxton 1974)

In 1819, the name 'Little Blacon' appears on Christopher Greenwood's map of the county (Greenwood 1819) (Fig. 7).



Fig. 5: Map of the County Palatine of Chester from an Actual Survey made in the Year 1819 (Greenwood 1819)

This is located at the site of *Blacon Hall*, which first appears on Bryant's 1831 map (see Figs. 8 and 9) and sits within the research area (Bryant 1831).



Fig. 6: Map of the County Palatine of Chester from an actual survey in the years 1829, 1830 and 1831, 1¼" to 1 mile (Bryant 1831)

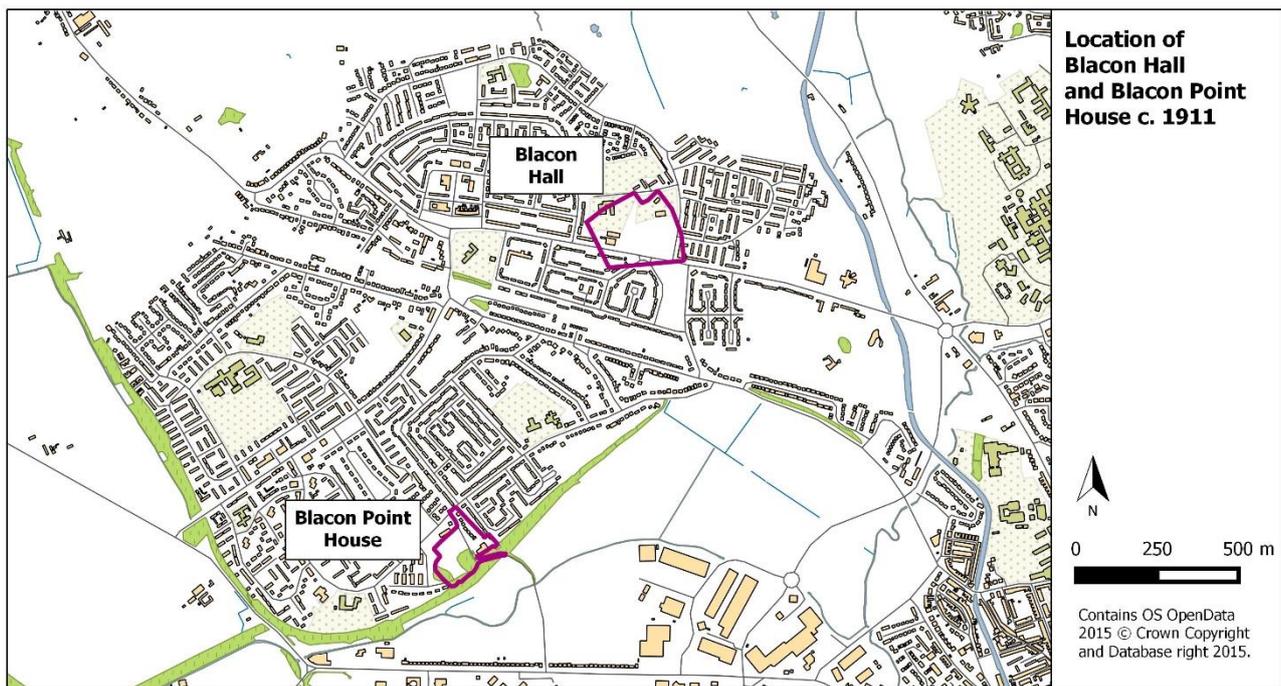


Fig. 7: Location of Blacon Hall and Blacon Point House c. 1911.

Blacon Hall stood until the 20th century, built during the 18th century on a U-shaped floor plan, and forms the foci for the community archaeology project reported here.

4.6. Industrial Period

In 1756, a land reclamation project around Port Pool was initiated to control the effects of high tides between what is now Saughall Road and Curzon Park. Stones were taken from the ruinous Shotwick Castle, (c. 4.5 km NW of Blacon), to build barriers to prevent the high tide moving in (Carrington 1993, 2-3).

By 1847, the open fields surrounding both properties had been enclosed as evident on the 1847 Tithe Map for the area. The fields respect both Blacon Hall and Blacon Point House, indicating the antiquity of the structures. The plot information reveals that Blacon largely constituted fields, small areas of interspersed woodland and numerous ponds. The 1851 census demonstrates that there were 115 people living in Blacon, most of whom were involved in agricultural activity (Blacon History Group 1990, 4).

In the 1880's, Lord Crewe sold land to the Manchester, Sheffield and Lincolnshire Railway Company to create a line through Blacon. The station opened in 1890 (Blacon History Group 1990, 4), and it was located just within the south-west limit of the research area. The train line linked Blacon to Chester's Northgate Station, to the junction of Hawarden Bridge where it linked with the Great Central Railway line (see Fig. 10 for associated structures). The line remained active, linking Blacon to Connah's Quay, until the 1990's (Cheshire HER: 10867/1/0). Between 2000 and 2009 the line was re-landscaped and turned into a cycle and footpath route, which is still currently in use.

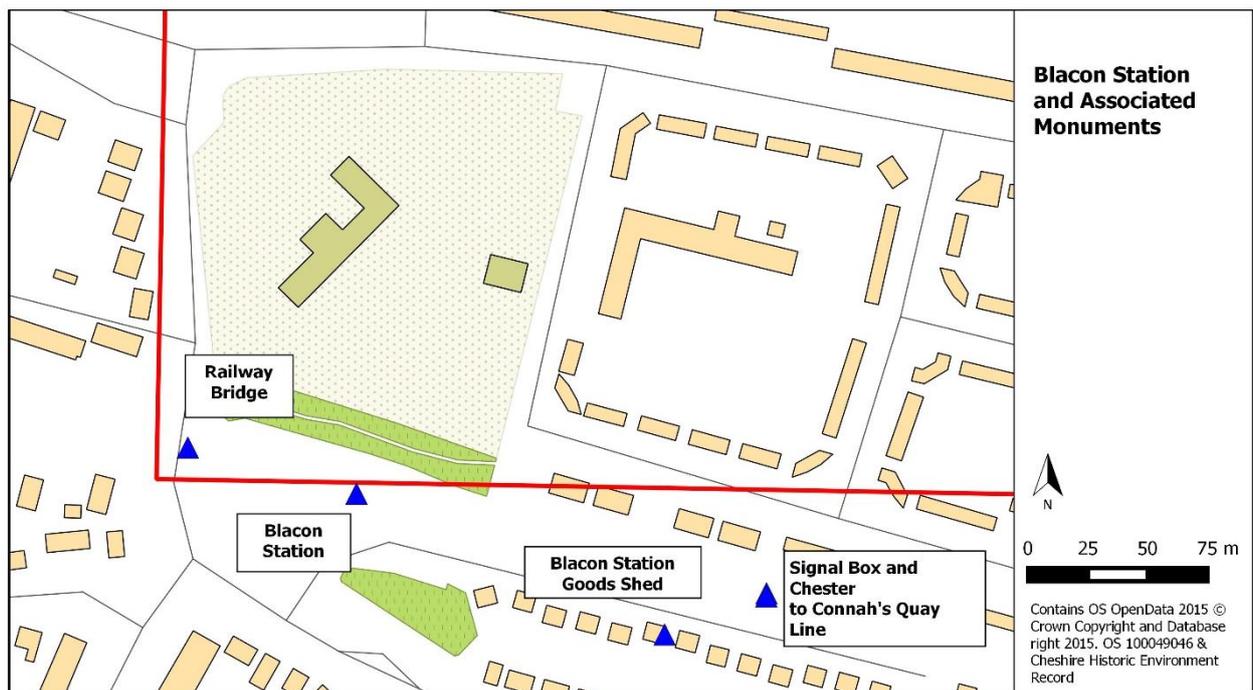


Fig. 10: Blacon Station and associated monuments

4.7. Modern

In 1921 after the sale of Blacon to various tenant farmers by Lord Crewe, the change to Blacon's landscape was rapid. Chester City Council began buying land in the 1930's and continued to do so after WWII. Chester City's Engineer and Architect, Charles Greenwood, designed a housing development for Blacon. The first houses were located at Blacon Hall Road (Stainthorp 2004, 5).

In 1937, the owner of Blacon Point Farm opened an 18-hole golf course between Southway, Treborth Road and Western Avenue. In 1939 the Ministry of Defence took over the land and built a large Army Camp (Stainthorp 2004, 5), which became home to the 26th Machine Gun Training Centre

(CHER: 4376) (Fig. 11). The main barracks were located on Auckland Road, the officer's mess and sleeping quarters were located at Treborth Road and the main parade ground sits beneath Blacon High School (Blacon History Group 1990, 18-19). The camp closed in 1960 and the houses in the area around Mayfield, Egerton, Highfield, Woodside and Wavertree Roads were converted to civilian housing (Blacon History Group 1990, 18-19).

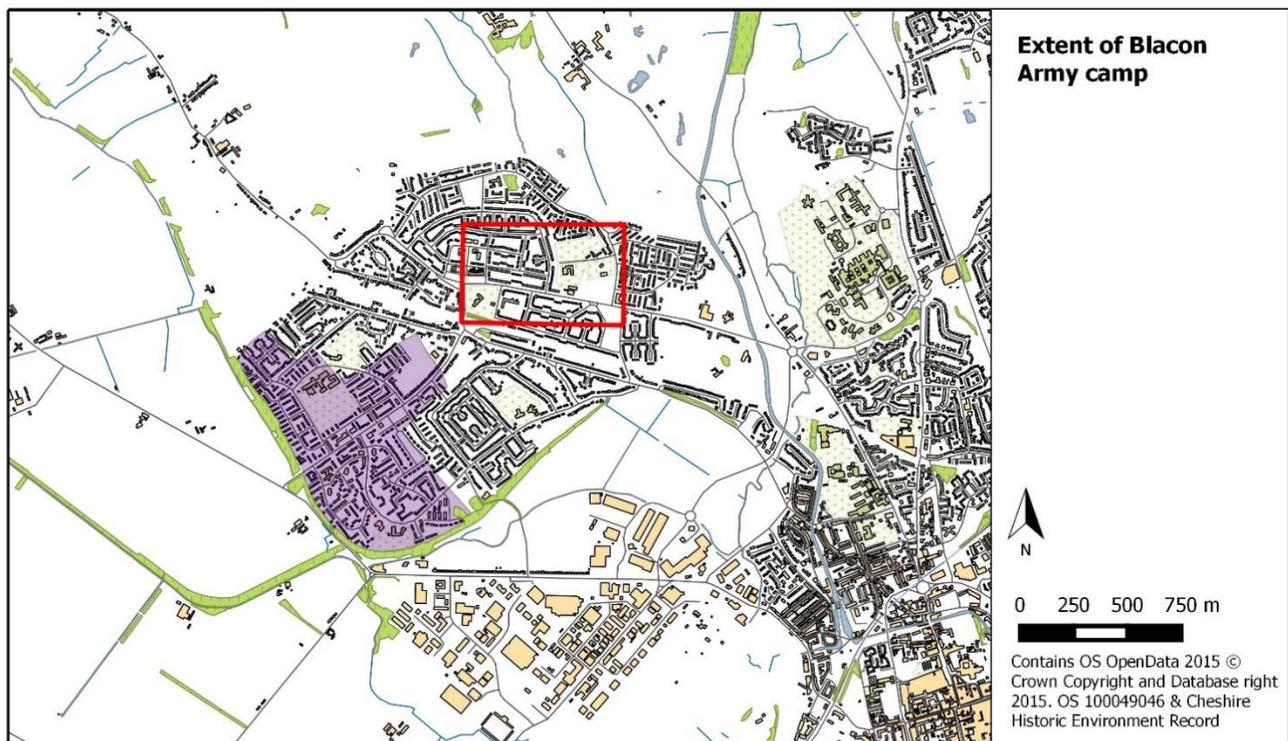


Fig. 11: Extent of Blacon Army Camp

From the 1960's onwards most of the development has been private and consequently, private ownership and Council owned properties are roughly 50/50.

Gazetteer of Cheshire Historic Environment Records within Research Area

Table 2: List of CHER Records located within research area

CHER Record	Location	CHER ID
Roman Coin from Lincoln Road	SJ 3866 6810	8600/10
Blacon Hall Country House	SJ 3881 6827	11191
Blacon Station	SJ 3830 6808	10867/1/10
Bridge (Railway) at Saughall Road	SJ 3823 6810	10867/1/13

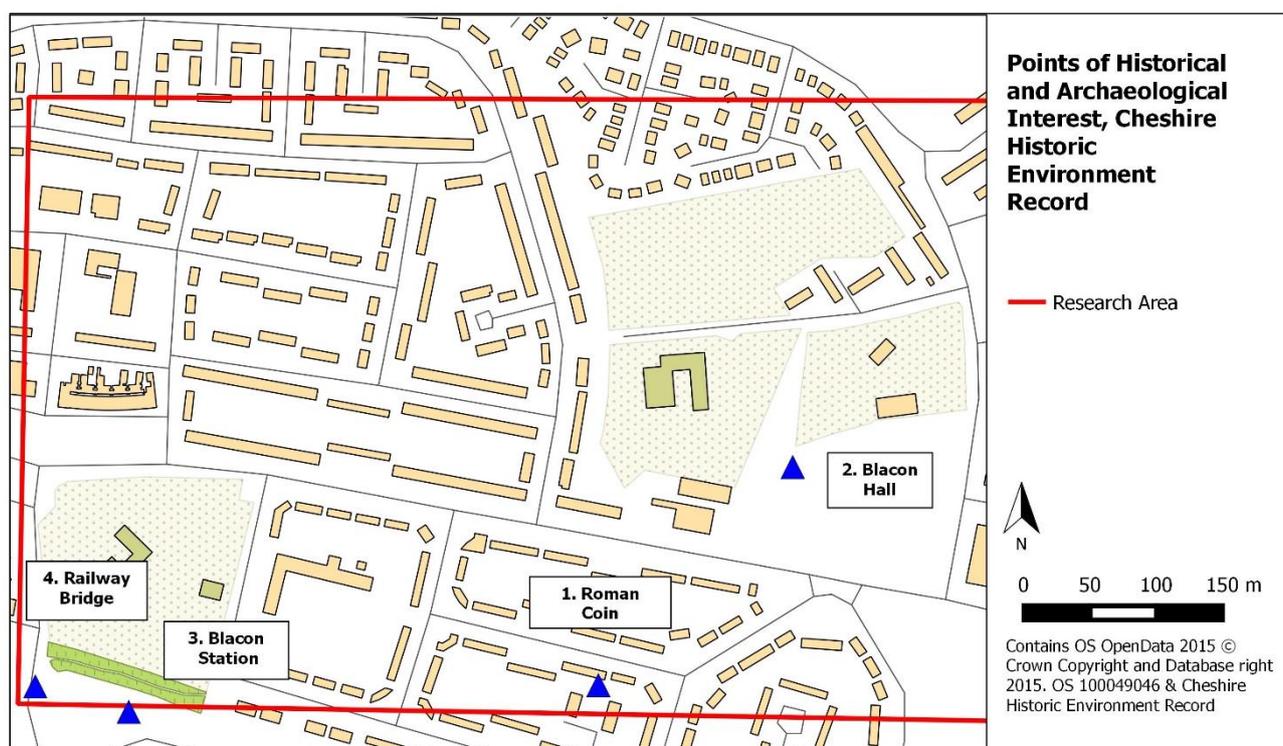


Fig. 12: Locations of Cheshire Historic Environment records found within research area.

Conclusion

Extant Archaeology

The research area is largely covered by twentieth century housing and the accessible greenfields have been subject to landscaping (Paul Noon, pers. comm.). 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.

Blacon's proximity to Chester and a potential Roman road skirting the north-east of the estate indicated that there was Roman activity in the area from the first century. The stray first century coin found within the study area clearly indicates that Roman material can and does survive in the Blacon area and it was anticipated that there was a strong possibility that more stray artefacts from this period may be recovered throughout the course of the project. However, it was not clear if a Roman military camp was located close to the modern junction of Western Ave and Treborth Road. If this was the case the potential for recovering occupational evidence and material culture would be much higher. Based on the evidence to date, it was deemed that there was a moderate to high possibility of unearthing activity from the Romano-British period.

Earlier settlement and agricultural activity in Blacon has been recorded in historical texts, such as Domesday. There was, therefore, a low to moderate potential for medieval and Saxo-Norman material to survive.

The potential to uncover evidence for post-medieval agricultural practice and settlement was deemed high, as both have been noted on early maps. 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. Specifically, maintenance work in the Adventure Playground in the 1990's just east of Blacon Hall recovered large quantities of unabraded nineteenth-twentieth century ceramic (Paul Noon, pers. comm.). Based on the date and proximity of the ceramic assemblage there is a strong possibility that this material was associated with Blacon Hall and its outhouses. Consequently, it was estimated that it was highly likely that further material and possibly structural elements associated with this building, 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 Blacon'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 Blacon.

5.2. Objectives

- Minimum of 1200 volunteer hours.
- Complete 20 1m x 1m test pit excavations within Blacon and its environs.
- Involve volunteers in as many stages of the archaeological process as appropriate.
- Assess the archaeological potential of Blacon.

5.3. Intended Outcomes

- Improve public and academic understanding of the historic environment of Blacon and its environs and the contribution this historic environment makes to a contemporary sense of place.
- Characterise and phase the development of Blacon and its environs.
- Identify, if any, further avenues of investigation within Blacon.
- Foster a greater sense of community pride.
- Leave an online legacy that will encourage the start-up and participation in comparable projects both locally and nationally.

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.

1m 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 north east of Blacon. A total of twenty test pits were excavated. Test pit locations are shown in Fig. 13.

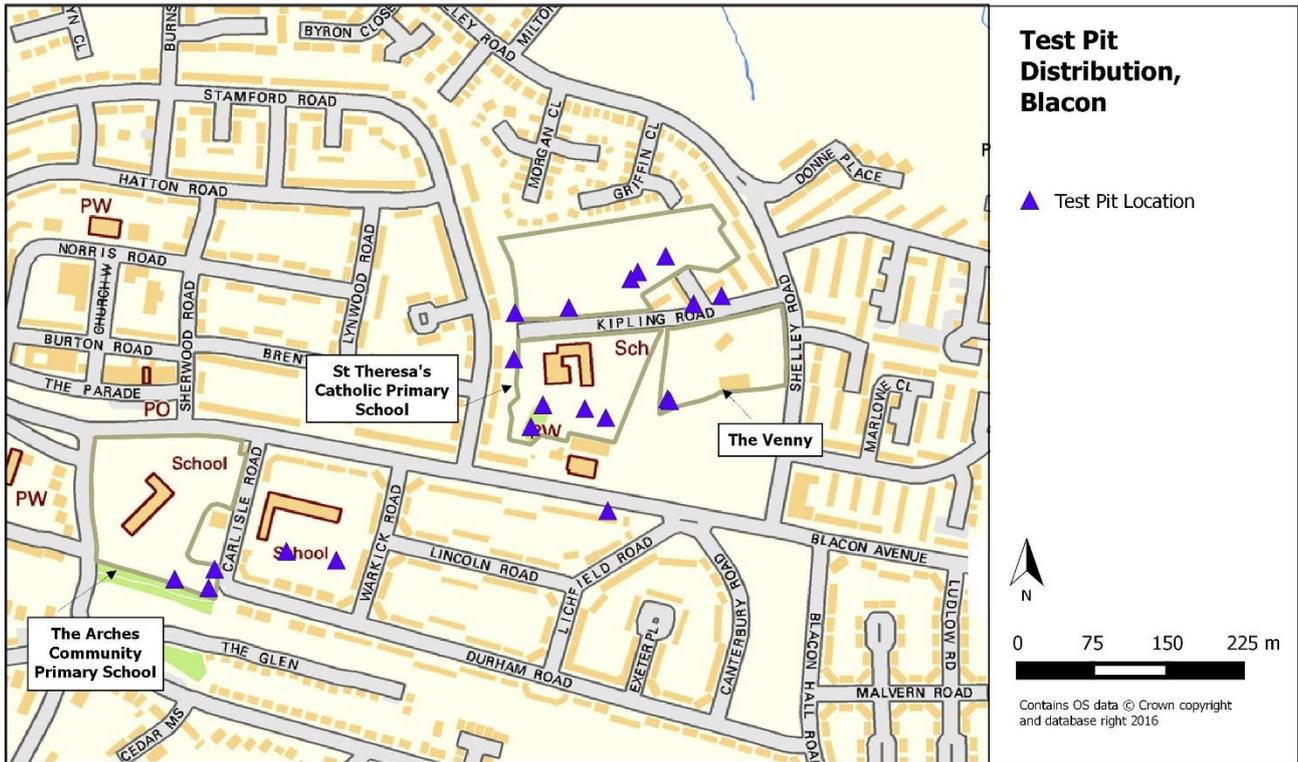


Fig. 13: Test Pit Distribution 2015

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 of 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 Dig Blacon project followed the standard procedure outlined below, unless otherwise stated.

- A 1x1m 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 20cm spits to provide a guideline for inexperienced volunteers. The 20cm 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 present in the trench. This process was undertaken to a maximum depth of 1.2m (although occasional small sondages were excavated to test the depth of the final context) but often the natural was present before this depth. (see Figure 46) 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 1.2m 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 nearby features and hand tapes then noted on the OS map supplied for each test pit.
- 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 6mm 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 Grosvenor Museum 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.

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 Cheshire Historic Environment Record [CHER] 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 Grosvenor Museum, Chester. The accession number is **CHEGM 2015.200**. The archive was compiled following guidelines supplied by Grosvenor Museum (Cheshire West and Chester Museums 2015).

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 Joanne Kirton and illustrations prepared by Joanne Kirton. The finds reports have been written by Paul Blinkhorn, Dr David Higgins and Ian Smith and Dr Robert Philpott. The archive has been prepared by Joanne Kirton and Karen Gavin.

7. RESULTS

Below are the results from each of the individual twenty 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 1-20

7.1.1. Test Pit 1

Test Pit 1 was located on the western perimeter of the grassed area to the west of the Blacon Children's Centre, CH1 5DB.

Centroid: 338437.98 368147.36

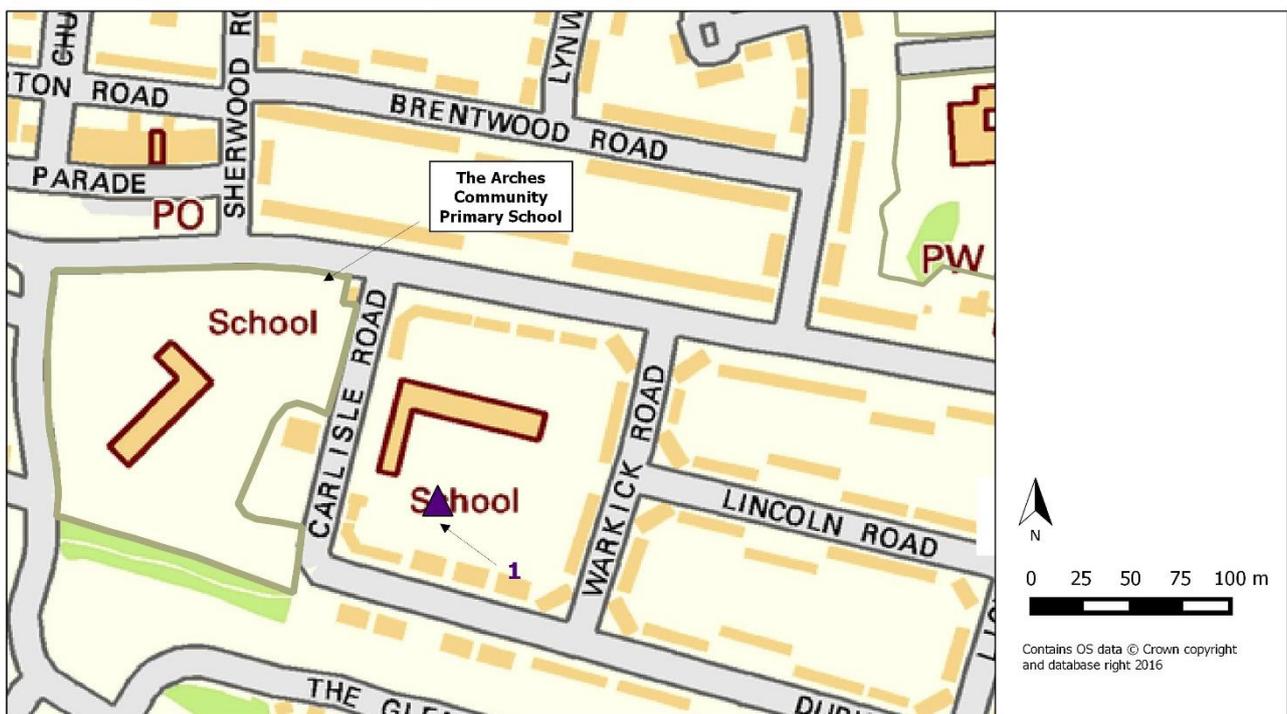


Fig. 14: Location of Test Pit 1

Test Pit 1 was excavated to a depth 0.2m. This test pit was used as an activity pit for toddlers and their parents. This is reflected in the depth the excavation reached. The topsoil (101) was a loose, light brownish-red clayey-silt with small angular stone inclusions, ranging from 1-4cm in size. The subsoil (102) was a firm, orangey-brown silty-clay with coal (1-2cm) and angular stone (1-4cm) inclusions. Context (102) is most likely a levelling event based on a comparison with nearby test pits (8 and 9), which still retained their agricultural soils pertaining to activity noted in the Tithe Map of 1847 (Cheshire Tithe Maps 2015) (see below for further discussion). A similar context was noted in Test Pit 2 at a comparable level (202), suggesting that the levelling event may relate to the creation of the sites playing field.

Table 3: Summary of bulk find materials excavated from TP1

Context	Animal Bone		CBM		Glazed Pottery		Misc			Modern Glass		Modern Metal		Plastic		SBM		Slag	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Description	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
101	1	25	26	200	2	1				4	16			5	9			2	13
102			17	797	1	4	1	1	Oyster	13	31	1	1	2	1	7	30	8	81

7.1.2. Test Pit 2

Test Pit 2 was located on the eastern perimeter of the grassed area to the west of the Blacon Children’s Centre, CH1 5DB.

Centroid: 338487.99 368138.86



Fig. 15: Location of Test Pit 2

Test Pit 2 was half-sectioned at 0.18m, quarter-sectioned at 0.24m, reaching a final depth of 0.42m in the south-west quadrant. The topsoil was a loose, light brown-red clayey/sandy-silt. The subsoil (202) was a compact, orangey-brown silty-clay with angular stone and pebble inclusions, less than 5cm in size. Within the deposit was a high concentration of rubble, consisting mainly of CBM and slag waste, possibly used to aid drainage of the playing field. This context was comparable to (102). The end of the context was not reached due to time constraints.

Table 4: Summary of bulk find materials excavated from TP2

Context	Animal Bone		CBM		Misc			Modern Glass		Modern Metal		Plastic		Slag	
	Total	Wt (g)	Total	Wt (g)	No	Wt (g)	Description	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
201	1	1			3	3	Rubber			4	13	2	1	4	10
					2	1	Fabric								
202			35	987				6	17	6	217			36	248

7.1.3. Test Pit 3

Test Pit 3 was located in the Blacon Adventure Playground, also known locally as 'The Venny', CH1 5UU. Test Pit 3 was the northern-most of two test pits excavated on the western perimeter.

Centroid: 338820.14 368300.5

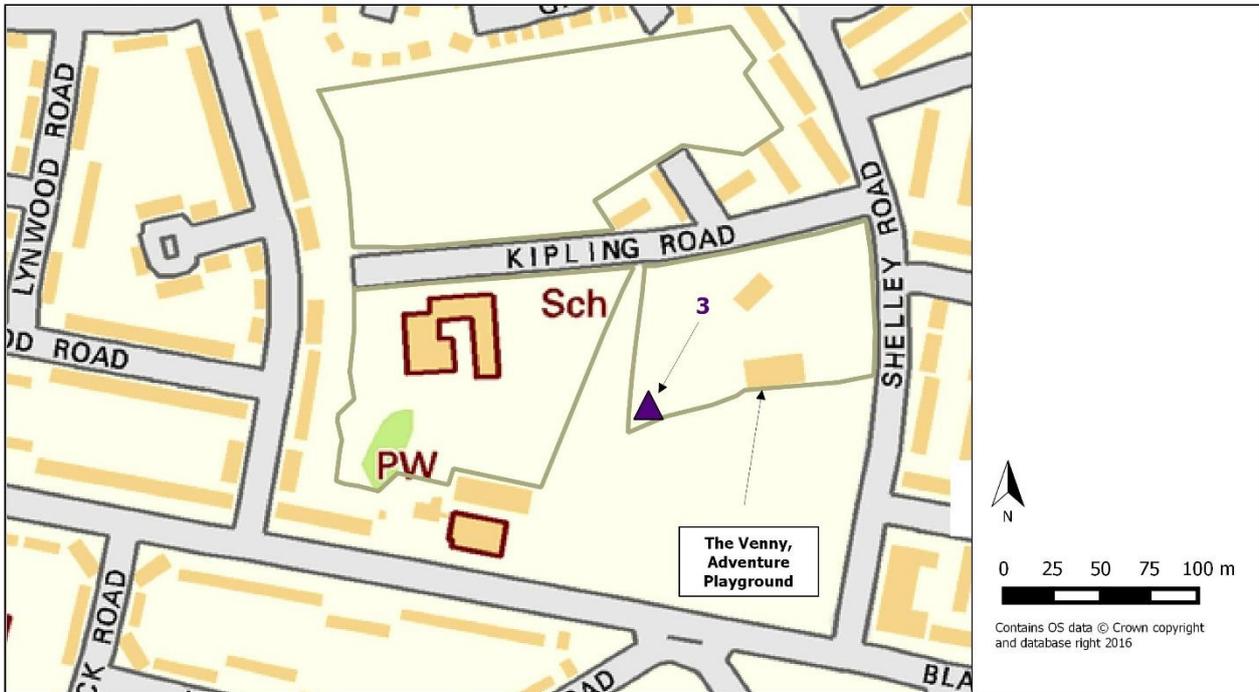


Fig. 16: Location of Test Pit 3

Test Pit 3 was half-sectioned at 0.4m and reached a final depth of 0.49m in the eastern half of the test pit. The excavation area was wooded and covered with woodland undergrowth. This area falls within the boundary of the Blacon Hall noted on the 1871 OS Map (Ordnance Survey 1871). Many of the trees in this area once belonged to the hall's orchard. The topsoil (301) was a loose, dark greyey-black silt mixed with partially decayed organic material and disturbed by root systems. The subsoil (302) was a compacted, mid greyey-brown silt with pockets of clay. Small angular stones were noted in this context, 1-2cm in size. This context produced a number of small finds: SF 301 is neck sherd of a utility bottle dating to c. 1700-1860, which is comparable with the period of occupation for Blacon Hall and may relate to occupational activity. Two sherds of pottery, SF 302 and SF 303, were also recovered from the site (see Fig. 17). SF 302 was a sherd of Midland Purple Ware dating to the 15th.

17th centuries and the second, SF 303, was a sherd of Glazed Red Earthenware dating to the c. 16th-17th centuries. The latter is abraded, which is common for all of the Red Earthenware recovered in Blacon, which indicates that the presence of Red Earthenware, and possibly other early ceramics, is from manuring rather than representing settlement activity (see Blinkhorn; 11.2.4).



Fig. 17: (L-R) SF 302 and SF 303

Context (303) was a weakly cemented, mid reddy-brown clay deposit. Mixed with this deposit were pockets of rubble CBM. This may pertain to a wall that was uncovered by Adventure Playground staff and which was associated with large sherds of Buckley Ware observed by Big Heritage staff on a preparatory visit to the site. The end of this context was not reached, as the test pit was closed due to time constraints.

Table 5: Summary of bulk find materials excavated from TP3

Context	Animal Bone		CBM		Clay Tobacco Pipe		Glazed Pottery		Modern Glass		Modern Metal		Plastic		SBM		Slag		Unglazed Pottery	
	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)	Total	Wt (g)
301	1	6	43	564	1	1	7	16	8	14	7	945	3	27	3	13	1	1		
302	1	1	53	596			26	111	8	14	1	5			14	24	8	387	1	2
303	19	69	30	268			3	10							6	35	3	130	1	3

7.1.4. Test Pit 4

Test Pit 4 was located in the Blacon Adventure Playground, also known locally as ‘The Venny’, CH1 5UU. Test Pit 4 was the southern-most of two test pits excavated on the western perimeter.

Centroid: 338821.69 368298.18

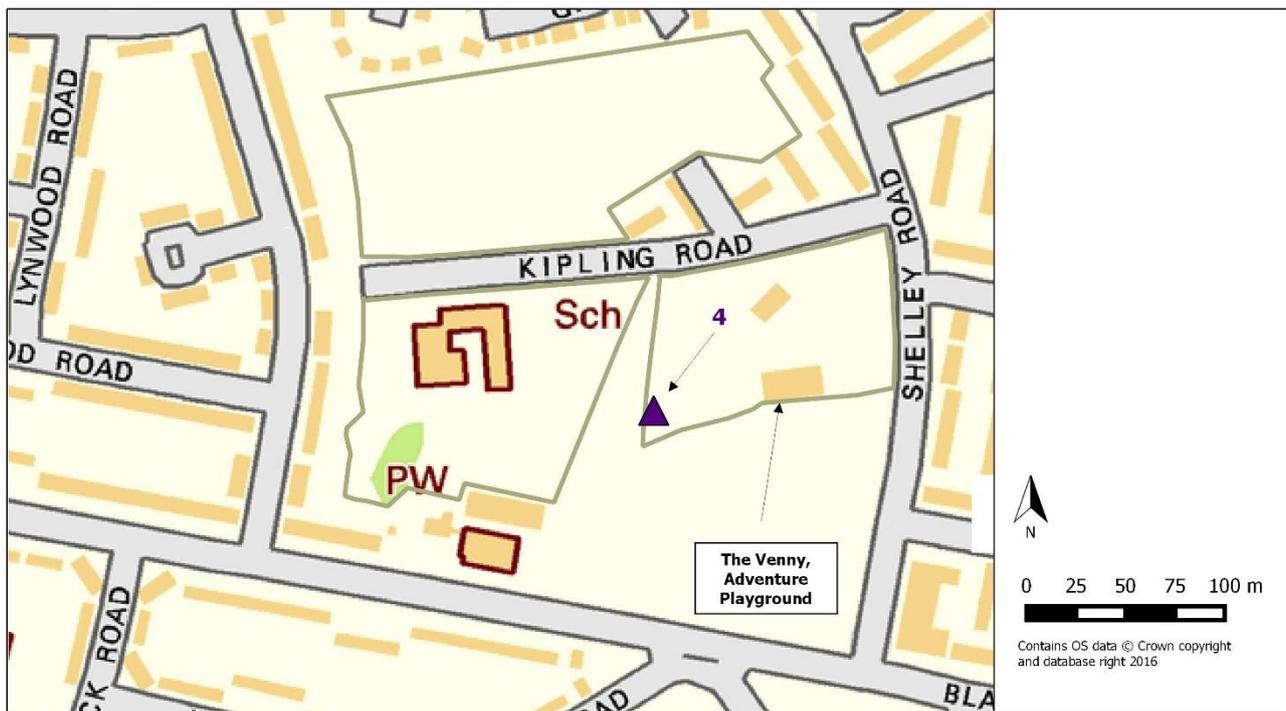


Fig. 18: Location of Test Pit 4

Test Pit 4 was half-sectioned at 0.28m and reached a final depth of 0.33m in the western half of the test pit. The excavation area was wooded and covered with woodland undergrowth. This areas falls

within the boundary of Blacon Hall noted on the 1871 OS Map (Ordnance Survey 1871). Many of the trees in this area once belonged to the hall's orchard. The topsoil (401) was a loose, mid blacky-brown silt mixed with partially decayed organic material and disturbed by root systems. It also contained angular stones, 1-4cm in size, and small fragments of coal. The topsoil produced one sherd of Midland Purple Ware (c. 15th-17th century), SF 402. The subsoil (402) was a firm, mid orangey-brown clayey-silt with rounded (1-4cm) and angular (0.5-5cm) stone inclusions and small fragments of coal. One small find, SF 401, was recovered from this context. This consisted of three sherds of a dark green utility bottle dating to c. 1760-1840, which is comparable with the period of occupation for Blacon Hall and may relate to occupational activity (see Fig. 19).



Fig. 19: SF 401

Context (403) was a firm, light orangey-yellow clay with pebble inclusions, ranging from 1-15cm 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. Context (404) was the same as (403). One sherd of Midland Purple Ware was recovered from this context, SF 403.

Table 6: Summary of bulk find materials excavated from TP4

Context	Animal Bone		CBM		Clay Tobacco Pipe		Glazed Pottery		Misc			Modern Glass		Modern Metal		Plastic		SBM		Slag	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	No	Wt (g)	Description	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
401	2	18	40	395	4	2	24	37	1	2	Ring	14	27	4	18	2	1	4	21	2	10
402	2	8	14	517			39	314				5	5	1	7			7	19	12	107
403			12	496								4	43	3	167			1	7	3	71
404			9	462			3	55													

7.1.5. Test Pit 5

Test Pit 5 was located in the school field, north of Kipling Road. The field belongs to St Theresa's Catholic Primary School and is used for sporting activities. The test pit was one of four excavated in this field. Test Pit 5 was the most easterly sited test pit in the field.

Centroid: 338817.83 368444.17

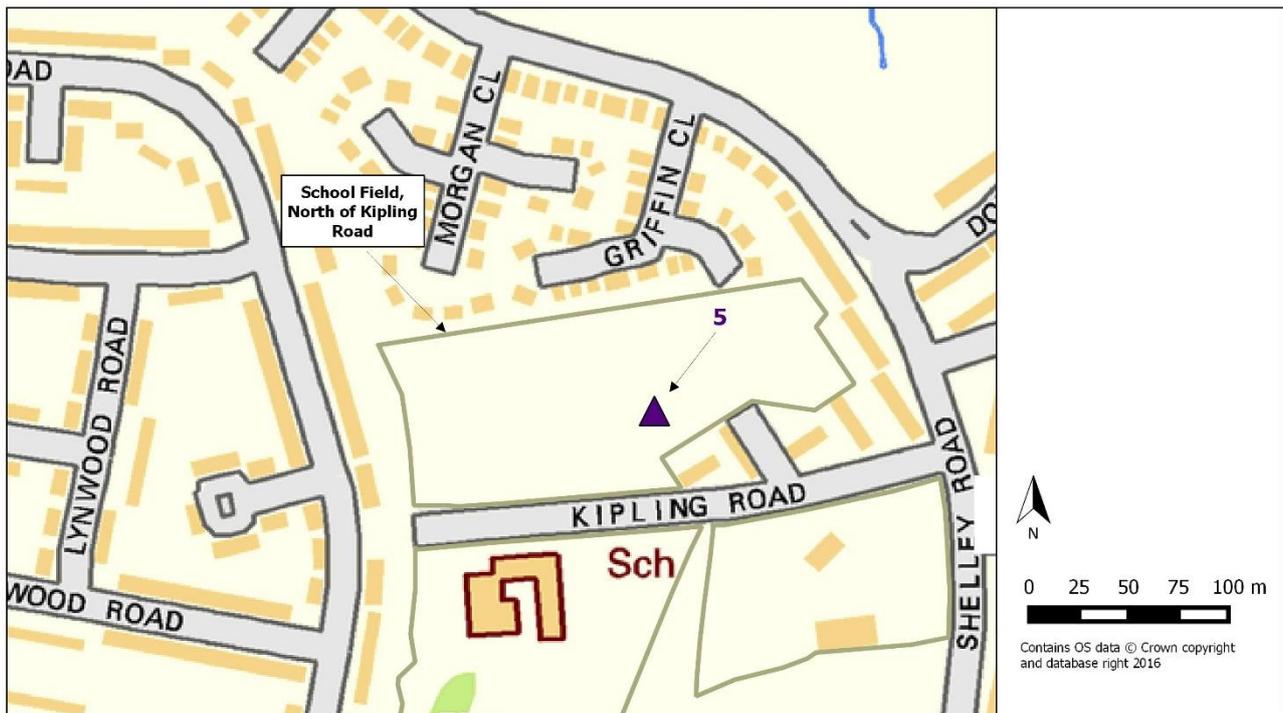


Fig. 20: Location of Test Pit 5

Test Pit 5 reached a final depth of 0.21m. The test pit was used to demonstrate basic excavation skills to three small groups of teenagers with severe mental illness, accompanied by care staff. This is reflected in the depth the excavation reached. The topsoil (501) was a compact, mid greyey-brown clayey/sandy-silt with angular stones, ranging from 5-10cm in size. Two small finds, SF 501 and SF 502, were recovered from this context (see Fig. 21). SF 501 is the base of an olive green glass flask, dating to c. 1760-1840 and SF 502 is a sherd of abraded Glazed Red Earthenware. The trench was closed once the activity-based learning was complete.



Fig. 21: (L-R) SF 501 and SF 502

Table 7: Summary of bulk find materials excavated from TP5

Context	CBM		Clay Tobacco Pipe		Glazed Pottery		Misc			Modern Glass		Plastic	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	No	Wt (g)	Description	Total	Wt (g)	Total	Wt (g)
501	12	21	2	5	16	95	2	5	Conductor Frag	11	10	5	2

7.1.6. Test Pit 6

Test Pit 6 was located in the school field, north of Kipling Road. The field belongs to St Theresa's Catholic Primary School and is used for sporting activities. The test pit was one of four excavated in this field.

Centroid: 338783.07 368421.77

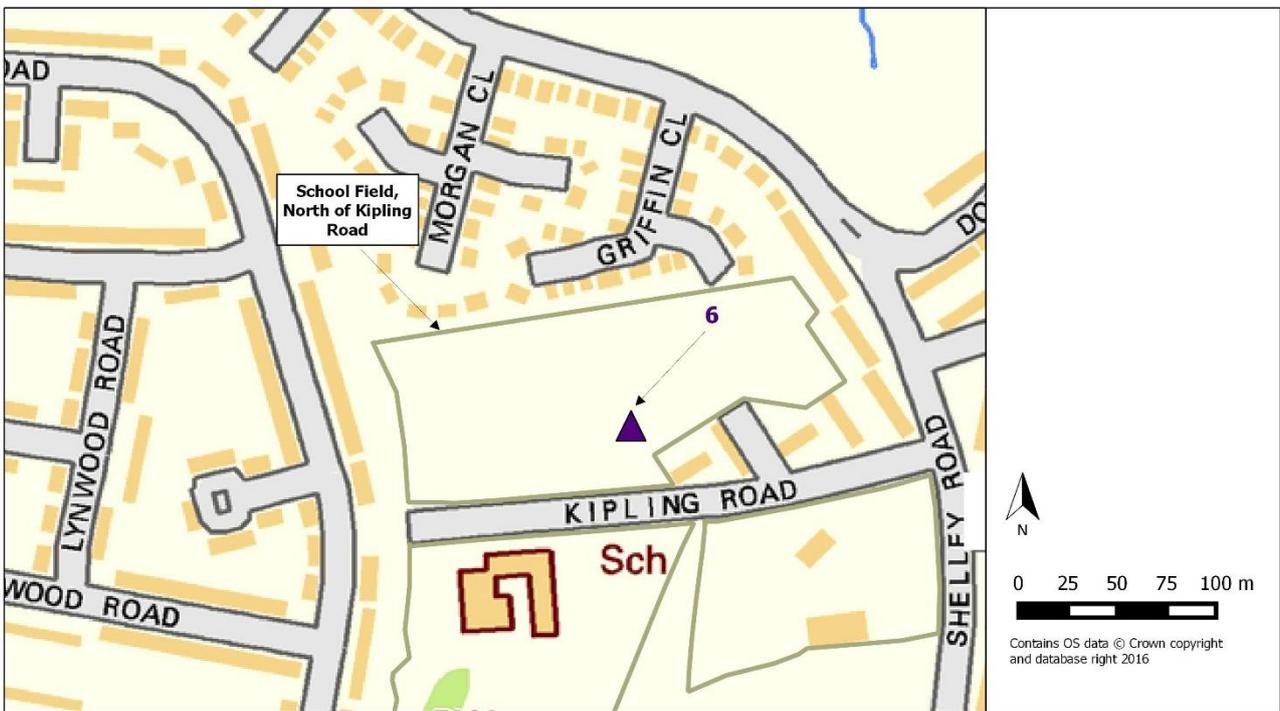


Fig. 22: Location of Test Pit 6

Test Pit 6 was half-sectioned at 0.3m and excavated to a final depth of 0.57m in the southern half of the test pit. The topsoil (601) was a weakly cemented, mid greyey-brown clayey-silt with small angular stones, 1-2cm in size. One small find was recovered from this context, SF 601. This was a sherd of Glazed Red Earthenware. Context (602) was a thin (4-5cm), weakly cemented, light reddy-brown clayey-silt with angular stone inclusions and charcoal flecks throughout. It resembles context (702) in Test Pit 7 (see below), which was significantly larger in depth, suggesting that context (602) maybe redeposited material from lower in the stratigraphic sequence. Context (603) was a strongly cemented, mid reddy-brown sandy-clay with small regular stones, 1-2cm in size.

This trench was sited to explore field boundary features identified through geophysical survey of the site (see Harris 2015). Excavation at other sites in the vicinity (Test Pits 8, 9 and 18) has indicated that this soil is agricultural. This fits with the land use noted on the Tithe Map of 1847 (Cheshire Tithe Maps 2015), the Chester Urban Archaeological Database (UAD) characterisation (Character Zone 61) and the ceramic assemblage from this trench, which is highly abraded, indicative of manuring in this area (see Blinkhorn 11.2.4). Context (603) may represent the fill of the field boundary noted on the geophysical survey but the cut was not evident at the test pits final depth. Only further investigation of the site would confirm this interpretation.

Table 8: Summary of bulk find materials excavated from TP6

Context	CBM		Clay Tobacco Pipe		Glazed Pottery		Modern Glass		Modern Metal		Unglazed Pottery	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
601	10	40	2	1	15	142	4	28	1	1	2	35
603	4	1										

7.1.7. Test Pit 7

Test Pit 7 was located in the school field, north of Kipling Road. The field belongs to St Theresa's Catholic Primary School and is used for sporting activities. The test pit was one of four excavated in this field. Test Pit 7 was the most westerly sited test pit in the field.

Centroid: 338721.27 368393.19

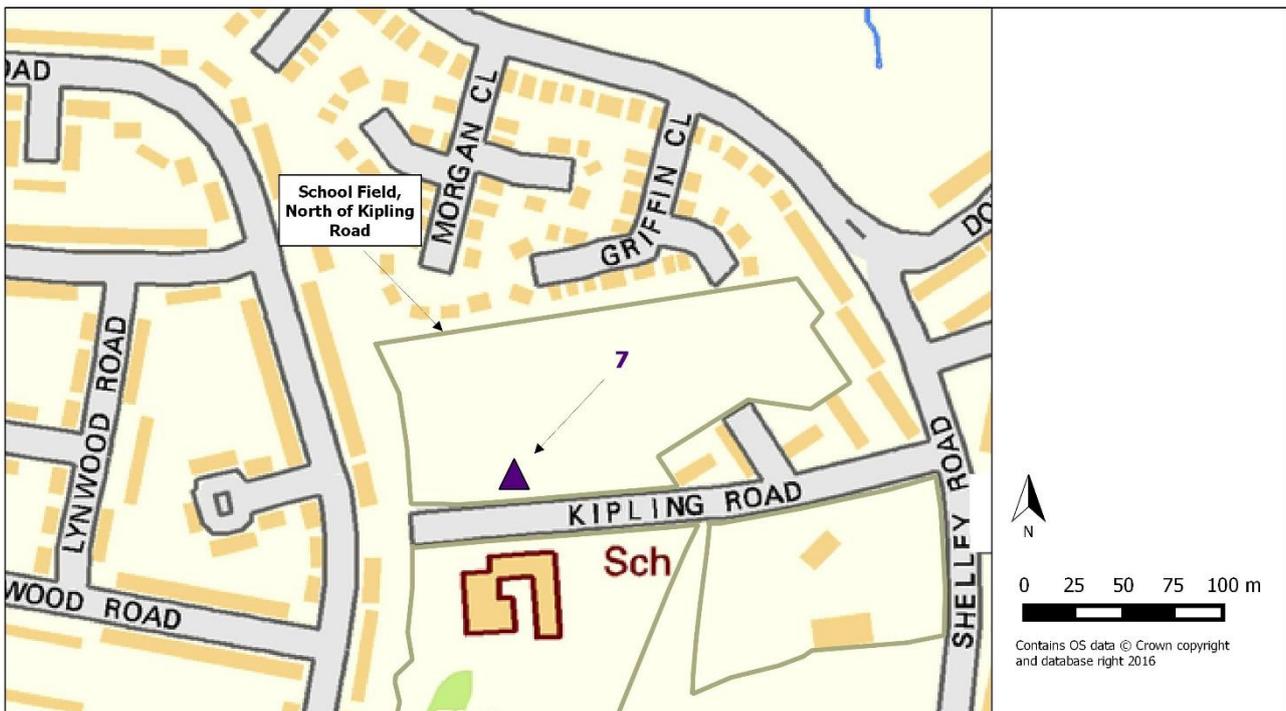


Fig. 23: Location of Test Pit 7

Test Pit 7 was half-sectioned at 0.16m and reached a final depth of 0.71m in the northern half of the test pit. The topsoil (701) was a loose, mid-blacky-brown silt with small pebble inclusions (1-4cm). Context (702) was a strongly-cemented, mid reddy-orange clay with small pebble inclusions. No finds were recovered from this context and its final depth was not reached due to time constraints. The context appears to be the natural. However, this is unlikely due to the depth at which it was encountered (0.16m) below the ground surface. Furthermore, this area was used for agricultural activity (see above) in the 19th century and soils deemed to be associated with such activity have been found in Test Pit's 6, 8, 9 and 18. The stratigraphy and composition of the soil is very different in this test pit. The clay deposit may be related to a levelling event that occurred in the 1960's and

early 70's. According to local residents, the land was prepared for a housing development. However, this never materialised and the land was levelled and turned into a school playing field.

Table 9: Summary of bulk find materials excavated from TP7

Context	CBM		Clay Tobacco Pipe		Glazed Pottery		Modern Glass		Plastic		SBM	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
701	6	72	2	3	5	7	3	3	5	3	5	6
702	1	1									1	4

7.1.8. Test Pit 8

Test Pit 8 was located in the grounds of The Arches Community Primary School, CH1 5EZ. Test Pit 8 was the most northerly of three test pits excavated in the grounds. This test pit was 2x1m² on an east-west alignment.

Centroid: 338365.95 368129.4

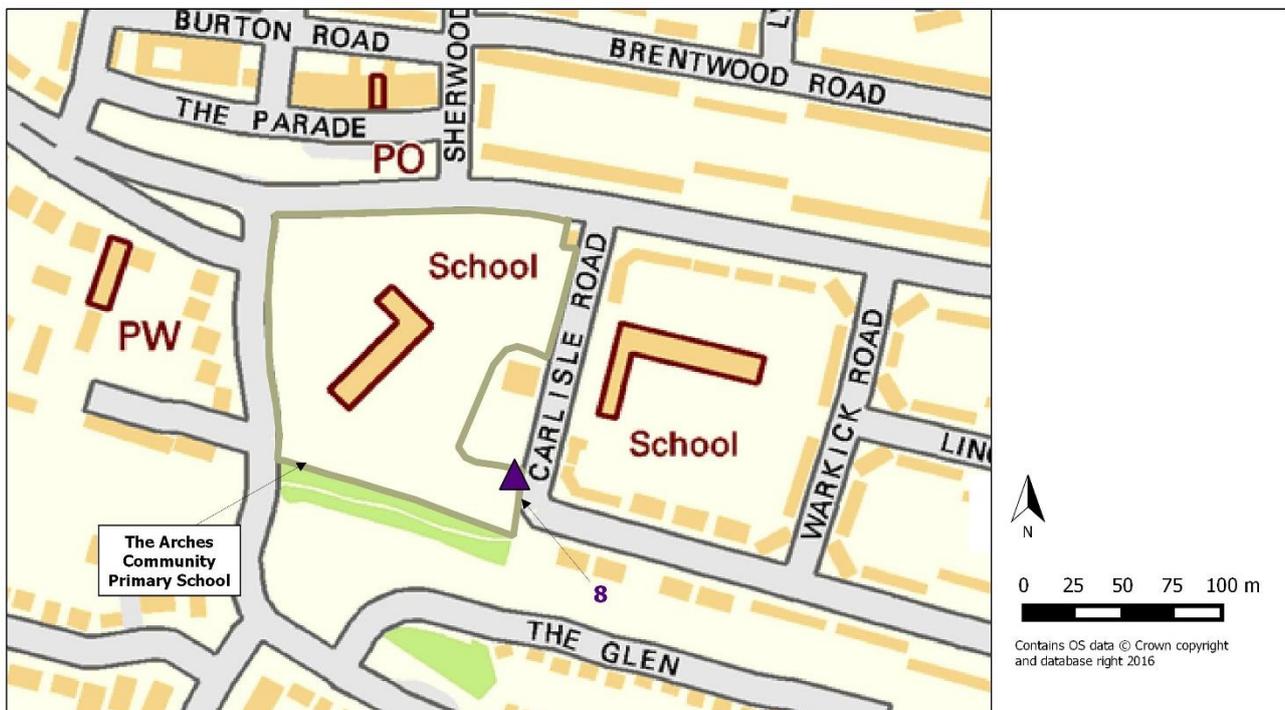


Fig. 24: Location of Test Pit 8

Test Pit 8 was quarter-sectioned at 0.22m and the final depth was reached at 0.62m in the central-eastern quadrant (see Fig. 25). The test pit was opened and excavated by pupils from the Arches Community Primary School over the course of a single day.



Fig. 25: Test Pit 8

The topsoil (801) was a loose, mid greyish-brown clayey-silt with flecks of charcoal and small stone inclusions, ranging from 1-2cm in size. The subsoil (802) was a weakly cemented, mid reddy-brown clay with flecks of charcoal and small stone inclusions, ranging from 1-4cm in size. Context (803) was a strongly cemented, mid yellowy-brown sandy-clay with comparable inclusions to earlier contexts. As with Test Pit 6 and 9, this context contained highly abraded sherds of ceramic material throughout, indicating that the land was used for agriculture previous to its current use as a school playing field. Context (804) was a strongly cemented, light blacky-grey clay with charcoal and stone inclusions. The final context appeared to be natural clay, producing no finds. Context (805) was a strongly cemented, mid reddy-orange clay with large pebble inclusions, ranging from 1-6cm in size. A small sondage was excavated at the base of the test pit (0.62m), this was 0.3m in depth with no change in context noted.

Table 10: Summary of bulk find materials excavated from TP8

Context	CBM		Clay Tobacco Pipe		Glazed Pottery		Modern Glass		Modern Metal		Plastic		SBM		Slag	
	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	31	253	1	3	17	34	6	40	4	30	2	1	6	13	18	49
802	9	99	2	1	21	39	2	2					3	24	6	46
803	2	3			1	6										
804	49	134														

7.1.9. Test Pit 9

Test Pit 9 was located in the grounds of The Arches Community Primary School, CH1 5EZ. Test Pit 9 was one of three excavated in the field. It was located in the south west corner of the field.

Centroid: 338359.77 368110.67

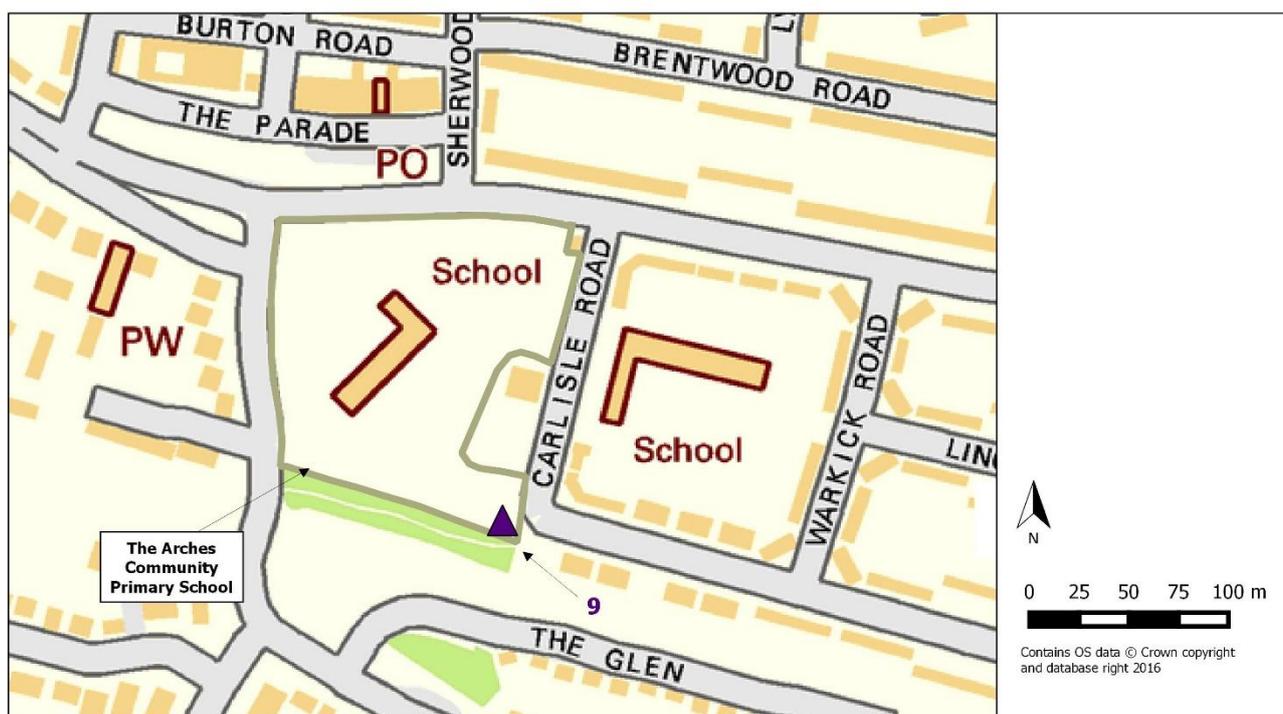


Fig. 26: Location of Test Pit 9

Test Pit 9 was excavated to a final depth of 0.28m. The topsoil (901) was a loose, dark greyey-brown clayey-silt. The subsoil (902) was a friable, mid orangey-brown sandy/silt-clay with small pebble

inclusions, 1-2cm in size. Context (903) was a firmly cemented, mid reddy-brown clay with angular stones and pebbles, ranging from 1-3cm. This deposit is the same as context (803) in the nearby Test Pit 8 (see description above).

Table 11: Summary of bulk find materials excavated from TP9

Context	CBM		Clay Tobacco Pipe		Glazed Pottery		Misc			Modern Glass		Plastic		SBM		Slag		Unglazed Pottery	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	No	Wt (g)	Description	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
901	6	75			1	3				6	7	1	1					1	3
902	14	11	1	1	7	4	2	4	Oyster	1	1			2	8	2	5		
903	15	25			8	7				5	17			1	3				

7.1.10. Test Pit 10

Test Pit 10 was located in the grounds of The Arches Community Primary School, CH1 5EZ. Test Pit 10 was the most westerly of the three test pits excavated in this field.

Centroid: 338325.78 368119.75

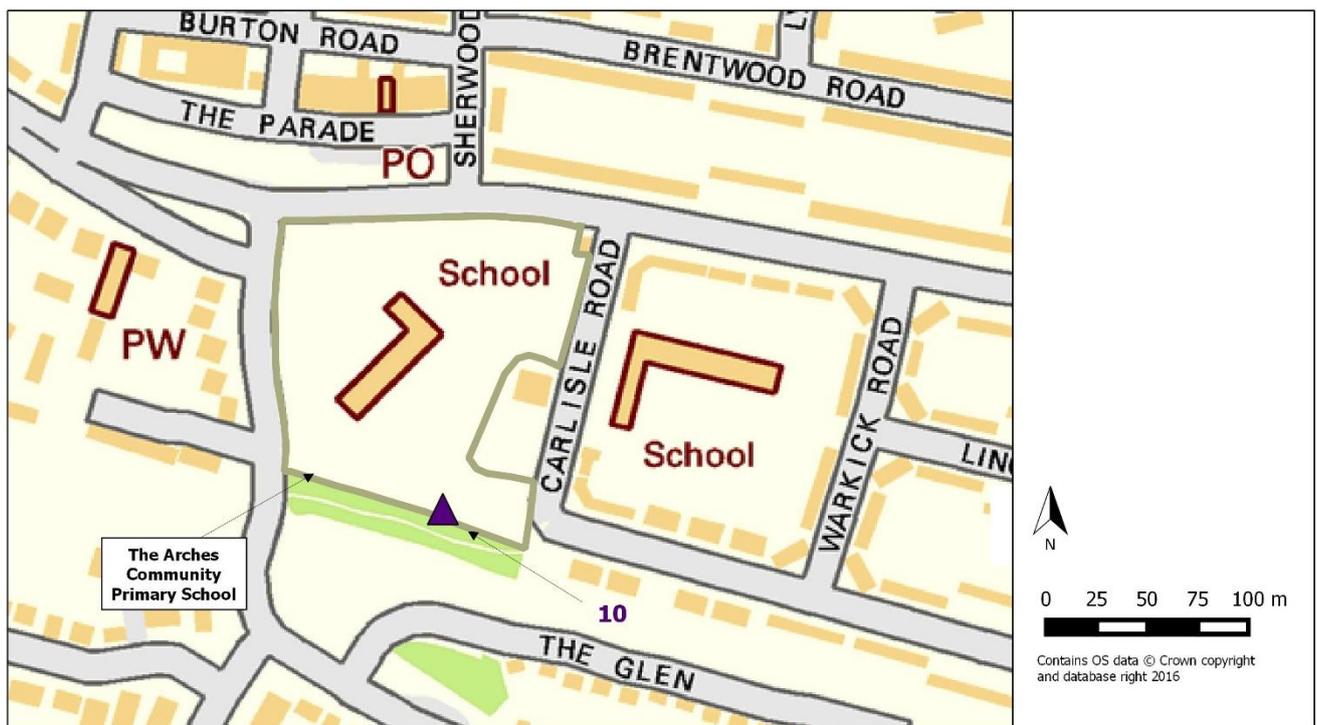


Fig. 27: Location of Test Pit 10

Test Pit 10 was excavated to a final depth of 0.13m. This test pit was used as an activity pit for children accompanied by their parents. Children were taught basic excavation skills and how to identify and record finds. This is reflected in the depth the excavation reached. The topsoil (1101) was a firm, mid blacky-brown silty-clay with the inclusion of pebbles, ranging from 1-2cm in size, and coal.

Despite the limited depth of the test pit, the topsoil was notably different from the nearby test pits, 8 and 9, opened in the same area of the school field. The compacted clay was likely part of a levelling event for the school, as it is in close proximity to the rebuilt and extended school buildings and hard surface.

Table 12: Summary of bulk find materials excavated from TP10

Context	CBM		Clay Tobacco Pipe		Glazed Pottery		Modern Glass	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1001	8	31	1	2	6	4	6	4

7.1.11. Test Pit 11

Test Pit 11 was located in the grounds of St Theresa's Catholic Primary School, CH1 5UU. It was the most easterly of four test pits excavated within the school grounds. The test pit was 2x1m² on a north to south alignment.

Centroid: 338754.52 368283.77

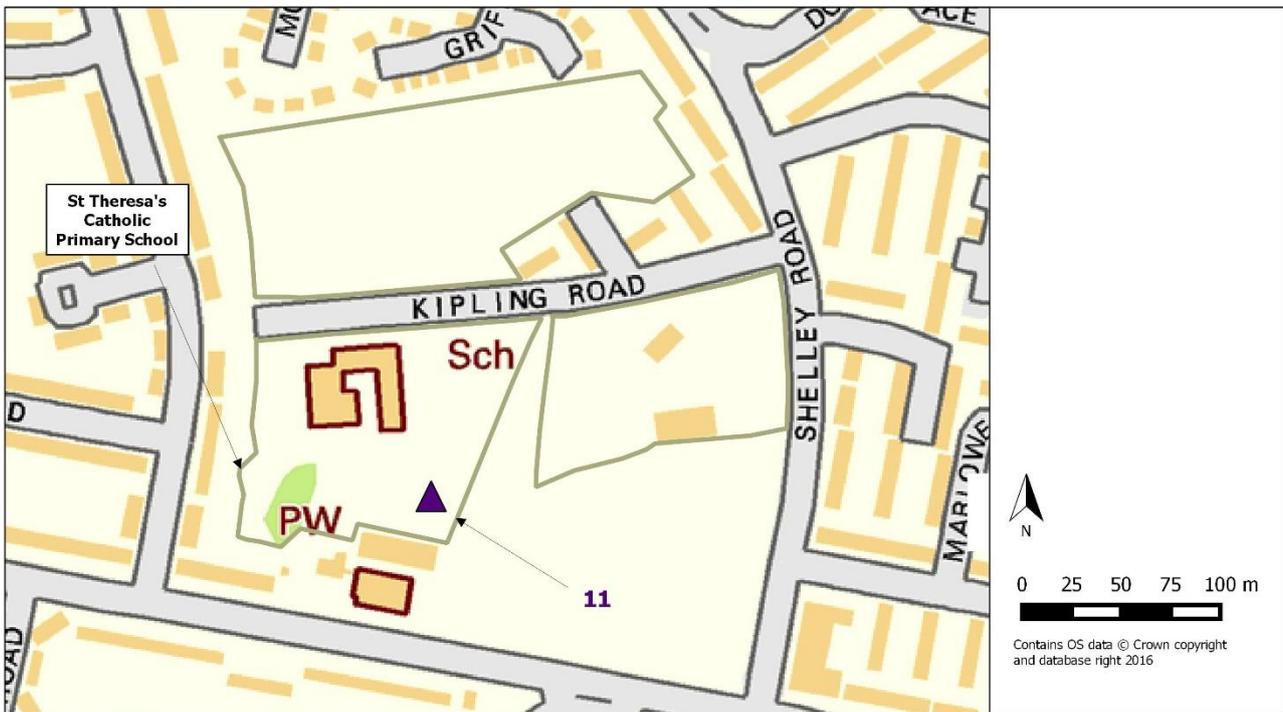


Fig. 28: Location of Test Pit 11

Test Pit 11 was excavated to a final depth of 0.19m. However, excavation of a cut (see below) reached a final depth of 0.55m. The test pit was opened and excavated by pupils from St Theresa's Catholic Primary School over the course of a single day. This area falls within the boundary of the Blacon Hall noted on the 1871 OS Map (Ordnance Survey 1871) and was sited here to explore the potential for survival of buildings associated with the hall, which was a working farm and had multiple outhouses and a large stable block.

The topsoil (1101) was a firm, mid greyey-brown clayey/sandy-silt with angular stone inclusions, ranging in size from 1-10cm. There was a significant quantity of CBM noted in this context, consisting of brick and mortar. Context (1102) appeared to be a shallow interface between the topsoil

and a brick surface, consisting largely of rubble fragments in a loose, mid greyey-brown, clayey/sandy silt matrix. Upon removal of this context an *in situ* brick wall (1105), cut by a curving linear [1104] and fill (1103) was noted (see Figs. 29 and 30). The brick wall (1105) was three courses high, running on a NW-SE alignment. A return was noted in the north facing section of cut [1104], once the fill was removed. Cut [1104] ran NE-SW and appeared to be a French Drain, used for re-directing surface water and groundwater. It was 0.31m deep and 0.5m wide. Its length was not established, as it entered the east and west sections, therefore extending beyond the limits of the test pit. The cut was filled (1103) by angular white rocks, 1-5cm in size, used here to aid draining. The surrounding matrix was a loose, mid brown sandy/clayey-silt. Context (1106) was a heavily compacted, mid brown-orange clay. It appeared to abut the eastern side of the brick wall and continue beneath the wall itself, suggesting that the brick structure had been cut into this surface. The context was not excavated due to time constraints and will need further exploration to establish if this interpretation is correct.



Fig. 29: Note cut and fill of French drain

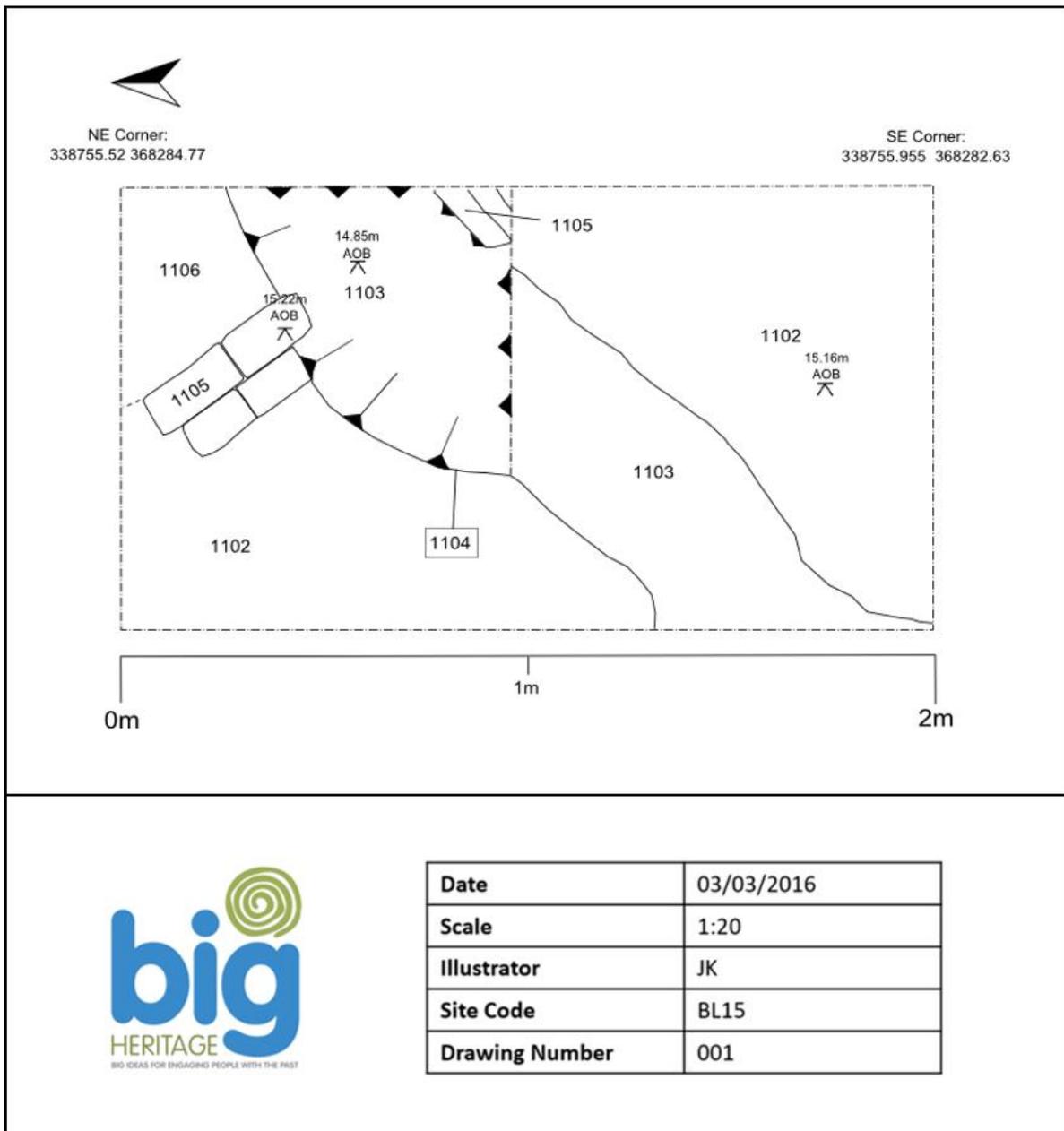


Fig. 30: Test pit 11 plan

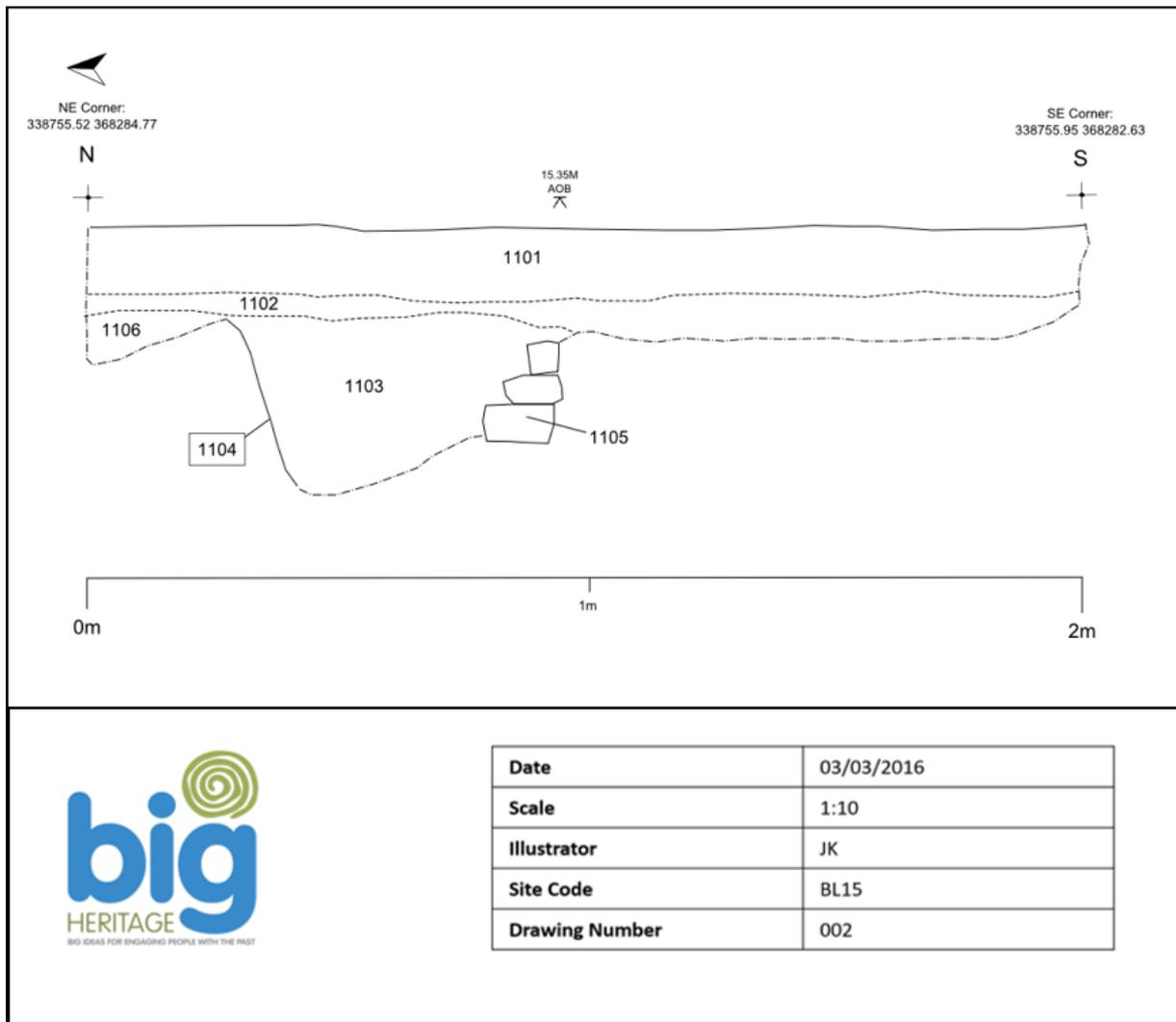


Fig. 31: Test Pit 11 east facing section

Table 13: Summary of bulk find materials excavated from TP11

Context	Animal Bone		CBM		Clay Tobacco Pipe		Glazed Pottery		Misc			Modern Glass		Modern Metal		Plastic		SBM		Slag		Unglazed Pottery	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	No	Wt (g)	Description	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1101	2	4	75	1685	2	4	10	24	1	2	Flint - Unworked	24	62	4	13	1	1	46	2123	10	60		
1102	1	3	120	2956	1	1	15	59				77	250	24	419			48	1189	11	184	2	2
1103			15	356								2	2	4	3					1	2		

7.1.12. Test Pit 12

Test Pit 12 was located in the grounds of St Theresa's Catholic Primary School, CH1 5UU. It was one of four test pits excavated within the school grounds.

Centroid: 338735.95 368290.46

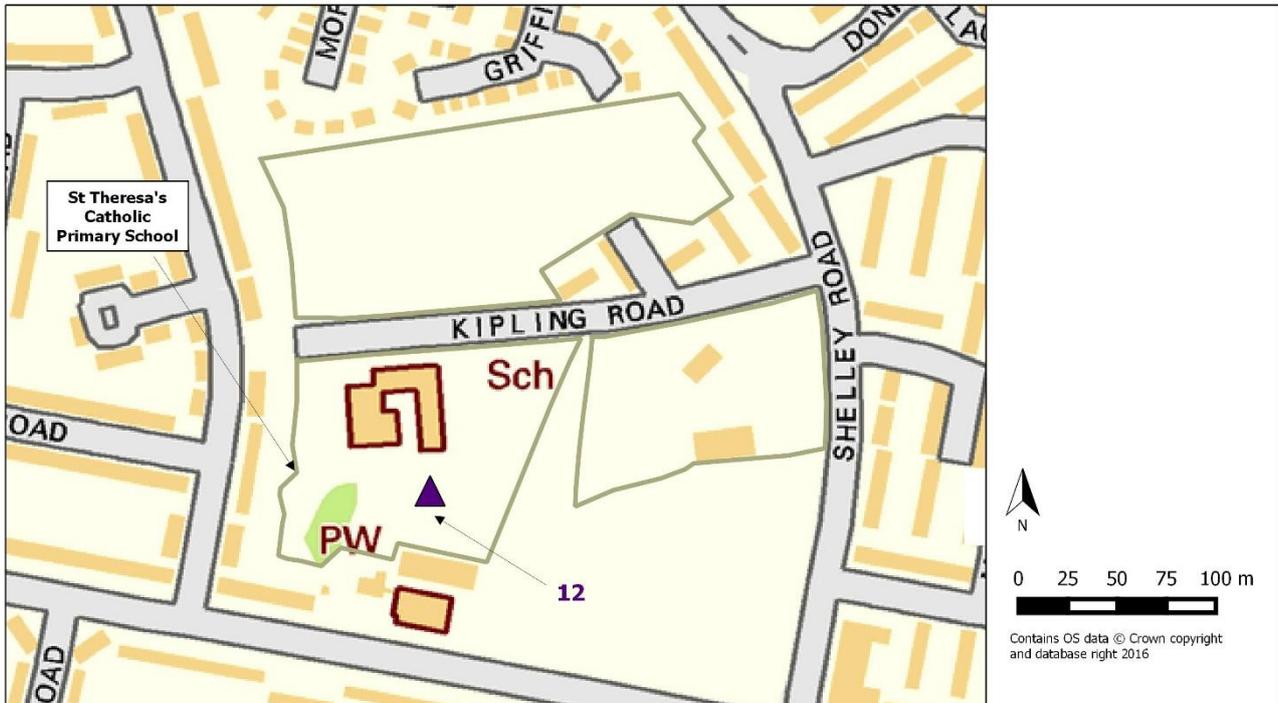


Fig. 32: Location of Test Pit 12

Test Pit 12 was half-sectioned at 0.28m and excavated to a final depth of 0.52m in the western half of the test pit. The test pit was opened and excavated by pupils and parents from St Theresa's Catholic Primary School over the course of a single day. This area falls within the boundary of the Blacon Hall noted on the 1871 OS Map (Ordnance Survey 1871) and was sited here to explore the east wing of a u-shaped building.

The topsoil (1201) was a loose, light brownish-grey gravelly-silt. This is likely due to the test pits proximity to the hard surface surrounding the school building and was most likely disturbed and then levelled during the construction of the building. The subsoil (1202) was a weakly cemented, mid reddish-grey silty-clay with gravel, large angular stone (1-4cm in size) and pebble (1-3cm) inclusions. The topsoil and subsoil contained large quantities of CBM and SBM, which might pertain to the

demolition of the previous buildings known to have once stood on the site. Context (1203) was a strongly cemented, mid yellowy-brown clay with angular stone inclusions (1-6 cm in size). The context was not the natural as pottery, metal and CBM were recovered from the context.

Table 14: Summary of bulk find materials excavated from TP12

Context	CBM		Glazed Pottery		Modern Glass		Modern Metal		Plastic		SBM	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1201	45	3411	12	33	2	5	2	3	1	1	13	173
1202	35	1833			1	1					7	255
1203	115	1044	2	3			1	8			27	226

7.1.13. Test Pit 13

Test Pit 13 was located in the grounds of St Theresa’s Catholic Primary School, CH1 5UU. It was the most westerly of four test pits excavated within the school grounds.

Centroid: 338686.65 368273.46

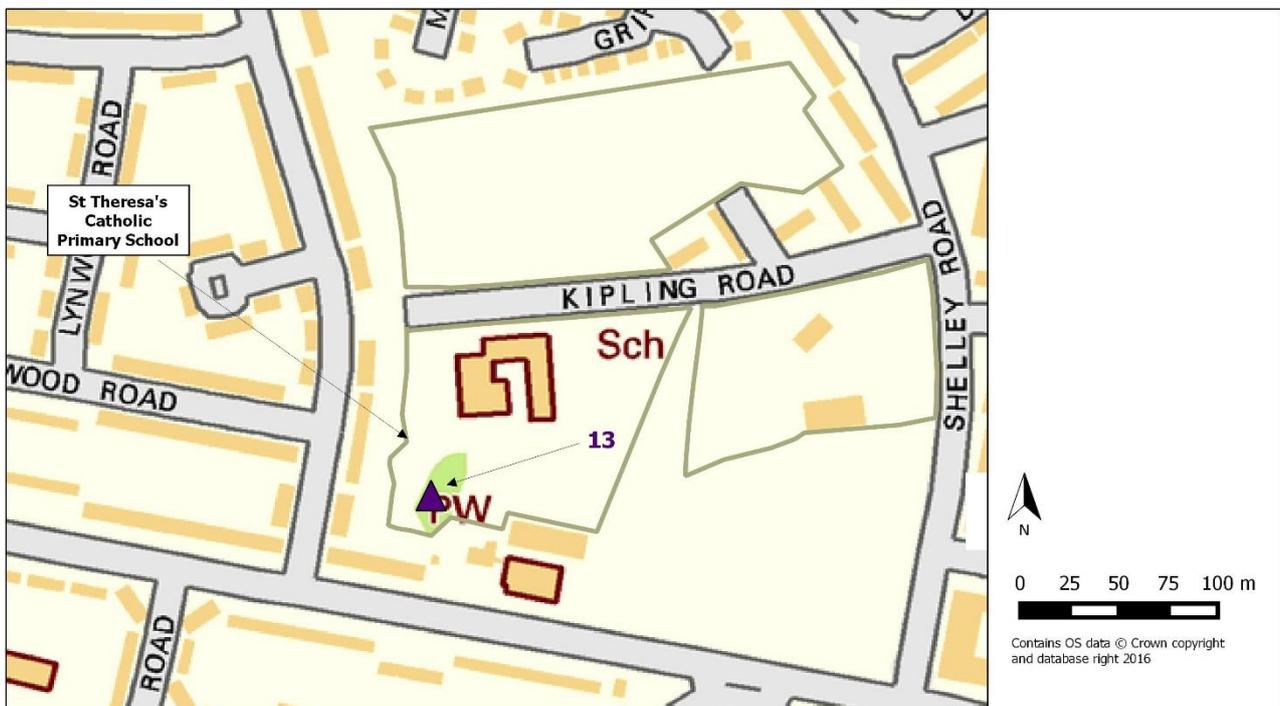


Fig. 33: Location of Test Pit 13

Test Pit 13 was excavated to a depth of 0.15m. This test pit was used as an activity pit for children accompanied by their parents. Children were taught basic excavation skills and how to identify and record finds. This is reflected in the depth the excavation reached. The topsoil (1301) was a loose, dark brownish-black silt with angular stone inclusions, ranging from 2-3cm in size. Context (1302) was a firm, mid orangey-brown clayey-silt with round and angular stone inclusions (1-4cm in size). Within this context was rubble CBM. This was not unexpected, as the test pit was sited in a low-lying area, which is prone to flooding. The material unearthed in contexts (1301) and (1302) suggest that material has been washed in and/or dumped in this area for some time.

Table 15: Summary of bulk find materials excavated from TP13

Context	Animal Bone		CBM		Clay Tobacco Pipe		Modern Glass		Modern Glazed Ceramic		Modern Metal		Plastic		Post-Medieval Glazed Ceramic		Unglazed Ceramic	
	Total	Wt (g)	Total	Wt (g)	No	Wt (g)	Total	Wt (g)	No	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1301	38	180	2	74	1	13	5	27	30	139	25	357	1	1	14	98	5	28
1302	61	35			1	4	5	100	24	54	5	17			6	126		

7.1.14. Test Pit 14

Test Pit 14 was located in the rear residential garden of 34 Stamford Road, CH1 5DG.

Centroid: 338667.2 368388.56

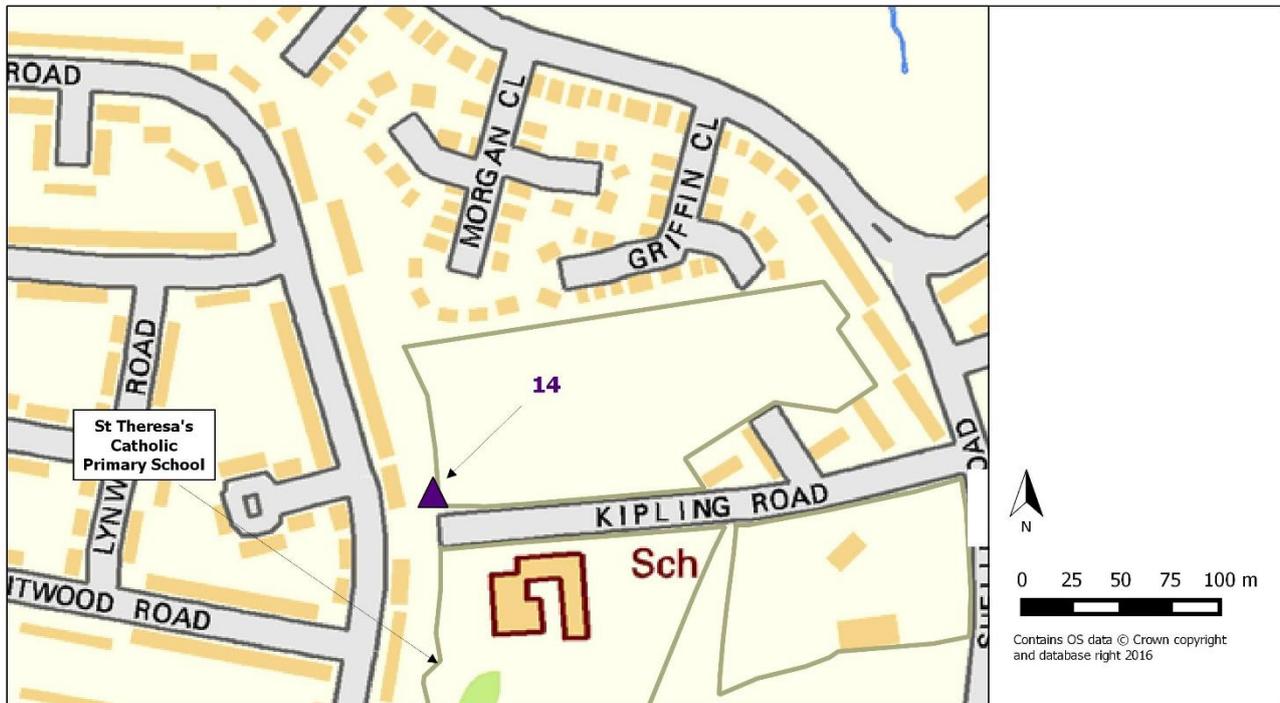


Fig. 34: Location of Test Pit 14

Test Pit 14 was half-sectioned at 0.37m, quarter-sectioned at 0.45m, reaching a final depth of 0.66m in the north east quadrant. The topsoil (1401) was a loose, dark greyey-brown sandy/clay-silt with angular stone inclusions (0-5cm). This context was disturbed by bioturbation. The subsoil (1402) was weakly cemented, mid greyey-brown sandy-clay with pebble inclusions (1-10cm). Context (1403) was a compact mid orangey-brown sandy-clay with sub-rounded stones (10-20cm in size). This deposit appeared agricultural in nature and bore similarities to the Test Pits, 6, 8, 9 and 18. One sherd of Midland Purple Ware was recovered from this context, SF 1401. This may be the result of manuring practices (see Blinkhorn; 11.2.3.). Context (1404) was a weakly cemented, light brown-orange sandy-clay silt. This deposit was sterile but not natural, as earlier anthropogenic activity was noted below it. Context (1405) was a metallated surface, left *in situ*. It was comprised of stones and clay with

a charcoal rich surface. Only further investigation would enable a more definitive interpretation of the context.

Table 16: Summary of bulk find materials excavated from TP14

Context	Animal Bone		CBM		Glazed Pottery		Modern Glass		Modern Metal		Plastic		SBM		Slag		Unglazed Pottery	
	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	2	3	11	112	4	3	4	24	17	243	2	1			1	87	1	15
1402	1	2	12	33	5	25	3	3	1	3			1	11	11	61		
1403	1	2	11	52					1	10								

7.1.15. Test Pit 15

Test Pit 15 was located in the front residential garden of 93 Blacon Avenue, CH1 5BB.

Centroid: 338759.89 368186.95

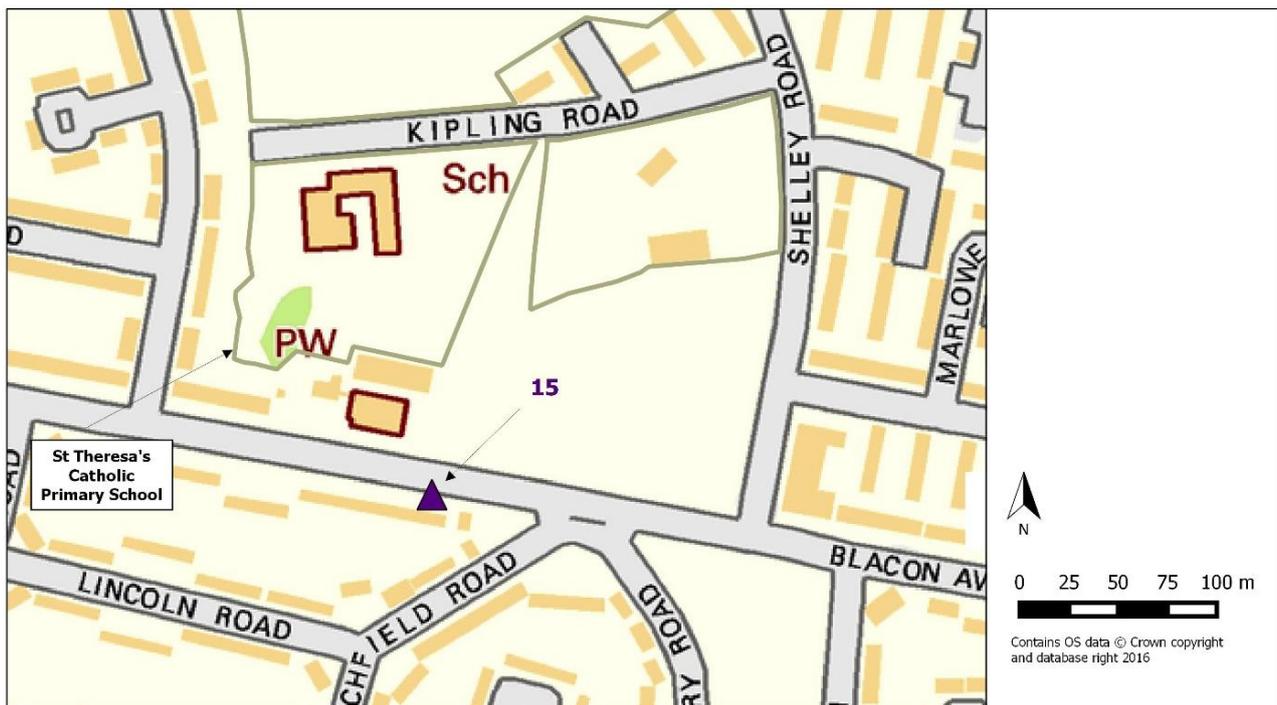


Fig. 35: Location of Test Pit 15

Test Pit 15 was half-sectioned at 0.43m and reached a final depth of 0.50m in the northern half of the test pit. The topsoil (1501) was a loose, light brownish-grey clayey-silt with small (1-2cm) angular stone inclusions. The context contained a varied material culture typical of that found in residential gardens. The subsoil (1502) was a weakly cemented, light yellowish-grey clay with charcoal, coal and angular stone (1-4cm) inclusions. Context (1503) was a strongly cemented, mid yellowish-brown clay with angular stone inclusions (1-6cm in size). The context was devoid of material culture. Context (1504) was strongly cemented, mid reddish-brown clay with large stone inclusions (1-7cm in size). The context appeared natural, as no material culture was recovered and it was sealed by a sterile layer (1503).

Table 17: Summary of bulk find materials excavated from TP15

Context	CBM		Modern Glass		Modern Metal		Slag	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1501	41	1180	6	30	1	1	23	287
1502	4	11						

7.1.16. Test Pit 16

Test Pit 16 was located in the rear residential garden of 26 Stamford Road, CH1 5DG.

Centroid: 338664.88 368342.21

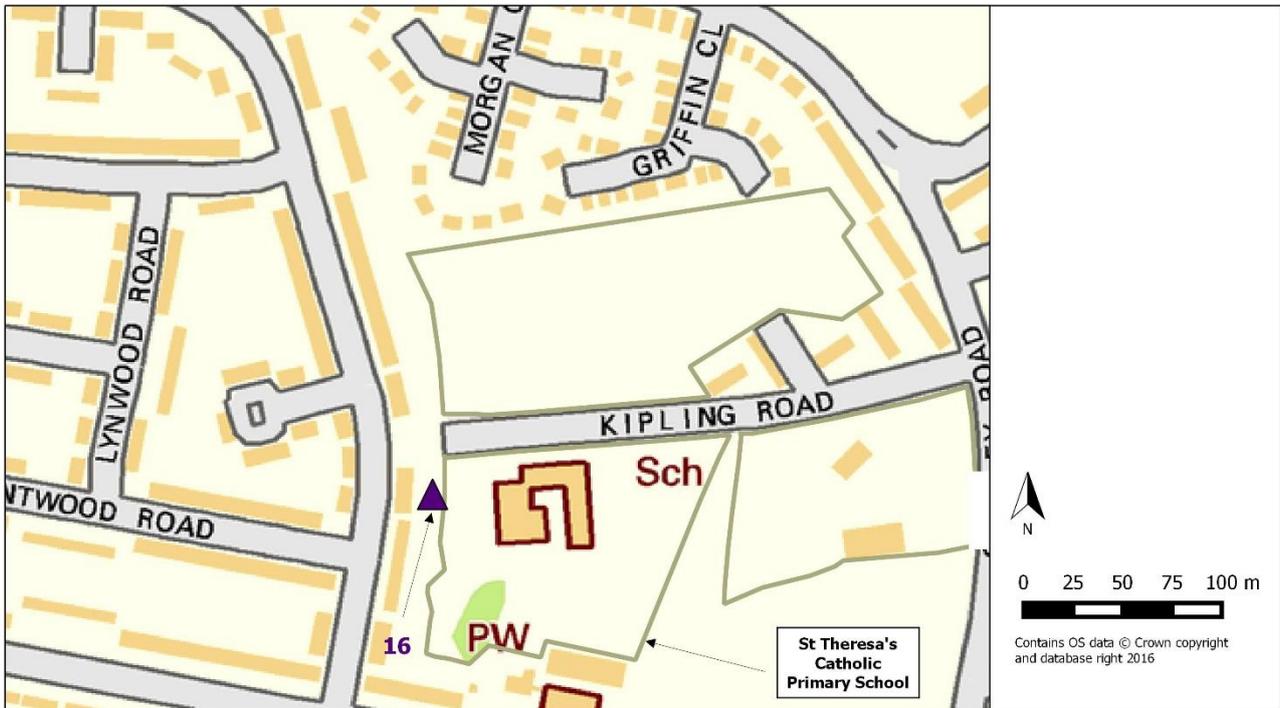


Fig. 36: Location of Test Pit 16

Test Pit 16 was half-sectioned at 0.42m and reached a final depth of 0.63m in the western half of the test pit. The test pit was located in border flower beds in a residential garden. The topsoil (1601) was a loose, dark greyey-silt with angular stones (1-4cm in size). The soil had recently been deposited to make fertile ground for the flowers. The subsoil (1602) was a weakly cemented, medium greyey-black clayey-silt with charcoal and small angular stone (1-2cm) inclusions. This was the original topsoil. Context (1603) was a firm, mid reddy-brown clay with minimal (less than 10%) angular stone inclusions (1-3cm in size). This was the original subsoil. Context (1604) was a strongly cemented, light yellowy-brown sandy-silt with minimal (less than 10%) angular stone inclusions (1-2cm in size). The layer was sterile and appeared natural, although the context was not fully excavated due to time restraints so a firm interpretation was not possible.

Table 18: Summary of bulk find materials excavated from TP16

Context	CBM		Glazed Pottery		Modern Glass		Modern Metal		Plastic		SBM		Slag		Unglazed Pottery	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1602	27	684	3	6	41	128	14	144	12	12	2	10			3	8
1603	6	124	1	4	1	2					1	2	3	29		

7.1.17. Test Pit 17

Test Pit 17 was located in the grounds of St Theresa’s Catholic Primary School, CH1 5UU. It was one of four test pits located within the grounds of the school.

Centroid: 338695.01 368295.86

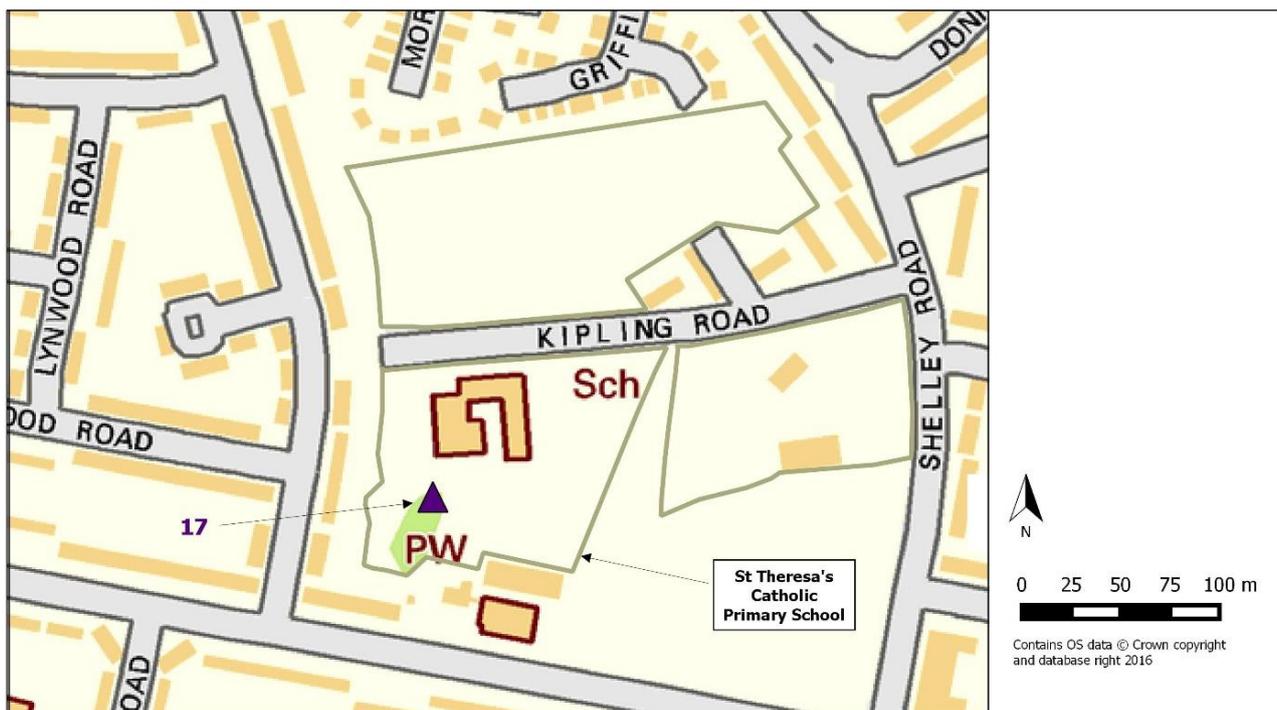


Fig. 37: Location of Test Pit 17

Test Pit 17 was excavated to a final depth of 0.51m. The topsoil (1701) was a loose, mid blacky-brown fine silt. The area was surrounded by trees and much of the topsoil was decomposing organic

material. Context (1702) was a rubble dumping layer comprised primary of CBM and SBM. This rubble layer surrounded a decayed tree trunk approximately 0.53m (1703). Context (1704) was a firm light orangey-brown silt with minimal small angular stone (1-2cm in size) inclusions. This layer sat below rubble layer (1702).

Table 18: Summary of bulk find materials excavated from TP16

Context	CBM		Glazed Pottery		Modern Glass		Modern Metal		Plastic		SBM		Slag	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1701	13	138	2	7	6	50	1	111	1	1	3	13	2	27
1702	68	1051	2	4	10	49					8	86	2	8

7.1.18. Test Pit 18

Test Pit 18 was located in the school field, north of Kipling Road. The field belongs to St Theresa's Catholic Primary School and is used for sporting activities. The test pit was one of four excavated in this field. It was sited on a field boundary noted in the geophysical survey. The field boundary was also evident as a shallow, curving depression in the field. The trench was 2x1m² on a north to south alignment.

Centroid: 338790.79 368428.72

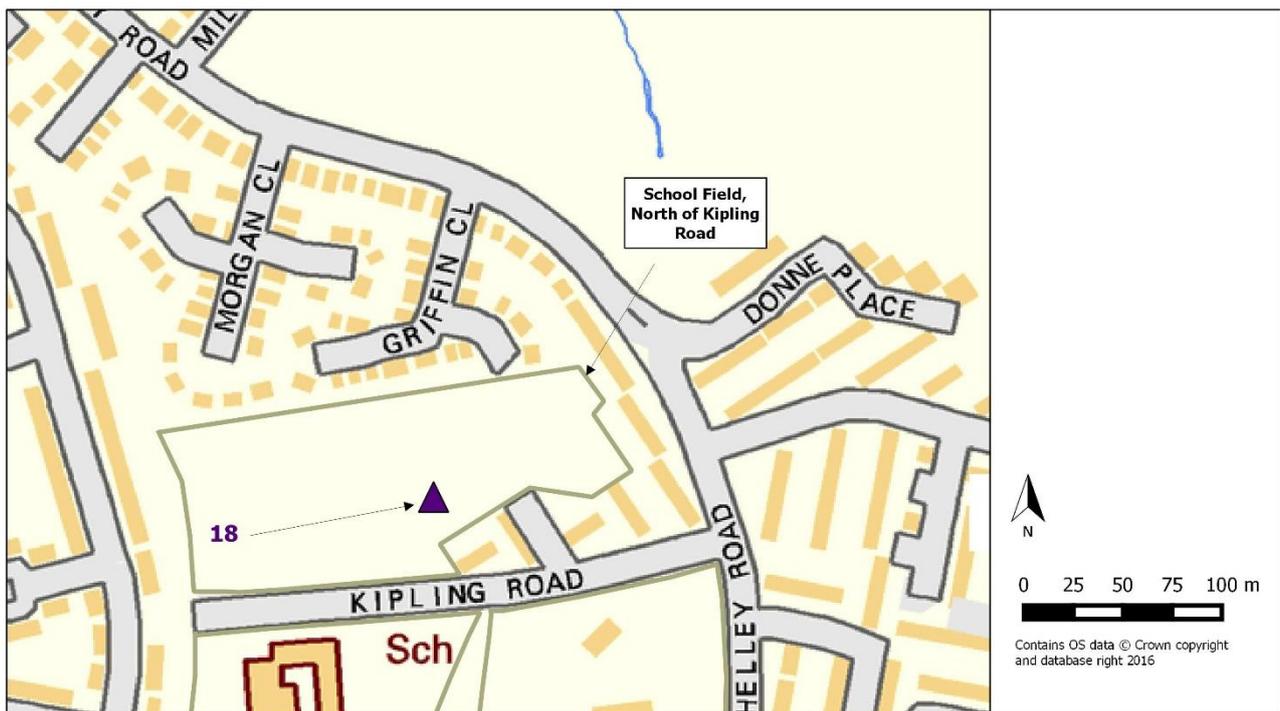


Fig. 38: Location of Test Pit 18

Test Pit 18 was half-sectioned at 0.16m and excavated to a final depth of 0.37m in the northern half. The topsoil (1801) was a loose, greyey-brown clayey-silt with coal (1-2cm) and angular stone (1-4cm) inclusions. The subsoil (1802) was loosely cemented, light orangey-brown silty-clay with coal (1-4cm), angular stone (1-3cm) and slate sherd inclusions. The soil was also consistently mixed with small (0.5-2cm), abraded fragments of ceramic, suggesting agricultural activity on the site, similar to Test Pits 6, 8, 9 and 14. This context also produced and a 4th century Roman Coin, SF 1801, and a lead offcut, SF

1802, of unknown date. The coin was found alongside post-medieval and modern material, indicating significant disturbance (see Fig. 39).



Fig. 39: SF 1801 Front and Reverse of coin with scaled image

Context (1803) was a strongly cemented, mid reddy-brown silty-clay with coal (1-2cm) and pebble (1-2cm) inclusions. The material unearthed suggested abraded waste: pottery, CBM and slate, suggestive of agricultural activity. This context produced four sherds of abraded Glazed Red Earthenware, SF 1803, consistent with manuring activities (see Fig. 40). This deposit was likely the fill of the field boundary but further investigation is required to determine the depth and extent of the context.



Fig. 40: SF 1803

Table 20: Summary of bulk find materials excavated from TP18

Context	Animal Bone		CBM		Glazed Pottery		Misc			Modern Glass		Modern Metal		Plastic		SBM		Slag		Unglazed Pottery	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	No	Wt (g)	Description	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1801	1	2	27	177	6	11				12	23	4	33	2	1					1	5
1802			27	73	11	41	1	1	Slate Pencil	7	16	2	11	4	4	5	29	7	18	1	45

7.1.19. Test Pit 19

Test Pit 19 was located in the front residential garden of 18 Kipling Road, CH1 5UU.

Centroid: 338844.86 368397.82

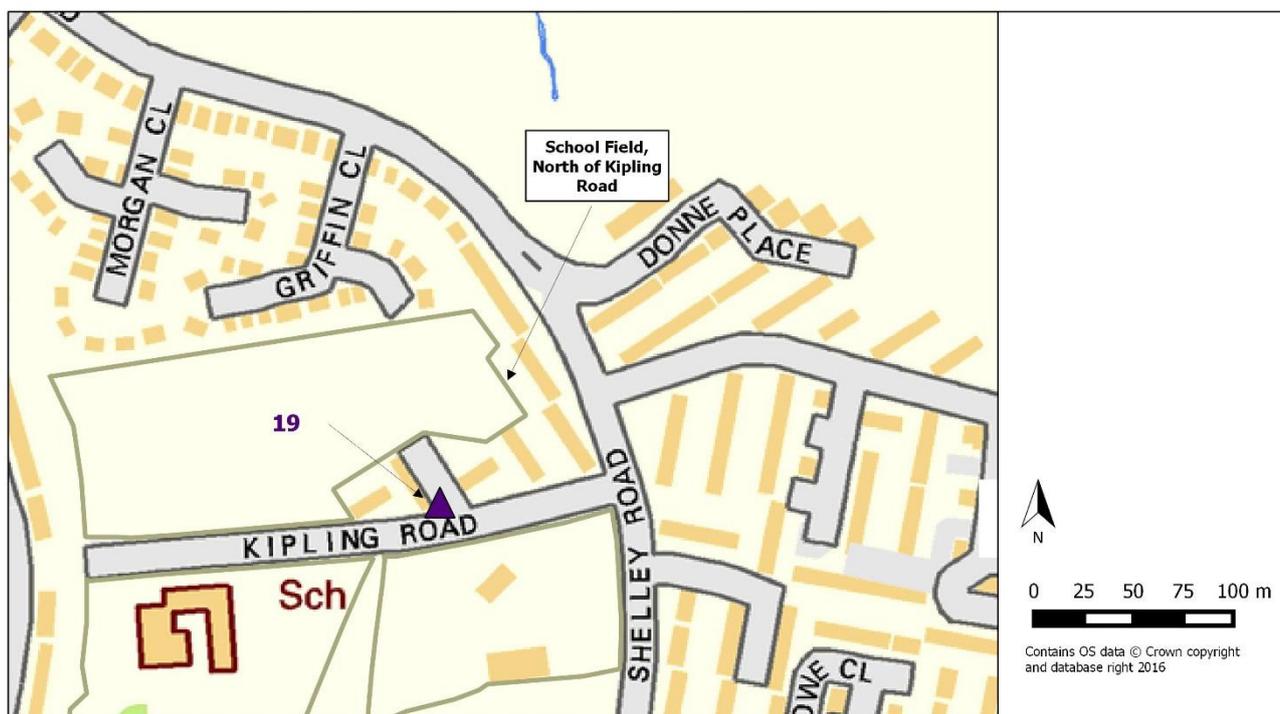


Fig. 41: Location of Test Pit 19

Test Pit 19 was half-sectioned at 0.24m and quarter-sectioned at 0.36m reaching a final depth of 0.46m in the north west quadrant. The topsoil (1901) was a loose, dark blacky-brown clayey-silt. The context contained a varied material culture typical of that found in residential gardens. The subsoil (1902) was a cemented, mid reddy-orange silty-clay with angular stone inclusions (1-4cm in size). The deposit was largely devoid of material culture with the exception of a small assemblage of pottery sherds. Context (1903) was a strongly cemented, mid reddy-orange sandy-clay with small rounded

stones (1-3cm in size). The layer was sterile and appeared natural, although the context was not fully excavated due to time restraints so a firm interpretation was not possible.

Table 21: Summary of bulk find materials excavated from TP19

Context	CBM		Glazed Pottery		Modern Glass		Plastic		SBM		Slag	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
1901	15	614	10	24	8	90	2	1	4	15	3	84
1902			3	5								

7.1.20. Test Pit 20

Test Pit 20 was located in the front residential garden of 12 Kipling Road, CH1 5UU.

Centroid: 338874.21 368404

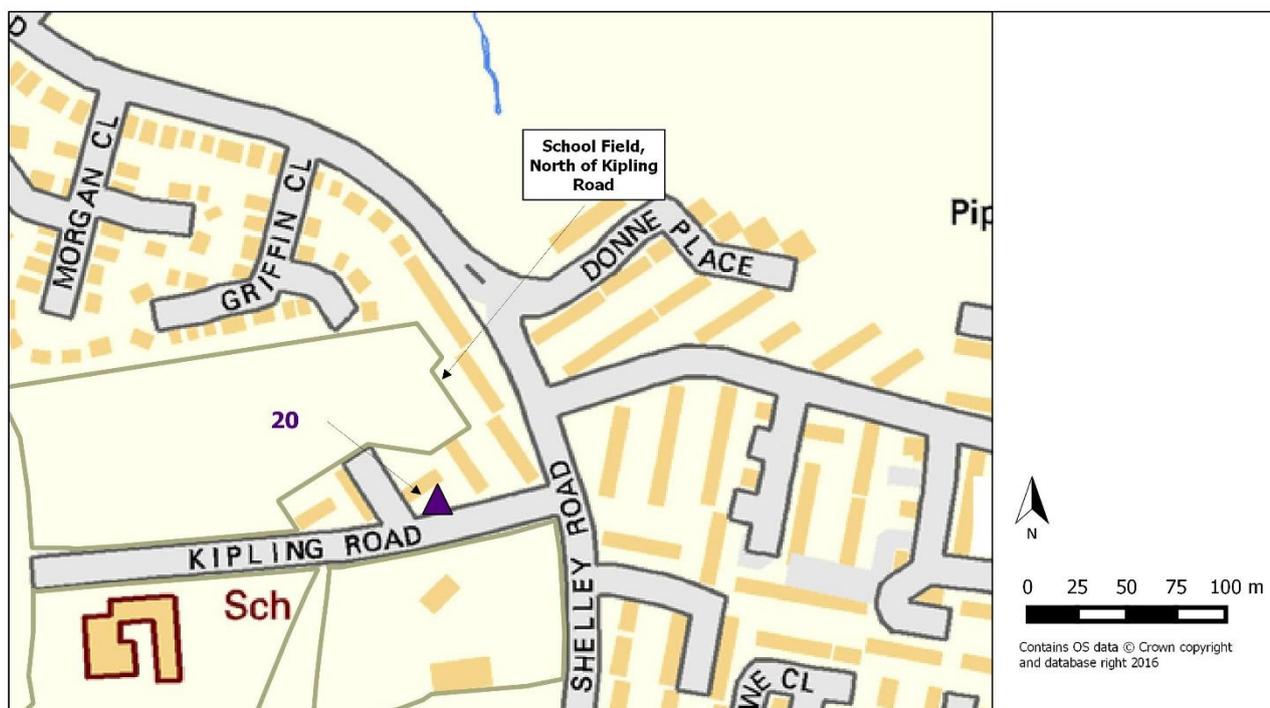


Fig. 42: Location of Test Pit 20

Test Pit 20 was half-sectioned at a depth of 0.20m and reached a final depth of 0.34m in the western half of the test pit. The trench was only 0.9m E-W due to the presence of concrete edge to a garden feature. The topsoil (2001) was loose, mid blacky-brown silt with angular stone inclusions (1-3cm in size). The subsoil (2002) was a firm, mid orangey-brown clayey-silt. Context (2003) was a firm, greyey-brown silty-clay with minimal (less than 10%) angular stone inclusions (1-2cm in size). This deposit was largely devoid of material culture with the exception of a small assemblage of CBM.

Table 22: Summary of bulk find materials excavated from TP20

Context	CBM		Glazed Pottery		Modern Glass		Modern Metal		Plastic		SBM	
	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)	Total	Wt (g)
2001	21	206	2	2	2	7	3	59	2	4	1	14
2002	31	306					1	90				
2003	2	6										

8. DISCUSSION

The project saw the excavation of 20 test pits around Blacon. Hundreds of artefacts were recovered. These were predominantly ceramic sherds, pottery and building material, totalling 1597 individual finds (see Figs. 44 and 45). The majority of the finds were from the post-medieval or modern era. However, the project did unearth artefacts from the Roman, Medieval and post-Medieval periods.

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 (See Fig. 2). This type of broader analysis helps provide an overview of an areas development throughout its history.

Blacon is currently occupied, which does have an effect on 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. 13 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, as recorded by the Cheshire Historic Environment Record, this was not unexpected.

8.2. Romano-British

The test pitting recovered limited evidence for Romano-British activity in Blacon. No pottery or ceramic building material was recovered, which is consistent with the current documented evidence for Blacon. One Roman coin, dating to the 4th century, was recovered from Test Pit 18 during the excavation of a relict post medieval field boundary identified through geophysical survey, SF 1801, (see 7.1.11 for full discussion). The coin was found amongst post-medieval and modern material, indicating that the context was disturbed and likely the result of arable farming practices in the area prior to the construction of the estate in the late 1940's. One other Roman coin has been recovered from the research area prior to Dig Blacon commencing (CHER 8600/10), so the presence of a second is not surprising, particularly when combined with the proximity of the Roman fortress at Chester and the probable Roman road skirting Blacon to the north east of the settlement (see 4.2. for summary of known Romano-British activity in the area). Accidental loss and/or manuring in the vicinity are the likely cause for the coins location and associated material assemblage. The recovery of this coin, and that recorded by Cheshire Historic Environment Record, do not suffice to suggest Roman occupation in this area. (Please see Fig. 43 for distribution of small finds).

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 Cheshire Historic Environment Record, this was not unexpected.

8.4. Medieval and Post-Medieval

The earliest ceramic material recovered from the research area are five sherds of Midland Purple Ware, dating from the 15th-17th centuries (see 11.2.4 for further discussion of the pottery assemblage), which straddle the medieval and post medieval periods. In addition, seven sherds of Glazed Red Earthenware were also recovered from comparable locations, dating to the 16th-17th centuries. Most of the earthenwares are abraded to some degree, and the sherd size is fairly small, indicating that most of the pottery is from manuring rather than representing settlement activity (see Fig. 43 for distribution of small finds). In addition, four fragments of ceramic building material (CBM) have been identified as post-medieval and a further 120 maybe post-medieval or earlier. The latter are heavily abraded with no form or surface discernible. Consequently, dating or characterising them is impossible. The CBM, like the pottery, appears to be largely associated with arable farming practices and provides no obvious indicator of occupational evidence. The presence of such material is not unexpected, as the area has been farmed since Domesday and continued to be used as arable until the construction of the Army base and the wider estate in the first half of the twentieth century (see 4.6. for a broader discussion of this period).

Geophysical survey conducted by Magnitude Surveys as a community training event (Full report: <http://bigheritage.co.uk/files/2015/07/MSSJ07-Final-Report-Combined-1.pdf>) located relict post-medieval field systems in the school field north of Kipling Road. These were also noted in the 1847 Tithe Map. They, do however, respect Blacon Hall, first noted in 1819 and may, therefore, date between 1819 and 1847.

8.5. Industrial and Modern

The Industrial and Modern periods are well represented by ceramics and animal bone (See Appendix A, Figs. 44, 45 and 47). This material is also supplemented by modern metalwork, plastics, fabrics, ceramic building material and glass in bulk, all of which are typical of early modern and modern occupational activity.

This is also the only period to have associated features. In Test Pit 14 a compacted, metallised surface was noted and left *in situ*. No associated dateable finds were recovered with this feature. Test Pit 11 was sited to explore one of the structures located within the boundary of Blacon Hall (CHER 11191) first noted on Greenwoods 1819 map (Greenwood 1819). A four course brick wall, with a return was unearthed cut by a French Drain. The depth, location and associated material assemblage indicate that this structure was likely associated with the Blacon Hall farm complex.

9. CONCLUSION

Overall, the test pitting project undertaken at Blacon in the summer and autumn of 2015 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 Blacon despite development over the past century. The test pitting project also recovered a significant artefactual assemblage, the oldest artefact dating to the end of the Romano-British period. The main body of material pertained to the post-medieval period or later. The limited post-medieval material was not directly associated with occupation. It did, however, suggest agricultural activity in this part of Blacon from as early as the 15th century. The majority of the artefacts recovered dated to the 19th onwards. The material assemblage and recorded features were likely connected with Blacon Hall and the associated agricultural activities in which it was engaged.

Test pitting is a demonstrably useful and practical methodology for exploring currently occupied settlements, particularly ones that are densely developed like Blacon. Future work should endeavour to increase the density of the test pit distribution to develop a better understanding of how north east Blacon, covered by the research area, may have been utilised. Further test pitting in and around the vicinity of the proposed Roman Camp may also provide the only means of locating

and characterising this potential feature. Test pitting would also be a useful tool to explore the character and date of the Blacon Manor House pulled down during the 1640's. The area now serves as a nature park at Blacon Point and offers an ideal target for future projects. Further geophysical survey of open areas across Blacon will provide potential targets for further research and could be utilised to explore the Nature Park at Blacon Point. However, open areas are limited and future study may also look to the surrounding greenfields as potential targets.

Secondly, Dig Blacon also demonstrated the value of archaeology in terms of social and health benefits, the results of which are synthesised in Dig Blacon Health Report (available upon request). Volunteers donated approximately 1466 hours of time to the project, the equivalent of £10,471 (Source: Volunteer England). We worked with over 400 school children and 100 members of the public who came together to undertake geophysical survey, test pitting, finds washing and processing and participated in training offered by local specialists. We also worked with five active local groups, who specialised in elderly care, mental health, family support and homelessness. Dig Blacon 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, Dig Blacon also provided the opportunity for volunteers 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. For example, we created a curation based project for a local school and one of the Dig Blacon volunteers undertook his work experience with Big Heritage.

The activities and results discussed 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. Furthermore, the methodology has also demonstrably proven the health and wellbeing benefits of archaeological projects. It is recommended that greater evaluation of these elements should be taken throughout the course of comparable projects and a template created of how best to engage communities and specific groups within that community in order to maximise the positive benefits of partaking in such activities.

10. REFERENCES

- Beckley, R., Campbell, D. and Collens, J. 2014. *Cheshire Archaeological Plan*. Chester: Cheshire Archaeological Planning Advisory Service
- Blacon History Group. 1990. *Blacon Past and Present*
- British Geological Survey. 2014. Geology of Britain Viewer. Retrieved from British Geological Survey website: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>
- Bryant, A. 1831. Map of the County Palatine of Chester from an actual survey in the years 1829, 1830 and 1831, 1¼ " to 1 mile, London: A. Bryant
- Carrington, P. 1993. Shotwick Castle: anatomy of a reconstruction painting, *Chester City Council Newsletter* 4, 2-3
- CHER 1800/10, Cheshire Archaeology Planning Advisory Service, Blacon Station
- CHER: 8596, Cheshire Archaeology Planning Advisory Service, Blacon Point Roman Military Camp
- CHER: 4367, Cheshire Archaeology Planning Advisory Service, Blacon Point (Second World War) Training Camp
- CHER: 8600/10, Cheshire Archaeology Planning Advisory Service, Roman Coin from Lincoln Road
- CHER: 11191, Cheshire Archaeology Planning Advisory Service, Blacon Hall Country House
- CHER: 10867/1/13, Cheshire Archaeology Planning Advisory Service, Bridge at Saughall Road
- Cheshire West and Cheshire Council. 2013. Indices of Deprivation 2010 – Neighbourhoods of deprivation in Cheshire West and Chester. Retrieved from <file:///C:/Users/Joanne/Downloads/20130627-FINALID2010Report-v08.pdf>
- Cheshire West and Cheshire Council. 2015. Blacon Ward snapshot. Retrieved from <file:///C:/Users/Joanne/Downloads/wardsnapshotblacon.pdf>
- Cheshire West and Chester Museum Services. 2015. *Standards for Preparation and Presentation of Archaeological Archives*
- Gerrard, C. M. and Aston, M. A. 2007. *The Shapwick Project, Somerset. A Rural Landscape Explored*, Leeds: Society for Medieval Archaeology

- Greenwood, C. 1819. *Map of the County Palatine of Chester from an Actual Survey made in the Year 1819*, 8¾ In. to 8 miles, Wakefield: W. M Fowler and C. Greenwood, (CRO Ref: PM 13/10)
- Harley, J. B., and Laxton, P. 1974. *A Survey of the County Palatine of Cheshire* P. P. Burdett 1777, Vol. Occasional Series Volume 1, *The Historic Society of Lancashire and Cheshire*
- Hemingway, J. 1831, *The History of the City of Chester from its Foundation to the Present Time*, *Chester: J. Fletcher*
- Jones, R. and Page, M. 2007. *Medieval Villages, Beginning and Ends*, Oxford: Windgather Press
- Leland, J. 1535-43. *The Itinerary in Wales of John Leland, the Antiquary, Vol. V*, Oxford: T. Hearne
- Lewis, C. and Ranson, C. 2010. *Archaeological test pit excavations in Clare, Suffolk, 2011*. Retrieved from Access Cambridge Archaeology website: <http://www.arch.cam.ac.uk/aca/docs/Clare%20Report%202011.pdf>
- Mason, D. 2007. *Chester AD 400-1066: from Roman fortress to English town*, Stour: The History Press
- Natural England. 2014. NCA 61: *Shropshire, Cheshire and Staffordshire Plain (NE556)*. Retrieved from Natural England website: <http://publications.naturalengland.org.uk/publication/6076647514046464?category=587130>
- Ordnance Survey. 1871. (Flintshire XI) Six-inch Series, Southampton
- Ormerod, G. 1882. *The History of the County Palatine and City of Chester*, London: Lackington, Hughes, Harding, Mavor and Jones
- Philpott, R. 1998. New Evidence from Aerial Reconnaissance for Roman Military Sites in Cheshire, *Britannia*, 29, 341-53
- Saxton, C. 1577. *Cestriae Comitatus, (Romanis Legionibus et Coloniis, olim insignis,) vera et absoluta effigies*, 3 5/8 in. to 8 miles. (CRO Ref: PM 12/10).
- Speed, J. 1646. *The County Palatine of Chester with that most Ancient Citie described* [1646 reprint of 1610 original], 3 ½ in. to 10 miles (CRO Ref: PM1/12)
- Stainthrop, N. 2004. Historic Blacon, in Blacon History Group (eds) *Blacon Within Living Memory*, 4-5, Blacon History Group

- Tithe Maps 1836-51. 2014. *Tithe Map of Blacon-cum-Crabwell, 1847*. Retrieved from Cheshire Tithe Maps
http://maps.cheshire.gov.uk/tithemaps/Original.aspx?township=EDT_70-2
- Ward, S. 2009. *Chester: a history*, Chichester: Phillimore and Co Ltd
- Wrathmell, S. 2012. Northern England: exploring the character of medieval rural settlements. In N. Christie and P. Stamper (eds.), *Medieval Rural Settlement: Britain and Ireland, AD 800 – 1600* (pp. 249-69), Oxford: Windgather Press

11. APPENDICES

11.1. Appendix A: additional figures

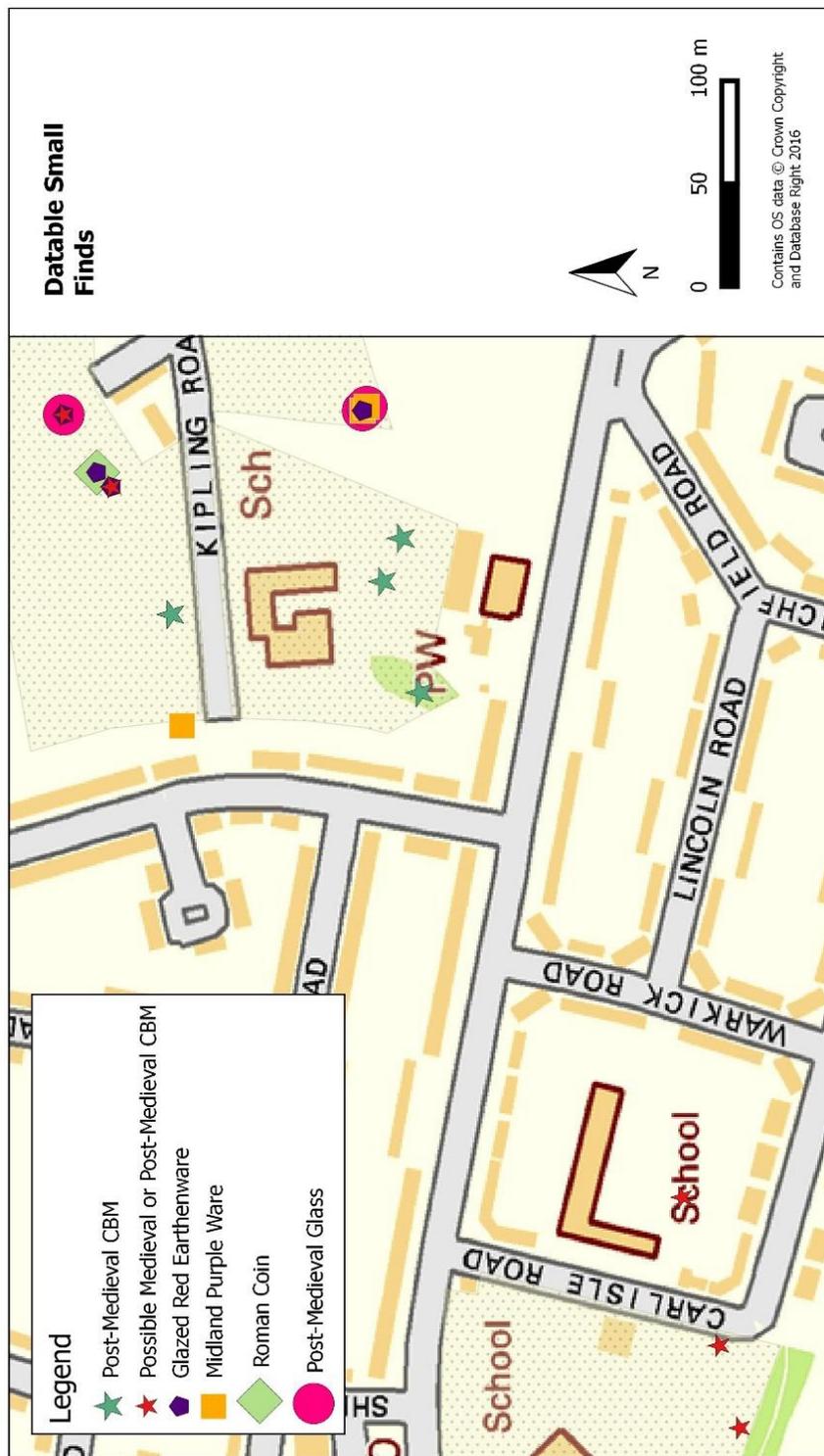


Figure 43: Datable Small Finds

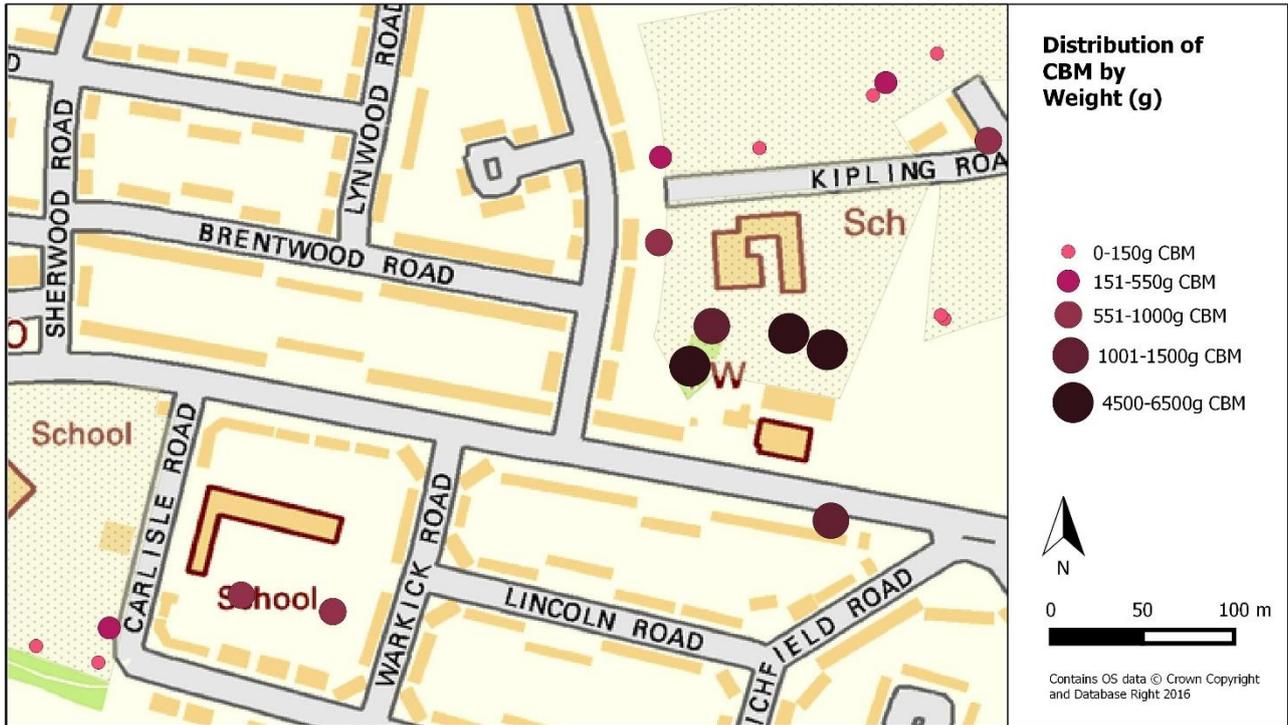


Fig. 44: Distribution of CBM by Weight (g)

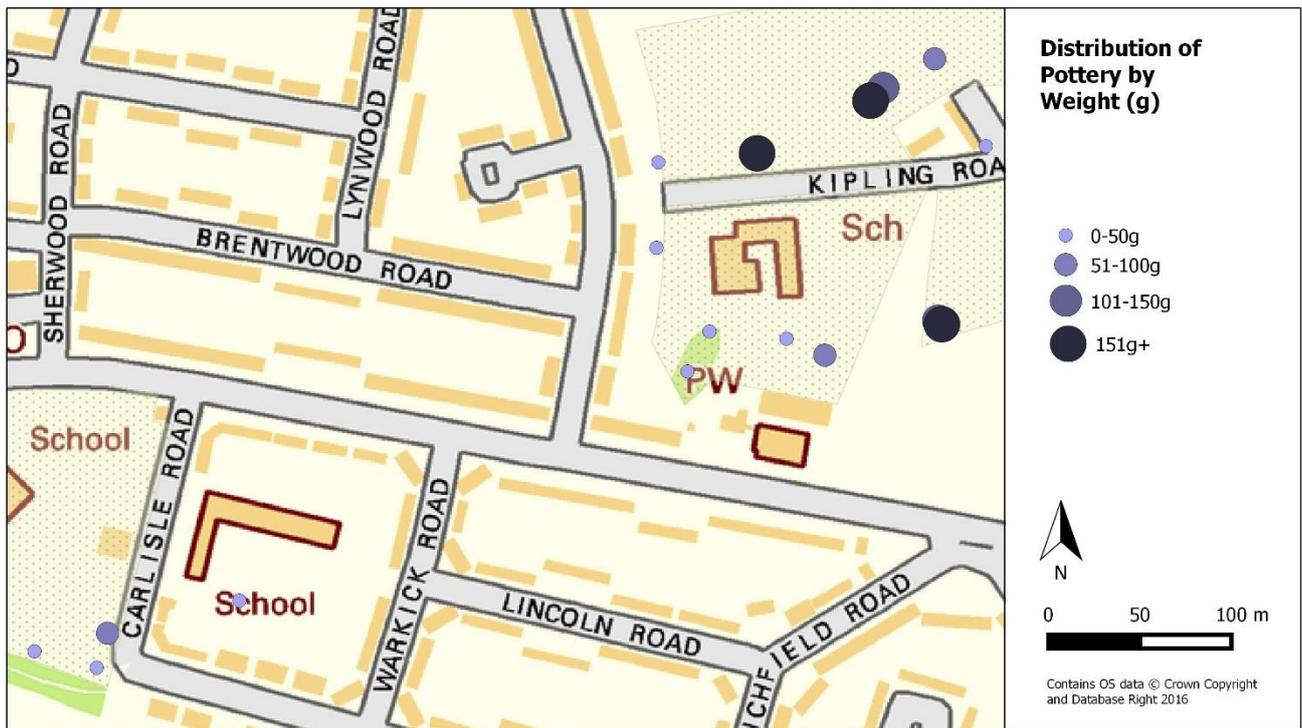


Fig. 45: Distribution of Pottery by Weight (g)

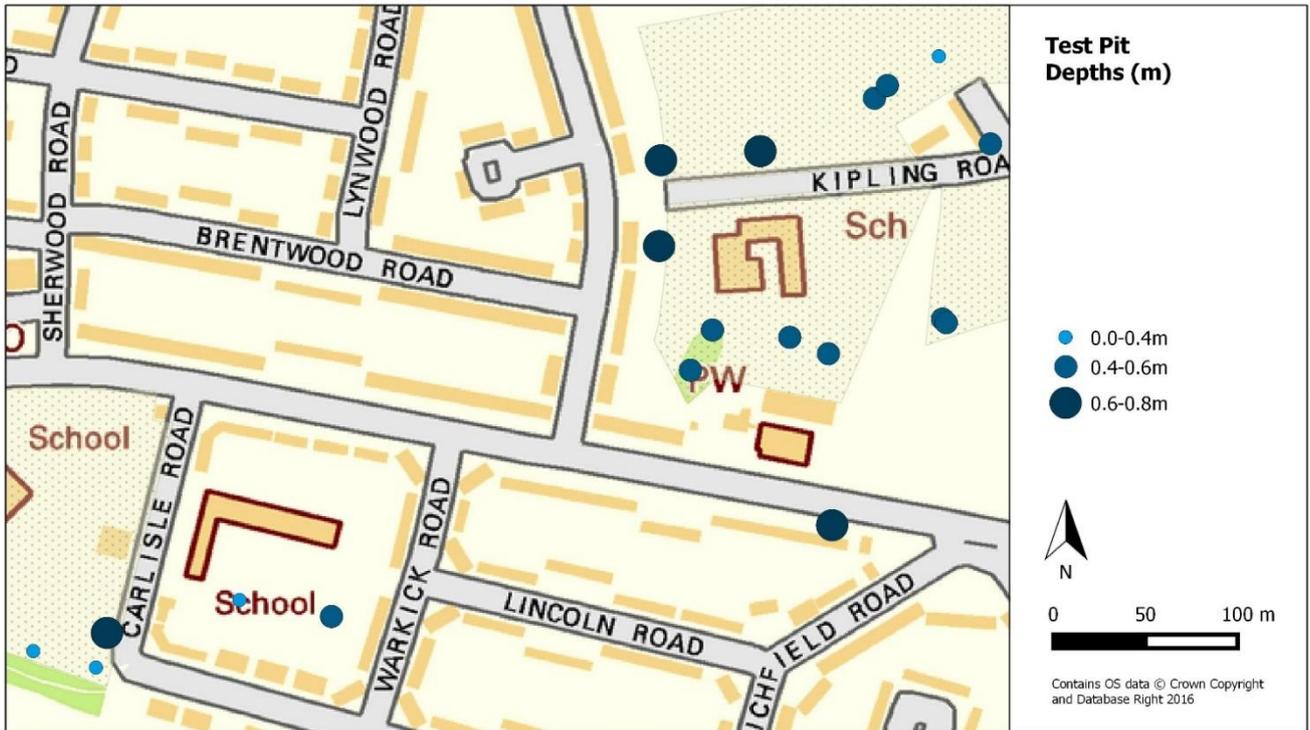


Fig 46: Test Pit Depths (m)



Fig 47: Distribution of Animal Bone

11.2. Appendix B: finds reports

11.2.1. *Animal Bone by Ian Smith*

Personnel

The work was commissioned by Joanne Kirton of Big Heritage, Chester, Cheshire, England, UK. The assessment work was undertaken by Ian Smith of Oxford Archaeology North between December 2015 and January 2016.

Aim

The aim was to assess the potential of the material.

Methods

Fragments were identified using the author's modern comparative collection. Reference was also made to Halstead and Collins (1995).

Stratigraphic Integrity

The bone bearing contexts include topsoil in each trench. If one excludes all topsoil contexts a NISP of 26 results. The presence of predominantly post-Medieval and Modern pottery (Blinkhorn) suggests the likely date range of the group, although the presence of some earlier fragments has not been entirely excluded.

Butchery and Date Range

The topsoil contexts include several (NISP=5) specimens with evidence for sawing which can be related to butchery rather than bone working. Such butchery is probably post-Medieval or Modern and indicates the presence of some meat ("lamb") joints that would be familiar today.

Species and Mammal Group Identifications

Fragments (NISP=4; see Table 2) of femora, pelvis and a thoracic vertebra were identified to the level of sheep or goat (*Ovis/Capra*) (with varying degrees of confidence). The other specimens include very probable cattle (*Bos taurus*) but the majority of were either identified to the level of large (cattle size) or medium (sheep size) mammal or remain unidentified.

Age Data and Measurements

There are no mandibular tooth rows and the limited epiphyseal evidence relates to a few thoracic and lumbar vertebrae and a rib of medium mammal (also possibly sheep/goat). The fragmented nature of the material dictates that no useful measurements can be taken.

Discussion

The bone from topsoil contexts clearly has a wide potential date range but is thought most likely to be largely recent. Amongst the butchery there is some evidence that suggests the date ranges indicated by the pottery may also broadly apply to the faunal assemblage. It appears quite possible that all of the non-burnt bone is post-medieval or recent. The burnt bone may potentially include earlier fragments and the comments (Blinkhorn) regarding manuring could possibly also apply to these burnt fragments. Potentially the assemblage can be divided into heavily burnt fragments that have survived the taphonomic conditions (and which may include early fragments) and the remains of relatively recent domestic meat (limb but not cranial or mandibular) joints.

Potential

The small size of the assemblage and paucity of “primary data” (Baker and Worley 2014, 18) limit the potential and significance of the group.

Table 1: Bone fragments identified to anatomical element by NISP (numbers of identified specimens) and context number. Totals for species or mammal group (in bold) are broken down by anatomical element (below).

Key: Contexts with an asterisk (*) are topsoil, sh/gt=sheep/goat, indet= indeterminate mammal, unid=unidentified anatomical element, vt=vertebra, cf cattle=possible cattle, med/large=medium to large mammal

NISP by context																		
Context	101*	201*	301*	302	303	401*	402	1101*	1102	1301*	1302	1401*	1402	1403	1801*	Total		
indet		1															1	
unid		1															1	
large					15		2	1									18	
unid					12												12	
long bone							2	1									3	
vt cervical					3												3	
cf cattle	1				4												5	
pelvis	1																1	
vt cervical					4												4	
med								1	1	1	1				1		5	
long bone								1							1		2	
rib										1	1						2	
vt lumbar									1								1	
med/large												2	1	1			4	
unid												2	1	1			4	
sh/gt			1	1		2											4	
femur				1		1											2	
pelvis						1											1	
vt thoracic			1														1	
Total	1	1	1	1	19	2	2	2	1	1	1	2	1	1	1		37	

Table 2: Numbers of identified specimens (NISP) by the date ranges indicated by the pottery (Blinkhorn this volume). Totals for species or mammal group (in bold) are broken down by anatomical element (below).

Key: sh/gt=sheep/goat, indet= indeterminate mammal, unid=unidentified anatomical element, vt=vertebra, cf cattle=possible cattle, med/large=medium to large mammal

NISP							
Date range	1400-1550	1400-1900	1680-1900	1700-1900	1800-1900	1800-1900?	Grand Total
indet						1	1
unid						1	1
large				18			18
unid				12			12
long bone				3			3
vt cervical				3			3
large, cf cattle				4	1		5
pelvis					1		1
vt cervical				4			4
med				3	2		5
long bone				1	1		2
rib				1	1		2
vt lumbar				1			1
med/large	1			1	2		4
unid	1			1	2		4
sh/gt		3	1				4
femur		2					2
pelvis		1					1
vt thoracic			1				1
Grand Total	1	3	1	26	5	1	37

Bibliography

Baker, P. and Worley, F. 2014. *Animal Bones and Archaeology; Guidelines for Best Practice*, English Heritage

Halstead, P. and Collins, P. 1995. Sheffield animal bone tutorial: taxonomic identification of the principle limb bones of common European farmyard animals and deer: a multimedia tutorial

11.2.2. *Ceramic Building Material and Miscellaneous 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 concrete, concrete roof

tile and lime mortar. There are also a few fragments of pink or red shale, an industrial by-product derived from colliery waste.

The ceramic building material includes a considerable quantity of brick, as well as floor tile and roof tile. There are numerous small fragments of fired clay material with fabrics consistent with brick but retaining no surfaces that make an attribution certain.

There are four fragments of salt-glazed drainage pipe, and several fragments of curved earthenware tile, appropriate for ceramic field drain. The stone includes a fine-grained grey sandstone flagstone fragment in 1602, two large Carboniferous limestone chippings in 1102, which are introduced materials; the test pitting report records the limestone was used as the infill for a drain.

Condition

Roof tile and floor tile

The roof tile and floor tile include no complete examples. Thicknesses can be measured but no other complete dimensions.

Bricks

The material is highly fragmented with only one near-complete brick and very few that have one or two complete dimensions which can be measured.

Other materials

The lime mortar lumps often show some abrasion, rounding off corners, suggesting some contexts have been subject to repeated disturbance and the material has abraded to a rounded form through rolling, as might be caused by ploughing (e.g. mortar in 401)

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 largely derived from topsoil contexts which represent soil layers from former agricultural fields, modern garden deposits, and open spaces (playing field). Little was found securely stratified in closed groups. The material is very fragmentary, rarely large enough to have measurable dimensions surviving, and in the case of softer material such as the mortar is often rolled and abraded, suggesting it has remained in the ploughsoil for some time. The material is therefore not closely dated, and its value for the regional study of ceramic (and other) building material is low.

Context types

Some of the modern building materials, such as interlocking clay roof tiles and lumps of reinforced concrete or cement tiles, probably result from post-war construction and maintenance of the modern housing estate and school on the site.

Material from test pits within the former garden and orchard of Blacon Hall (e.g. TP3, TP4, TP11) is more likely to have derived from demolition of outbuildings and possibly the hall itself. Occasionally, as in TP 11, the material is derived from known nearby demolished buildings. TP11 encountered a brick wall foundation, possibly an outbuilding, which provides an immediate source for the near-complete brick and large portions of others in context 1102 as the wall had been cut by a more recent drain. There are large fragments of brick in 1102, crudely finished with large pebbles in the brick fabrics, of consistent size with complete brick.

In most cases, however, the material cannot be attributed to any particular structure. The CBM and other material reported on here may represent demolition rubble spread on fields or dumped in particular areas to create hardstanding or drainage, or is simply material dispersed through topsoil layers after demolition of nearby structures.

Agricultural soils were identified in Test Pits 6, 8, 9 and 18. The agricultural use may account from the heavily comminuted fragments of probable brick, for example from TP8 (context 804).

Dating

Where datable, most of the material present is of relatively recent date (19th to 20th century); this includes the red shale, reinforced concrete, pressed machine-made brick and concrete tile.

Some material may be earlier in date. Probably post-medieval in date and appears to include a few fragments of roof tile, and probably the majority of the handmade brick.

Brick

The assemblage contains a high proportion of handmade brick with a consistent light–mid orange fabric, containing some sand, occasional rounded pebbles (up to 30mm long), infrequent small hard black minerals (iron?) and infrequent softer reddish brown dull inclusions (iron). They often retain traces of lime mortar where surfaces survive, indicating that the bricks have been used rather than being waste from a nearby brick kiln (e.g. dominant in 1201, 1102; 1203). Many fragments are between 10-40mm long with no surfaces, so they are heavily broken.

The brick is highly variable in colour, depending on local firing conditions, the position in the brick clamp, the presence of mineral or chemical inclusions, and variations in temperature, particularly between the inner and hotter part of the clamp and the outer.

Although brick fabrics were not assigned individually, three main fabrics predominated in the assemblage as a whole:

1. Usually mid orange to light brown, sandy fabric, with occasional larger white? clay inclusions to 3mm
2. Coarse light brown-range to purple – very variable in colour with a very coarse fabric, many inclusions, most obviously many subangular black cinder fragments to 2mm, many white? clay subrounded to 5mm and occasionally to 10mm; surface purplish speckled with dark purple where inclusions have affected colour,
3. Dull dark red fabric, very sandy fabric inclusions to 1mm max; few brownish purple iron to 3-4mm; few white? clay to 2mm (occasionally to 10mm); handmade, crudely finished reddish-purple surfaces.

The only complete brick (context 1102) measures 230 x 114 x 81 mm (= approx. 9 in x 4 ¼ x 3 in) with all but one face mortared; it contains a pebble 30mm across and is crudely finished with a number of burst marks from blown out inclusions, a slightly sanded underside, and an upper side with fine parallel-drawing marks diagonally across the surface. In size it is close to the 'statute brick' recorded by Richard Neve in the early 18th century (Neve 1703, 43).

Very few brick fragments are sufficiently complete to have even one measurable dimension. In context 1201 three crudely finished handmade bricks have thicknesses surviving (1 x 65 mm, 2 x 63mm), one of which is 113mm wide. The largest from 1201 (about half a brick) is heavily weathered and abraded, with traces of lime mortar. In 1203 the one measurable fragment also has a thickness of 63mm, perhaps indicating a consistent source for the material in 1201 and 1203.

The absence of complete bricks, or of any part-bricks with all surfaces intact (with the main exception of TP11 (in 1102), suggests that this assemblage represents the residue of demolition material after any useable bricks have been salvaged and recycled leaving behind only broken fragments.

Brick was introduced to Cheshire in the 16th century, although it did not become a common building material until the 17th century. Some of the earliest use of brick in Cheshire occurs in the 16th century, where the brick is used 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). 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, which was 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 and suitable 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 by 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 reserves for production to meet demand from the immediate vicinity, often for individual construction projects.

The diary of Nicholas Blundell of Little Crosby in neighbouring Lancashire shows the process of local production in action. In the early 18th century, Blundell, a local landowner, frequently visited his brick kiln to order bricks for specific constructions (Tyrer 1972). An ancestor William Blundell of Crosby records an agreement made with Nicholas Hewett in 1624 for the firing of eight score thousand bricks. Hewett was to be paid 2s 9d per thousand, each brick was to measure 10 inches by 5 by 2½ inches (Ellison Gibson 1880, 168-9).

Brick sizes changed over time, for the most part becoming thicker into the 18th century. Richard Neve, writing in 1703, recorded that the 'statute' or 'common bricks' should measure 9 x 4 ½ x 2 ¾ inches although examples he measured in Sussex were a little smaller (Neve 1703, 43).

Roof and floor tile

Ceramic roof tile was used for high-status secular buildings and religious houses from the late medieval period in the lowland North West of England. Ridge tiles were produced at the Ewloe kilns near Buckley at a pottery kiln, dated tentatively to the 15th century (Davey ed. 1977, 98). Ceramic floor tiles were also a late medieval introduction to the area, and were used like the ridge tiles in both secular and ecclesiastical contexts.

Potentially significant finds (retained in physical archive)

- Much of the hand-made brick is likely to belong to the later 17th or 18th century, when brick had become a widespread construction material in the vernacular architecture of Cheshire. The brick is not closely datable without corroborative evidence from either the archaeological context or the structure of which it forms part. The presence of the demolished Blacon Hall, apparently of 18th-century date, within the area of the test-pitting exercise provides an obvious source for some of the brick and tile.
- A number of contexts contain groups of evenly-fired orange tile or brick (e.g. context 1403) which lack the crudely finished surfaces of handmade brick or the smooth machine-made finishes, and may be earlier than the 19th-century factory products.
- A small number of finds appear to pre-date the 19th century. They include one fragment of handmade roof tile, with sanded underside and thin splash-glazed in purple with a streaky poorly wedged white and red clay body; this may be post-medieval in date (in 701).
- Another roof tile fragment (in 1203) T 9mm, has a curved form, has an over-fired dark purple surface, dark grey core and mid brown interior, with a highly sanded fabric; this also appears to be post-medieval rather than 18th- or 19th-century in date.
- One fragment of hand-made roof-tile, sanded underside with straw impression, and lightly glazed pale brown upper side, coarse sandy fabric fired orange and grey post-medieval roof tile (in 1301). T 18-21mm, thicker at some end; there are striations of wire drawing marks on the thinly glazed surface.
- An evenly fired orange earthenware tile (in 1101), retaining sections of two sides, with poorly finished edges and a sanded underside, is accompanied by a note which states 'possibly medieval or early post-medieval'. This is the most complete fragment with this well fired

even-coloured sandy orange fabric. The piece has a few larger sub-rounded white-clay particles in the sandy fabric, with a thickness of 19mm, it is a mould-made piece. However, many small abraded fragments from other contexts may come from similar tile. These include the following:

- Two small abraded fragments of fired clay (in context 501), which although lacking diagnostic features, may be earlier on the basis of the fabric.
- Nine fragments of heavily abraded lightly sanded mid orange well sorted fabrics (in 802), and fifteen in 801; also small group of six in 1001; group of five in context 601.
- In 102 a very abraded lump of fired clay has a clean well-mixed fabric with a little sand.
- Context 1301 contains much modern material but also a distinctive fragment of orange-brown tile; it is well-fired throughout, but has a fabric unlike modern brick and tile, and it could be earlier, although it lacks diagnostic characteristics to confirm it.
- It is possible that some of this undiagnostic abraded oxidised ceramic building material is of medieval or Roman date. The likelihood of an early date would be considerably enhanced by the presence of other diagnostically early finds such as pottery or metalwork. A single Roman coin from TP18 may be no more than a casual loss but it hints at potential for Roman material in the vicinity. The possibility that some Roman tile and brick is present cannot be completely dismissed. The proximity of the site to the legionary fortress at Chester raises the possibility either in Roman or more recent times through robbing of usable material from the buildings of the fortress.

Discussion

Brickmaking was widespread within many rural communities of Cheshire and occurred across the county on a very localised basis. It is probable therefore that the handmade Blacon material was produced within a few miles of the site. Detailed fabric analysis of handmade Cheshire brick and tiles to determine source is difficult to justify in view of the broad homogeneity of the glacial till from north Shropshire to Lancashire. The tithe award maps of the mid 19th century capture the extent of rural brick-making towards the end of the phenomenon, when the establishment of a reliable network of transport communications through improved roads, canals and railways enabled heavy products to be transported more cheaply than before, making distribution of bricks from centralised factories cost-effective.

By the later 18th century the ceramics industries at Buckley in Flintshire only 7 miles south-west of Blacon provided a local source for brick and tile. Buckley had no fewer than 25 brickworks, exploiting the local Coal Measures clays and coal, 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. This had declined to 11 by 1950. The last factory making bricks, Hanson's, closed in 2003. 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.

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.

Without stamped makers' marks, which were fairly common on Buckley products, attribution is not certain, though Buckley's domination of brick and tile production in the region makes it the most likely source for the 19th- and 20th-century material brick and tile.

Shale

Shale was frequently used as hardcore for paths and yard surfaces until the late 20th century (e.g. present in contexts 101, 1702).

Concrete

Context 1301 contains some fragments of reinforced concrete, with the impression of steel reinforcing rods which measure about 8mm in diameter. Concrete has high compressible strength but low tensile strength, and reinforcement by steel bars or rods is used to increase its tensile strength. Reinforced concrete was invented in 1849, so this material is later 19th or 20th century in date.

Drainage tile

Several curved fragments of roughly finished earthenware, in sandy orange fabrics, are from drainage tiles. These were developed in the 19th century for field drains.

There is modern (i.e. 20th-century) machine-made 'drainage tile', light orange, very uniform in colour and fabric, with an end which is plain and straight, and a diameter of 75mm (in 1301). This type was used for field drains until the 1970s when they were largely replaced by perforated plastic drains (Droy 2010).

There are four fragments of brown salt-glazed drainage pipes, of a type used as sewer pipes (contexts 1702, 1102).

Mortar

There are a total of 21 fragments of lime mortar, which represents demolition material. The material is soft and tends to abrade easily so provides a good indication of material that has been extensively disturbed in the soil.

Concrete tile

The concrete tiles are characterised by grey or pinkish fabrics containing large amounts of sand inclusions, giving a distinctive gritty appearance. The tiles are moulded, one of which has a nib, and belong to the post-World War 1 period, when a shortage of material led to development of new roofing materials. Concrete tiles were introduced to Britain in the 1920s and rebuilding programmes after World War 2 led to huge demand for roofing materials which were largely met through concrete tiles. Concrete tiles are present in 1702, 1501 and 2001; grey in colour with ridged underside (in 2 examples in 2001).

Bibliography

- Davey, P. J. (eds). 1977. *Medieval Pottery from Excavations in the North West*, Institute of Extension Studies, Liverpool: University of Liverpool
- Droy, N. 2010. *Lowland Agricultural Land Drainage System*, RSPB Information and Advice Note. http://www.rspb.org.uk/Images/land_drainage_systems_tcm9-254843.pdf
- Ellison Gibson, T. (ed). 1880. *A Cavalier's Note Book being Notes, Anecdotes, &c Observations of William Blundell of Crosby, Lancashire, Esquire*, London: Longmans, Green and Co.
- Hartwell C., Hyde M., Hubbard E. and Pevsner, N. 2011. *Cheshire*, The Buildings of England, New Haven and London: Yale University Press
- Phillips, C. B. and Smith, J. H. 1994, *Lancashire and Cheshire from AD 1540*, London: Longman
- Neve, R. 1703. *The City and Countrey Purchaser, and Builder's Dictionary*, 1st edn, London.
- Tyrer, F. (ed.) 1972. *The Great Diurnal of Nicholas Blundell. Vol 3. 1720-1728*, Liverpool: Rec Soc Lancashire Cheshire

Materials Glossary:

BRK: Brick
CEM: Cement
CON: Concrete
FCL: Fired Clay
FLT: Floor Tile
MOR: Mortar
PIPE: Pipe
RFT: Roof Tile
SHA: Shale
TIL: Tile

BRICK

CONTEXT	MATERIAL	TYPE	TOT	FORM
101	BRK	CER	15	very small brick light orange to purple
102	BRK	CER	1	large fragment of machine made frogged brick, W107 T75mm; frogged, adhering mortar C20th
102	BRK	CER	5	fragments - very small of C19-20 brick; machine?
102	BRK	CER	2	fragment of red very sandy fabric brick, abraded; 1 reddish, one orange
202	BRK	CER	23	23 fragments of brick, coarse fabric with many visible inclusions, 1 fragment is machine made C19-20 frogged; another is T 71mm, slightly yellowish sheen
302	BRK	CER	52	certain or probable brick fragments, light orange, mid orange red, sandy fabrics, 1 with cream surface; 1 larger purple fabric piece
303	BRK	CER	1	large fragment of abraded reddish orange handmade brick, lime mortar on broken surface, coarse sandy fabric
401	BRK	CER	26	fragments of handmade brick, light orange to dark brown; one sanded surface; most very small fragments
401	BRK	CER	1	fragment probably machine-made brick, with light purple fabric and surface
402	BRK	CER	1	very distinctive fabric 2 coarse buff with cinder and white clay
402	BRK	CER	12	largely undiagnostic brick or tile, all but 1 purple fragment are orange
404	BRK	CER	5	fragments brick (or probable brick), 1 machine-made wiped surface
601	BRK	CER	3	very small fragments of brick, reddish purple in colour - probably machine-made
801	BRK	CER	5	fragment of modern C20 brick, machine made, largest with circular holes;
801	BRK	CER	4	abraded brick fragments, sandy, probably handmade
803	BRK	CER	2	comminuted brick fragments, undiagnostic, mid orange in colour

804	BRK	CER	49	very comminuted fragments of undiagnostic brick, sandy light orange fabric, 1 with mortar adhering
903	BRK	CER	1	very small fragment of reddish orange brick
202	BRK?	CER	6	undiagnostic possible brick fragments; light to mid orange, sandy fabric
301	BRK?	CER	38	fragments of undiagnostic broken brick, mid orange to mid brown sandy, very fragmentary
303	BRK?	CER	28	fragments of undiagnostic broken brick, mid orange to reddish purple, sandy, very fragmentary; 2 with cream surface
701	BRK?	CER	3	very small fragments of undiagnostic brick
702	BRK?	CER	1	very small fragment of light orange brick, undiagnostic
901	BRK?	CER	5	small fragments of light-mid orange brick; undiagnostic
902	BRK?	CER	14	very small fragments (largest max L20mm) of mid orange prob brick
1001	BRK	CER	1	sandy mid orange handmade brick fragment, very abraded
1101	BRK	CER	63	brick or probable brick fragments, mid orange to greyish purple, sandy fabrics, a few with adhering mortar, most very small
1101	BRK	CER	7	fragments (including one large) in coarse fabric 2; purplish-grey fabric
1102	BRK	CER	82	fragments of brick, most small fragments; most orange and sandy, probably handmade; 1 buff and hard, with smooth surface; another with machine-made finish
1102	BRK	CER	1	complete brick T81 W114 L 230mm; one face unmortised; others cream lime mortar; parallel drawing lines on upper source; sanded lower; reddish purple in colour
1102	BRK	CER	14	frags of orange to reddish-orange brick, 1 has parallel drawing lines T63mm; 1 with cream surface; all handmade
1103	BRK	CER	15	fragment of brick, orange-red in colour, some large inclusions in fabric of handmade bricks (pebble 23mm long) similar to bricks in 1102.

1102	BRK	CER	10	10 fragments of brick, large pieces, handmade, crudely finished; T 3 x 73mm; W 2 x 107mm; adhering mortar
1201	BRK	CER	1	small fragment of possibly machine-made brick, very smooth surface but very small and could be worn pavement brick; mid orange.
1201	BRK	CER	44	44 frags from v small to half-complete; colour mid orange to dark red; all but 1 prob handmade; 1 W 113 x T65mm; 2 x T 63mm
1202	BRK	CER	32	fragments of probable handmade brick; mid orange, one large frag with adhering mortar is T75mm; hard fired purplish grey
1202	BRK	CER	1	fragment of machine-made brick, with brown thin glaze
1203	BRK	CER	79	fragments brick from very small to about one-quarter brick; latter is T 63mm
1301	BRK	CER	35	fragments of brick, hand-made, no complete dimensions (3 are very sandy red; others mid orange to reddish brown), occasional with mortar adhering; various sandy fabrics
1301	BRK	CER	1	very vitrified interior fragment of brick, fired almost black, no surfaces
1301	BRK	CER	6	small frags distinctive machine-made brick purple fabric, hard fired C20
1301	BRK	CER	1	small corner fragment of rusticated brick, in pale brown fabric C19-20
1302	BRK	CER	27	fragments of brick; 2 large fragments T 63 and 74mm; handmade; sandy fabrics, with mortar on 4; handmade
1302	BRK	CER	1	fragment of different type of brick, rustic buff surface, machine made
1401	BRK	CER	10	fragments of coarse fabric brick; 1 with glazed brown surface
1402	BRK	CER	4	2 hard over-fired brick frags, 2 reddish orange brick frags
1403	BRK?	CER	7	light orange brick/tile fragments. Undiagnostic but evenly fired fine sandy fabric
1403	BRK	CER	3	small fragments of dull red brick, hand-made, sandy fabric

1501	BRK	CER	4	fragments of softer orange fabric, probably hand made brick
1501	BRK	CER	25	fragments of brick, buff to red some large lumps with compressed fabric and one with recessed surface for stamp C20; all machine made
1502	BRK	CER	1	very small fragment with red surface machine-made
1602	BRK	CER	16	fragments of brick or probable brick - 2 very coarse fabric; reddish range in colour
1602	BRK	CER	3	from same buff fabric, many visible inclusions; orange-brown almost glazed surface; machine-made?
1603	BRK	CER	5	brick fragments, 1 tiny machine made fragment; others handmade; mid orange, 1 darker purple overfired
1701	BRK	CER	11	small fragments of brick, white clay streaks in orange fabric in 2 cases; undiagnostic, mortar adhering on 3
1702	BRK	CER	54	fragments of brick; 2 probable machine-made sandy dull red; rest orange to purplish grey and prob handmade; 3 with mortared surface; largest is 54mm long
1801	BRK	CER	1	fragment of brick with coarse red fabric and smooth surface
1901	BRK	CER	1	hard purplish red handmade crude brick
1901	BRK	CER	1	W 73 T41mm small brick one cream side, and thin slurry/slip on surface
2001	BRK	CER	1	1 fragment of moulded brick - machine-made ;low flat ridge on surface
2001	BRK?	CER	3	small abraded fragments of probable brick, orange no surfaces
2001	BRK?	CER	12	very small fragments of mid orange machine made brick or tile with very smooth surfaces where present
2002	BRK?	CER	8	very small fragments of probable brick; coarse fabric, mid orange

CEMENT

CONTEXT	MATERIAL	TYPE	TOT	FORM
404	CEM	CEM	3	fragments of concrete/cement
1603	CEM	CEM	1	fragment of grey cement with flat surface C19-20

CONCRETE

CONTEXT	MATERIAL	TYPE	TOT	FORM
102	CON	CON	3	lumps of concrete, numerous pebble inclusions
801	CON	CON	1	lump of grey concrete with copious pebbles in matrix
1301	CON	CON	26	fragments of reinforced concrete, max L 88mm; whitish-grey with pebble inclusions and impressions of steel reinforcing bars with D of C 8mm C20
1302	CON	CON	1	lump of concrete C20
1501	CON	CON	1	rounded lump of concrete with rounded pebbles in matrix
1602	CON	CON	6	fragments of cement/concrete - 3 flat (T 11, 2 x 14mm), from smoothed surface

FIRED CLAY

CONTEXT	MATERIAL	TYPE	TOT	FORM
1001	FCL	CER	6	small very abraded lumps of undiagnostic mid orange fired clay/brick/tile
102	FCL	CER	1	very abraded fine orange fabric undiagnostic a little sand
501	FCL	CER	12	small fragments, 2 may be post-med/mod brick traces of surface; 2 uniformly sandy orange may be earlier poss pot;
601	FCL	CER	5	small very abraded fragments of mid orange sandy clay, poss abraded brick or tile

603	FCL	CER	4	tiny fragments of orange fired clay, brick/tile - uncertain
801	FCL	CER	15	small very abraded fired clay lumps, sandy mid orange fabrics; undiagnostic; largest L 18mm
802	FCL	CER	9	very small and abraded fragments of orange fired clay - brick or tile. Sandy fabrics
903	FCL	CER	12	small fragments of abraded mid orange sandy fired clay undiagnostic; largest L 27mm
1401	FCL	CER	1	very abraded fragment of undiagnostic mid orange clay
1402	FCL	CER	8	fragments of fired clay; 2 very soft orange and brown;
1502	FCL	CER	2	small abraded fragments of orange fired clay; undiagnostic, probably not brick
1801	FCL	CER	19	small fragments of brick/tile mid orange some certainly brick but none diagnostic
1802	FCL	CER	25	misc. small fragments of undiagnostic fired clay, brick or tile, mid orange
1901	FCL	CER	3	very small fragments of brick; undiagnostic
1901	FCL	CER	1	very small soft orange earthenware with sandy fabric, just poss Romano-British or medieval pottery
1901	FCL	CER	1	very small fragment of buff drain pipe; very smooth surface, cf 1202
2003	FCL	CER	1	very small frag of orange tile/brick uncertain, mid orange

FLOOR TILE

CONTEXT	MATERIAL	TYPE	TOT	FORM
901	FLT	CER	1	fragment floor tile, T 21mm; hard purplish grey surfaces, press-moulded with underside decorate curved area in relief; mid grey core; C19; mortar on underside; surface v worn

1101	FLT	CER	1	large fragment of floor tile, T 26mm; coarse buff fabric with numerous black inclusions; dribbled black tar/pitch on surface
1102	FLT	CER	1	fragment of floor tile T 22mm, reddish orange, sandy fabric
1202	FLT	CER	1	thick frag of floor tile T 42mm; dark grey surfaces, hard purple fabric, high fired sanded underside C19?
1301	FLT	CER	4	Floor tile fragments, purplish hard sanded underside; smooth mottle upper side with visible small pebble inclusions, brown and orange fabrics
1602	FLT	CER	1	fragment dark red machine-made floor tile T 20mm, trace of blue paint on one surface C19-20

MORTAR

CONTEXT	MATERIAL	TYPE	TOT	FORM
101	MOR	MOR	3	fragments of off white lime mortar, one with large stone inclusion
401	MOR	MOR	3	fragments of abraded lime mortar, cream to light grey
404	MOR	MOR	1	fragment of pinkish mortar, very abraded
701	MOR	MOR	1	small fragment of pale grey mortar
1301	MOR	MOR	1	very small fragment of white lime mortar
1302	MOR	MOR	1	thin fragment of white lime mortar
1701	MOR	MOR	2	fragment cream lime mortar, and one very tiny fragment
1702	MOR	MOR	9	fragments of cream-white lime mortar, one with surface has possible sooting

PIPE

CONTEXT	MATERIAL	TYPE	TOT	FORM
301	PIP	CER	1	fragment curved drain pipe T 16mm; light orange clay, smoothed surface C20
301	PIP	CER	2	fragments curved poorly finished curved drain (field drain?), T11, straight ended, 1 smaller
1102	PIP	CER	2	fragments of brown salt-glazed drain/sewer pipe
1102	PIP	CER	1	fragment of mid orange earthenware curved drain with straight end; field drain
1302	PIP	CER	2	curved mid orange fragments of field drain
1702	PIP	CER	2	fragments of purple salt-glazed drainage pipe, 110mm int diam; 14mm thick; late 19th-C20
1901	PIP	CER	2	fragments of brown salt-glazed stoneware drain pipe, one has zone of no glaze at terminal, straight edge; T13mm

ROOF TILE

CONTEXT	MATERIAL	TYPE	TOT	FORM
101	RFT	CER	1	fragment, hard purple exterior, heavily sanded underside, one small hole; machine-made C19-20; T 11mm
102	RFT	CER	1	fragment of mid orange interlocking roof tile C20
202	RFT	CER	5	fragments of machine made roof tile 'one red frag '...]ON' in relief, another '...] TD'; C20
202	RFT	CON	1	fragment of concrete roof tile T 13mm, pinkish grey
301	RFT	CER	2	hard fired purple glazed roof tile frags , 1 with nib; T 13mm; later C19-20
302	RFT	CON	1	fragment concrete tile T 15mm, pink, many visible inclusions

401	RFT	CER	3	machine made roof tiles, very flat (2 purple, 1 orange-red) T 2 x 12mm; 1 x 18mm
701	RFT	CER	1	fragment of post-medieval roof tile - handmade, sanded underside streaked white and orange clay, mid purple surface with splash glaze, mid grey core T13mm
1101	RFT	CER	1	fragment of evenly fired mid orange earthenware tile, trace of wooden mould scar, note says 'med/post-med' T 19mm;
1102	RFT	CER	5	fragments of light orange smooth surface roof tile C20
1203	RFT	CER	1	curved roof tile; T of 9mm, has a curved form, over-fired dark purple surface, dark grey core and mid brown interior –with very sanded fabric
1301	RFT	CER	7	fragments of machine-made tile or drain, T 14mm; curved, D 75mm v well mixed fabric, and v smooth light orange surfaces; 1 plain straight-sided end
1501	RFT	CER	3	fragments of interlocking machine made roof tile C20
1501	RFT	CON	3	fragments of roof tile in concrete composite material T 13.5, one with nib to T 22.5mm C20
1702	RFT	CON	1	fragment of concrete tile, gritty fabric in grey body; T 14mm
1901	RFT	CER	6	fragments of interlocking roof tile in light orange fabric with very smooth surfaces C20
2001	RFT	CER	3	fragments of interlocking clay roof tile, later C20, with ridges and channels to shed water
2001	RFT	CON	2	fragments of concrete roof tile T 14mm with parallel raised ridges on underside. Very gritty grey fabric. C20
2002	RFT	CER	14	fragments of very smooth-surfaced light orange tile, roof tile, 2 with ridges of later C20 tile
2002	RFT	CON	2	fragments of concrete tile, one with parallel ridges on underside; greenish grey, many coarse sand inclusions in fabric

SHALE

CONTEXT	MATERIAL	TYPE	TOT	FORM
101	SHA	INW	5	fragments of shale, 4 pinkish red, one purplish red
102	SHA	INW	2	fragments shale (industrial waste) pink/purple
303	SHA	INW	1	small fragment of industrial waste - pink shale
401	SHA	INW	3	fragments of pinkish red slate, industrial waste
801	SHA	INW?	1	small uncertain fragment of ?burnt cinder or stone
1101	SHA	INW	2	fragments of pink shale (industrial waste)
1301	SHA	INW	2	fragment of red shale, conchoidal fracture, purple interior
1403	SHA	INW	1	small fragment of burnt coal waste - coal ash
1702	SHA	INW	1	fragment of pinkish shale (industrial waste)
1802	SHA	INW	2	small fragments of pinkish orange shale(industrial waste)

TILE

CONTEXT	MATERIAL	TYPE	TOT	FORM
101	TIL	CER	1	fragment of uncertain tile with pale surface, on light orange fabric, machine made
102	TIL	CER	2	fragments of roof tile, hard fired purple glazed surface, dark purple interior, mould made sanded unersideT11mm later C19-20
401	TIL	CER	2	fragment of handmade(?) tile: one light orange, slipped over coarse fabric 8.5mm thick; one reddish slip 4mm thick - uncertain function?
401	TIL	CER	2	1 machine made moulded interlocking roof tile]RU[inscription in sunken panel C20; 1 curved machine made orange roof tile frag
402	TIL	CER	1	curved light orange sandy fabric, field drain, T12mm
601	TIL	CER	2	fragments of orange curved clay ?drain (field drain)

701	TIL	CER	1	curved fragment of tile, hard compressed fabric, possibly machine made
903	TIL	CER	2	small fragments of tile with smoothed surface and sandy fabric; undiagnostic, evenly fired
1001	TIL?	CER	1	light orange fragment of tile (?) with horizontal ridges on upper surface. T11mm; post-med/mod?
1101	TIL	CER	1	Fragment of light orange fairly smooth curved tile C20?
1102	TIL	CER	2	fragments of tile possibly roof, hard purplish upper surface, sanded underside, T 11mm
1202	TIL	CER	1	fragment of curved drain, buff surfaces, light grey sandy core C20
1301	TIL	CER	1	Mid orange brown fragment of tile T 17mm, sanded underside, slightly sandy fabric
1301	TIL	CER	1	fragment of modern C20 tile, machine made, very fine fabric, orange-red; T 17mm
1301	TIL	CER	1	fragment of possible roof tile, sanded underside with straw impression, and lightly glazed pale brown upper side, coarse sandy fabric fired orange and grey -post-med roof tile? T 18-21mm striations of wire drawing marks on glazed surface. Handmade
1501	TIL	CER	1	Machine-made flat tile, very smooth surface with striations of roller; T14.5mm
1501	TIL	CER	1	well-fired smooth surfaced modern tile, if clay drain 205mm diam; straight plain end. Machine-made T18.5mm
1702	TIL	CER	1	fragment of crudely finished handmade tile possibly field drain, ; sanded in concave surface. T 21mm;pale orange sandy fabric
1801	TIL	CER	7	fragments of mid orange earthenware ?tile, all with surface; too fine to be brick; ?roof tile
2002	TIL	CER	7	fragments of light orange well fired earthenware tile, smooth fabrics ; form uncertain.
2003	TIL	CER	1	fragment of flat orange tile, T 13mm, sandy fabric, orange glaze

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

Introduction

This report deals with an assemblage of clay tobacco pipes that were recovered from twenty test pits excavated at Blacon in 2015 by Big Heritage C.I.C. as part of a community archaeology project. The 1 metre square test pits were excavated in the north-east part of Blacon, which is now a suburb of Chester and located about 2km north-west of the city centre itself. The finds from each trench are identified by a number (in a circle), the last two digits of which represent the context or spit, while the first part identifies the trench number, for example, 802 represents the finds from Trench 8, Context 2, while 1101 represents the finds from Trench 11, Context 1. The bags of pipes contain between one and four fragments. The site archive and finds will be deposited at the Grosvenor Museum, Chester (accession number CHEGM 2015.200).

The pipes themselves were individually examined by the author in February 2016 and an archive record compiled on an Excel worksheet, based on the recording system developed at the University of Liverpool (Higgins & Davey 2004). This record comprises a context summary, so that the pieces in each bag have been logged together and described as a group. Two dates have been given for each group, the 'Range', which gives the earliest and latest dates for any of the pipe fragments within the group, and the 'Latest', which is an assessment of the likely date of deposition for the group as a whole. The former can be very wide, since it often includes plain stem fragments that can only be given a broad general date range, whereas the latter takes into account an assessment of the dating for the more diagnostic pieces within the group as well as the nature of the group as a whole (i.e., whether they appear to form a consistent/contemporary group or not). The 'cut off' date for pipe deposition for this site has been taken as 1910, since clay pipes went out of general use after this date while municipal rubbish collection also meant that far fewer objects were discarded around domestic dwellings by this time.

The Clay Tobacco Pipes

A total of 20 fragments of pipe were recovered during this project, comprising 7 bowl and 13 stem fragments. No mouthpiece fragments were recovered. These pieces came from ten of the excavated test pits, the spoil from which was sieved through a 6mm mesh to ensure a good recovery rate for any artefacts present. A quantification and description of the pipes from the test pits is given in Table 1 below, including date ranges for the groups from each context and details of any marked or decorated pieces recovered.

Table 1: Context summary showing the context number (Cxt) followed by the numbers of bowl (B), stem (S) and mouthpiece (M) fragments recovered, together with the total (Tot). The 'range' shows the widest dating parameters for all the pipes in each group while the 'latest' is the best estimate of the likely deposition date, based on the latest pieces present. The marks are transcribed followed by their type (IS = incuse stamped) and position (SL = along the stem). The 'cast' is the reference number from the National Clay Tobacco Pipe Stamp Catalogue for an impression of the mark. Finally any decoration is described, followed by general comments on the individual pieces present.

Context	B	S	M	Tot	Range	Latest	Mark	Type	Pos	Cast	Decor ation	Comments
301		1		1	1860- 1960	1860- 1960	...THOR... / ...LY6SA...	IS	SL			Tiny stem fragment with a stem bore of 4/64"; appears burnt. There is part of an incuse W.SOUTHORN & Co / BROSLEY 6 SALOP stem stamp on the stem. This firm was founded in Broseley, Shropshire, in 1823 and closed in about 1960. This particular style of stem mark was introduced in about 1860 and was

												mainly used c1860-1920, although it continued in occasional use until the firm closed, making precise dating difficult.
401		4		4	1610-1910	1800-1910						Four stem fragments of mixed dates. One very abraded and battered piece dates from the C17th but the latest is a stem that probably dates from somewhere between 1800 and 1910.
501	2			2	1800-1910	1800-1910					leaf seams x1	Two very small bowl fragments. One piece has simple leaves decorating the seam of a style that probably dates from c1800-1850 (long thin oval type). The other piece is a plain rim fragment (simple cut rim) from a bowl of c1800-1910.

601	1	1		2	1760-1910	1800-1910					leaf seams x1	Two small pieces of pipe. The stem is a plain fragment of c1760-1910 type. The bowl fragment is a small sliver from a bowl with simple leaves decorating the seams (long thin oval type), most likely dating from c1800-1850.
701		2		2	1610-1910	1750-1910						Two small stem fragments, one of which is an abraded C17th fragment. The other is a thick stem that would be typical of the C18th were it not for the rather small stem bore (4/64") for that period. This piece could either be a later C18th fragment, or from a thick-stemmed C19th pattern of pipe.
801	1			1	1670-1720	1670-1720						A small plain bowl fragment, very abraded, from the body of a transitional pipe bowl of c1670-1720.
802	1	1		2	1700-1910	1820-1910					decorated x 1	A very small stem fragment of C18th or later date and a small rim fragment from a bowl that dates from somewhere between c1820 and c1910. This has a cut rim and traces of relief moulded decoration on

												either side of the bowl; pattern not recognised. Plain seam.
902		1		1	1800-1910	1800-1910						A small fragment of plain stem dating from c1800-1910.
1001		1		1	1610-1710	1610-1710						A very abraded stem fragment of C17th date.
1101	2			2	1680-1780	1740-1780						Two bowl fragments; a small and very abraded sliver from a transitional bowl of c1680-1730 and a larger, fresher, piece from a large and relatively thin-walled bowl of c1740-1780.
1102		1		1	1750-1910	1750-1910						A very small stem fragment of mid-C18th or later date.
1302		1		1	1740-1910	1740-1910						Plain stem fragment. Hard to date accurately, but of a type likely to date from c1740 or later.
Total	7	13	0	20			1				3	

Discussion of the Pipes

Although this is only a very small assemblage of pipes, it nevertheless provides a glimpse into the lifestyle of Blacon's inhabitants during the three centuries from c1610-1910. During this period smoking was commonplace in Britain and this is reflected in the occurrence of pipe fragments in

many of the test pits excavated. The pipes recovered are all very fragmentary and many of the pieces are clearly extremely battered and abraded from having been in very disturbed (most likely heavily cultivated) soils. Despite this, it is still possible to date most of the fragments with a fair degree of precision, which shows that pipes were being widely used and discarded in Blaenau throughout this three hundred year period.

No recognisable bowl forms were recovered but, as would be expected, all the seventeenth and earlier eighteenth century bowl fragments are plain. Pipes at this period came in a variety of different styles according to bowl form, but were very rarely decorated. In contrast, pipes from the late eighteenth century onwards often had moulded decoration and this is reflected by three of the fragments from the excavations. Contexts 501 and 601 both produced bowls with simple leaves decorating the seams, which are likely to date from c1800-1850. Context 802 produced a bowl fragment that clearly had some sort of relief moulded decorative motif on either side, but unfortunately not enough survives to be able to identify the design.

Only one of the pipe fragments had a maker's mark on it, and this is a small stem fragment from context 301, which has part of an incuse stamped name running along it in two lines. Only the lettering "...THOR... / ...LY6SA..." survives, but this is sufficient to identify it as part of a mark that would originally have read, "W.SOUTHORN & Co / BROSLEY 6 SALOP". This firm was founded by William Southorn in Broseley, Shropshire, in 1823 and the family business finally closed in about 1960 (Higgins 1987). The former factory used by this firm is now a clay pipe museum run by the Ironbridge Gorge Museum Trust. This particular style of stem mark was introduced by the firm in about 1860 and was mainly used from about 1860-1920, although it continued in occasional use until the firm closed, making precise dating difficult. It is most likely, however, that this example dates from the late nineteenth or early twentieth century.

Southorn's pipe works was one of the more important in the country and they exported widely both at home and abroad. Their trade via Liverpool was so important that they advertised in the local trade directories as "wholesale and export tobacco pipe manufacturers" and had agents there during the 1870s and 1880s (Gore's Liverpool trade directories). They specialised in making good quality pipes and, in particular, long stemmed varieties, which were always more expensive to buy. In this respect it is worth noting that the marked stem fragment came from a test pit excavated

within the grounds of what would have been Blacon Hall at the time. It is quite possible that this fragment came from a better quality pipe used by one of the inhabitants at the hall that was either broken in the grounds or discarded there from the house. As such, this tiny fragment reflects something of the lifestyle and social status of the former inhabitants of Blacon.

References

Higgins D. A., 1987, *The Interpretation and Regional Study of Clay Tobacco Pipes: A Case Study of the Broseley District*, doctoral thesis submitted to the University of Liverpool, 628pp.

Higgins D. A. & Davey P. J., 2004, 'Appendix 4: Draft Guidelines for using the Clay Tobacco Pipe Record Sheets' in S. D. White, *The Dynamics of Regionalisation and Trade: Yorkshire Clay Tobacco Pipes c1600-1800*, British Archaeological Reports, Oxford, British Series 374, 487-90 (567pp).

11.2.4. 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.).

CRW: Creamware, mid 18th – 19th century (Towner 1978). Cream-coloured earthenware, and with a lead glaze, resulting in a rich cream colour. Range of tablewares.

GRE: Glazed Red Earthenware, 16th – 19th century. Fine sandy earthenware, usually with a brown or green glaze, occurring in a range of utilitarian forms. Such 'country pottery' was first made in the 16th century, and in some areas continued in use until the 19th century (Brears 1969).

MOD: Modern, 19th century +. A wide range of different types of pottery, including stoneware, porcelain and earthenwares, particularly 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).

ND: Nottingham/Derby Stoneware, 18th – 19th century. Hard, grey stoneware with glossy chocolate brown glaze. Wide range of utilitarian pots (Mountford 1971)

SMW: Staffordshire Manganese Mottled Ware, late 17th – 18th century (Crossley 1994). Hard buff fabric with distinctive purplish-brown mottled 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.

Overview

Almost all the pottery is of early modern or modern date, other than the sherds of Midland Purple Ware and Glazed Red Earthenware. It is possible that some of the former may be of late medieval date, but the tradition was long-lived, and such pottery was still being made in the 17th century. The sherds of Glazed Red Earthenware look likely to be of 16th – 17th century date, as such pottery largely ceased to be made in the region after the start of production of the Buckley potteries. Most of the earthenwares are abraded to some degree, and the sherd size is fairly small, indicating that most of the pottery is from manuring rather than representing settlement activity.

Bibliography

Brears, P. C. D. 1969. *The English country pottery: its history and techniques*, Newton Abbot: David and Charles

Crossley, D. 1994. *Post-Medieval Archaeology in Britain*, Liverpool: Liverpool University Press

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

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

Towner, D. 1978. *Creamware*, London: Faber and Faber

RESULTS

Test Pit 1

TP	Cntxt	BEW		MOD		Date Range
		No	Wt	No	Wt	
1	101			2	2	1800-1900
1	102	1	4			1700-1750

Test Pit 3

TP	Cntxt	MP		GRE		BEW		BSL		ND		CRW		MOD		Date Range
		No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
3	301							1	1	1	2			5	13	1680-1900
3	302	1	13	1	2	5	34	1	17			4	20	17	32	1400-1900
3	303					2	6							1	4	1700-1900

Test Pit 4

TP	Cntxt	MP		BEW		SMW		ND		CRW		MOD		Date Range
		No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
4	401	1	6	1	8	2	2					21	27	1400-1900
4	402			2	61	1	1	1	109	31	130	4	13	1700-1900

4	404	1	17						1	5	2	50	1400-1900
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Test Pit 5

		GRE		BEW		ND		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	Date Range
5	501	1	22	4	73	1	4	11	18	1550-1900

Test Pit 6

		GRE		BEW		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	Date Range
6	601	1	6	2	71	15	106	1550-1900

Test Pit 7

		MOD		
TP	Cntxt	No	Wt	Date Range
7	701	5	7	1800-1900

Test Pit 8

		BEW		SS		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	Date Range
8	801	5	21			12	15	1700-1900
8	802	4	14			17	24	1700-1900
8	803			1	6			1640-1680

Test Pit 9

TP	Cntxt	BEW		MOD		Date Range
		No	Wt	No	Wt	
9	901			2	6	1800-1900
9	902	1	1	6	4	1700-1900
9	903	1	1	7	7	1700-1900

Test Pit 10

TP	Cntxt	BEW		MOD		Date Range
		No	Wt	No	Wt	
10	1001	1	1	5	5	1700-1900

Test Pit 11

TP	Cntxt	BEW		SS		BSL		SMW		MOD		Date Range
		No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
11	1101	3	17	1	1	1	1			5	5	1700-1900
11	1102	1	3					1	1	14	57	1700-1900

Test Pit 12

TP	Cntxt	BEW		SMW		ND		MOD		Date Range
		No	Wt	No	Wt	No	Wt	No	Wt	
12	1201	4	18	1	1			7	13	1700-1900
12	1203	1	2			1	1			1700-1800

Test Pit 13

TP	Cntxt	BEW		MOD		Date Range
		No	Wt	No	Wt	
13	1301	1	2	2	5	1700-1900
13	1302			5	36	1800-1900

Test Pit 14

TP	Cntxt	MP		BEW		MOD		Date Range
		No	Wt	No	Wt	No	Wt	
14	1401					5	19	1800-1900
14	1402			3	15	2	9	1700-1900
14	1403	1	9					1400-1550

Test Pit 16

TP	Cntxt	MOD		Date Range
		No	Wt	
16	1602	6	14	1800-1900
16	1603	1	4	1800-1900

Test Pit 17

TP	Cntxt	SMW		MOD		Date Range
		No	Wt	No	Wt	

17	1701	2	7			1680-1750
17	1702			2	3	1800-1900

Test Pit 18

		GRE		ND		MOD		
TP	Cntxt	No	Wt	No	Wt	No	Wt	Date Range
18	1801					7	16	1800-1900
18	1802	4	18	1	31	11	10	1550-1900

Test Pit 19

		BEW		MOD		
TP	Cntxt	No	Wt	No	Wt	Date Range
19	1901	2	7	8	17	1700-1900
19	1902			3	5	1800-1900

Test Pit 20

		MOD		
TP	Cntxt	No	Wt	Date Range
20	2001	2	4	1800-1900

Appendix C: Health and Well-being Evaluation