Archaeological Investigation and Excavation at Cow Lane, Northampton November 2014

Report No. 15/79

Author: Claire Finn

Illustrators: Amir Bassir and James Ladocha

Project Manager: Jim Brown
Site Code: ENN108056/ ENN108057
NGR: SP 75664 60268

MOLA
Bolton House
Wootton Hall Park
Northampton
NN4 8BN 01604 700 493
www.mola.org.uk
sparry@mola.org.uk

Archaeological Investigation and Excavation at Cow Lane, Northampton November 2014

Event No: ENN108056
ENN108057

Report No: 15/79

Quality control and sign off**:**

Issue No.	Date approved:	Checked by:	Verified by:	Approved by:	Reason for Issue:
1	04/08/2015	P Chapman	J Brown	A Chapman	Draft for approval
2	20/08/2015	A Chapman	J Brown	J Brown	Final report for distribution

Author: Claire Finn

Illustrators: Amir Bassir and James Ladocha

MOLA
Bolton House
Wootton Hall Park
Northampton
NN4 8BN
01604 700 493
www.mola.org.uk
sparry@mola.org.uk

STAFF

Project Manager	Jim Brown BSc PGDip MCIfA
Fieldwork	Jeremy Mordue BSc ACIfA
	James Fairclough BA MA PCIfA
	Laura Cogley BA
	Anne Foard-Colby Cert Ed
	Chris Pennell BA
	Rob Smith
	Gemma Hewitt BA
Text	Claire Finn BA MA PhD
Illustrations	Amir Bassir BSc
	James Ladocha BA
Flint	Yvonne Wolframm-Murray BSc PhD
Pottery	Paul Blinkhorn BTech
Building Materials	Pat Chapman BA ACIfA
Glass	Claire Finn
Other Finds	Tora Hylton
Metalworking debris	Andy Chapman BSc MCIfA FSA
Animal Bone	Adam Reid BSc MSc
	Rebecca Gordon BSc MSc
	Philip Armitage BSc MSc PhD
Plant macrofossils	Val Fryer BA MCIfA
Shells	Jim Brown

OASIS REPORT FORM

PROJECT DETAILS	**OASIS No: molanort1-210517**	
Project title	Archaeological investigation and excavation at Cow Lane, Northampton, November 2014	
Summary Archaeological features and deposits were excavated in 2014 at a former car park on Cow Lane, now known as Swan Street, Northampton. Prior to the Norman Conquest the area was mostly open land, perhaps with some low level agricultural activity outside the Saxon burh. In the late 12th century an ironstone quarry was established to supply stone to the Norman New Borough. By the 13th century Cow Lane (Swan Street) had been laid out, the quarry pits were being backfilled and the land terraced for occupation. From the late 13th century, an ironstone wall served as a property boundary and revetment for the terrace. This boundary wall was retained through later periods up to the present development. In the 15th century, on the upslope side of the wall a number of dwellings were erected with gardens and stone-lined cesspits to the rear, and probably with stables and orchards beyond. In the 16th century, the buildings had been demolished, the stonework robbed, and existing pits backfilled to level the land for horticultural use. The 17th and 18th centuries saw renewed activity, and the site again became used as backyards, with drains, stone-lined cesspits, and post-built structures. In 1830 the Lion Foundry ironworks was constructed to the north of the revetment wall. Several circular pits, possibly wells, were backfilled with large quantities of iron and copper slag waste, as well as domestic pottery. The foundry was demolished in the 1960s and replaced by a car park. Below the revetment was a row of three-storey terraced brick houses forming St John's Terrace, built in the mid-19th century. The terrace had two public houses at its eastern end, which were demolished in the late 20th century.		
Project type	Archaeological observation, investigation and recording	
Site status	None	
Previous work	Archaeological desk-based assessment (Shepherd 2013), Archaeological trial trench evaluation (Brown 2013)	
Current land use	Car parking	
Future work	Unknown	
Monument type/period	Medieval quarry pits, boundary wall, cesspits, 19th-century foundry waste pits	
Significant finds	Medieval and post-medieval pottery, slag, clay tobacco pipes	
PROJECT LOCATION		
County	Northamptonshire	
Site address	Swan Street, Northampton (formerly Cow Lane)	
Postcode	NN1 1AG	
OS co-ordinates	SP 75664 60268	
Area (sq m/ha)	*c*0.2 hectares	
Height aOD	*c*69-65m aOD	
PROJECT CREATORS		
Organisation	MOLA Northampton	
Project Brief originator	Lesley-Ann Mather, Northamptonshire County Council Planning	
Project Design originator	Jim Brown, MOLA Northampton	
Director/Supervisor	Jeremy Mordue, MOLA	
Project Manager	Jim Brown, MOLA	
Sponsor or funding body	CgMs Consulting	
PROJECT DATE		
Start date	4 November 2014	
End date	28 November 2014	
ARCHIVES	Location (Accession no.)	Content
Physical	MOLA Northampton Archive Store: ENN108056 ENN108057	Pot; animal bone; Fe and Cu objects; shell, glass, crucibles, flint, seed flots, tile, clay tobacco pipes
Paper		Site records; background data, photographs; plans and sections on permatrace
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report (MOLA report)	
Title	Archaeological excavation, investigation and recording at Cow Lane, Northampton, November 2014	
Serial title & volume	MOLA Northampton Reports 15/79	
Author(s)	Claire Finn	
Page numbers	75	
Date	4 August, revised 20 August 2015	

Contents

Illustrations

Tables

Archaeological Investigation and Excavation at Cow Lane, Northampton November 2014

Abstract

Archaeological features and deposits were excavated in 2014 at a former car park on Cow Lane, now known as Swan Street, Northampton.

Prior to the Norman Conquest the area was mostly open land, perhaps with some low level agricultural activity outside the Saxon burh. In the late 12th century an ironstone quarry was established to supply stone to the Norman New Borough. By the 13th century Cow Lane (Swan Street) had been laid out, the quarry pits were being backfilled and the land terraced for occupation.

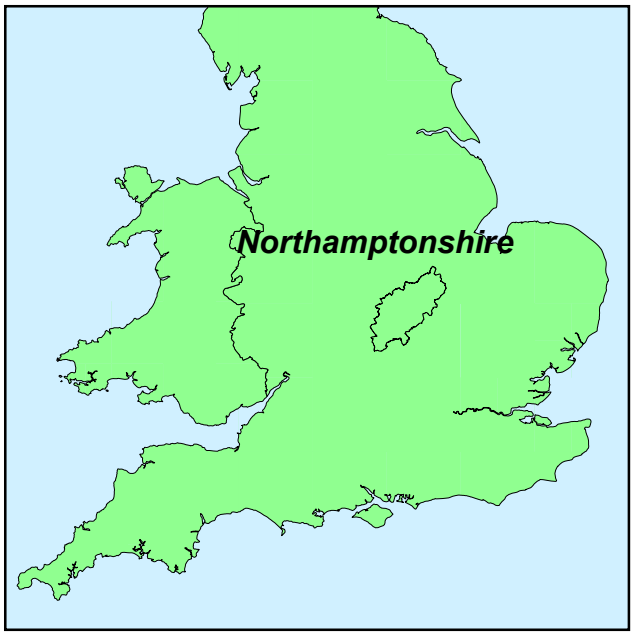
From the late 13th century, an ironstone wall served as a property boundary and revetment for the terrace. This boundary wall was retained through later periods up to the present development. In the 15th century, on the upslope side of the wall a number of dwellings were erected with gardens and stone-lined cesspits to the rear, and probably with stables and orchards beyond.

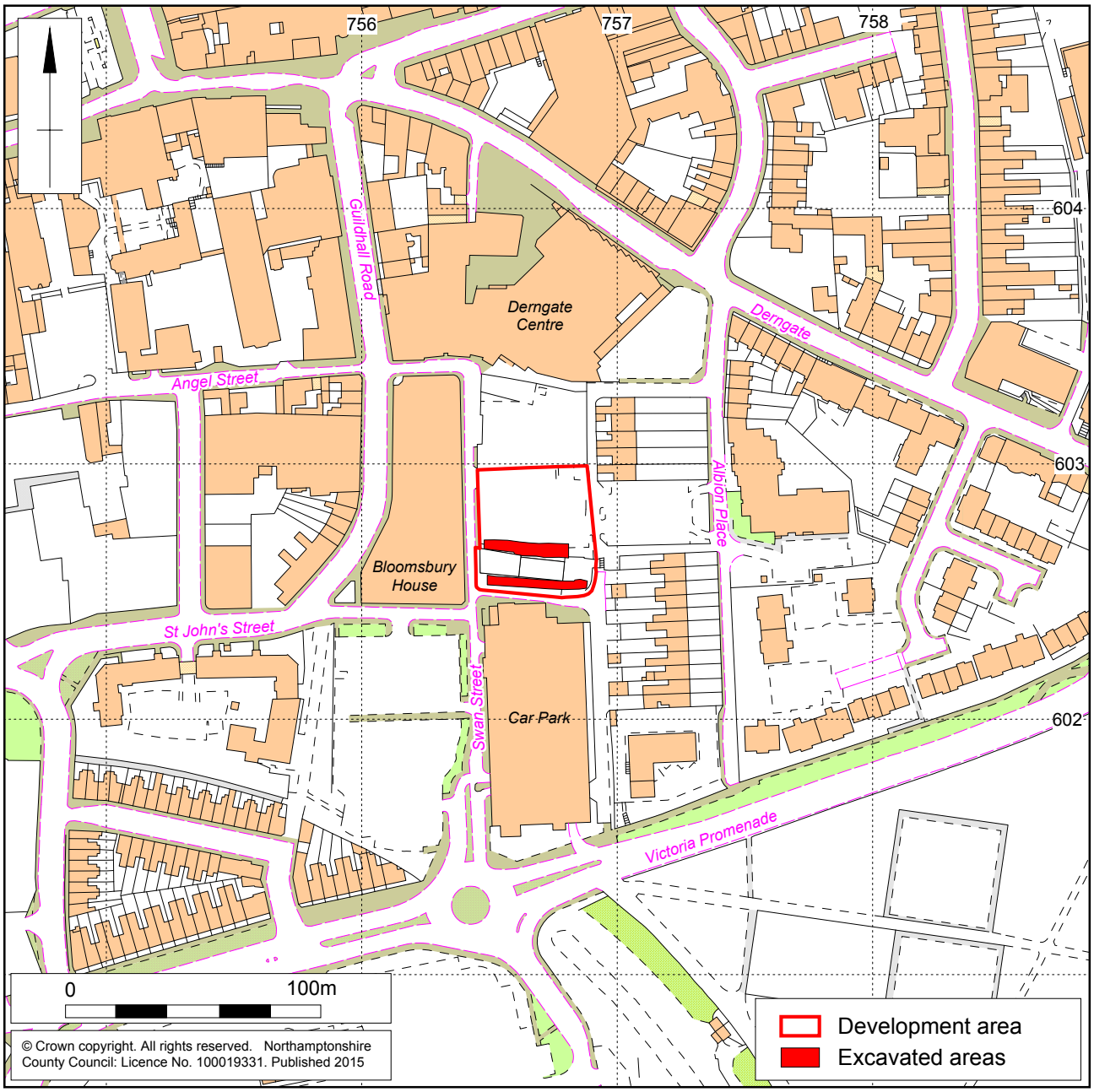
In the 16th century, the buildings had been demolished, the stonework robbed, and existing pits backfilled to level the land for horticultural use. The 17th and 18th centuries saw renewed activity, and the site again became used as backyards, with drains, stone-lined cesspits, and post-built structures.

In 1830 the Lion Foundry ironworks was constructed to the north of the revetment wall. Several circular pits, possibly wells, were backfilled with large quantities of iron and copper slag waste, as well as domestic pottery. The foundry was demolished in the 1960s and replaced by a car park. Below the revetment was a row of three-storey terraced brick houses forming St John's Terrace, built in the mid-19th century. The terrace had two public houses at its eastern end, which were demolished in the late 20th century.

1 INTRODUCTION

A scheme of archaeological observation, investigation and recording was undertaken by MOLA Northampton in November 2014 at the former Swan Street car park, Northampton. The work was commissioned by CgMs Consulting, on behalf of Premier Inns, in advance of the development of the site for a new hotel (Fig 1; NGR SP 7566 6027). Since the development will include the construction of an undercroft and extensive foundation piling, a programme of archaeological work was required to preserve the earlier settlement remains by record before they were lost permanently. The works comprised archaeological excavation and recording of stratified urban archaeological deposits. The investigation was carried out in accordance with a Written Scheme of Investigation (WSI) (MOLA 2014a) approved by the Northamptonshire County Council (NCC) Archaeological Planning Advisor.





Scale 1:2500

Site location Fig 1

2 BACKGROUND

2.1 Location, topography and geology

The development site occupies an area of *c*0.2ha within the town of Northampton. The site is divided between two levels; the upper area to the north was formerly occupied by a car park. The lower level to the south formerly housed a row of redundant office buildings with an apron of car park (Fig 1). The site is bounded to the west by Swan Street (Cow Lane) and to the north and east by further car parking. The no through road of St John's Terrace lies to the south. The site is situated across naturally sloping ground, 68-65m above Ordnance Datum (aOD), and faces south across the River Nene.

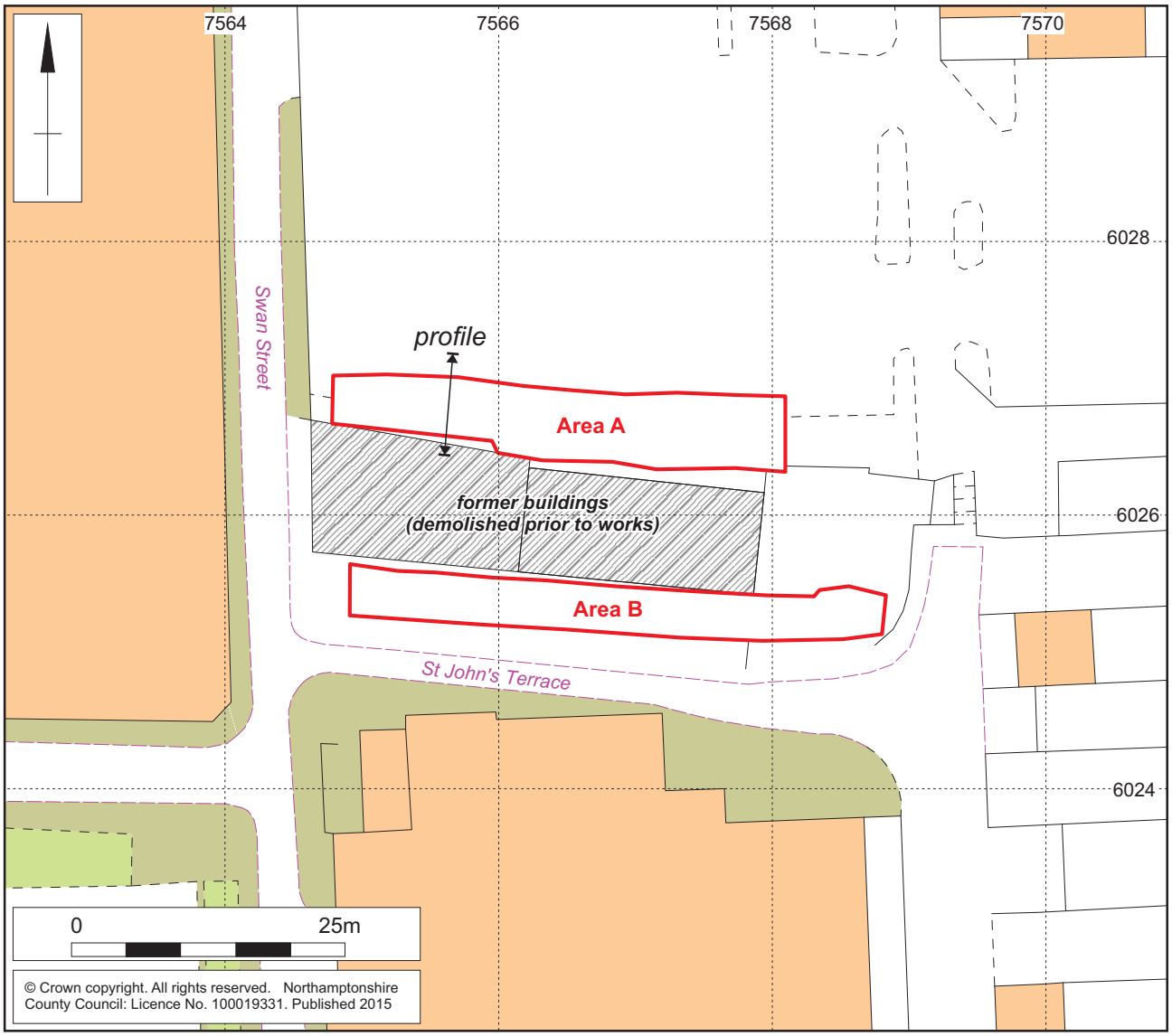
The geology of the site is Northampton Sand and Ironstone at the upper end of the site, with Whitby Mudstone Formation closer to the south (BGS 2015). The soils are likely to be of the Wickham 2 association, comprising slowly permeable seasonally waterlogged fine loam over clayey soils, above clay and mudstone (LAT 1983).

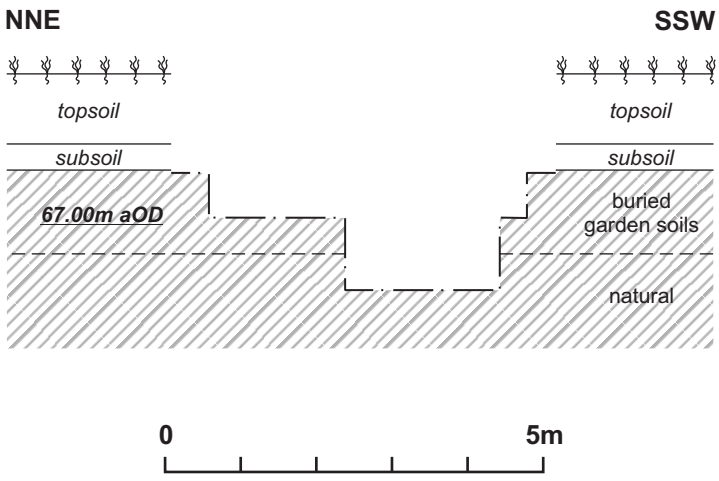
2.2 Archaeological and historical background

The proposed development site lies within the planned medieval town of Northampton on a street once known as Cow Lane. The name changed to Swan Street sometime between 1887 and 1901, when it first appeared on a map of that date (Shepherd 2013, 15). Other sites that have been excavated within the vicinity have shown varied levels of preservation, largely the direct impact of extensive cellars established from the 18th century onwards. Several previous archaeological investigations have been undertaken on the site itself. An archaeological desk-based assessment of Swan Street demonstrated that it was terraced on two levels, and was the site of the Lion Foundry ironworks (Shepherd 2013).

The site was evaluated by Northampton Archaeology (now MOLA Northampton) in August 2013 (Brown 2013). The evaluation, consisting of five trenches, identified archaeological deposits that were predominantly late medieval in date, broadly spanning a period between the mid-13th and 15th centuries, with post-medieval deposits of the 16th to 18th centuries overlying them. However, the evaluation also demonstrated that there were areas of the site where there was no potential for archaeological survival owing to the impact of modern cellars, terracing, and the foundations of previous buildings.

No evidence of medieval structures was identified during the evaluation, and the quantity and variety of finds was thought to be too low for there to have been any substantial domestic, industrial or waste disposal activities within the period prior to the 19th century. The thick build-up of silty clay loam was consistently firm light grey-brown in colour, different to the darker 19th-century horizons. Medieval soils are likely to have been a gradual accumulation of cultivation material, which is consistent with observations from nearby sites at Derngate (Shaw 1984), St John Street (Shaw 1993), Fetter Street (Brown 2010, Brown forthcoming), St John's car park (Shaw and Steadman 1993-4) and the former Northampton High School for Girls (Shaw *et al* 1992; Hiller *et al* 2002).





Scales 1:250 & 1:100 The excavated areas and profile of Area A Fig 2

Prehistoric

No substantial remains have been recovered from this part of the the town predating the Saxon period. However, a few prehistoric finds have been recovered from early cultivation soils at Derngate (Shaw 1984), St John Street and Fetter Street (Shaw 1993; Brown 2010; Brown, forthcoming), and St John's car park (Shaw and Steadman 1993-4).

Roman

Little in the way of Roman or Romano-British evidence has been located in the town. Some probable Romano-British features were identified during the excavation at the Northampton High School for Girls in 1991-92 (Shaw *et al* 1992, Hillier *et al* 2002).

Medieval

The site lies within the southern portion of the Norman 'New Borough', established outside the postulated circuit of the Saxon *burh* (Lee 1954), which lay 250m west of the site. Prior to its inclusion in the 'New Borough', the site is thought to have been part of the agricultural hinterland to the Saxon town. The streets that formed the eastward extension of the town are thought to have been laid out during its 12th-century expansion (Foard 1995). Cow Lane may have been amongst these roads, although opinion is divided upon this theory (Welsh 1996-7). Historic map evidence and data from the Historic Environment Record (HER) indicate that medieval tenement plots occupied parts of the street frontages after this date (Shaw 1985; 1993; Shaw and Steadman 1993-4; Brown 2008; Brown 2010) (Fig 3).

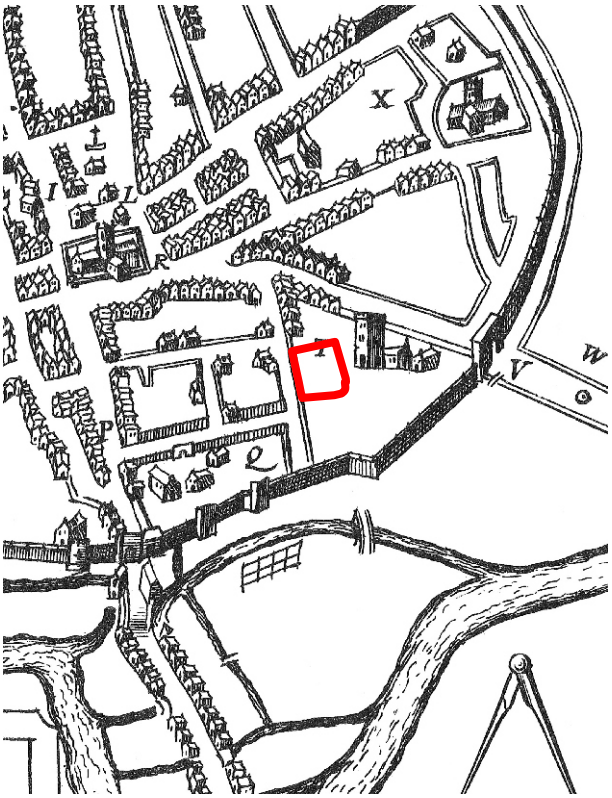
The first documented appearance of Cow Lane is a reference to Cougate, dated 1275 (Shaw 1984). By 1414, reference was made to four cottages with gardens, and thereafter to stables and orchards on the site. These properties are likely to be the four illustrated on Speed's map of 1610, at the north end of Cow Lane. At Derngate, a progression of buildings from timber to stone between the 12th to 14th centuries were revealed adjacent to the northern part of the street (Shaw 1984).

At the southern end of Cow Lane, excavations on the former St John's car park demonstrated changing land use throughout the period from the late 11th century to the 15th century, where the area alternated between cultivation and low status, ephemeral settlement. This appears to indicate that the area was predominantly used for gardens or fields and occasionally occupied for short periods, in contrast to the permanent and more substantial frontage of buildings on the street to the north. Similar evidence for insubstantial episodic occupation was recorded to the west on the former Northampton High School for Girls site (Shaw *et al* 1992; Hiller *et al* 2002).

Post-medieval and modern

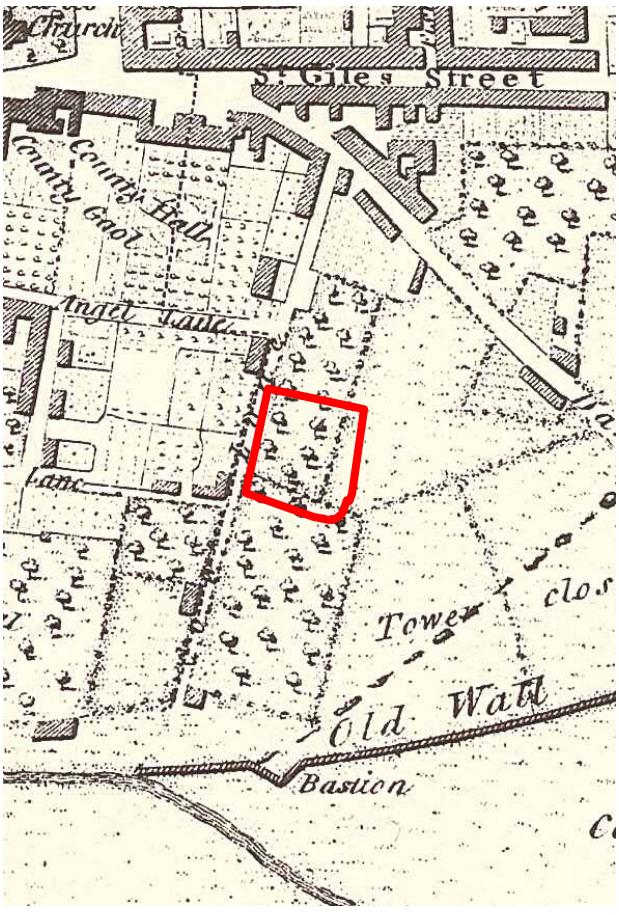
The east part of the medieval town maintained a largely rural character well into the post-medieval period. Speed's 1610 map shows building at the north-end of Cow Lane but an open area to the south, up to the town wall (Fig 3a). Maps from 1747 by Jeffreys, and Noble and Butlin, shows the area was covered by two orchards (Fig 3b), also recorded by Roper and Cole in 1807 (Fig 3c), and Britten in 1810 (Shepherd 2013, figs 3-4).

The uppermost horizon of the cultivation soils would have been deposited in the 16th-18th centuries, prior to the construction of the foundry. This was confirmed by the recovery of Cistercian ware, a jetton and a clay tobacco-pipe during trial trench evaluations (Brown 2013).

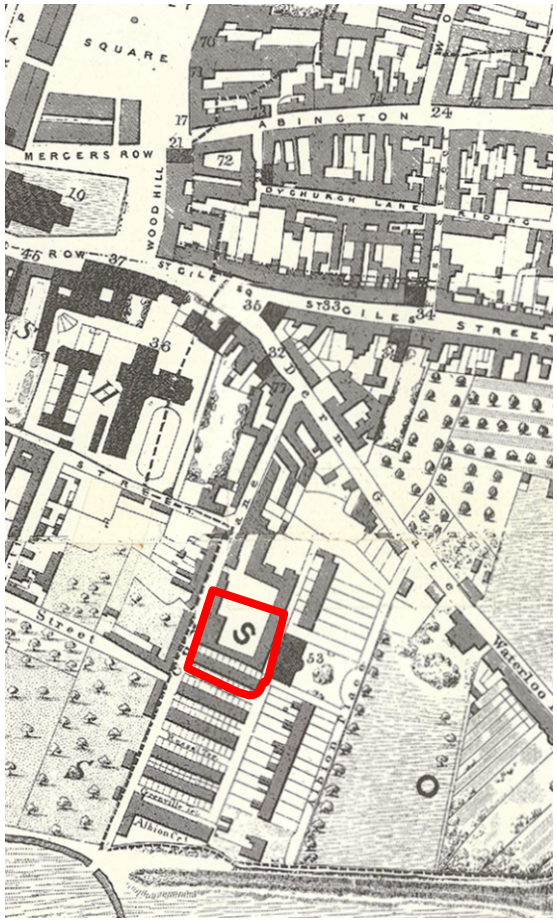


Speed 1610 Map of Northampton (a)

Noble and Butlin 1747 Map of Northampton (b)



Roper and Cole 1807 Map of Northampton (c)



Wood and Law 1847 Map of Northampton (d)

Wood and Law's map of 1847 shows the area to the south of the development site had been developed, with parallel streets of housing being constructed perpendicular to Cow Lane (Fig 3d). St John's Terrace, the northernmost street, cut a substantial step into the natural contour of the slope (Figs 3d; 4). The gradient of the hillside had been fairly steep, dropping rapidly from 68m aOD in the north to 65m aOD in the south. This terracing truncated the archaeological deposits so that the larger part of the 16th- to 18th-century deposits were removed and the soil that remained directly beneath the 20th-century surface layers were predominantly of medieval origin. Twenty-one properties formed the terrace, which contained two public houses. *The Flowing Tankard* occupied numbers 19-21 at the furthest eastern end of St John's Terrace between *c*1845 and 1906 (http://www.northampton.gov.uk/museums, Fig 5; Plowman 2010, 111-112). *The Old Grey Horse* probably stood on the corner of St John's Terrace and Swan Street. It traded between 1878 and 1906, when it was renamed *The Phoenix* until it closed in 1941 (*ibid)*.

In September 1830, John Brettell opened an iron foundry called *The Beehive* on Cow Lane, later renamed *The Lion Foundry* (Instone 1970, 4). The foundry was constructed north of the terrace, leading to large-scale vertical truncation of the medieval horizons below (http://www.familyhistorynorthants.co.uk/, Fig 4). Basements, cellars, service lines and at least one well, 177, over 3.60m deep (177), were cut through natural geological substrate horizon.

St John's Terrace in 1935, with the foundry behind, looking north-east Fig 4

The Flowing Tankard, St John's Terrace in 1894, looking north-east Fig 5

3 EXCAVATION STRATEGY

3.1 Aims and objectives

The aim of the archaeological investigation was to recover information that may assist in understanding the nature, function and character of past occupation within the parish in its cultural and environmental setting. The aims and methodology were laid out in the WSI (MOLA 2014a).

Specific aims

- Record evidence for the date, nature and extent of any activity or occupation encountered during the development works;
- Provide an opportunity for more detailed archaeological fieldwork, as necessary, in order to enable preservation by record where significant archaeological remains will otherwise be lost;
- Recover artefacts to assist in development of the artefact studies within the region;
- Recover palaeo-environmental or industrial residues where they are encountered.

The works were carried out within the parameters suggested by English Heritage and the East Midlands Regional Research Framework (EH 1991; 1997; Cooper 2006; Knight *et al* 2012). Of particular relevance are the criteria within the early medieval, high medieval and post-medieval research notes which relate to the points above.

3.2 Methodology

Excavation areas were located using a survey grade GPS (Leica System 1200). The overburden was removed under continuous archaeological supervision with a 360° tracked mechanical excavator fitted with a toothless ditching bucket to reveal significant archaeological remains at each major period interface. Mechanical excavation was undertaken in stages with periods of investigation and recording between each stage for the 18th-19th-century, 16th-17th-century and medieval or earlier horizons. All deposits predating the 14th-15th centuries were excavated by hand, except for some end of fieldwork investigation of wells and deep deposits. Movement of machinery during site preparation was conducted in such a manner as to avoid impact on the archaeology.

The site was divided into two areas of open excavation. Area A consisted of a strip *c*30m long by 8m wide to the north of the terrace revetment. Area B was 30m long by 5m wide to the south of this revetment. Archaeological deposits were identified at a depth of over 1.0m below the car park surface (Area A; Figs 6-7), and at a much shallower depth of 0.1m below the concrete in front of St John's Terrace (Area B), (Figs 8-9).

All archaeological remains were cleaned by hand, planned to scale, and photographed. Those features that predated Speed's map of 1610 received full and detailed investigation and recording, as described below. Thick layers of homogeneous garden soil were investigated by hand using test pits 1.0m by 1.0m in size to characterise and record the sequence of layers before these were reduced by mechanical excavator to the next significant archaeological horizon. The excavation areas were cleaned sufficiently to enable the identification and definition of archaeological features. A hand-drawn site plan of all archaeological features was made at scale 1:50 and was related to the Ordnance Survey National Grid.

Area A (upper layers) cleaned, looking west Fig 6

Area A (lower layers) cleaned, looking east Fig 7

Area B, cleaned, looking west Fig 8

Area B, cleaned, looking east Fig 9

All archaeological deposits and artefacts encountered during the course of excavation were recorded. Recording methodology followed the standard Northampton MOLA context recording system with context sheets, cross-referenced to scale plans, section drawings and digital photographs (MOLA 2014b). Deposits were described on *pro-forma* context sheets to include measured and descriptive details of the context, its relationships, interpretation and a checklist of associated finds. The record was supplemented by direct annotations of the site general plan as required. All levels were related to Ordnance Survey datum with significant structures or areas of complex stratigraphy planned in greater detail. Sections of sampled features were drawn at scale 1:10 or 1:20, as appropriate. A representative sample of all archaeological features was fully excavated, to include the basal deposits wherever practical.

All discrete features were sampled to no less than 50% of the whole, and were fully excavated where deposits contained artefacts or residues of particular archaeological interest. All structural features were fully exposed, excavated, and sampled for potential industrial or environmental material. Artefacts and soil samples were collected by hand. Hand spoil and the surface of archaeological features were scanned with a metal detector to ensure maximum finds retrieval from secure contexts. Deep features and deposits of particular interest such as wells and quarries were subject to final mechanical investigation and recording at the end of the hand excavations. Environmental samples were sought in deposits from secure and uncontaminated contexts which had a potential for the recovery of charcoal, carbonised plant remains, industrial waste, and other ecofacts. A minimum of 40 litres was taken for flotation or 100% of the fill where this was less than 40 litres.

3.3 Site summary

Site chronology was informed by pottery phases and ceramic chronology (see 5.2).

Table 1: Site phasing and summary

Period	Description
Prehistoric	Two worked flints (residual)
Medieval (Late 12th-13th centuries)	Extensive ironstone quarrying
	Quarry pits partially backfilled with quarrying waste material
Medieval (13th-14th centuries)	Uneven ground caused by quarrying backfilled with mixed waste, levelled out and terraced
	Ironstone boundary wall constructed as plot division and revetment for terracing in advance of occupation
Later medieval (14th-15th century)	Garden soil build up
	Limited back yard activity, with pits and stone-lined cesspits being constructed
Post-medieval (16th-18th centuries)	Stonework robbed from pits and structures, open features filled with waste, and ground levelled for horticultural use in 16th century
	Renewed use in 17th and 18th centuries as backyards, stone footings and postholes for timber structures, drains, and cesspits dug, some stone-lined
Post-medieval (19th century)	Foundry constructed 1830 in northern part of the site. A number of circular pits, possibly wells, were backfilled with large quantities of iron and copper slag with some pottery
	A row of brick terraced houses built on the lower terrace along St Johns Terrace. Each house had a cellar; properties at either end were public houses
Modern (20th-21st centuries)	Site levelled following demolition of the foundry in the 1960s, and turned over to car parking.
	Terrace of houses demolished and replaced by a brick garage, which stood until 2014

4 THE EXCAVATED EVIDENCE

4.1 Prehistoric remains

No prehistoric features were identified, and no pottery dating before the 12th century was recovered. However, two worked flints indicate prehistoric activity may have taken place in the vicinity. Flints were recovered from two medieval pits, and a medieval garden soil layer. The flint pieces are residual.

4.2 Medieval stone quarrying (late 12th-13th centuries)

The first major activity is characterised by the digging of quarry pits, although the early layers were damaged by the later cutting of cellars, terraces, and the foundations of buildings (Fig 10). Ironstone was extensively quarried in Northampton during the 12th century, and numerous other excavations in the locality have uncovered quarrying activity, including Derngate (Shaw 1984, 72, 74), Black Lion Hill (Shaw 1985, 122), Kingswell Street (Brown 2008, 188, fig 10), St John's Street and Fetter Street (Brown 2010, 16, 27; Brown forthcoming).

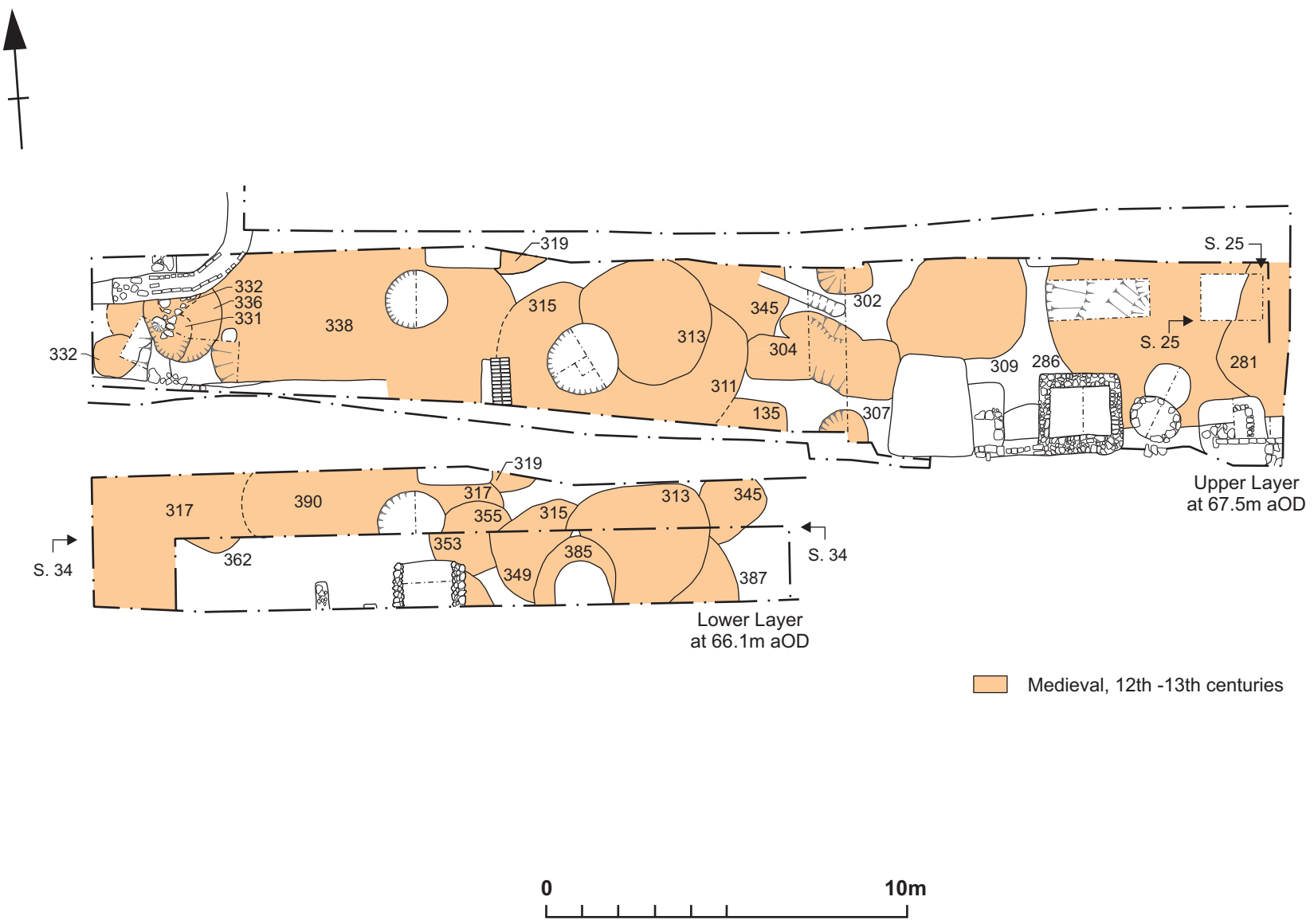
There were 28 pits in Area A, and five in Area B. However, the small size of the open plan areas meant that a sequence of cuts could not readily be identified, except that multiple quarrying events could be seen (Figs 10-12). Additionally, different pit cuts were difficult to distinguish in plan as their upper fills merged, and the majority were not visible in their full extent due to later interventions or the limit of the excavation area. Pits were primarily sub-circular in plan, and the majority were up to 1.20m across. Several of the largest pits may have been the principal quarries, with later smaller pits cut in them. Pit 338 was a large pit, *c*8.50m in diameter, but only 0.23m deep. Pit 313 was also of significant size, with the full length probably being around 6m, and with an exposed depth of 1.1m. Other large pits were greater than 3.0m in diameter and between 0.25-0.98m deep, such as 307, 286, and 309. Smaller pits, between 2.5m-3.0m wide by 0.44m-0.92m deep, like 387, 304, 315 and 349, showed intercut relationships where one quarry was in-filled as the next was excavated. Numerous smaller cuts might be side quarries following particularly good quality ironstone seams, or works on a smaller scale.

Waste from the quarrying process was dumped back into the quarry cuts in the form of orange-yellow or brown sandy gravel mixed with poorly sorted 20mm-80mm lumps of ironstone. The primary fills of most pits were dumps of quarrying waste infused with silt or loam garden soil. Some fills also had identifiable tip lines, such as those in pits 286 and 281 (Fig 14). In some instances, pits contained multiple dumps of redeposited ironstone, such as 286 and 353, presumably discarded material from nearby pits (Fig 11). These layers were notably sterile of finds; only fill 280 of pit 281 contained any pottery, comprising three pieces of shelly coarseware, probably 12th century in date.

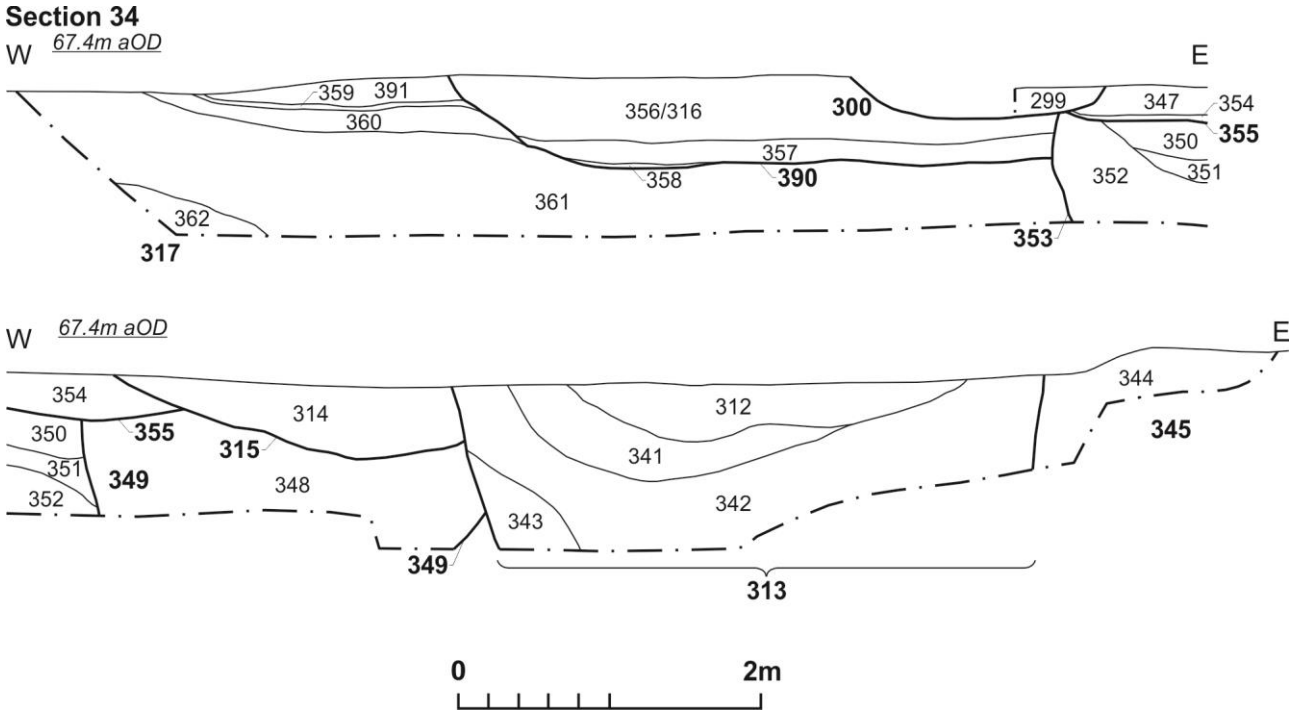
Further quarrying and waste disposal (13th-14th centuries)

The secondary and later fills of the quarry pits indicate that the cutting and extraction of the stone was reasonably swiftly followed by the infill of the pits, with the end result that the uneven ground left behind by quarry work was levelled out and terraced. Overlying the initial quarry fill were multiple dumps of darker grey-brown sandy silt or clayey silt soil, generally still with a small content of ironstone, and containing domestic waste in the form of animal bone, charcoal and pottery.

Scale 1:150



Area A, Medieval quarry pits (12th-13th centuries) Fig 10



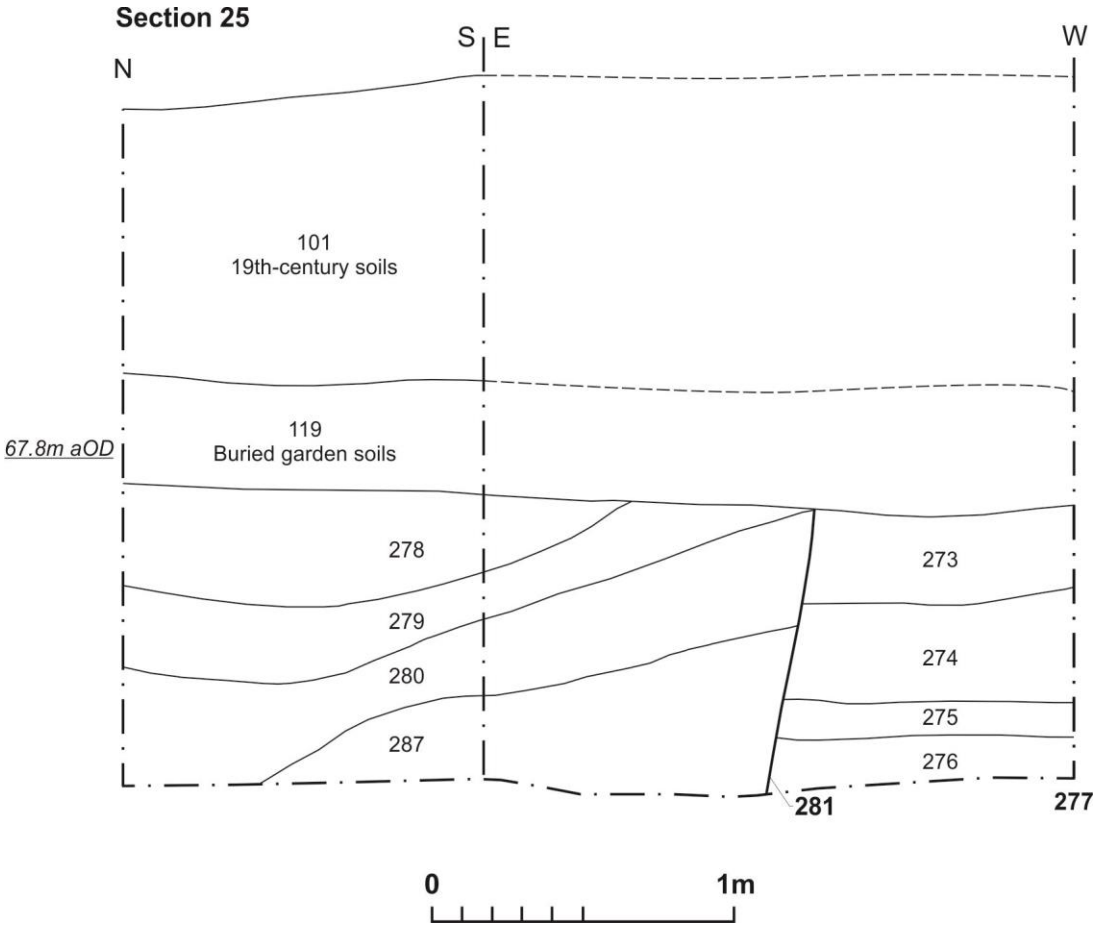
Section showing intercutting quarry pits Fig 11

Quarry pits 281 and 277, demonstrating stratigraphy, looking south Fig 12

Fill 279 of pit 281 contained a concentration of domestic waste comprising animal bone and pottery, including a large almost complete pot of shelly coarseware, which was inverted and dumped into the pit. The pot and its contents were removed intact for excavation in the laboratory (Fig 13). The pot contained a little light grey ashy material containing a few small pieces of burnt bone, unburnt bone, charcoal and charred seed from cereals. The base of the vessel was heat damaged, and it may have been accidently left on the fire to overcook, ruining the pot and its contents (Blinkhorn pers comm) but this has been difficult to substantiate with plant macrofossil analysis. Fill 279 was overlain by sterile quarry waste dumped from the south, 278, suggesting that quarrying may still have been taking place nearby while other pits were being infilled with waste material from elsewhere in the town (Fig 14).

Pottery types in these fills included Lyveden/Stanion ‘A’ and 'B' ware, Brill/Boarstall ware, Potterspury ware, shelly coarseware, Developed Stamford ware, North Midlands whiteware, and residual pieces of St Neots ware. These pottery types indicate that the majority of dumping dates from between the mid-13th century to the mid-14th century (ceramic phases M2 and M3), with some dumping probably continuing until the early 15th century. As dumping seems to have begun soon after the extraction of the ironstone, this suggests that the quarrying was a periodic process of extraction over a long period rather than a systematic, organised strategy.

Shattered base of pot with *in situ* content, 279 (scale 20mm) Fig 13



Section through quarry pit 281 Fig 14

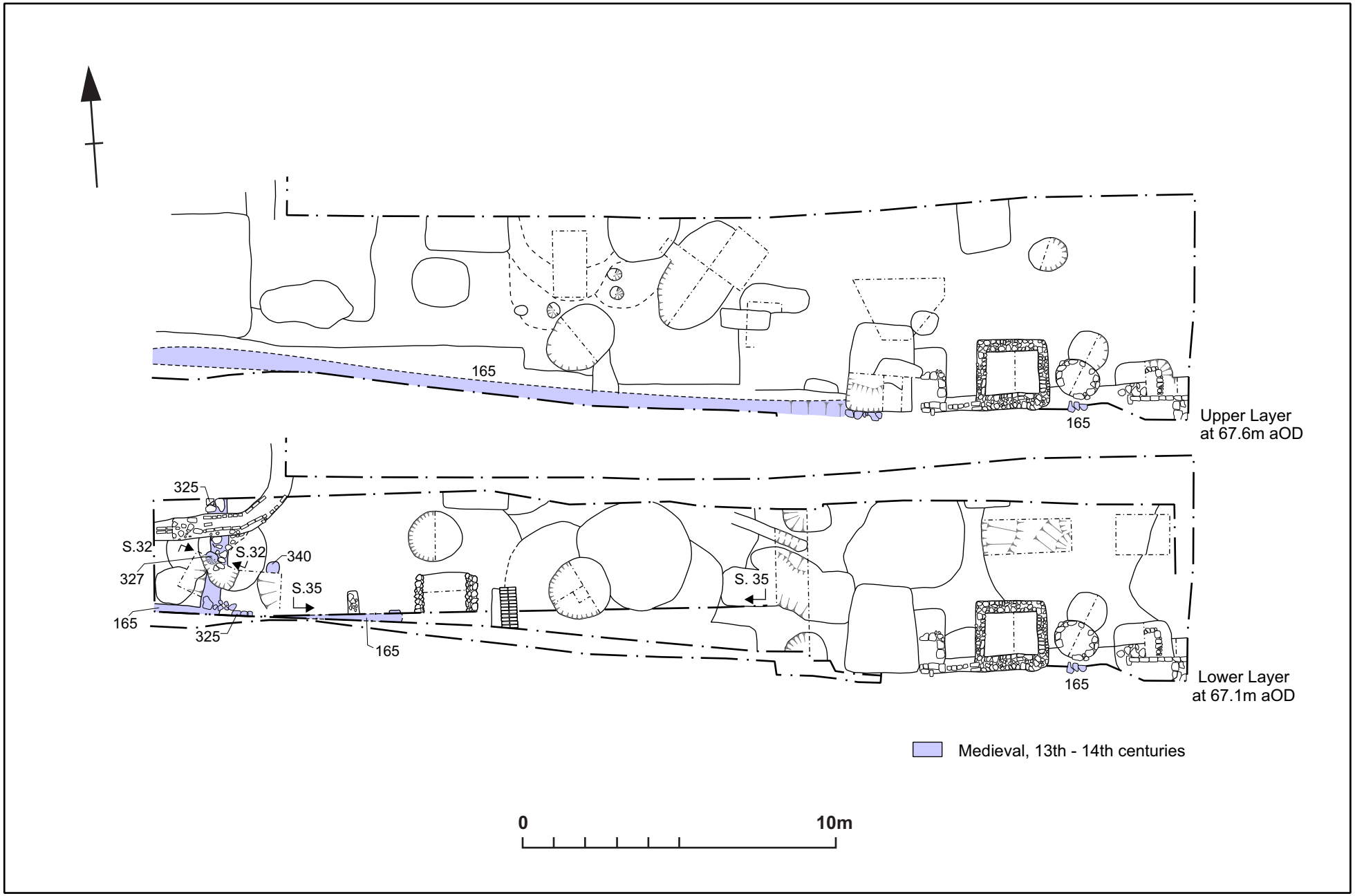
4.3 Boundary walls (late 13th-14th centuries)

Once the quarry pits were infilled and the uneven ground surface was levelled, an ironstone wall 165, was built, aligned east-west (Figs 15-16). Parts of the wall survived across the site, seemingly as a plot division. The boundary was retained throughout later periods of occupation, and a wall was still in existence along this boundary prior to development.

The wall was built within a vertical-sided and flat-based foundation trench which in some areas had a possible bedding layer of soft mid-grey or orange-brown sandy clay loam, with fragments of brick, ironstone and charcoal. The most substantial parts of the surviving wall were towards the east. This latter section survived as four courses, 0.38m high and 1.10m in length. The stones were unbonded ironstone of 280mm by 160mm by 110mm, roughly flattened on the exterior surface (Fig 16). In some areas, only the core of the wall survived, with the better facing stones having been robbed away.

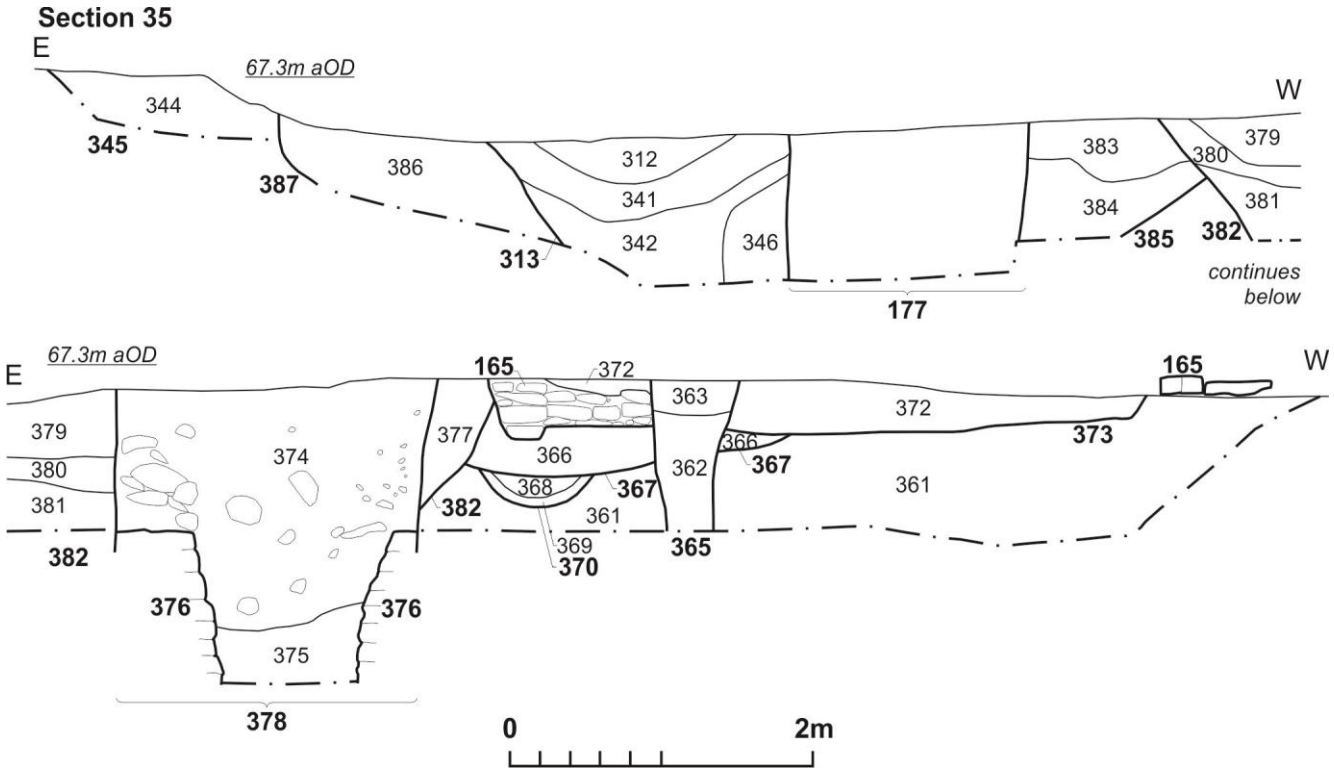
A contemporary wall also stood north to south along the western edge of the site (Fig 15). The wall, 325, was cut by a later culvert and only survived as a few stones (Fig 17). Two postholes, 340 and 327, were associated with this section of the wall, being 2.0m apart, and perpendicular to wall 325. The postholes were subcircular, with vertical sides and gradual concave bases. Posthole 327 (0.50m by 0.35m by 0.52m deep) was filled with soft mid-dark grey-brown sandy silt with medium to large stones and charcoal flecks (Fig 18). Posthole 240 was 0.40m wide by 0.40m deep, and had a dark black-grey sandy silt fill with stones and charcoal, containing animal bone and two sherds of Potterspury ware and shelly coarseware. These fragments date from the mid-13th to early 14th centuries. The postholes were situated parallel to, and *c*1.0m to the north of, boundary wall 165, which may represent structural elements associated with the wall, such as a lean-to construction.

As well as operating as a plot boundary, the ironstone wall functioned as a revetment for soil levels built up against it in later periods.



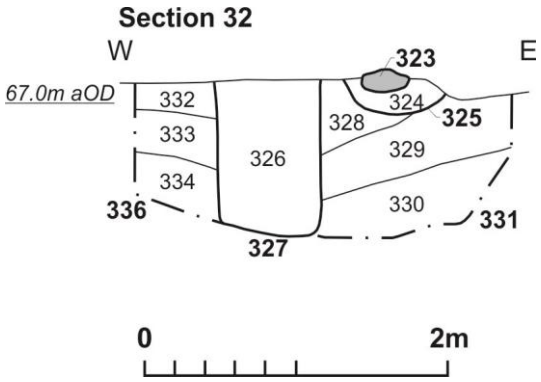
Scale 1:150

Area A, medieval boundaries (late 13th - 14th centuries) Fig 15



Section including wall 165 Fig 16

Area A (lower layers) showing remnants of stone wall 325 and culvert 322, looking north-west Fig 17



Section of wall 325 and posthole 327 Fig 18

4.4 Later medieval occupation (14th-15th centuries)

After the construction of the ironstone boundary wall, a layer of dark grey-brown sandy or silty loam soil built up across the site (Fig 19). The soil had frequent inclusions of ironstone and charcoal, with some clay lenses, and rare brick or mortar fragments. The layer, 119, varied in depth across the site, 0.19m-0.40m deep. Finds from this layer included worked flint, animal bone, and pottery of early 14th- to mid-15th-century date, primarily Potterspury ware and shelly coarseware. Only 33 sherds were found, suggesting that domestic refuse was not being deposited here on a large scale. Instead this ground may have been used for cultivation (see section 7 for further discussion). A single undiagnostic iron object (SF15) was also recovered.

After soil layer 119 built up there was limited activity on the site. Three small layers overlying 119 have been interpreted as soil build-up; layer 167 comprised mid-grey-brown clay silt, while 166 and 188 were formed of mid-orange-brown sandy silt, around 0.18m thick. Layer 188 contained two small sherds of pottery of mid-13th- to early 14th-century date.

As soils accumulated, this period began to exhibit the use of the site for garden and yard activity, in the form of refuse and cesspit construction (Fig 19). Pit 129 was a shallow, sub-circular pit with steep sides and a slightly sloped base, 1.35m wide by 0.21m deep (Fig 20). The fill, 128, comprised dark grey-brown sandy clay with ironstone and frequent charcoal inclusions. The fill also contained domestic refuse in the form of animal bone, flint, and 16 pottery sherds of early 14th to mid-15th century date. Pit 307 was similar in shape and size, with a fill of mid-green-grey sandy silt with charcoal and one pottery sherd of 14th-15th century date. Pit 129 contained a dump of refuse from nearby occupation, although the function of pit 307 is less clear and seemed to contain more cessy material.

Stone-lined cesspit 378 was rectangular, 1.25m long by 2.00m wide, and was excavated up to a depth of 1.60m (Fig 21). The walls were formed of roughly faced ironstone blocks, about eight courses of which survived (Figs 16 and 21). Remnants of the ironstone superstructure were found in the upper fill of the pit, suggesting that the pit had been robbed. The fills were mid-grey-brown sandy silt, with hues of grey, red and green. The upper levels contained pottery of early 14th- to mid-15th-century date, animal bone, faecal concretions and a wide range of wild and cultivated seeds and plant debris (see section 6.3).

Scale 1:150

Area A, 14th to 15th-century occupation Fig 19

Domestic waste pit 129, looking north-west Fig 20

Stone-lined pit 378, looking south Fig 21

4.5 Post-medieval domestic occupation (16th-18th centuries)

During the 16th century, further layers of soil were laid down over the 15th-century brown garden soil, 119. A layer, 0.10m thick, of compacted light blue-grey clay with yellow-brown patches, 218, was laid down, possibly as a yard or floor surface over layer 119. Layer 218 was sealed by two dumps of dark grey or dark brown clayey silt 216 and 217, probably as levelling layers. Layer 216 was 0.14m thick, and contained refuse waste of animal bone, 16th-century pottery, broken brick and tile, and a copper-alloy pin (SF12) and fragment of sheeting (SF13). Layer 217 was slightly thicker at 0.22m, but contained a similar range of refuse material, with additional finds of antler, a decorative hook, copper-alloy sheeting and an iron rod (group SF14).

After this period of levelling in the 16th century, a number of features associated with building and back yard activity were constructed and remained in use though the 17th and 18th centuries. This included stone footings and postholes for timber buildings, drains, and later stone-lined cesspits (Fig 22).

Two large shallow sub-rectangular pits were located in the centre of Area A, cutting into the levelling layer 119 (Fig 22). Pit 161 measured 3.65m long by 2.45m wide and 0.18m deep. The pit was filled with soft dark grey-brown clay loam with building rubble of stone and ceramic tiles, and domestic waste matter such as animal bone, shell, charcoal and 33 sherds of pottery. Two iron nails (SF2), a copper-alloy wire loop fastener (SF1), a fitting and pins (SF3, SF5) also originated from this fill. Pit 163 was probably larger than pit 161 but the majority of it lay outside the limit of the excavation. The pit was at least 4.80m long by 2.20m wide, and was shallow, only 0.14m deep. The fill was almost identical to pit 161, although it contained only one sherd of pottery and a copper-alloy sheet fragment (SF4).

Probably contemporary with the waste pits were several features indicative of timber structures. Four postholes were found in the centre of Area A (Fig 22). Postholes 175 and 173 were aligned east-west, while 171 and 169 lay perpendicular to the north-east, on a north-south alignment, giving an L shape to the resulting structure. The postholes were 0.40-0.43m in diameter and 0.27-0.30m deep, with straight sides and flat bases. The fills were consistent, comprising mid-dark grey-brown sandy clay with charcoal, animal bone, pottery and shell. Two postholes, 168 and 174, contained stone roof tile as packing material (Fig 23). A copper-alloy pin (SF7) came from the fill of posthole 171.

An irregular pit, 147, was filled with mortar, probably as a post-pad. The pit was 0.96m long by 0.90m wide, and 0.24m deep. The mortar fill was light white-yellow in colour, and contained a high frequency of stones 0.05m-0.3m across (Fig 24). Unfortunately no datable material was recovered from the pit fill.

Scale 1:150

Area A, post-medieval features Fig 22

Posthole 169 showing post-packing, looking north-west Fig 23

Post pad of white-yellow mortar 147, looking south-east Fig 24

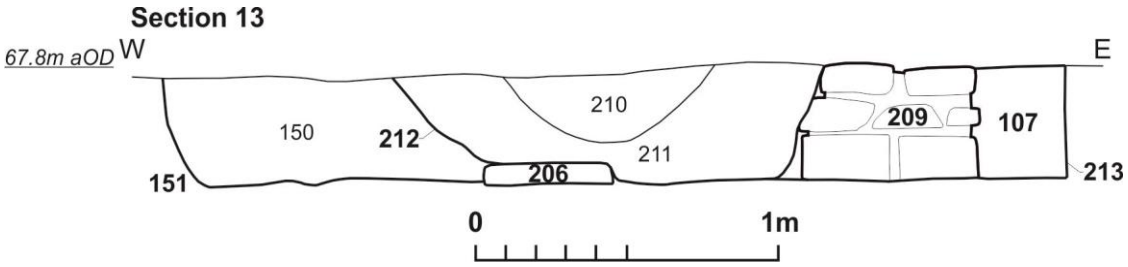
Another feature that post-dated the medieval soil layers and probably dates from the 16th-18th centuries is a short section of drain, 365. The cut was aligned north to south, with steep sides and a U-shaped base. The surviving length was about 1.20m with a width of 0.60m. The fills were dark coloured sandy silts, with charcoal, brick and ironstone, but no other finds.

Stone-lined cesspits were also constructed in the 17th and 18th centuries. Pit 213 was a sub-rectangular cesspit, 0.90m long and 0.49m wide (Figs 22, 25-26). The lining of the pit comprised four courses of unmortared ironstone, 209, some with burning and chisel marks, as well as a flagstone floor of roughly cut sandstone blocks, 206, set into a bedding layer of green-grey sandy silt. A small thimble (SF10) came from this layer. The fill was loose mid grey-brown sandy silt, 205, with inclusions of building waste, mortar, roof and floor tile, and charcoal. Household waste made up a large proportion of the fill, with oyster shell, animal bone, clay tobacco-pipes and ten sherds of pottery, primarily English stonewares and iron-glazed coursewares of 17th- to 18th-century date.

Another stone-lined pit, 139, was found at the eastern end of Area A (Fig 22). The pit was 0.70m long by 0.63m wide and 0.40m deep. The walls were roughly-cut ironstone blocks, 199, and the pit had a layer of solid mortar at its base, 200 (Fig 27), perhaps a footing for flagstones, which were later robbed. The fill of the pit comprised light grey-brown sandy clay silt with large ironstone inclusions, probably from a collapsed superstructure or discarded after robbing. The fill also contained animal bone, shell, clay tobacco-pipe, red deer antler, and pottery (Fig 28). Only one sherd dated to the 18th century, with the remainder of the pottery comprising residual medieval sherds.

Many of the stone-lined pits were robbed and cut by later features. Pit 213 was truncated by several later cuts, including 151 and 214, some of which may have been robbing events. The original pit 213 was filled with firm mid-grey-brown sandy silt with charcoal, mortar and ironstone, and contained animal bone, glass, daub, clay tobacco-pipe and 18th-century pottery. The pit appears to be have recut into a much larger pit 151, 2.94m long by 1.0m wide and 0.30m deep. The purpose of this larger pit is not known; the clay rich lower deposit of the fill might indicate that the pit was intended as a cesspit. However, the upper fills of the pit had a large quantity of building waste, including mortar and ironstone fragments mixed with brown-grey sandy silt. This, combined with the almost complete removal of stone from pit 213, makes it seem more likely that this is the result of a robbing event. Another heavily truncated sub-rectangular pit, 212, was cut into 151, 1.50m wide and 0.11m deep. It was filled with grey-blue clay and green-grey sandy silt containing mortar, ironstone, animal bone, glass, clay tobacco-pipe, two copper-alloy pins (SF11) and mid-18th-century pottery.

The robbing of wall stone and the infilling of the pits suggests that by the end of the 18th-century, the site had lost its domestic function. The infill of features with waste might represent an attempt to level the site, and much of this material may have been imported.



Section of stone-lined cesspit 213 Fig 25

Pit 213 and surviving stone lining, looking east Fig 26

Stone-lined pit 139 and later brick wall 198, looking south Fig 27

Antler *in situ,* pit 139 Fig 28

4.6 Industrial deposits (19th century)

By the 19th century, the upstanding structures on the site seem to have been demolished. The robbing of walls and cellars continued in association with 19th-century development. The medieval stone wall, 165, was dressed with brick cladding, one brick deep on its north side and two bricks deep on its south side, secured with lime mortar (Fig 29). The brick cladding, 230mm by 110mm by 70mm, survived in several places, up to around 1.8m long, built into a steep-sided construction cut, 104, (Fig 27). The construction trenches were filled with grey-brown sandy silt containing building rubble and waste, including animal bone and 19th-20th-century pottery. Several cellars or coal houses had been built up to the boundary wall. Cellar 103 was 1.73m long, and projected 0.70m from the wall and may also have had a brick base. The wall trench was filled with dark black sandy loam with rubble, discoloured by the foundry waste above. Brick-clad sections of wall, such as 221, might also be the remnants of cellars.

Another probable former cellar, an L-shaped structure extending from the boundary wall, was completely robbed out by trench 159 (Fig 29). The fills comprised soft yellow-white sandy clay with fragments of stone, charcoal, daub/mortar and a copper-alloy pin (SF6) left behind after the complete removal of the wall stones. Similar robbing took place on a short 1.40m length of wall, 178, of which only a few stones remained. Another pit, 181, in the western end of Area A which might also predate the foundry, was a rectangular stone-lined pit 2.70m long by 1.70m wide, backfilled with brown clay soil and building debris.

In 1830 the Beehive Foundry was constructed, and extended as far south as the stone boundary wall. This period of construction was shortly followed by building works in Area B, south of the boundary, where a row of brick terraced houses fronting onto St John's Terrace were raised (see Fig 3d). A probable medieval stone wall was used as a base for the south-facing front foundation wall. The wall here was two bricks thick and was built into the vertical-sided construction cut 272. The surviving section of wall, 271, was 5.10m long, 0.65-0.85m wide, and 0.40m high. Two cellars or coal houses with brick floors, one discoloured with coal dust, were built off the wall on the north side, along with short sections of internal wall (Fig 29).

A length of brick-lined culvert 148, the main surviving structural element of the foundry building, lay at the west end of Area A (Figs 17, 29 and 31). It was constructed in a vertical-sided cut with the culvert 0.32m wide. The brickwork formed an arched cap 0.20m high. The culvert probably emptied into the main drain running down Cow Lane. The enclosed structure was built of red frogless bricks with sandy lime mortar, a single brick thick. The fill of the culvert was mid-grey silt at the base, darkening to black at the top. The lower part of the fill contained concreted iron and foundry waste, fragments of stone, brick, bone, 19th- to 20th-century pottery, clay tobacco-pipes, window glass (SF16-19), textile fragment (SF19), a bead (SF20), a pin shank (SF25), and various iron objects, primarily nails (SF24-37).

Scale 1:150

Area A, the foundry (19th century) Fig 29

Terrace frontage 272 and posthole 223, looking north-east Fig 30

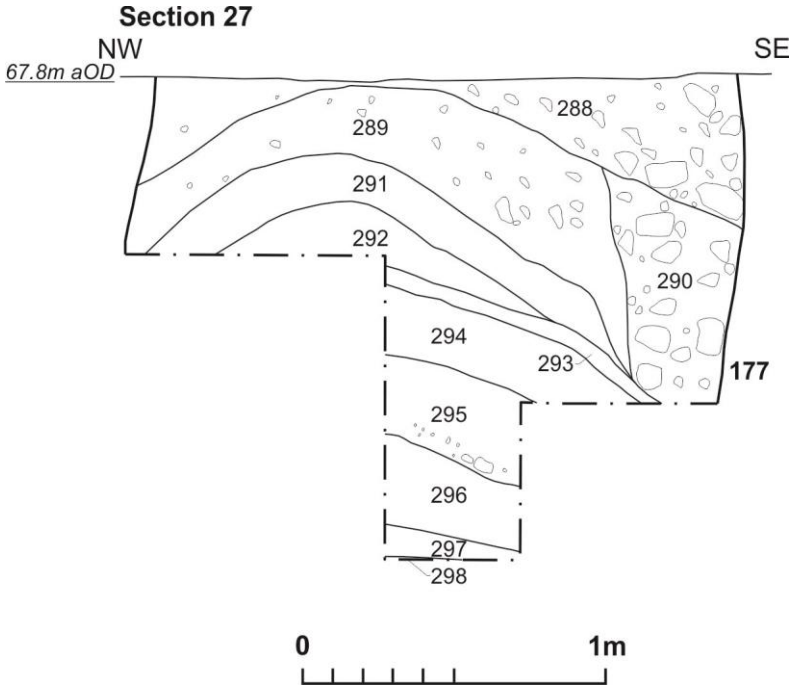
Brick culvert 148, looking west Fig 31

During the 19th century, a number of pits were used as dumps for foundry waste (Fig 32). It is not certain if the pits were dug before or after the foundry was constructed, as a number of circular stone-lined pits may be wells or earlier cesspits repurposed for dumping later material. Four circular pits of this type were probably former wells. The most complete example was a circular well 177, *c*2.0m in diameter and over 3.60m deep (Figs 33-34). It contained multiple layers of black sandy silt with ash, slag and charcoal, alternating with mid brown-grey sand, and mixed yellow-grey sandy clay. Some layers contained large quantities of building rubble, lumps of slag, and domestic refuse in the form of animal bone and pottery of 19th- to 20th-century date. The latest fill had multiple tip lines and bands of dumping, as well as ceramic building materials, clay tobacco-pipes, and crucible waste, to a depth of 0.60m.

Similar waste disposal processes led to the filling of two other sub-circular pits, and although these were shallower than well 177, they may also have originally been wells. Well 141 was 1.26m diameter and more than 0.80m deep (Figs 32 and 35). Fills alternated between dumps of mid brown-grey loam and concentrations of dark purple-black slag, clinker and ash, with 19th- to 20th-century pottery. The largest slag lump was 0.44m by 0.30m by 0.30m (Fig 32). Pit 183 was 1.70m long by 1.56m wide, and 0.85m deep. The fill was a mix of dark blue-black and dark grey-brown sandy clay, and contained foundry slag, clinker and ash, as well as mortar, large pieces of ironstone, roof slates, wood and house bricks. The fill also contained waste of 19th- and 20th-century household pottery, clay tobacco-pipe, animal bone, and bottle glass.

Slag lump *in situ,* pit 141, looking south Fig 32

Lower deposits in well 177, looking north-east Fig 33



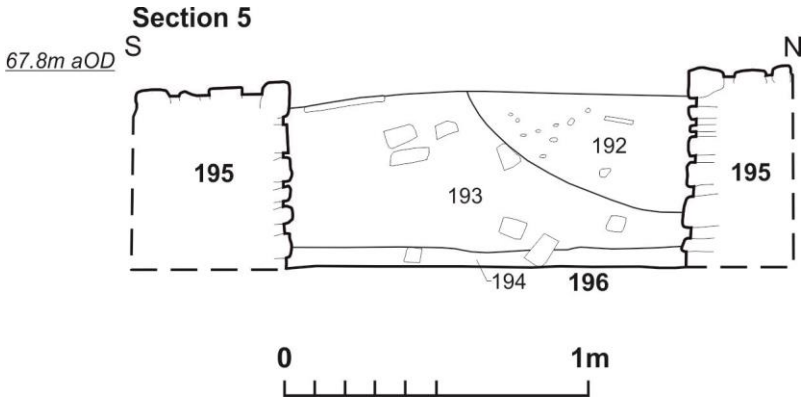
Section of well 177 Fig 34

Stone-lined pit 143 (left), cutting earlier pit 141 (right), looking north-west Fig 35

A circular pit 143 with a single surviving course of ironstone lining lay at the south-east end of the site and contained a cess-like fill of soft black, grey and green sandy soil, containing clay tobacco-pipe (Fig 35). This cesspit post-dated the foundry as it cut pit 141, but it may have been associated with the properties on St John's Terrace. Ordnance Survey Northamptonshire maps of 1886 and 1925 show a yard at the front and a smaller yard to the rear, with the properties backing onto stone boundary wall 198. Cesspit 143 lay adjacent to a substantial cellar 195.

Cellar 195, measuring 1.30m internal diameter, with walls 0.30-0.50m thick, was built into a sub-rectangular vertical-sided construction trench (Figs 36-37). The walls were constructed of ironstone and brick in seven uneven courses. The lowest fill of the pit was a thin deposit of mid-red-brown organic peaty material, either the first layer of waste laid down in the pit, or the remnants of wooden floorboards at the base of the pit. The pit was mainly filled with a highly mixed mid-grey and green sandy silt, with a high proportion of building rubble having been dumped from the south (193; Fig 36). A dump of foundry waste lay on top, 192, with clinker, slag and building materials such as slate, brick, stone, mortar, wood, animal bone, glass, clay tobacco-pipe, and 19th- to 20th-century pottery. The size of this cellar might suggest an association with the *Flowing Tankard* public house that occupied the easternmost properties on St John's Terrace

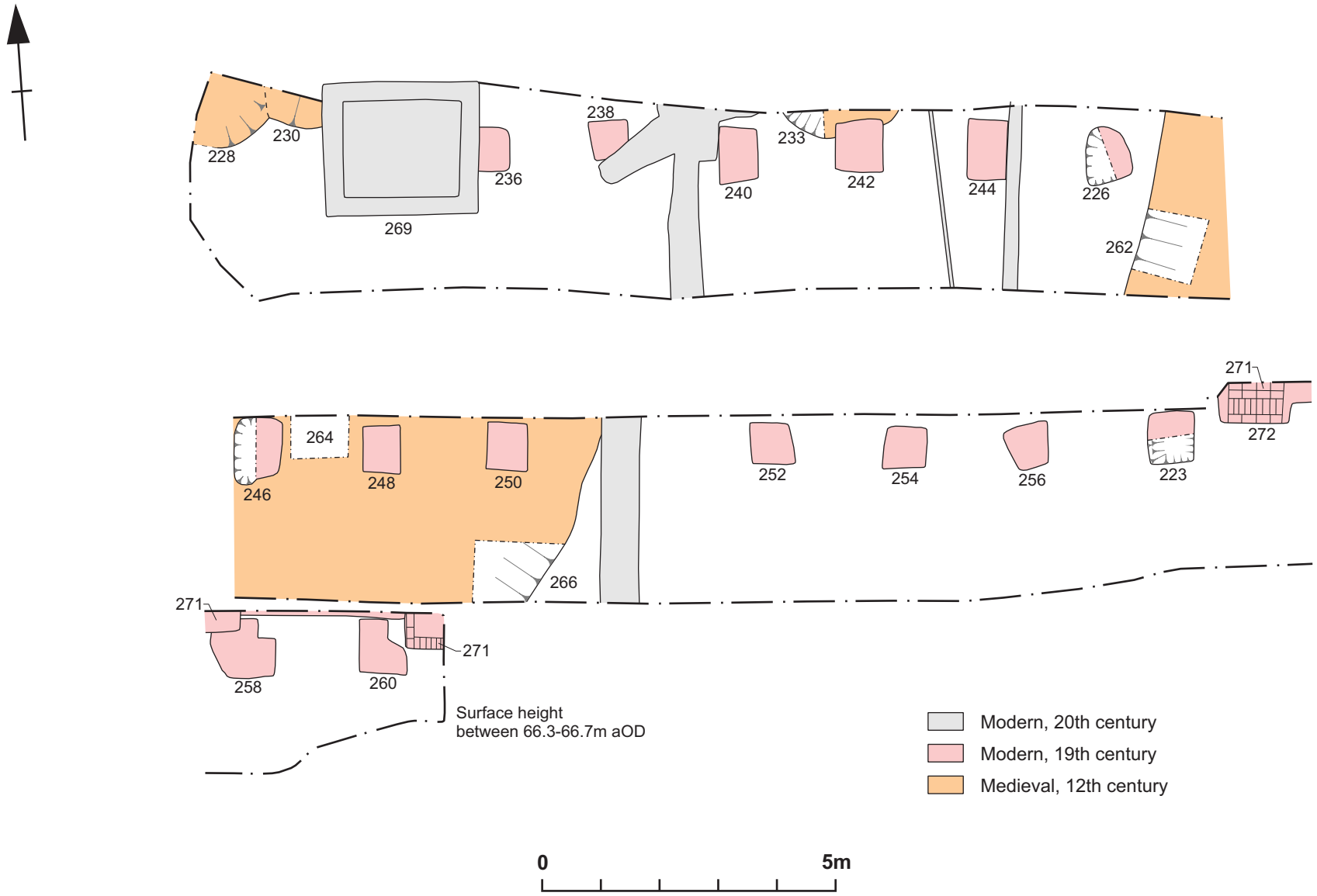
Cellar 195, looking west Fig 36



Section through cellar 195 Fig 37

A rectangular pit, 137, which extended beyond the limits of the excavation to the north, was over 1.75m long by 1.20m deep (Fig 37). The fill was black silty foundry waste, probably from raking out of the furnace. One other pit 186, 1.98m by 1.60m wide, cut through a layer of demolition waste 184, but not fully excavated. The fill comprised light grey-brown patchy sandy clay with redeposited natural, charcoal and stone.

Scale 1:100



Area B, recent activity (19th - 20th centuries) Fig 38

In Area B there was a line of 15 pits, group 267 (Fig 38). The pits ranged between 0.64m-1.10m long by 0.45m-1.03m wide, and were square, rectangular or L-shaped. The pits were evenly spaced at 1.50m intervals. The fills were comparable, comprising mid- to dark grey-brown sandy silt, with small stones and charcoal flecks. This fill probably derived from a former topsoil, which was no longer present. The fills were generally devoid of finds, although pit 246 contained animal bone, pits 260 and 223 contained 19th- to 20th-century pottery, and the latter also contained animal bone, ceramic building material and clay tobacco-pipe.

Pit 226 was the only pit with more than one fill. The basal fill contained residual pottery of 17th- to 18th-century date and animal bone, sealed by a slightly more orange sandy silt. The pits may have been postpits, although their proper function is unknown, and any structure in this area was demolished before the foundry and St John's Terrace were built.

4.7 Modern remains post-dating St John's Terrace (20th-21st centuries)

The foundry was demolished in the late 20th century. Several spread deposits were observed across the site (Fig 39). Layer 220 at the west end of Area A comprised mixed grey-brown clay, with ironstone, brick and mortar rubble. The most significant depth of foundry material came from 114, a 0.80m thick layer of dark grey-black sandy silt with mortar, coal, slate, brick, and ironstone. This material appeared to have subsided from behind the revetment wall spilling into the main area.

Two additional features post-dated the demolition of the foundry. Pit 157 in Area A was 1.50m long and 0.70m wide. The base of the feature undulated with three long ridges, indicating excavation by a toothed JCB bucket. The cut may have been part of the works to level the site before it was turned over to car parking. Additionally, the area was covered by modern overburden in excess of 1.0m thick.

South of the boundary wall, the building terrace was demolished, and replaced by a brick garage, surviving as a low section of wall four courses high, 5.52m long by 2.15m wide. The garage was demolished in 2014. Three modern service pipelines crossed the area from north to south.

Scale 1:150

Area A, modern activity Fig 39

5 THE FINDS

5.1 Worked flint by Yvonne Wolframm-Murray

Two pieces of worked flint were recovered as residual finds from medieval contexts, both are waste flakes. Table 2 provides a summary.

Table 2: Summary of worked flint

Fill / cut / type	Flake/Blade (portion)	Portion	Material	Comments
128 / 129 / waste pit	flake	whole	dark grey vitreous flint	squat flake
301 / 302 / pit	flake	proximal	light brown-grey vitreous flint	post-depositional damage

The condition of the flakes is good with the flint showing post-depositional edge damage as occasional nicks along the edges, which is more severe on the flint recovered from the garden soil. The raw material is vitreous flint, light brown-grey and dark grey and is likely to have originated from local gravel deposits. One of the waste flakes has the distal end missing. The technological characteristics of this worked flint are not directly dateable.

5.2 The medieval and post-medieval pottery by Paul Blinkhorn

Analytical methodology

The pottery was initially bulk-sorted and recorded on a computer using DBase IV software. The material from each context was recorded by number and weight of sherds per fabric type, with featureless body sherds of the same fabric counted, weighed and recorded as one database entry. Feature sherds such as rims, bases and lugs were recorded, with individual codes used for the various types. Decorated sherds were similarly treated. In the case of the rimsherds, the form, diameter (in mm) and the percentage remaining of the original complete circumference was all recorded. This figure was summed for each fabric type to obtain the Estimated Vessel Equivalent (EVE).

The terminology used is that defined by the Medieval Pottery Research Group's *Guide to the Classification of Medieval Ceramic Forms* (MPRG 1998) and to the minimum standards laid out in the *Minimum Standards for the Processing, Recording, Analysis and Publication of post-Roman Ceramics* (MPRG 2001). All the statistical analyses were carried out using a DBase package written by the author, which interrogated the original or subsidiary databases, with some of the final calculations made with an electronic calculator. Any statistical analyses were carried out to the minimum standards suggested by Orton (1998-9, 135-7).

The pottery

The pottery assemblage comprises 598 sherds with a total weight of 14,992g. It was recorded using the conventions of the Northamptonshire Ceramic Type-Series (CTS), as follows. The pottery occurrence by number and weight of sherds per context by fabric type is shown in Appendices 1 and 2. The range of fabric types is typical of medieval sites in Northampton (e.g. McCarthy 1979), consisting mainly of local wares, along with a small quantity of regional imports from Lincolnshire, Oxfordshire

and Nottinghamshire, and a few late medieval imports in the form of German Stonewares.

F200: T1 (2) type St. Neots ware, AD1000-1200, 5 sherds, 45g
F308: Nottingham glazed ware, 13th century, 1 sherd, 25g
F319: Lyveden/Stanion 'A' ware, AD1150-1400, 11 sherds, 277g
F320: Lyveden/Stanion 'B' ware, AD1225-1400, 10 sherds, 85g
F324: Brill/Boarstall ware, early 13th-16th centuries, 19 sherds, 409g
F329: Potterspury ware, AD1250-1600, 71 sherds, 709g
F330: Shelly coarseware, AD1100-1400, 239 sherds, 4235g
F331: Developed Stamford ware, late 12th-early 13th centuries, 1 sherd, 4g
F342: North Midlands Whiteware, 13th-14th centuries, 1 sherd, 10g
F345: Oxford ware, mid-11th-14th centuries, 5 sherds, 82g
F360: Miscellaneous Sandy coarsewares, 12th-14th century, 2 sherds, 20g
F401: Late Medieval Oxidized ware, AD1450-1600, 34 sherds, 671g
F404: Cistercian ware, AD1470-1600, 12 sherds, 127g
F408: Rhenish Stonewares, AD1350-1700, 4 sherds, 30g
F409: Staffordshire Slipwares, AD1680-1750, 5 sherds, 75g
F410: Anglo-Dutch Tin-glazed Earthenware, 1600-1800, 6 sherds, 70g
F413: Manganese Glazed ware, AD1680-1750, 11 sherds, 276g
F417: Nottingham/Derby Stoneware, 1700-1900, 3 sherds, 75g
F420: Westerwald Stoneware, 17th-18th centuries, 1 sherd, 21g
F426: Iron-Glazed coarsewares, late 17th-18th centuries, 28 sherds, 2745g
F429: White Salt-glazed Stoneware, 1720-1780, 2 sherds, 25g
F438: English Stoneware, late 17th-19th centuries, 11 sherds, 660g
F1000: Misc 19th- and 20th-century wares, 115 sherds, 4241g

The following, not included in the type-series, was also noted (Young and Vince 2005, 174-5):

F370: Toynton ware, late 13th-14th centuries), 1 sherd, 36g

Chronology

Each stratified, context-specific pottery assemblage has been given a ceramic phase date based on the range of ware and vessel types present, and adjusted according to the stratigraphic matrix. The chronology, defining wares and the amount of pottery per phase is shown in Table 3.

The data in Table 3 shows that there was little activity at the site in the 12th century, with the presence of a few sherds of F200 suggesting it may have had a marginal use at that time. The site then seems to have flourished from the beginning of the 13th century until sometime after the beginning of the 14th century, with the dearth of pottery from the mid-late 15th century suggesting that the site was abandoned before then.

The fact that only one small group of ceramic phase M4 sherds (fill 229 of pit 230) can be definitely dated to the mid/late 14th century or later suggests very strongly that the site was no longer used for dumping refuse in this period. The pit fill 229 is dated by a Potterspury ware pipkin handle (Fig 40). It is the only example of a ‘developed’ later medieval vessel form from this excavation, other than a costrel fragment from a 16th-century context (Fig 41). Potterspury ware pipkins are, however, well-attested finds at other sites in the region, along with other specialized late medieval products of the industry that were associated with the transportation, storage, preparation, serving and consumption of food and drink.

Table 3: Ceramic phase chronology, occurrence and defining wares

Phase	Defining wares	Date	Sherds	Wt. (g) Sherds
M1	Shelly coarseware, Sandy coarsewares	12th century	7	1613
M2	Lyveden/Stanion 'B' ware, Brill/Boarstall ware	Early to mid-13th century	58	995
M3	Potterspury ware	Mid-13th-early 14th centuries	117	978
M4	Typology	Early 14th-mid-15th centuries	148	2030
M5	Medieval Oxidized ware	Mid-late 15th century	0	0
M6	Cistercian ware	Late 15th-early 16th centuries	3	16
M7	Rhenish Stonewares	16th century	57	1005
PM1	Anglo-Dutch Tin-glazed Earthenware	Early-mid-17th century	0	0
PM2	Staffordshire Slipwares	Mid-late 17th century	0	0
PM3	Manganese Glazed ware, English Stoneware	Late 17th-early 18th centuries	12	253
PM4	White Salt-glazed Stoneware	Early-late 18th century	38	951
MOD	Misc 19th and 20th century wares	19th century +	158	7152
Total			**598**	**14993**

Fragments of around thirty pipkins occurred at Westbury-by-Shenley, Milton Keynes, where they were dated to the mid-14th-16th century (Ivens and Hurman 1995, 259), and a wide range of other late medieval domestic vessel forms were introduced after the mid-14th century (*ibid*, 257). Conversely, at Caldecotte village, also in Milton Keynes, there appears to have been abandonment before the end of the 14th century (Roberts 1994, 59); developed medieval vessels were entirely absent (King 1994, 197), and a similar picture was noted at West Cotton, also largely abandoned after the mid-14th century, with just a single skillet noted (Blinkhorn 2010, fig 11.34, 217). It would appear therefore that, from the evidence for Potterspury ware, there was an hiatus in activity in terms of pottery deposition starting in the second half of the 14th century, and continuing through much of the 15th century.

The Brill/Boarstall ware offers much the same picture. The developed forms, fabrics and glazes typical of the later medieval products of the industry (Mellor 1994, 127-32) are entirely absent other than a bodysherd in a late fabric from layer 204 and the costrel from the 16th-century layer 216, with most of the assemblage appearing to be from highly-decorated jugs typical of the 13th-14th centuries. The groups of pottery dating to the 16th century seem reasonably secure in that, as well as the costrel, there is at least one other sherd of pottery that definitely dates to that time. A fragment of Siegburg Stoneware (F408) from fill 160 of pit 161 has a clear salt glaze, which is very typical of the products of the tradition at that time (Hurst *et al* 1986, 176). After this, there then seems to have been something of a decline from the 17th to early 18th centuries, although it is possible that early modern activity may have removed earlier strata.

The occurrence of the major fabrics per ceramic phase is shown in Table 4. The pattern for the earlier medieval period is largely as would be expected for sites in Northampton. However, the suggestion that the site ceased to be used for dumping waste in the second half of the 14th century is further supported by the relatively low occurrence of Potterspury ware (23.3%) in ceramic phase M4. Certainly, the proportion here is similar to that observed in 14th-century contexts at St Peter's Street in Northampton (McCarthy 1979), with the material not becoming the major ware in most contexts at that site until the 15th century, when shelly coarsewares had fallen from use.

Table 4: Pottery occurrence per ceramic phase by fabric type, expressed as a percentage of the total weight per phase, major fabrics only

Ceramic Phase Fabric	**M1**	**M2**	**M3**	**M4**	**M6**	**M7**	**PM3**	**PM4**	**MOD**
Shelly coarseware	100%	98.1	67.9	42.2	0	12.4	9.5	0	0.2
Lyveden/Stanion 'A' ware	0	0	0.5	13.3	0	0	0	0	0
Oxford ware	0	0	0	4.0	0	0	0	0	0
Lyveden/Stanion 'B' ware	-	0.5	5.2	0.2	0	0.4	0	0	0
Brill/Boarstall ware	-	0.3	11.2	10.0	0	9.1	1.2	0	0
Potterspury ware	-	-	14.1	23.3	0	6.6	7.5	0	0.2
Late Medieval Oxidized ware	-	-	-	-	31.3	58.7	7.5	2.0	0.5
Cistercian ware	-	-	-	-	68.7	10.6	0	0.8	0.1
Anglo-Dutch Tin-glazed Earthenware	-	-	-	-	-	-	0	5.1	0.3
Staffordshire Slipwares	-	-	-	-	-	-	0	7.9	0
Manganese Glazed ware	-	-	-	-	-	-	0	28.9	0.1
Iron-Glazed coarsewares	-	-	-	-	-	-	73.9	39.6	30.5
English Stoneware	-	-	-	-	-	-	0.4	4.9	8.6
White Salt-glazed Stoneware	-	-	-	-	-	-	-	2.6	0
Misc 19th and 20th century wares	-	-	-	-	-	-	-	-	59.3
Total	**1613**	**995**	**978**	**2030**	**16**	**1005**	**253**	**951**	**7152**

Shaded cells = residual material

Residuality is fairly low in the late medieval and post-medieval deposits, other than PM3. Just 253g of pottery could be dated to this ceramic phase, and around 25% of it is residual, suggesting still further that there were either very low levels of activity at the site in the 17th century, or that these strata have been lost. The 18th and 19th-century groups have very little residual material, suggesting that earlier strata were taken off site when the foundry was built.

The assemblages

Ceramic Phase M1 (12th century), 7 sherds, 1613g.
The only pottery that could be dated to this phase, other than six small body-sherds of shelly coarseware from three contexts, is a near-complete jar, also in fabric shelly coarseware (see Fig 13). The vessel has been extensively used, with a thick layer of limescale on the inner surface. Most of the base-pad is missing, with the remaining fragments showing that signs of heavy degradation, which combined with the sooting on the outer surface, suggests the base may have burnt out, or been so damaged that it disintegrated after deposition. It is entirely possible that all the pottery from this phase is later than the bare date suggests, as all the assemblages are small in terms of sherd count, and thus could be lacking contemporary pottery.

The pottery from this phase, as is often the case in Northampton, is entirely dominated by shelly coarseware (eg McCarthy 1979, 216), along with a few sherds of glazed jugs in the form of Lyveden/Stanion 'B' ware and Brill/Boarstall ware. The sherd of North Midlands Whiteware, from the base of another glazed jug, also occurred during this period. No other pottery types were noted. Just five rimsherds were noted, all in shelly coarseware. Three were from jars and two from bowls, which is a fairly normal pattern for the period.

Ceramic Phase M3 (mid-13th-early 14th centuries) 117 sherds, 978g
This assemblage is again dominated by shelly coarseware, although the proportion is somewhat lower (67.9%) than in the preceding phase, mainly due to the introduction of Potterspury ware (19.3%) and an increase in the occurrence of Brill/Boarstall ware (11.2%). Lyveden/Stanion ‘B’ ware represents 5.2% of the material, along with single sherds of Lyveden/Stanion 'A' ware and developed Stamford ware. A single residual sherd of St. Neots ware was also present.

The Lyveden/Stanion 'B' ware, Brill/Boarstall ware and developed Stamford ware are all fragments of glazed jugs, with the Potterspury assemblage comprising jars, bowls and jugs. Thirteen rimsherds were present, one of which was from a Potterspury jar, and the rest from shelly coarseware vessels. Of these, two were from bowls and one was from a pedestal lamp, with the rest being from jars. This is again a fairly typical pattern of vessel consumption.

Ceramic Phase M4 (14th-mid 15th century), 148 sherds, 2030g
As discussed above, it seems highly likely that very little pottery from this phase dates to after the mid-late 14th century. Shelly coarseware is still the major pottery type (42.2%), with Potterspury ware increasing to 23.3%, which is typical of 14th century assemblages in the town. Brill/Boarstall wares declines slightly to 10%, but Lyveden/Stanion ‘A’ wares are well-represented, making up 13.3% of the phase assemblage, although just four sherds of the ‘B’ ware are present. One of the Brill/Boarstall jugs has a thumb-frilled base, which is unusual for the products of this particular tradition, but other examples are known, usually of 14th-century date (Mellor 1994, 127). Oxford ware is fairly well-represented in this phase, making up 4% of the group, including a sherd from a glazed jug from layer 119 which has a near-identical decorative scheme to that of a largely complete vessel from West Cotton that was securely stratified in a pit of mid-late 13th-century date (Blinkhorn 2010, fig 11.38, 231). It is probably residual; as such pottery does not appear to have carried on in use beyond the end of the 13th century in Oxfordshire (Mellor 1994, 71). The single sherds of Toynton ware and Nottingham Glazed ware also occurred in this phase, as did two residual sherds each of St. Neots ware and sandy coarseware.

Just eight rimsherds were noted, two of which were a jar and a bowl of Potterspury ware. The sherd from the Potterspury ware pipkin also occurred in a pit of this date (Fig 40). The other six rimsherds are all shelly coarseware, from three jars, a bowl, a lamp and a jug. Shelly coarsewares jugs are very rare in the later part of the life of the industry, and the example from this phase may well be residual, although a rimsherd with a very similar form occurred in a 14th-century context at West Cotton (Blinkhorn 2010, fig 11.24 no. 165). A large fragment of the base of a shelly coarseware storage jar with applied strip decoration was also noted. The sherd is very worn, and is either residual or was very old when finally disposed of, either of which is possible as storage vessels often had a very long life.

Pipkin handle, buff fabric with a grey core, lower handle
surface and outer body below handle are thickly and evenly sooted
Pit 230, fabric F329 (scale 50mm) Fig 40

Ceramic Phase M6 (late 15th – early 16th century) 3 sherds, 16g
This group comprised just three small sherds from two different contexts. It is entirely possible that it is all residual.

Ceramic Phase M7 (16th century) 57 sherds, 1005g
Most of the assemblage (73.9%) comprises late medieval oxidized ware, which is typical of late medieval sites in the region. Four rimsherds are present, three of which were from large bowls and the other from a jar. This is a typical pattern for the tradition. Cistercian ware, mainly in the form of cups or multi-handled tygs, is also well-represented (10.6%). Potterspury (6.6%) and Brill/Boarstall wares (9.1%), made up most of the rest of the assemblage, although as nearly 13% of the whole assemblage is residual, some of these long-lived wares may be redeposited. Three sherds of German Stoneware (F408) are also present, including a fragment of a Siegburg drinking vessel with a clear salt glaze, a typical 16th-century product of the industry. Also noted is a fragment of a rather unusual flat-backed costrel (water-bottle) in Brill/Boarstall ware (Fig 41). Such vessels are known from Oxford, albeit rarely, in the late 15th-16th centuries (Mellor 1994, fig 77, 8).

Base sherd from a flat-backed costrel, red fabric with purplish-brown surfaces
Layer 216, fabric F324 (scale 50mm) Fig 41

Ceramic Phase PM3 (late 17th-early 18th century) 12 sherds, 253g
All the pottery came from two contexts, and over one quarter of it is residual. The major ware is the utilitarian iron-glazed earthenware, along with small quantities of English stoneware. No other pottery occurred. This suggests that there was very little surviving evidence for activity at the site during this period, with the complete lack of Staffordshire finewares (F413, F409) or tin-glazed earthenware (F410) suggesting that it was all of an industrial or utilitarian rather than domestic nature.

Ceramic Phase PM4 (early-late 18th century) 38 sherds, 951g
All the pottery from this ceramic phase came from just four contexts. Residuality is very low, just 2.8%. Iron-Glazed coarseware is once again the main ware type, but makes up a much lower proportion of the group at 39.6%. Manganese wares in the form of tankards and chamber-pots, typical products of the industry, are well-represented (28.9%). Other fine tablewares in the form of plates, jugs, tea-bowls, tankards and dishes of Rhenish stonewares Staffordshire slipwares, Anglo-Dutch tin-glazed earthenware, and white salt-glazed stoneware) are also present. The group is a very typical assemblage from a reasonably well-to-do urban household of the period.

Ceramic Phase MOD (19th-20th century) 158 sherds, 7152g
Residuality is again very low at less than 3%. The assemblage mainly comprises mass-produced refined white earthenwares, many with blue transfer decoration, along with iron-glazed earthenware pancheons and English stoneware storage jars. It is again a very typical domestic assemblage of the period.

5.3 Building materials by Pat Chapman

Stone roof tile

Six stone roof tile sherds, four of limestone and two of sandstone, weigh 3.9kg. The largest sherd comes from layer 191 and was originally a rectangular tile, 25mm thick, of shelly limestone. The smallest tile sherd, from pit 163, is in fine grained limestone, 10mm thick, with a round peghole 10mm in diameter. The four tiles from pit 161 all differ. One limestone tile was probably triangular, at least 120mm wide and 20mm thick, with a round peghole 7mm in diameter, while the other limestone tile is shelly and also 20mm thick. Of the two sandstone tiles, one is 130mm wide and 30mm thick

with a peghole 8mm in diameter, the other tile is 12mm thick. These tiles would be medieval to early post-medieval in date.

A tiny fragment of Welsh slate came from fill 201 of foundry waste pit 141.

Ceramic roof tile

This assemblage of 27 fragmentary roof tile sherds, from 10-20mm thick, weighs 2.73kg (Table 5). These are plain and glazed flat tiles, one glazed ridge tile and one pantile. Twelve sherds come from pit 161; the remainder are mainly single sherds from a range of features and layers.

Decorated ridge tile with remnant crest, pit 212 (scale 50mm) Fig 42

The majority of the fabric is slightly coarse orange-brown sandy clay with the occasional dark grey to black core, similar to Lyveden/Stanion ware. The tiles are 13-18mm thick, and three have pulled nibs and three others are glazed dark green. One tile is lead-glazed. There is a fine sandy orange clay fabric, including the ridge tile, and plain tiles 20mm thick. Three sherds, 11mm thick, in a fine silty pink-buff and pale orange fabric are similar to Potterspury ware; two have a pale green glaze. The lead-glazed ridge tile has a wavy line and the remains of a crest (Fig 42).

The roof tile is medieval to early post-medieval in date, apart from the pantile sherd in pit 177, which would date from the early 18th century onwards.

Table 5: Quantification of ceramic roof tile

Fill / cut / type	No	Wt (g)	Comment
160 / 161 / pit	12	1375	2 x pale green glaze, 1 dark green glaze 2 x nib
168 / 169 / posthole	1	7	Fragment
170 / 171 / posthole	1	44	Fragment
176 / 177 / pit	2	250	1 pantile
191 / layer	1	335	-
205 / 213 / stone-lined pit	1	28	Nib
210 / 212 / pit	1	255	Ridge, lead glaze, wavy decoration, crest
216 / layer	1	45	Fragment, trace mortar
217 / layer	1	84	-
219 / layer	1	20	-
303 / 304 / natural hollow	1	73	lead glaze
316 / 390 / pit	1	12	green glaze
332 / layer	1	35	-
374 / 378 / stone-lined pit	2	167	dark green glaze and fragment
Totals	**27**	**2730**	

Ceramic floor tile

Five small sherds of ceramic floor tile made from sandy orange clay, weigh 365g. One sherd, 20mm thick, from fill 160 of pit 161, has a trace of dark green glaze along one edge. Three sherds, 18-24mm thick, from fill 263 of pit 264, have worn green-glazed surfaces. The sherd from layer 216 is 30mm thick with chamfered edges and a black glaze.

Stone floor tile

A fragment from a sandstone slab, 75mm thick, with one smooth surface and a small fine-grained limestone sherd from a paving tile, 22mm thick, come from fill 160 of pit 161.

Bricks

Four lumps of brick from pit 141 were all semi-vitrified from being subjected to intense heat. Three lumps of brick were found together in the foundry waste, fill 201 of pit 141, weighing 1125g, and one additional piece (1210g) came from an earlier fill 202. One brick was originally white, 75mm thick, with the remnant of a stamp *.UR* . on the surface and not in a frog, possibly a Stourbridge firebrick. The other fragments are ordinary handmade bricks 65mm and 110mm wide.

Mortar

Forty-three small rounded pieces of white limestone mortar with black flecks and two small lumps of grey limestone mortar, together weighing 55g, come from sample 3 from fill 321 of brick culvert 320.

Other

A flat sherd made of white powdery clay, 6mm thick and weighing 22g, comes from brick culvert 320. It has one complete perforation, 15mm in diameter, at least two others and a fragment of nail adhering to the extant edge.

Discussion

The ceramic and stone roof tiles and the floor tiles would be associated with the medieval and early post-medieval buildings in the surrounding area. These mostly come from pit 161. The bricks are associated with the foundry waste.

5.4 Clay tobacco-pipes by Tora Hylton

A small group of 47 clay tobacco-pipe fragments were recovered comprising 12 complete or fragmented pipe-bowls and 36 stem fragments, which span the late 17th-18th and 19th centuries (Table 6). The majority of the assemblage was recovered from two contexts; fill 192 of stone-lined cesspit 196, and fill 208 of robber cut 214. Smaller quantities of pipes were found in ten other contexts. Ten of the bowls are sufficiently complete to enable dating and they have been classified according to Oswald's simplified typology using bowl and foot/spur forms (1975, 37-41) and Robert Moore's bowl types for Northampton (1980). Chronologically the earliest bowl represented is a fragment decorated with a narrow band of rouletting just below the lip of the bowl, a decorative motif used until *c*1710 (Moore 1980, 6). It was recovered from fill 208 of 16th to 18th-century robber cut 214.

Typologically the remaining ten bowls equate to Oswald's type G24, which provide an early 19th-century date (*c*1810-40). All the bowls are decorated, nine with a simple motif of oak leaves on the front and the back of the bowl (*ibid*, fig 9, 20), and one with a fluted motif (Fig 9, 28). One bowl and one stem/spur fragment are furnished with the maker's initials in relief on the spur. Both spurs are marked with 'F S', for Francis Street who had workshops in Gregory Street and Horseshoe Street (*ibid*, 25).

The stem fragments measure up to 155mm long. Changes in manufacturing technique and the use of finer wire to make the bore ensured that there was a regular reduction in hole diameter between *c*1620 and 1800. The sizes of the bores are measured by 64's of an inch and the measurements suggest that the majority of stems date to the 19th century. A smaller number measure 6, 7, 8/64's suggesting an earlier date for the stem fragments (like the bowl fragment above). These early stems were recovered from two layers in cesspit 213, the fill of robber cut 214, the fill of pit 212, and the fill of one pit in the linear posthole alignment in Area B.

Table 6: Quantification of clay tobacco-pipes

Fill / cut / type	Stems	Bowl	Oswald Type
107 / 108 / pit	1	-	-
138 / 139 / pit	1	-	-
140 / 141 / well	1	-	-
176 / 177 / well	3	-	-
192 / 196 / cesspit	15	9 + 1 fragments	9 x G24 (1810-40)
205 / 213 / cesspit	1	-	-
207 / 213 / cesspit	2	-	-
208 / 214 / robber trench	6	1	-
210 / 212 / pit	1	-	-
222 / 223 / pit	1	-	-
299 / 300 / pit	-	1	(G24 (1810-40)
321 / 320 / culvert	4	-	-
Total	**36**	**12**	**-**

5.5 Glass by Claire Finn

Glass was recovered from six contexts at Cow Lane, and mainly comprised bottle glass (Table 7). Three glass small finds (SF16-18) were recovered from sample 3 from the fill of the foundry culvert 320.

Pieces from three mouth-blown olive green wine bottles with convex necks and applied finishes came from the fill of a square stone-lined cesspit. At least one bottle was straight-sided/cylindrical, with a rounded heel. The finishes are between 32-34mm wide, and the bottles date between the late 18th to early 19th centuries.

From the fill of robber cut 214 came a mouth-blown concave-necked wine bottle in mid-green glass of good quality with little corrosion. It dated to the 18th century. The lip was fire polished and has a V-shaped string line around the finish 32mm wide. The basal diameter is *c*112mm, and the base has a rounded heel, a domed kick-up with a sand pontil-mark.

Fill 210 of pit 212 produced a small flared flat lip from a narrow bottle, probably a 19th-century medicine/prescription bottle. The lip is between 20-22mm wide, mounted on a narrow neck 12mm wide. A base fragment from a dark green-brown bottle was also recovered from this fill.

Waste pit 300 produced at least three glass items, comprising two bottles and a vessel. The bottles included a dark green-brown bottle base with high conical kick-up (48mm) and bulged heel. The bottle was dip-moulded, had a cylindrical body with a basal diameter of 86mm. The neck was convex with a thick applied rounded lip 34mm wide. The glass itself contained occasional large seeds but little corrosion, and the bottle probably dates from the early 19th century.

The second bottle from this context was a straight-sided/cylindrical bottle of pale blue-green glass, with a tall straight neck with a mould seam, 101mm high. The neck had a hand-applied mineral finish with a V-shaped string line, 29mm wide. This bottle may have had multiple functions, and probably dates to the mid-19th century.

A more unusual vessel also came from waste pit 300. This was the base of a milk glass vessel with a folded-in raised foot, splayed-out body and pontil mark. The width of the foot was 61mm, and the base had a low, rounded kick up 19mm high. The glass in the main body of the vessel was very thin, around 1.5mm. This vessel was probably a tea or coffee cup, with or without a handle, in white imitation porcelain.

Table 7: Quantification of glass

Fill / cut / type	Form	Wt (g)	Fragments	Min. vessel count	Date
192 / 196 / cesspit	bottle	328.9	4	3	late 18th-early 19th century
208 / 214 / robber trench	bottle	208.5	2	1	mid-late 18th century
210 / 212 / pit	bottle	2.4	1	1	early 19th century
210 / 212 / pit	bottle	26.9	1	1	18th-19th century
299 / 300 / pit	bottle	93	2	1	mid-19th-century
299 / 300 / pit	vessel	54.2	1	1	early 18th century
299 / 300 / pit	bottle	591.7	2	1	early 19th century
282 / 286 / pit	bottle/vessel	<1	1	1	-
321 / 320 / culvert SF16,	bottle/vessel	2	3	1	19th-century
321 / 320 / culvert SF17	flat glass	1.4	7	-	post-medieval
	bottle	1.5	5	5	-
321 / 320 / culvert SF18	flat glass	<1	2	-	-
Total		**1312.5g**	**29**	**16**	

SF 16-18 were recovered from the fill of the brick-built foundry culvert (320). These finds include very tiny fragments from post-medieval window glass, as well as small pieces of bottle glass from multiple bottle types. Several sherds from a colourless 19th-century bottle have red discolouring on the exterior from local soil conditions.

5.6 Metalworking and other post-medieval debris by Andy Chapman

Samples of metalworking debris were retained from deposits of post-medieval date, and these presumably derive from the *Beehive Foundry* that occupied part of the site from 1830 until the mid-20th century. Fills 140, 201 and 202 of pit 141 comprised furnace waste, slag and clinker. From fill 140 there are two large pieces of dense glassy grey-green tap slag with occasional air bubbles and fluid surfaces that retain the shape of the narrow channel, 100mm wide, into which the slag had been allowed to flow (Fig 43).

Glassy iron smelting tap slag, pit 141 (scale 50mm) Fig 43

Fill 202 produced a large piece of ferrous furnace slag (Fig 44) and further furnace slag, grey and highly vesicular with a fluid surface, was adhering to bricks from part of the furnace structure, perhaps a brick-lined outflow channel at the base of the furnace.

Ferrous furnace slag, pit 141 (scale 50mm) Fig 44

Fill 201 of pit 141 also produced some brick fragments with ferrous slag adhering to the faces of bricks, similar to those from fill 202 (Fig 45).

Slag adhering to lining bricks, pit 141 (scale 50mm) Fig 45

Fill 192 of stone-lined pit 196 comprised 'furnace waste and clinker'. The material retained comprises one piece of vesicular iron slag, weighing 152g, and two small fragments of black-green glassy slag, weighing 40g, typical of material from post-medieval iron furnaces. From layer post-medieval layer 217, there is a single piece of undiagnostic iron slag, weighing 115g, from either a furnace or a hearth.

The fill 321 of brick culvert 320, produced 390g of ironpanned ferrous debris, one very small piece of glassy slag and 184g of coke clinker.

From fill 176 of well 177, which also contained foundry debris, there is a single lump of ironpanned ferrous debris. There are also sherds from a metalworking crucible, with walls 12mm thick and 135mm in diameter at the rim, with a pouring lip, and tapering inwards, but only survive to 130mm high, with the bottom lost (Fig 46). The inner surface contains remnants of green copper minerals, indicating that this crucible was use for casting objects in copper alloys, probably bronze and brass.

Crucible, well 177 (scale 50mm) Fig 46

This assemblage is all consistent with the functioning of a post-medieval iron foundry, with the crucible indicating that copper-alloy casting was also being carried out.

5.7 Other finds by Tora Hylton

Around 43 registered finds were recovered from Cow Lane (Table 8). Twenty of these were iron objects, mainly nails, and a further 17 finds were of copper alloy. Four small finds of glass are discussed in section 5.5.

Of the iron finds, many are undiagnostic due to corrosion, although some very large nail shanks or iron rods are visible (SF14, SF33-SF34). There is a horseshoe nail with expanded head and ears (SF21), of the type illustrated by Clark (1995, 87, Fig 76). A piece of clay tobacco-pipe stem was found fused into a lump of iron corrosion products in fill 321 of the brick culvert 320, from whence a large proportion of the small finds originated.

Ten copper-alloy wound wire or spherical-headed small pins were found. Of the pins categorised by Williams (1979, 261, Fig 230), the wound wire headed pins from Cow Lane fall into group H2, dating them to the 16th-17th centuries (*ibid,* 260). Notable amongst the copper-alloy finds is a hooked tag on a decorated backplate, from layer 217 (SF14; Fig 47). This was probably used for fastening clothing, and examples of comparable size are given by Margeson (1993, 17, figs 71-75). Another copper-alloy clothes fastener (SF1) was recovered from post-medieval waste pit 161; this comprised a small wire-loop fastener (*ibid,* 20, figs 98-101). A thimble (SF10) was recovered from stone-lined cesspit 213 which is highly fragmentary, but machine-knurled indentations can be seen, indicating a post-medieval date, probably 16th-17th century.

Other noteworthy finds include a small, annular black bead, possibly of stone (SF20, 321), and a small fragment of textile (SF19).

Table 8: Finds catalogue

SF No	Fill / cut / type	**Description**
SF 1	160 / 161 / pit	**Wire loop fastener**, copper alloy. L: 14mm, W: 9mm, Th: 1.5mm
SF 2	160 / 161 / pit	**Nails**, iron, x2.
SF3	160 / 161 / pit	**Fitting**, copper alloy. Fragmentary fitting, circular with flaring edges. W: >21mm, Int diam: 12mm.
SF4	162 / 163 / pit	**Folded sheet fragment**, copper alloy. Undiagnostic.
SF5	160 / 161 / pit	**Pins,** copper alloy. Two small pins with wound wire heads, Oakley type H2. L: 25mm, Dia of head: 3mm; L: 30mm, Dia of head: 3mm
SF6	158 / 159 / construction cut	**Pin**, copper alloy. Spherical head. L: 43mm, Dia of head: 3.5mm
SF7	170 / 171 / posthole	**Pin**, copper alloy. Wound wire head, type H2. L: 27.5mm, Dia of head: 2.3mm
SF8	178 / 179 / wall	**Pin**, copper alloy. Spherical head. L: 44mm, Dia of head: 4mm.
SF9	184 / layer	**Pin**, copper alloy. Wound wire head, type H2. L: 32mm, Dia of head: 3mm.
SF10	207 / 213 / cesspit	**Thimble**, copper alloy. Incomplete thimble with machine-knurled indentations. Dia: >19mm
SF11	219 / 119 / layer	**Pins**, copper alloy. Wound wire heads, type H2. L: 31mm, Dia of head: 2.5mm; L: 26mm, Dia of head: 2mm
SF12	216 / layer	**Pin**, copper alloy. Wound wire head (H2). L: 26mm, Dia of head: 2mm
SF13	216 / layer	**Sheet**, copper alloy. Fragment, undiagnostic. L: 42mm, W: 10mm, Th: 1.5mm
SF14	217 / layer	**Decorative hook**, copper alloy. Hook rising from a back

		plate formed of a serrated circle with two lozenge-shaped prongs extending from the top (Fig 47). L: 51mm, W: 31mm, L of hook: 17mm **Sheet fragment**, copper alloy. L: 21mm, W: 10mm, Th: 1mm. **Iron rod,** iron. Undiagnostic. L: >110mm, W: >18mm
SF15	219 / 119 / layer	**Iron object**, iron. Undiagnostic.
SF16	321 / 320 / culvert	**Glass**
SF17	321 / 320 / culvert	**Glass**
SF18	321 / 320 / culvert	**Glass**
SF19	321 / 320 / culvert	**Woven fabric**, textile
SF20	321 / 320 / culvert	**Bead**, stone? Small annular black bead. Ex dia: 8.5mm, Int dia: 4mm.
SF21	282 / 286 / quarry pit	**Horseshoe nail**, iron, with expanded head and ears. L: 29mm, Dia of head: 15mm
SF22	374 / 378 / cesspit	**Iron corrosion**, iron, slag
SF23	278 / cesspit	**Nail shank (?)**, iron
SF25	321 / 320 / culvert	**Pin shank**, copper alloy. L: 16mm.
SF26	321 / 320 / culvert	**Iron object**, iron
SF27	321 / 320 / culvert	**Nail shank**, iron
SF28	321 / 320 / culvert	**Nail shank**, iron
SF29	321 / 320 / culvert	**Clay tobacco-pipe and iron object**, tobacco pipe fused to iron corrosion products
SF30	321 / 320 / culvert	**Nail,** iron. Nail attached to a small stone by corrosion deposits.
SF31	321 / 320 / culvert	**Nail**, iron
SF32	321 / 320 / culvert	**Nail**, iron
SF33	321 / 320 / culvert	**Iron bar**, iron. L: 96mm, W: 20-30mm
SF34	321 / 320 / culvert	**Iron rod,** iron rod fragment with curved profile
SF35	321 / 320 / culvert	**Nail shank,** iron
SF36	321 / 320 / culvert	**Object**, iron, stone. Amorphous lump, small stones and corrosion.
SF37	321 / 320 / culvert	**Nail shank**, fused to stone
SF38	278 / 376 / cellar	**Plate fragment,** iron. Undiagnostic.
-	282 / 286 / quarry	**Glass**
-	314 / 315 / pit	**Strip**, copper alloy. Strip with vestiges of perforation hole at one end. L: 72mm, W: 11mm, Th: 4mm

Copper-alloy hooked fitting, (SF14) layer 217, (height 51mm) Fig 47

6 THE ENVIRONMENTAL EVIDENCE

6.1 Mammal bone by Adam Reid and Rebecca Gordon

Introduction

A total of 7.47kg of animal bone was hand collected from 41 different contexts during the course of excavation and a further 0.48kg of material was recovered from seven wet sieved soil samples. All material was washed prior to analysis. Identifiable bones were noted, and were examined for signs of butchery. Identifications took place with the aid of the MOLA Northampton reference collection, with Grant (1982), Hillson (1992), Hambleton (1999) and France (2009) also consulted. Specimens that could not be positively identified were attributed, where possible, to categories including large mammal (cattle, horse, deer), medium mammal (sheep/goat, pig, large dog), small mammal (small dog, cat, rabbit/hare) and very small mammal (mouse, rat, shrew). The *Guidelines for Best Practice for Animal Bones and Archaeology* (HE 2015) were followed, where possible.

Identification and quantification

The moderately fragmented nature of the assemblage made identifications difficult and a presentation of the results can be seen below (Tables 9 and 10). Positive identifications were made for 33% of the total hand-collected specimens. Only 2% of the total material recovered via wet sieving could be identified.

The medieval phases (12th to 16th century)

There were 131 fragments from the hand-collected material that have been spot-dated to medieval periods (28%) (Table 9). The majority of the represented taxa are domesticate species, with the exception of a small number of bones from horse, dog, fallow deer, rabbit and possibly hare. Fallow deer and hare are well-known high status animals in the medieval and post-medieval period.

A total of five possible cases of butchery were noted – two chop marks on a large mammal-sized rib fragment from demolition layer 101, a cleave mark on a cattle talus recovered from pit 161 fill 160, two chop marks on a large mammal-sized rib fragment from pit 161 fill 160, several chop marks on a sheep/goat metacarpal from layer 204 and a chop mark on a large mammal-sized pelvic fragment from pit 281 fill 279.

The post-medieval phases (16th century onward)

Identifications were provided for 65 of the hand collected fragments that were recovered from contexts with a clearly post-medieval date (56%) (Table 10). This represents a much higher proportion than for the medieval phases and is a reflection of the difference in the quality of preservation between the two periods. All of the represented species are domesticates with the exception of one fragment of dog bone from pit 300 fill 299, rabbit bone recovered from fills 112 of wall foundation cut 113 and fill 208 of pit 214, fallow deer bones from fill 208 of pit 214 and fill 210 of pit 212, and fallow deer antler from fill 138 of pit 139. A tine of the antler had been sawn through, which is indicative of craft-working.

A large number of microfaunal remains were recovered from the sieved material from the fill 321 of the foundry culvert, including several mandibles and long bones.

Mammal teeth

Five mammals could be confidently assigned an age category based on the eruption and subsequent wear of the mandibular teeth. Teeth wear stages were recorded using Grant (1982) for cattle, sheep/goat and pig and the wear stages were converted into age categories using Hambleton (1999). One of the cattle was aged between 8-18 months, three sheep/goat were aged between 6-12 months, 1-2 years and 2-3 years and one pig was 7-14 months.

Conclusions

The work at Cow Lane has produced a relatively large assemblage. The assemblage contains a variety of domesticate taxa, with some evidence for butchery and craft working, as well as the utilisation of wild animal species.

Table 9: The identified mammalian taxa from medieval contexts (12th- to 16th-century)

Fill / cut / type	cattle *bos*	sheep/goat ovicaprid	pig *sus*	horse *equus*	dog *canis*	rabbit/ hare	fallow deer	v. small mammal	small mammal	medium mammal	large mammal	indet.	Total
101 / layer	-	-	-	-	-	-	-	-	-	4	1	-	**5**
109 / 111 / pit	-	-	-	-	-	-	-	-	-	-	1	-	**1**
119 / layer	-	1	-	-	-	-	-	-	-	1	1	-	**3**
128 / 129 / pit	-	1	-	-	-			-	1	6	-	-	**8**
160 / 161 / pit	7	5	5	3	1	1	1	-	8	37	18	3	**89**
162 / 163 / pit	1	-	-	-	-	-		-	-	1	-	-	**2**
168 / 169 / posthole	-	-	-	-	-	-	-	-	1	4	1	-	**6**
170 / 171 / posthole	-	-	-	-	-	-	-	-	-	3	-	2	**5**
172 / 173 / posthole	-	2	-	-	-	-	-	-	-	3	1	-	**6**
188 / layer	-	-	-	-	-	-	-	-	-	2	-	-	**2**
190 / 119 / layer	2	2	1	-	-	-	-	-	-	5	5	-	**15**
204 / 119 / layer	-	1	1	-	-	-	-	-	-	-	1	-	**3**
216 / layer	3	6	1	-	-	1	-	-	1	8	5	-	**25**
217 / layer	4	2	1	-	-	-	-	-	-	10	20	2	**39**
219 / 119 / layer	-	4	-	1	-	-	-	-	-	2	1	-	**8**
227 / 228 / pit	-	-	-	-	-	-	-	-	-	4	-	1	**5**
232 / 233 / pit	-	-	1	-	-	-	-	-	-	-	-	-	**1**
263 / 264 / nat. hollow	-	-	-	-	-	-	-	-	-	-	1	-	**1**
276 / 277 / pit	-	-	-	-	-	-	-	-	1	-	1	13	**15**
278 / 281 / pit	-	-(2)	-	-	-	-	-	-	-(7)	-(1)	-	-(72)	**0(82)**
279 / 281 / pit	-	15(1)	12	-	4	-	-	-	2	49(4)	9	10(79)	**101(84)**
282 / 286 / pit	-	-(1)	-(1)	-	-	-	-	-	-(7)	-(5)	-	-(160)	**0(174)**
303 / 304 / nat. hollow	1	3	-	-	-	-	-	-	-	3	-	-	**7**
329 / 331 / pit	-	8	-	-	1	1	-	-	-	9	1	-	**20**
332 / layer	4	1	-	-	-	-	-	-	-	1	1	-	**7**

Fill / cut / type	cattle *bos*	sheep/goat ovicaprid	pig *sus*	horse *equus*	dog *canis*	rabbit/ hare	fallow deer	v. small mammal	small mammal	medium mammal	large mammal	indet.	Total
335 / 336 / pit	-	8(10)	-	-	-	-	-	-(1)	4(10)	25(45)	4	5(338)	**46(404)**
337 / 338 / pit	-	6	-	-	-	-	-	-	-	6	2	1	**15**
339 / 340 / posthole	-	-	-	-	-	-	-	-	-	1	1	-	**2**
356 / 390 / pit	-	-	-	-	-	-	-	-	-	-	1	-	**1**
374 / 378 / cellar	1	7(4)	1(1)	-	1	1	-	-(4)	3(17)	18(20)	1	2(266)	**35(312)**
376 / cellar	-	-	-(2)	-	-	-	-	-	-(2)	-	-	-(48)	**0(52)**
Total	**23**	**69(15)**	**23(4)**	**4**	**7**	**4**	**1**	**0(5)**	**21(43)**	**201(74)**	**77**	**39(963)**	**473(1108)**

Numbers in brackets denote material recovered via sieving.

Table 10: The identified mammalian taxa from post-medieval contexts

Fill / cut / type	cattle *bos*	sheep/goat ovicaprid	pig *sus*	dog *canis*	fallow deer *dama*	rabbit	v. small mammal	small mammal	medium mammal	large mammal	indet.	Total
112 / 113 / wall	1	1	1	-	-	1	-	1	4	-	-	**9**
118 / 164 / wall	1	1	1	-	-	-	-	-	1	2	-	**6**
138 / 139 / pit	1	12	1	-	8	-	-	-	3	-	-	**25**
176 / 177 / well	-	1	-	-	-	-	-	-	2	-	-	**3**
205 / 213 / cesspit	6	2	1	-	-	-	-	-	3	3	5	**20**
208 / 214 / robber trench	5	4	2	-	1	1	-	2	16	2	-	**33**
210 / 212 / pit	-	2	1	-	1	-	-	-	2	-	-	**6**
222 / 223 / pit	-	1	4	-	-	-	-	-	-	-	1	**6**
225 / 226 / pit	-	-	-	-	-	-	-	-	2	-	-	**2**
288 / 177 / well	2	-	-	-	-	-	-	-	-	1	-	**3**
299 / 300 / pit	-	-	1	1	-	-	-	-	-	-	-	**2**
321 / 320 / culvert	-(1)	-(1)	-(1)	-	-	-	1(124)	-(3)	-(23)	-(2)	-(4)	**1(159)**
Total	**16(1)**	**24(1)**	**12(1)**	**1**	**10**	**2**	**1(124)**	**3(3)**	**33(23)**	**8(2)**	**6(4)**	**116(159)**

Numbers in brackets denote material recovered via sieving.

6.2 Bird bone by Rebecca Gordon

Following the initial assessment of the animal bone, the bird and fish bone remains were subjected to further analysis (section 6.3 below). Bird bones were identified to taxon and species where possible. Birds that could not be identified were recorded as large and medium bird. Other forms of evidence were recorded which included: age, sex, burning, butchery, gnawing and preservation (the latter was recorded following Harland *et al* 2003). Manuals consulted were Cohen and Serjeantson (1996), Schmid (1972) and Tomek and Bocheński (2009a, 2009b).

The bird assemblage was small with a total of 45 fragments recovered from hand collected and sieved contexts (Tables 11 and 12). Overall, most of the bird remains were in a good state of preservation. Gnawing marks were observed on three specimens, which were similar to cat gnawing (Moran and O'Connor 1992). The vast majority of the birds identified were chicken. There were a small number of goose bones and one pigeon was identified. Most of the bones derived from adults, although there were some juvenile chickens and one juvenile goose bone. The presence of juvenile domestic birds on an archaeological site is suggestive of on-site breeding. Most of the elements which belonged to chicken were long bones. One chicken humerus had a cut mark on the proximal end and another chicken was identified as male based on the spur on the tarsometatarsus.

Table 11: The identified bird taxa from 12th- to 16th-century contexts

Fill / cut / type	Chicken (*Gallus gallus*)	Galliform	Goose (*Anser* sp.)	Anseriform	Unident. large bird	Unident. medium bird	Total
119 / layer	-	-	1	-	-	-	**1**
160 / 161 / pit	2	1	-	-	-	-	**3**
172 / 173 / posthole	2	-	-	-	-	-	**2**
278 / 281 / pit	(1)	-	-	-	-	(3)	**(4)**
279 / 281 / pit	5	-	-	-	1	4	**10**
282/ 286 / pit	1(1)	-	-	-	-	-	**1(1)**
329 / 331 / pit	-	-	2	-	-	-	**2**
337 / 338 / pit	-	-	-	-	-	1	**1**
374 / 378 / cesspit	1(2)	1(1)	-	(1)	-	(7)	**2(11)**
376 / cellar	-	(1)	-	-	-	-	**(1)**
Total	**11(4)**	**2(2)**	**3**	**(1)**	**1**	**5(10)**	**22(17)**

Numbers in brackets denote material recovered via sieving.

Table 12: The identified bird taxa from post-medieval contexts

Fill / cut / type	Chicken (*Gallus gallus*)	Pigeon (cf. Columba sp.)	Total
138 / 139 / pit	-	1	**1**
208 / 214 / robber pit	3	-	**3**
299 / 300 / pit	2	-	**2**
Total	**5**	**1**	**6**

6.3 Fish and amphibian bone by Philip Armitage

The fish bone assemblage was small with the majority of bones having been recovered from environmental samples (Table 13). Despite this, a number of different species were identified, totalling 17 individuals present, comprising edible fish species and small amphibians. Much of the assemblage came from late medieval stone-lined cesspit 378, including one near-complete articular of a cod. One Atlantic cod vertebra fragment from quarry pit fill 278 showed evidence of burning.

The only identifiable fish bone material from a post-medieval context was an Atlantic cod vertebra from the fill of a modern pit 223. An unidentifiable bone was also recovered from early post-medieval layer 217.

Table 13: The identified fish and amphibian taxa from all contexts

Fill / cut / type	Sample	Taxa	Element (s)	Notes	NISP
Fish bones					
222 / 223 / pit		Atlantic cod	vertebra		1
278 / 281 / pit	<2>	Atlantic cod	vertebra	burnt/ calcined	1
		small gadid	vertebra		1
		herring	caudal vertebra		1
		mackerel	vertebra	small fish	1
		plaice/flounder	caudal vertebra	small fish	1
279 / 281 / pit	<7>	herring	vertebra		1
374 / 378 / cesspit		Atlantic cod	articular	left; from large - sized cod estimated Total length = 118 cm	1
374 / 378 / cesspit	<5>	herring	ottic bulla		3
		herring	caudal vertebra		2
		herring	scale		1
217 / layer		unident.	unident.		1
Amphibian bones					
374 / 378 / cesspit	<5>	frog	tibio-fibula	small immature frog	1
374 / 378 / cesspit	<5>	frog	tarsal bone	small immature frog	1
Total					**17**

6.4 Shells by Jim Brown

There are 26 individual shells, weighing 267g. The majority of the shells (22) are European flat oysters, *Ostrea edulis,* the remaining four are Blue mussels, *Mytilus edulis.* Both of these species are common sources of food and occur naturally along the coasts of the British Isles. They can be gathered in estuarine and shallow coastal water where they attach themselves to rocks. Mussels may be found in the mid- or low intertidal zone, whilst flat oysters are subtidal. Almost all of these shells were recovered from post-medieval deposits of the 16th-18th centuries. One mussel and

one oyster shell come from fill 374 of pit 378, which is thought to have been medieval, the oyster shell differs from all other examples in that it is greyish in colour and heavily speckled on the inner surface, perhaps the product of post-depositional chemical action.

Oysters

When mature, the flat oysters may range in size from 38-110mm across. The largest shells in this assemblage are no greater than 60mm in size, and nine examples are well below size, indicating that they were probably collected whilst still relatively young, and is possibly an indication of over-harvesting. Usually the lifespan can reach about six years, with a maximum of 15 years. In most of these examples the growth pattern of bands on the shells is fairly thin (1-2mm); only four examples have thicker banding (2-3mm) than the average for the whole group. The larger shells are 3-4mm thick; those that are undersized are less than 2mm thick. Shells with thicker banding are also more robust. However, as a group these shells exhibit reduced growth resulting from a fairly cool water temperature, which is a growth pattern consistent with oyster shells from the north and east coasts of England.

The shells are mostly pear-shaped, two are slightly oval. There are 14 upper (right) valves with a fairly smooth surface that are white or yellowish-cream in colour. There are eight lower (left) valves that have a rough surface showing pale brown or bluish concentric bands. The two valves are different in shape and size, with the left concave and fixed to the substratum, while the right is almost flat and fits inside the left. The inner surface is smooth, whitish or bluish-grey opalescent mother of pearl.

All of the shells show healthy growing beds, there are no examples of infestation from encrusting organisms and none show erosion. Two upper valves contain a tiny borehole from a colonising predatory gastropod. Three upper valves suggest cultivation; one carries a cluster of four spat oysters upon its surface, and another has a single spat; the third has a coarse deposit of possible cultch material. Six shells, two upper and four lower valves, have chalky deposits on their inner surfaces that indicate rapid changes of salinity in their habitat. This may suggest they were from an estuarine source. One upper valve has a small chamber within the inner surface, perhaps caused by irritation or a contaminant. None of the shells have been modified and there are no surviving ligaments.

Mussels

The shape of the shells is triangular and elongated with rounded edges, 45-53mm long by 7-13mm deep. The shells are smooth with a sculpturing of fine concentric growth lines, all of which have occasional prominent ridges suggesting spurts of growth during warm seasons. The shells are purplish-blue, and two are brownish-white towards the dorsal margin. All four examples have radial stripes. There are no adhering deposits. The largest example has a cluster of adhering spat mussels. All of the shells appear healthy and show no evidence of parasites, infestation or unusual growth.

6.5 Plant macrofossils and other remains by Val Fryer

Soil samples for the retrieval of the plant macrofossil assemblages were taken from across the excavated area and seven were submitted for assessment. Following the initial assessment, full quantification and analysis was undertaken on four of the seven samples. The results are discussed further below.

The samples were bulk floated by MOLA Northampton and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x16 and the plant macrofossils and other remains noted are listed in Table 14. Nomenclature within the table follows Stace (2010). Most plant remains were charred, but occasional macrofossils were preserved by mineral replacement, with the latter being denoted within the table by a lower case 'm' suffix. A small group of remains from culvert 320 (sample 3) were desiccated and these are denoted by a lower case 'd' suffix. Modern roots and seeds were also noted, but at a very low density.

Assessment results

Cereals/chaff, seeds of common weeds, wetland plant macrofossils and tree/shrub remains are present at a low to moderate density within all seven assemblages. Preservation is variable; whilst some cereals and most seeds are well preserved, others are severely puffed and distorted, probably as a result of combustion at very high temperatures. Some material also appears rounded and abraded, possibly indicating that it was either exposed to the elements for some considerable period prior to burial, or suffered mechanical damage as a result of the disturbance of features during the intensive reuse of the area.

Oat, barley, rye and wheat grains are recorded, with wheat being predominant in most instances. Both bread wheat and rivet wheat type rachis nodes are recorded, along with a limited number of unusually small (probably immature) wheat grains. Oats are also reasonably common, although in the absence of the diagnostic floret bases, it is impossible to state whether wild or cultivated varieties are present. Barley and rye are both relatively scarce. Other potential crop plant remains include a possible mineral replaced field bean, additional indeterminate large pulse (cotyledon fragments and a possible fragmentary hempseed, although identification of the latter is far from certain.

Seeds of segetal weeds and grassland herbs are present throughout, although scarce within the assemblages from pot [278] (sample 7) and culvert 320. Taxa noted most frequently include stinking mayweed, orache, brome, cornflower, small legumes, goosegrass, medick/clover/trefoil, grasses and dock. Wetland plant macrofossils (namely nutlets of sedge and spike-rush) are present within four assemblages. Tree/shrub macrofossils are relatively scarce, but do include fragments of charred hazel nutshell, mineral-replaced elderberry seeds and desiccated bramble 'pips' and fig seeds. Charcoal/charred wood fragments, including a number of larger pieces, are present throughout, but other plant macrofossils are relatively scarce. However, charred bracken pinnule fragments are recorded within the assemblages from pits 336 (sample 4) and 378 (sample 6).

Fragments of black porous and tarry material are present within all seven assemblages. Although most are probable residues of the combustion of organic remains (including cereal grains) at very high temperatures, the pieces within culvert 320 are distinctly hard and brittle, probably indicating that they are bi-products of the combustion of coal. Coal fragments are also abundant within the same assemblage. Other remains include fragments of bone, ferrous globules (probably derived from the nineteenth century iron works), mineral replaced arthropod remains and faecal concretions, with the latter being particularly abundant within fill 375 of pit 378.

Discussion

With the exception of samples 3 (culvert [320]) and 7 (pot from 279), the assemblages are reasonably uniform in composition and it would appear most likely that much of the material within them is derived from a common source. What precisely this source was is unclear. However, by the mid-13th to 14th centuries, archaeological evidence suggests that refuse was being dumped into the disused quarry pits at the southern edge of the medieval town, some of which were subsequently disturbed by later building and/or gardening activities. While domestic refuse in the form of cereals, bone fragments, fish bones and eggshell is almost certainly present within the current assemblages, it is thought most likely that some of the seeds are derived from the use of grasses and grassland herbs as litter, bedding or flooring materials, which were subsequently burnt when soiled. Other seeds may be indicative of late stage cereal processing, which would have involved the removal by hand of any larger items of a similar size to the grains which had persisted within batches of cereal imported into the town from the agricultural hinterland. Within the seed assemblage, the presence of stinking mayweed almost certainly suggests that cereals and most particularly the wheat were largely being grown on the local heavier clay soils, some of which were probably being improved by the rotational cropping of small legumes. In addition, the presence of bracken also indicates that areas of heathland were being exploited for their valuable raw materials. The assemblage from fill 375 within stone-lined pit 378 (samples 5 and 6) also includes faecal residues, although all are highly comminuted and it is currently unclear whether these are derived from human sewage or animal dung.

The material within pot 278 (sample 7) is almost certainly derived from a domestic source similar to the other assemblages, although a far lower density of material is recorded. The contents may suggest possible food remains, but this has been infused with intrusive material and contaminated by other waste dumped nearby. As noted above, the later culvert (sample 3) appears to be largely filled with coal and coal by-products, most of which are probably derived from either domestic hearth waste or the industrial activities which took place on the site during the early modern era. A small number of charred cereals and seeds are also present, but these may again be residual.

Conclusions

In summary, many of the current assemblages would appear to be derived from domestic and/or agricultural refuse, much of which was originally deposited during the medieval period but subsequently disturbed by later activity. If late stage cereal processing was occurring on or near the site, this may imply that the Swan Street area acted as a focus for the importation of grain into the medieval town, an activity possibly facilitated by the nearby River Nene.

Although the list of species present within these assemblages is relatively comprehensive, many seeds are present as single specimens within a sample and, therefore, their value to the interpretation of the site and its component features is limited. In addition, the assemblages are mostly small (i.e. 0.1 litres in volume or less), with much of the material apparently being from secondary or disturbed contexts. Although these factors do severely limit the potential of the assemblages, it is recognised that this material does represent a rare and valuable glimpse into the everyday life of the medieval town.

Further analysis

Further to the assessment above, four samples were selected for quantification and analysis: sample 4 (fill 335/336, 13th century pit); sample 1 (quarry pit fill 282/286, 13th to 14th century); sample 2 (quarry pit fill 278/281, 13th to 14th century); and sample 5 (cesspit fill 374/378, 14th to 15th century).

All plant macrofossils and other remains noted are listed in Table 14, within which counts of cereal grains include only whole specimens and/or intact embryo ends. Identifications were made by comparison with modern reference specimens and nomenclature within the table follows Stace (2010). Most plant remains were charred, but very occasional mineral replaced seeds were also noted, although most could not be closely identified. Modern roots, seeds, arthropod remains and fungal sclerotia were also noted, although generally at a low density.

Sample composition

Cereals, chaff, seeds of common weeds and wetland plants, and tree/shrub macrofossils are present at varying densities within all four of the quantified assemblages. Preservation is variable; whilst some cereals and most seeds are reasonably well preserved, other grains are severely puffed and distorted, probably as a result of combustion at very high temperatures. Some material is also fragmented and abraded. Such damage could either be a result of exposure to the elements for some considerable period prior to inclusion within the feature fills, although it is equally likely that some remains suffered post-depositional damage as a result of the intensive use and reuse of a relatively small area of land over a number of years.

Oat, barley, rye and grains are recorded, with wheat occurring marginally more frequently than oats. Wheat would have been well suited to production on the slightly clayey base rich local soils (Cranfield University online Soilscapes database), and although it was rarely used whole for human consumption, it was a staple crop when milled for the production of flour. Most of the wheat grains from the Cow Lane assemblages appear relatively robust, although the sample from pit 336 does include a number of unusually small, rounded specimens, which it is assumed are derived from immature spikelets. Although cereal chaff is generally very scarce, bread wheat type rachis nodes with diagnostic crescentic glume inserts are recorded, along with one poorly preserved rivet wheat node with persistent glume bases. Rivet wheat is first recorded during the early part of the medieval period, but as it complemented the main bread wheat crop, producing a flour best suited to the making of biscuits, it rapidly became established across large areas of the Midlands and East Anglia.

Oats are also relatively abundant, although in the absence of any diagnostic floret bases, it is not possible to state whether the recovered specimens are from wild or cultivated varieties. The sample from quarry pit fill 286 includes a number of small grains, all of which are possibly derived from tertiary spikelets. Whilst much of the current material is probably present as a contaminant of the main wheat crop, oats were regularly used as animal fodder and were also toasted (as ‘groats’) for human consumption. Rye grains, with elongated embryos and distinct dorsal ridges, are also recorded at a low to moderate density within the Cow Lane assemblages. Rye has been noted from other sites within medieval Northampton (for example St. Peter’s Walk, Carruthers 1998-9), although it tends to occur most frequently within deposits of Late Saxon date. Barley grains are surprisingly scarce, and the few specimens which are recorded are very poorly preserved. However, none appear to have the asymmetry typical of a six-row variety. Although all four assemblages include cotyledons and/or fragments of large legumes, none retain intact testae or hilums and

they cannot, therefore, be clearly identified. Some specimens, which are more rounded, may be peas, but none appear to be sufficiently robust to be identified as beans.

Seeds of common segetal weeds and grassland herbs are present throughout, although rarely at a high density. Taxa noted most frequently include corn cockle, brome, cornflower, medick/clover/trefoil, grasses and dock. The relative abundance of stinking mayweed seeds is probably a result of the preferential cultivation of the fertile clay loam soils to the south east and south west of the town, although occasional seeds of sheep's sorrel, a weed of free-draining acid sand soils, are also recorded. Small legumes are present/common within all four assemblages, a pattern which has now been noted from numerous other sites of medieval date. All are probably related to the rotational cropping of leguminous plants as a means of improving soils left impoverished by over production and inadequate application of animal manure. Wetland plant macrofossils are generally scarce, although occasional sedge and spike-rush nutlets are recorded. Small fragments of hazel nutshell are also noted within three of the four assemblages. Charcoal/charred wood fragments, including some larger pieces >10mm in size, are present throughout, but other plant macrofossils occur very infrequently.

Small fragments of black porous and tarry material are present throughout, being especially common within the assemblages from quarry pit fill 336 and cesspit 378. Most are likely to be residues of the combustion of organic remains at very high temperatures, although occasional pieces are hard and brittle, and may be a bi-product of the combustion of coal. Possible domestic midden waste in the form of bone and eggshell fragments and fish bones/scales is also present, and cesspit includes what appear to be mineralised faecal remains as well as numerous amorphous mineral concretions.

Discussion

Although all four of the samples selected for analysis are broadly similar in composition, there are subtle differences which may be indicative of specific activities which were occurring on or near the site. The earliest assemblage, from 13th-century pit fill 335, is grain dominant, with wheat being particularly abundant. However, the quality of the material is generally poor, with the inclusion of a number of immature grains, which were probably harvested while they were still unfit. Such material would have a tendency to sprout in store, thereby severely compromising the entire batch of grain. Other contaminants, in the form of cereals, pulses and large weed seeds, are also present and it is suggested that the palatability of any flour milled from this material would have been severely impaired. It would, therefore, appear most likely that this assemblage is derived from the final stage of the processing of a batch of wheat, comprising material which was removed by hand immediately prior to the use of the grain. Whether this process was carried out on an ad hoc basis by the occupants of the site, or whether it is indicative of a more established agricultural process is unknown, but it would appear that the resulting 'dross' was either used as tinder/kindling or was deliberately burnt, possibly in a bonfire, hence the relatively poor preservation of the material.

By the 13th-14th centuries, a number of quarry pits, which had previously occupied much of this area towards the south edge of the town, were increasingly being used for the deposition of refuse. Samples 1 and 2 are both from such refuse deposits (within pits 286 and 281 respectively), and it is noted that the assemblages are reasonably similar in composition, possibly suggesting a similar source for the remains. In both instances cereals are common, but perhaps unusually, oats are

predominant. Whether this is significant is unclear, as the oats could simply be present as contaminants of a main wheat crop. However, it is noted that a number of the grains are large and well developed, possibly suggesting that they are derived from cereal which was deliberately being grown for either human or animal consumption. The weed assemblages are moderately diverse, with seeds of both segetal weeds and grasses/grassland herbs being relatively common. The grassland herbs are most likely to be derived from litter, fodder, bedding or flooring materials which were burnt after use. However, the relative abundance of possible early stage cereal processing detritus is unusual within an urban context, where it would, perhaps, be anticipated that the occupants were largely reliant upon the importation of semi-cleaned or prime grain. Segetal weeds are certainly relatively scarce from other sites within the southern part of Northampton (Carruthers 1998-9), although a malting oven at Kingswell Street to the west of the current site (Fryer 2008) does contain material indicative of the use of processing waste as fuel for the oven. However, near contemporary evidence from sites within Norwich (Murphy 1988) does suggest that some limited crop processing was occasionally undertaken within certain urban centres, albeit (in the Norwich example) at the periphery. The taphonomy of these two refuse assemblages is, therefore, likely to be complex. However, as small quantities of possible culinary detritus are also present within both samples, it is suggested that the remains are largely derived from mixed rubbish deposits, although it is unclear whether this material was being generated locally or whether it was being dumped from elsewhere within the medieval settlement.

The exact nature of the assemblage from late medieval stone-lined pit 378 is difficult to define for a number of reasons. Firstly, the assemblage is small and limited in composition; cereals and seeds are present, but often as single specimens. The few remains which are recorded are generally poorly preserved, with the grains in particular being severely puffed and distorted. Such preservation is typical of material burnt in an uncontrolled manner, possibly within a bonfire. In addition, the material is fragmented and abraded, with the charcoal in particular being highly comminuted, possibly suggesting either pre-depositional exposure to the elements or damage caused by post-depositional disturbance. Finally, it would appear that many of the features of this date had been disturbed by later building and/or gardening activities, resulting in an unknown degree of residuality and/or contamination. Notwithstanding these issues, the assemblage is unusual as it contains mineralised faecal material along with mineral replaced seeds and stem fragments. Unfortunately, the faecal residues are so comminuted that it is impossible to state whether they are derived from human sewage or animal dung, but given the context, it is, perhaps, most likely that the pit did primarily function as a cesspit.

Conclusions

In summary, three of the four assemblages selected for analysis appear to be derived from small quantities of refuse, which were deliberately dumped within an area of the town which may have been somewhat under developed, at least during the earlier part of the medieval period. The fourth assemblage, from stone-lined pit 378, also contains similar refuse, although it is suggested that this feature was primarily intended to function as a cesspit. As the data set is so limited, and as the taphonomy of the assemblages is potentially very complex, it is difficult to state with any degree of certainty how representative the remains may be of activities which were occurring within the near vicinity. However, it is suggested that some limited processing of cereals may have been occurring nearby, with the grain possibly arriving within the town via the nearby River Nene. As such activities were a potential nuisance (being ‘messy’, a focus for rodent infestation and a serous fire hazard), it is, perhaps, not surprising that they were being undertaken within an area which was somewhat

peripheral to the main focus of the medieval settlement. It would appear that the cereals represented within the assemblages were largely being grown on the local base rich soils, probably as part of a cropping regime including the rotational cultivation of small legumes. Wheat was almost certainly a mainstay of the local economy, although oats, rye, barley and large pulses were also probably being grown in their own right.

Table 14: Plant macrofossils and other remains

Feature No.	**335 / 336 / pit**	**282 / 286 / quarry pit**	**278 / 281 / quarry pit**	**374 / 378 / pit**	**278 / 279 / pot fill**	**378 / 375 / pit**
Sample No.	**4**	**1**	**2**	**5**	**7**	**6**
Date	**13thC**	**13-14thC**	**13-14thC**	**14-15thC**	**13-14thC**	**14-15thC**
Cereals and other potential crop plants						
Oat *Avena* sp. (grains)	56	61	93	9	x	x
(immature/tertiary grains)	-	21+22cf	2cf	-	-	-
(awn frags.)	2	-	1	-	-	-
Barley *Hordeum* sp. (grains)	8+2cf	8	14	3cf	x	x
(rachis nodes)	2	-	-	2cf	-	-
Barley/rye *Hordeum/Secale cereale* type (rachis nodes)	6	3	2	4	x	x
Rye *Secale cereale* L. (grains)	34+30cf	3+6cf	13+8cf	16+3cf	xcf	-
(rachis nodes)	6cf	-	-	2	x	-
Wheat *Triticum* sp. (grains)	664	35	60	48	xx	xx
(small/immature grains)	48	-	-	-	-	-
(rachis node frags.)		1	1	-	-	-
(rachis internode frags.)	12fg	-	-	-	-	-
Bread wheat *T. aestivum/compactum* type (rachis nodes)	4+4cf	-	1	1cf	x	-
Rivet wheat *T. turgidum* type (rachis nodes)	-	-	1	-	-	-
Cereal indet. (grains)	172	56	46	67	xx	xx
(germinated grains)		-	-	1	-	-
(detached embryos)	18	2	2	3	-	-
(basal rachis nodes)	6	-	-	1	x	-
Large Fabaceae indet.	2cfcotyfg	1+5cotyfg	14cotyfg	2coty	-	xcfm
Dry land herbs						
Corn cockle *Agrostemma githago* L.	2+1cf	2	1cf	-	-	-
Stinking mayweed *Anthemis arvensis* L.	-	-	2	-	-	-
A. cotula L.	26	27	51	7	x	x
Asteraceae indet.	-	3	6	-	-	xm
Orache *Atriplex* sp.	-	1	-	1	-	-
Cabbage *Brassica* sp.	-	19	2+1cf	-	-	-
Brassicaceae indet.	-	18	23	-	-	-
Brome *Bromus* sp.	32	3cf	4	6+2fg	x	x

Feature No.	**335 / 336 / pit**	**282 / 286 / quarry pit**	**278 / 281 / quarry pit**	**374 / 378 / pit**	**278 / 279 / pot fill**	**378 / 375 / pit**
Sample No.	**4**	**1**	**2**	**5**	**7**	**6**
Date	**13thC**	**13-14thC**	**13-14thC**	**14-15thC**	**13-14thC**	**14-15thC**
Caryophyllaceae indet.	-	1	1	1+1m	-	-
Cornflower *Centaurea* sp.	2+2cf+4fg	1	1+1cffg	2fg	-	-
Lambs Quarters *Chenopodium album* L.	-	-	1	-	-	-
Chenopodiaceae indet.	-	1	3	1	-	x
Legumes Fabaceae indet.	62+66coty	11+6coty	6+12coty	6+5coty	-	x
Goosegrass *Galium aparine* L.	-	1fg	-	2	-	-
Nipplewort *Lapsana communis* L.	-	1	4	-	x	-
Linum sp.	-	-	1cffg	-	-	-
Medick/clover/trefoil Medicago/Trifolium/ Lotus sp.	6	36	27	4	-	xcf
Black Medic *M. lupulina* L.	-	2	-	-	-	-
Mint *Mentha* sp.	2	-	-	-	-	-
Poppy *Papaver* sp.	-	1	-	-	-	-
Poppy *P. argemone* L.	-	1	-	-	-	-
Plantain *Plantago lanceolata* L.	-	1	-	1	-	-
Grasses Small Poaceae indet.	16	3+1cf	8	1	-	-
Grasses Large Poaceae indet.	20	4+1cf	32	3	-	-
Wild radish *Raphanus raphanistrum* L.	1cf	-	-	-	-	-
(siliqua frags.)	-	1	1	1	-	-
Dock *Rumex* sp.	4+2fg	5+4cf	14+1cf	1fg	x	x
Sheep's sorrel R. acetosella L.	4	2+2cf	13+1cf	-	-	-
German Knotweed *Scleranthus annuus* L.	-	1	1	-	-	-
Field madder *Sheradia arvensis* L.	1cf	-	1	2	-	-
Solanum sp.	-	-	-	-	-	xm
Spergular arvensis L.	-	-	7	-	-	-
Scentless mayweed *Tripleurospermum inodorum* (L.)Schultz-Bip	-	1	3+1cf	-	-	-
Wetland plants						
Sedge *Carex* sp.	2	1cf	1cf	-	-	-
Spike-rush *Eleocharis* sp.	2+1cf	1cf	-	xcf	-	-
Hemp-agrimony *Eupatorium cannabium* L.	-	-	1cf	-	-	-
Tree/shrub macrofossils						
Hazel *Corylus avellana* L.	4fg	5fg	1+1cffg	-	-	xcf
Bramble *Rubus sp.*	-	-	-	-	-	xm
Elderberry *Sambucus nigra L.*	-	-	-	-	-	xxm

Feature No.	**335 / 336 / pit**	**282 / 286 / quarry pit**	**278 / 281 / quarry pit**	**374 / 378 / pit**	**278 / 279 / pot fill**	**378 / 375 / pit**
Sample No.	**4**	**1**	**2**	**5**	**7**	**6**
Date	**13thC**	**13-14thC**	**13-14thC**	**14-15thC**	**13-14thC**	**14-15thC**
Other plant macrofossils						
Charcoal <2mm	xxxx	xxxx	xxxx	xxxx	xxxx	xxx
Charcoal >2mm	xxxx	xxx	xxxx	xxx	xxxx	x
Charcoal >5mm	xxx	xx	xx	xx	xx	x
Charcoal >10mm	xx	x	x	-	x	xx
Charred root/stem	x	-	x	x	x	x
Mineral replaced root/stem	-	-	-	x	-	xx
Bracken *Pteridium aquilinum* (L.) Kuhn (pinnule frags.)	-	-	-	-	-	x
Indet. bud	-	-	-	1	-	-
Indet. culm nodes/frags.	6	-	-	2	-	x
Indet. floret frag.	-	-	-	-	-	x
Indet. inflorescence frags.	x	x	xx	-	-	-
Indet. seeds	-	22	25	8	x	xm
Other remains						
Black porous 'cokey' material	xxx	x	xx	xxx	xxxx	xx
Black tarry material	xx	x	x	xx	xxx	x
Bone	x	x xb	-	-	x xb	xxx
Burnt/fired clay	-	x	-	x	-	-
Eggshell	-	x	-	-	-	-
Faecal concretions	-	-	-	xx	-	-
Fish bones	-	x	x	xx	x xb	xxx
Mineral replaced arthropod remains	x	-	-	x	-	xx
Mineralised concretions	-	-	-	xxx	-	xxxx
Small coal frags.	-	x	x	-	-	-
Small mammal/amphibian bones	x	x	x	xx	-	xxx
Vitreous material	-	x	x	-	-	-
Sample volume (litres)	**40**	**40**	**20**	**40**	**N/A**	**20**
Volume of flot (litres)	**0.1**	**<0.1**	**<0.1**	**<0.1**	-	-
% flot sorted	**100%**	**100%**	**100%**	**100%**	**<0.1**	**10%**

Key to Table

x = 1 – 10 specimens xx = 11 – 50 specimens xxx = 51 – 100 specimens xxxx = 100+ specimens
cf = compare fg = fragment coty = cotyledon m = mineral replaced b = burnt

7 DISCUSSION

Activity on the land at Cow Lane took place as three main episodes between the medieval period to present, interspersed with periods of abandonment and dereliction.

Quarrying

The earliest significant activity was quarrying which took place in the late 12th century onwards, followed by the infill of pits. As noted above, the waste from the ironstone extraction process was dumped back into the pits very quickly after the stone was quarried. After the pit was no longer in use for quarrying, sandy silty clay and domestic pottery and waste was dumped into them. This resulted in the levelling and terracing of the land, although this was not a uniform or single process. Some pits indicated that quarrying was happening contemporaneously with dumping in other areas of the site (pit 281).

Pottery recovered from the quarry fills indicates that the majority of dumping dates from between the mid-13th century to the mid-14th century, with some dumping probably continuing to take place until the beginning of the 15th century. As dumping seems to have begun soon after the extraction of the ironstone, quarrying probably took place periodically from the late 12th or early 13th centuries onwards. This is contemporary with other quarrying events in the area; at St John's Street, quarry pits were excavated from the Saxo-Norman period to the early 13th century (Brown 2010, 26), and quarrying defined plot boundaries between Kingswell Street and Woolmonger Street from the 13th to 14th centuries (Brown 2008, 188). This activity follows on from the major expansion of the town that took place in the 12th century. However, at Cow Lane, as with quarrying at Black Lion Hill (Shaw 1985, 118) and Derngate (Shaw 1984, 74), quarrying is suggestive of small scale interventions rather than on a commercial scale. Quarrying at Cow Lane may be associated with the layout of the roads in this part of town, including Cow Lane itself, which was perhaps established in the third quarter of the 13th century.

Occupation

After the pits were levelled and the site terraced, a boundary wall was constructed, aligned east-west across the site. Small wooden structures may have been related to the wall in this period, as indicated by postholes. At the end of the medieval period, the site underwent a period of probable cultivation, with a build-up of sandy silt soil and a small scatter of domestic pottery. At this point the area was probably cultivated as back yards, as refuse pits and cesspits were also constructed during this period. These varied between shallow earth-cut pits and larger stone-lined constructions. Some limited terracing also took place to the west of the site, and during the following post-medieval period, further levelling and flooring events raised the terrace level. The function of the site remained broadly unchanged during the post-medieval period, with evidence for back yard timber buildings, drains, and stone-lined cesspits and wells.

This form of landuse continued until the end of the 18th century, when upstanding structures were demolished, wall stone and pit lining stones were extensively robbed and some pits were infilled. Contemporaneous with the construction of the iron foundry in the early-mid 19th century, a medieval stone wall was clad with brick and a number of cellars or coal houses with brick floors were adjoined to the wall on its north side. Pits and earlier wells were infilled with waste from the foundry workings. A row of brick terraced houses were constructed fronting onto St John's Terrace, with cellars and back yard waste pits, some of which post-dated the foundry layers. A

large square stone-lined cesspit might relate to the former public house which stood at the end of St John's Terrace.

At the turn of the 20th century, Cow Lane was renamed Swan Street. The foundry and houses of St John's Terrace were both demolished, and demolition waste spread across the site. A brick garage was constructed in the footprint of the terrace, which stood until 2014, and the land to the north was used for car parking.

BIBLIOGRAPHY

Blinkhorn, P, 2010 The Saxon and medieval pottery, in A Chapman (ed) *West Cotton, Raunds. A study of medieval settlement dynamics: AD450-1450. Excavation of a deserted medieval hamlet in Northamptonshire, 1985-89,* Oxford, 259-333

Brown, J, 2008 Excavations at the corner of Kingswell Street and Woolmonger Street, Northampton, *Northamptonshire Archaeology*, **35**, 173-214

Brown, J, 2010 *Medieval and post-medieval remains at Angel Street car park, Northampton*, Northamptonshire Archaeology report, **10/107**

Brown, J, 2014 *Written Scheme of Investigation for an archaeological watching brief at the proposed Premier Inn site, Swan Street, Northampton, October 2014*, MOLA Northampton

Brown, J, 2013 *An archaeological trial trench evaluation at Swan Street car park, Northampton, July 2013,* Northamptonshire Archaeology report, **13/147**

Brown, J, forthcoming, *Archaeological excavations at the former Northamptonshire county council car park, St John's Street and Fetter Street, Northampton,* MOLA Northampton

Carruthers, W, 1998-9 Charred plant remains and the arable environment, in I Soden (ed.) A story of urban regeneration: Excavations off St Peter's Walk, Northampton 1994 – 7, *Northamptonshire Archaeology*, **28**, 108 - 112

Clark, J, 1995 *The medieval horse and its equipment: Medieval finds from excavations in London,* Museum of London.

Cohen, A, and Serjeantson, D, 1996 *A Manual for the Identification of Bird Bones from Archaeological Sites,* Archetype Publication

Cooper, N J, 2006 *The Archaeology of the East Midlands: an archaeological resource assessment and research agenda*, Leicester Archaeology Monographs, **13**

EH 1991 *Exploring our past*, English Heritage

EH 1997 *English Heritage Archaeology Division Research Agenda*, English Heritage

Foard, G, 1995 The early topography of Northampton and its suburbs, *Northamptonshire Archaeology*, **26**, 109-122

France, D L, 2009 *Human and Nonhuman Bone Identification*: *A Color Atlas,* Cambridge Regional College Press

Fryer, V, 2008 Plant Remains, in J Brown Excavations at the corner of Kingswell Street and Woolmonger Street, Northampton*, Northamptonshire Archaeology*, **35**, 209 – 210

Grant, A, 1982 The use of tooth wear as a guide to the age of domestic ungulates, in B Wilson, C Grigson and S Payne (eds.) *Ageing and Sexing Animal Bones from Archaeological Sites.* BAR. British Series, **109**, 91-108

Hambleton, E, 1999 *Animal Husbandry Regimes in Iron Age Britain: a comparative study of faunal assemblages from British Iron Age sites,* BAR British Series, **282**, Archaeopress

Harland, J F, Barrett, J H, Carrott, J, Dobney, K, and Jaques, D, 2003 *The York System: an integrated zooarchaeological database for research and teaching.* Internet Archaeology, **13**
(available at: http://intarch.ac.uk/journal/issue13/harland_toc.html)

HE 2015 *Animal Bones and Archaeology: Guidelines for Best Practice,* Historic England (available online at: https://content.historicengland.org.uk/images-books/publications/animal-bones-and-archaeology/animal-bones-and-archaeology.pdf (Accessed 27/07/2015)

Hiller, J, Hardy, A, and Blinkhorn, P, 2002 Excavations at Derngate, Northampton, 1997-2000, *Northamptonshire Archaeology*, **30**, 31-62

Hillson, S, 1992 *Mammal Bones and Teeth: An Introductory Guide to Methods of Identification,* University College of London Institute of Archaeology Publications

Hurst, J G, Neal, D S, and Van Beuningen, H J E, 1986 *Pottery Produced and Traded in North-West Europe 1350 – 1650,* Rotterdam Papers, **6**

Instone, E, 1970 Northampton Iron Foundries, *Bulletin of Industrial Archaeology*, **8**, 2-8

Ivens, R J and Hurman, B, 1995 The Medieval Pottery, in R Ivens, P Busby and N Shepherd *Tattenhoe and Westbury: Two Deserted Medieval Settlements in Milton Keynes*, Buckinghamshire Archaeology Society Monograph, **8**, 241-302

King, N A, 1994 Medieval and Post-Medieval Pottery, in R J Zeepvat, J S Roberts, and N A King *Caldecotte, Milton Keynes: Excavation and Fieldwork 1966-91*, Buckinghamshire Archaeology Society Monograph, **4,** 197-207

Knight, D, Vyner, B, and Allen, C, 2012 *East Midlands Heritage: An Updated Research Agenda and Strategy for the Historic Environment of the East Midlands,* University of Nottingham and York Archaeological Trust

Lee, F, 1954 A New Theory of the Origins and early growth of Northampton, *The Archaeological Journal*, **110**, 164-74

Margeson, S, 1993 *Norwich Households: Medieval and Post Medieval Finds from Norwich Survey Excavations,* East Anglian Archaeology, **58**

McCarthy, M, 1979 The Pottery, in J H Williams *St Peter's St, Northampton. Excavations 1973-76,* Northampton Development Corporation Monograph, **2**, 151-242

Mellor, M, 1994 *Oxford Pottery: A Synthesis of middle and late Saxon, medieval and early post-medieval pottery in the Oxford Region,* Oxoniensia, **59**, 17-217

MOLA 2014a *Written Scheme of Investigation for an archaeological watching brief at the proposed Premier Inn site, Swan Street, Northampton, October 2014,* MOLA Northampton

MOLA 2014b *Archaeological fieldwork manual*, MOLA Northampton

Moore, W R G, 1980 *Northamptonshire Clay Tobacco-pipes and Pipemakers*, Northampton Museums and Art Gallery

Moran, N C, and O'Connor, T P, 1992 Bones that cat gnawed upon: a case study in bone modification, *Circaea*, **9 (1)**, 27-34

MPRG 2001 *Minimum Standards for the Processing, Recording, Analysis and Publication of post-roman Ceramics,* Medieval Pottery Research Group, Occasional Paper, **2**

MPRG 1998 *Guide to the Classification of Medieval Ceramic Forms*, Medieval Pottery Research Group, Occasional Paper, **1**

Murphy, P, 1988 Plant macrofossils, in B Ayers *Excavations at St. Martin-at-Palace Plain, Norwich, 1981,* East Anglian Archaeology, **37**, 118 – 125

Orton, C, 1998-99 Minimum Standards in Statistics and Sampling, *Medieval Ceramics*, **22-23**, 135-8

Oswald, A, 1975 *Clay pipes for the Archaeologist*, BAR British Series, **14**

Plowman, J, 2010 *Northampton public houses and their signs*, Azlan Publications

Roberts, J S , 1994 Caldecotte Village, in R J Zeepvat, J S Roberts, and N A King *Caldecotte, Milton Keynes: Excavation and Fieldwork 1966-91*, Buckinghamshire Archaeology Society Monograph, **4**, 59-96

Schmid, E, 1972, *Atlas of Animal Bones for Prehistorians, Archaeologists and Quaternary Geologist,* Elsevier

Shaw, M, 1984 Excavations on a medieval site at Derngate, Northampton, *Northamptonshire Archaeology*, **19**, 63-82

Shaw, M, 1985 Excavations on a Saxon and medieval site at Black Lion Hill, Northampton, *Northamptonshire Archaeology*, **20**, 113-138

Shaw, M, 1993 *Archaeological evaluation at St John's Street, Northampton 1990*, Northamptonshire Archaeology report, **861**

Shaw, M, and Steadman, S, 1993-4 Life on a medieval backstreet: archaeological excavations at Swan Street, Northampton 1989, *Northamptonshire Archaeology,* **25**, 143-147

Shaw, M, Steadman, S, and Webster, M, 1992 *Northampton High School for Girls, Derngate: Archaeological Evaluation- Stage 2- Fieldwork*, Northamptonshire Archaeology report

Shaw, M, Steadman, S, and Webster, M, 1993 Northampton, Derngate, Northampton High School for Girls (SP758 603), *Medieval Archaeology,* **37,** 278

Shepherd, N, 2013 *Archaeological desk-based assessment at Swan Street, Northampton,* CgMs Consulting, **NS/15308**

Stace, C, 2010 *New Flora of the British Isles,* 3rd edition, Cambridge University Press

Tomek, T, and Bocheński, Z M, 2009a *A Key for the Identification of Domestic Bird Bones in Europe: Galliformes and Columbiformes,* Institute of Systematic and Evolution of Animals of the Polish Academy of Sciences

Tomek, T, and Bocheński, Z M, 2009b *Key to the Identification of Domestic Bird Bones in Europe: Preliminary Determination*, Institute of Systematic and Evolution of Animals of the Polish Academy of Sciences.

Welsh, T, 1996-7 Northampton alternatives: Conjecture and counter-conjecture, *Northamptonshire Archaeology*, **27**, 166-176

Williams, J H, 1979 *St Peter's Street, Northampton: Excavations 1973-1976,* Northampton Development Corporation Archaeological Monograph, **2**

Winder, J M, 2011 *Oyster shells from archaeological sites: a brief illustrated guide to basic processing*, unpublished, https://oystersetcetera.files.wordpress.com/

Young, J, and Vince, A 2005 *A Corpus of Anglo-Saxon and Medieval Pottery from Lincoln,* Lincoln Archaeological Studies, **7**

Maps

LAT 1983 Soil Survey of England and Wales: Soils of Southern England, Scale 1:250000, 4, Lawes Agricultural Trust

Websites

Family History Northants 2015 http://www.familyhistorynorthants.co.uk/

Northampton Museums 2015 http://www.northampton.gov.uk/museums, https://www.flickr.com/photos/northampton_museum/sets/72157623474349430,

BGS 2015 Geoindex http://www.bgs.ac.uk/geoindex British Geological Survey

MOLA Northampton
4 August 2015, revised 20 August

APPENDIX 1: POTTERY OCCURRENCE IN MEDIEVAL CONTEXTS

Table 15: Pottery occurrence by number and weight (in g) of sherds per context by fabric type (Refer to Table 3 for phase chronology)

	F200		F308		F319		F320		F324		F329		F330		F331		F342		F345		F360		F370		F370		F404		F408		
Context	No	Wt	No	Wt	No	Wt	No	No	Wt	No	Wt	No	No	No	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	**Date**
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	1	6	-	-	**M6**
119	2	23	-	-	-	-	-	-	-	-	-	-	-	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M4**
128	-	-	-	-	-	-	-	-	1	4	4	-	-	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M4**
160	-	-	-	-	-	-	1	4	2	18	5	-	-	37	-	-	-	-	-	-	-	-	-	-	15	334	2	44	2	9	**M7**
162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	22	-	-	-	-	**M7**
168	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M7**
170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	52	2	9	-	-	**M7**
172	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			1	5	-	-	**M6**
188	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M3**
190	-	-	-	-	1	2	-	-	-	-	7	-	-	59	-	-	-	-	1	13	-	-	-	-	-	-	-	-	-	-	**M4**
191	-	-	-	-	-	-	-	-	-	-	1	-	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M4**
204	2	16	-	-	-	-	-	-	1	39	2	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M4**
216	-	-	-	-	-	-	-	-	2	73	1	-	-		-	-	-	-	-	-	-	-	-	-	5	158	1	6	-	-	**M7**
217	-	-	-	-	-	-	-	-	-	-	-	-	-	88	-	-	-	-	-	-	-	-	-	-	3	24	2	48	1	13	**M7**
219	-	-	-	-	-	-	-	-	-	-	5	-	-	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M4**
227	-	-	-	-	-	-	1	9	-	-	1	-	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M3**
229	-	-	-	-	-	-	-	-	-	-	5	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M4**
232	-	-	-	-	-	-	1	1	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M2**
263	-	-	-	-	-	-	1	6	2	7	1	-	-	6	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M3**
278	-	-	-	-	-	-	-	-	1	5	--	-	-	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M3**
279	-	-	-	-	-	-	-	-	-	-	2	-	-	239	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M3**
280	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M1**
282	-	-	-	-	1	5	1	5	2	14	6	-	-	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M3**
303	1	6	-	-	-	-	-	-	1	2	2	-	-	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M3**
305	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M4**
310	-	-	-	-	-	-	1	4	-	-	-	-	-	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M2**
312	-	-	-	-	-	-	-	-	2	80	2	-	-	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M3**
314	-	-	-	-	-	-	-	-	-	-	1	-	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M3**
316	-	-	1	25	-	-	-	-	-	-	11	-	-	309	-	-	-	-	-	-	2	20	-	-	-	-	-	-	-	-	**M4**
329	-	-	-	-	-	-	1	31	1	2	1	-	-	179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M3**
332	-	-	-	-	-	-	-	-			-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M2**
335	-	-	-	-	-	-	-	-	1	3	-	-	-	692	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M2**
337	-	-	-	-	-	-	-	-	-	-	-	-	-	241	-	-	1	10	-	-	-	-	-	-	-	-	-	-	-	-	**M2**
339	-	-	-	-	-	-	-	-	-	-	1	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M3**
356	-	-	-	-	-	-	-	-	1	102	1	-	-	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M4**
374	-	-	-	-	9	270	3	25	1	57	1	1	1	259	-	-	-	-	4	69	-	-	1	36	-	-	-	-	-	-	**M4**
376	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**M1**
Total	**5**	**45**	**1**	**25**	**11**	**277**	**10**	**85**	**18**	**406**	**64**	**1**	**1**	**2644**	**1**	**4**	**1**	**10**	**5**	**82**	**2**	**20**	**1**	**36**	**28**	**595**	**9**	**118**	**3**	**22**	

APPENDIX 2: POTTERY OCCURRENCE IN POST-MEDIEVAL CONTEXTS

Table 16: Pottery occurrence by number and weight (in g) of sherds per context by fabric type (Refer to Table 3 for phase chronology)

Fabric/	**MED**		**F409**		**F410**		**F413**		**F417**		**F420**		**F426**		**F429**		**F438**		**F1000**		
Context	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	**Date**
107	1	19	-	-	-	-	1	12	-	-	-	-	-	-	-	-	-	-	-	-	**PM4**
112	2	29	-	-	-	-	-	-	-	-	-	-		-	-	-	2	128	2	39	**MOD**
118	2	8	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	**MOD**
138	6	37	-	-	-	-	-	-	-	-	-	-	1	187	-	-	-	-	-	-	**PM3**
140	1	6	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	**MOD**
176	-	-	-	-	-	-	-	-	-	-	-	-	17	2145	-	-	-	-	9	113	**MOD**
192	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	37	598	**MOD**
202	-	-	-	-	1	21	-	-	1	7	-	-	1	12	-	-	-	-	1	2	**MOD**
205	-	-	-	-	1	26	2	65	2	68	-	-	4	237	1	11			-	-	**PM4**
208	2	14	5	75	3	19	6	193	-	-	-	-	3	55	1	14	2	47	-	-	**PM4**
210	1	2			1	4	1	5	-	-	-	-	1	85	-	-	-	-	-	-	**PM4**
222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	**MOD**
225	4	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	**PM3**
288	-	-	-	-	-	-	-	-	-	-	-	-	1	24	-	-	6	484	1	18	**MOD**
299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59	3374	**MOD**
321	4	8	-	-	-	-	1	1	-	-	1	21	-	-	-	-	-	-	4	93	**MOD**
Totals	**23**	**151**	**5**	**75**	**6**	**70**	**11**	**276**	**3**	**75**	**1**	**21**	**28**	**2745**	**2**	**25**	**11**	**660**	**115**	**4241**	

APPENDIX 3: CONTEXT REGISTER

Table 17: Context register

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
101	Layer	Demolition layer, debris mixed with blue-black/ brown-grey silty sand	Site wide, >1m deep	Pottery, brick/tile, animal bone			Layer	Modern (MOD)
102	Fill	Rubble and soil fill of cellar	1.73m wide, 0.70m deep				Possible cellar	19th century (MOD)
103	Wall	Brick wall of cellar	0.70m high				Possible cellar	19th century (MOD)
104	Floor	Brick floor of cellar	1.730 long, 0.07m high				Possible cellar	19th century (MOD)
105	Cut	Foundation cut for cellar	1.83m wide, 0.82m deep				Possible cellar	19th century (MOD)
106	Layer	Intermittent thin layer of mortar, overlies (118) and (119)	0.02-0.05m deep				Layer	18th-19th centuries (PM4, MOD)
107	Fill	Mixed fill, pit [108]	2.50m wide, 0.45m deep	Pottery, clay tobacco pipe			Pit	18th-19th centuries (PM4, MOD)
108	Cut	Irregular-sided pit	2.50m wide, 0.45m deep			Same as 212	Pit	18th-19th centuries (PM4, MOD)
109	Fill	Rubble and soil fill, stone-lined pit [111]	2.00m wide, 1.00m deep	Animal bone			Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
110	Wall	Stone lining of pit [111]	2.18m wide, 1.00m high				Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
111	Cut	Stone-lined pit	2.18m wide, 1.00m deep				Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
112	Fill	Mixed fill of wall foundation cut [113]	>1.50m long, 0.42m wide, 0.39m deep	Pottery, animal bone			Wall cut	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
113	Cut	Wall foundation cut for wall (198)	>1.50m long, 0.42m wide, 0.39m deep				Wall cut	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
114	Fill/ Layer	Rubble fill/demolition layer	1.2m long, 0.20-0.30m wide, 0.80m deep				Demolition	Modern (MOD)
115	Fill	Fill between stones of wall (116)	2.50m long, 0.20m wide, 0.40m deep				Wall	14th-15th centuries (M4, M5, M6)
116	Wall	Ironstone wall	2.50m long, 0.30m deep, 0.20m wide				Wall	14th-15th centuries (M4, M5, M6)
117	Cut	Wall foundation (116)	2.50m long, 0.20m, 0.40m deep				Wall	14th-15th centuries (M4, M5, M6)
118	Fill	Rubble brick boundary wall cut [164]	6.80m wide, 0.65m deep	Pottery, animal bone			Wall	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
119	Fill	Dark grey-brown sandy silt layer above quarry pits	4.50m wide, 0.25m deep	Pottery, animal bone			Pit	14th-15th centuries (M4, M5, M6)

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
120	Fill	Possible pit [121]	1.00m wide, 0.20m deep				Pit	12th-13th centuries (M1, M2)
121	Cut	Possible pit	1.00m wide, 0.22m deep				Pit	12th-13th centuries (M1, M2)
122	Layer	Layer of hard sand, possibly natural	4.50m wide, 0.40m deep				Layer	Natural?
123	Fill	Quarry pit [135], redeposited natural sand and ironstone	2.90m wide, 0.39m deep				Pit	12th-13th centuries (M1, M2)
124	Wall	Exposed core of wall in pit [125]	2.00m wide, 0.31m deep				Wall	14th-15th centuries (M4, M5, M6)
125	Cut	Pit	2.00m wide, 0.31m deep				Pit	14th-15th centuries (M4, M5, M6)
126	Natural	Natural hard light yellow-orange sand	>16m wide, 0.50m deep					Natural
127	Layer	Layer of hard sand, possibly natural	2.20m wide, 0.25m deep				Layer	Natural?
128	Fill	Mixed backfill of pit [129]	1.35m long, 1.10m wide, 0.21m deep	Pottery, flint, animal bone			Pit	14th-15th centuries (M4, M5, M6)
129	Cut	Domestic waste pit	1.35m long, 1.10m wide, 0.21m deep				Pit	14th-15th centuries (M4, M5, M6)
130	Layer	Layer of hard sand, possibly natural	0.90m deep				Layer	Natural?
131	Fill	Pit [145], redeposited sand	0.20m deep				Pit	Natural?
132	Fill	Backfill of possible pit [134], mixed rubble					Pit or tree throw	12th-13th centuries (M1, M2)
133	Fill	Pit [111]	0.75m wide, 0.38m deep				Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
134	Cut	Possible pit	1.05 wide by 0.25 deep				Pit or tree throw	12th-13th centuries (M1, M2)
135	Cut	Possible quarry pit	>3.00m wide, >0.80m deep				Pit	12th-13th centuries (M1, M2)
136	Fill	Pit [137], black foundry waste	>1.75m long, 1.75m wide, >1.20m deep				Pit	19th century (MOD)
137	Cut	Rectangular pit	>1.75m long, 1.75m wide, >1.20m deep				Pit	19th century (MOD)
138	Fill	Pit [139]	0.70m long, 0.63m wide, 0.38m deep	Pottery, bone, shell, clay tobacco pipe, antler			Pit	18th-19th centuries (PM4, MOD)
139	Cut	Stone-lined pit with mortar floor	0.70m long, 0.63m wide, 0.40m deep				Pit	18th-19th centuries (PM4, MOD)
140	Fill	Pit [141], foundry slag, clinker and ash	0.11-0.24m deep	Pottery, slag			Pit or well	19th century (MOD)

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
141	Cut	Foundry waste pit/ possible backfilled well	0.80m deep				Pit or well	19th century (MOD)
142	Fill	Pit [143]	0.97m long, 0.80m wide, 0.01-0.03m deep	Pottery, clay tobacco pipe			Cesspit or well	19th century (MOD)
143	Cut	Pit, possible cesspit or well	0.97m long, 0.80m wide, 0.01-0.03m deep				Cesspit or well	19th century (MOD)
144	Fill	Pit or tree throw [145]	0.70m wide, 0.10m deep				Pit or tree throw	12th-13th centuries (M1, M2)
145	Cut	Pit or tree throw	0.70m wide, 0.32m deep				Pit or tree throw	12th-13th centuries (M1, M2)
146	Fill	Pit [147], mortar fill	0.96m long, 0.94m wide, 0.24m deep				Post pad	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
147	Cut	Pit for concrete pile or pillar base	0.96m long, 0.94m wide, 0.24m deep				Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
148	Structure	Foundry culvert/ drain	>2.50m long, 0.23m wide				Culvert/ drain	19th century (MOD)
149	Cut	Cut for foundry culvert/ drain	>2.50m long, 0.35m wide				Culvert/ drain	19th century (MOD)
150	Fill	Pit [151]	1.00m long, 0.60m wide, 0.40m deep				Robbing pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
151	Cut	Rectangular robbing pit	1.00m long, 2.94m wide, 0.30m deep				Robbing pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
152	Fill	Pit [153]	>1.0m long, 1.30m wide, 0.36m deep			Same as 306	Pit	14th-15th centuries (M4, M5, M6)
153	Cut	Pit	>1.0m long, 1.30m wide, 0.36m deep			Same as 307	Pit	14th-15th centuries (M4, M5, M6)
154	Fill	Construction cut [155], daub sandy clay	1.20m long, 0.52m wide, 0.05m deep				Construction cut	19th century (MOD)
155	Cut	Construction cut for robbed-out wall	1.20m long, 0.52m wide, 0.05m deep				Construction cut	19th century (MOD)
156	Fill	Modern cut, foundry waste	1.50m long, 0.70m wide, 0.27m deep				Pit	Modern (MOD)
157	Cut	Modern feature	1.50m long, 0.70m wide, 0.27m deep				Pit	Modern (MOD)
158	Fill	Construction cut [159], daub sandy clay	1.90m long, 1.15m wide, 0.05m deep		6		Construction cut	19th century (MOD)
159	Cut	Construction cut for robbed-out wall	1.90m long, 1.15m wide, 0.05m deep				Construction cut	19th century (MOD)
160	Fill	Backfill of pit [161]	3.65m long, 2.45m wide, 0.18m deep	Pottery, animal bone, brick/tile, shell	1, 2, 3, 5		Possible waste pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
161	Cut	Possible rectangular waste pit	3.65m long, 2.45m wide, 0.18m deep				Possible waste pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
162	Fill	Pit [163]	4.80m long, 2.20m wide,	Pottery,	4		Possible	16th-18th centuries (M7,

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
			0.14m deep	animal bone			waste pit	PM1, PM2, PM3, PM4)
163	Cut	Possible irregular waste pit	4.80m long, 2.20m wide, 0.14m deep				Possible waste pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
164	Cut	Construction cut for brick wall	5.45m long, >0.45m wide				Constructi on cut	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
165	Cut	Construction cut for ironstone wall (187)	14.0m long, 0.6m wide				Constructi on cut	13th-14th centuries (M3)
166	Layer	Layer of orange-brown silty sand					Layer	15th-16th centuries (M4, M5, M6, M7)
167	Layer	Layer of grey-brown clay silt					Layer	15th-16th centuries (M4, M5, M6, M7)
168	Fill	Posthole [169], sandy silt and broken stone roof tile fragments as packing	0.40m long, 0.36m wide, 0.30m deep	Pottery, animal bone, shell			Posthole	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
169	Cut	Posthole	0.40m long, 0.36m wide, 0.30m deep			Assoc. with [171], [173], [175]	Posthole	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
170	Fill	Posthole [171], one cobble as packing	0.40m long, 0.36m wide, 0.27m deep	Pottery, animal bone, brick/tile, shell	7		Posthole	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
171	Cut	Posthole	0.40m long, 0.36m wide, 0.27m deep			Assoc. with [169], [173], [175]	Posthole	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
172	Fill	Posthole [173], large limestone blocks as packing	0.28m deep	Animal bone, shell, pottery			Posthole	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
173	Cut	Posthole	0.28m deep			Assoc. with [171], [169], [175]	Posthole	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
174	Fill	Posthole [175], limestone packing	0.43m long, 0.32m wide				Posthole	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
175	Cut	Posthole	0.43m long, 0.32m wide			Assoc. with [171], [173], [169]	Posthole	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
176	Fill	Pit or well [177], with foundry debris	2.00m long, 1.82m wide, >0.6m deep	Pottery, animal bone, brick/tile, clay tobacco pipe, crucible			Pit/ well	19th century (MOD)
177	Cut	Waste pit or filled well	2.00m long, 1.82m wide, >0.6m deep				Pit/ well	19th century (MOD)
178	Wall	Ironstone wall, very robbed	1.40m long, 0.85m wide		8		Wall	19th century (MOD)
179	Cut	Construction or robber cut of wall (178)	1.40m long, 0.85m wide				Constructi on cut	19th century (MOD)

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
180	Fill	Backfill of pit [181], demolition debris	2.10m long, 0.70m wide				Pit	19th century (MOD)
181	Cut	Foundation trench for possible stone-lined cesspit	2.70m long, 1.70m wide, >0.40m deep				Pit	18th century (PM3, PM4)
182	Fill	Pit [183], sandy clay and foundry and demolition debris		Pottery, brick/tile		Same as 299	Pit	19th century (MOD)
183	Cut	Circular pit				Same as 300	Pit	19th century (MOD)
184	Layer	Layer of building debris with a light brown sandy clay	0.12m deep	Pottery, brick/tile	9		Layer	19th century (MOD)?
185	Fill	Pit [186]	1.98m long, 1.60m wide				Pit	19th century (MOD)
186	Cut	Irregular pit	1.98m long, 1.60m wide				Pit	19th century (MOD)
187	Wall	Ironstone dry stone wall	14m long, 0.6-1.2m wide				Wall	14th-15th centuries (M4, M5, M6)
188	Layer	Layer, possibly from terracing	0.14m deep	Pottery, bone			Layer	14th-15th centuries (M4, M5, M6)
189	VOID							
190	Layer	Layer of dark sandy clay loam with slag intrusions		Pottery, animal bone		Same as 119	Layer	14th-15th centuries (M4, M5, M6)
191	Layer	Layer of dark sandy clay loam with slag intrusions		Pottery, brick/tile		Same as 119	Layer	14th-15th centuries (M4, M5, M6)
192	Fill	Stone-lined pit [196], furnace waste and clinker	1.70m long, 0.70m wide, 0.36m deep	Pottery, animal bone, clay tobacco pipe, slag, glass			Pit	19th century (MOD)
193	Fill	Stone-lined pit [196], building debris and rubble	1.70m long, 0.50m-1.30m wide, 0.46m to 0.16m deep				Pit	19th century (MOD)
194	Fill	Stone-lined pit [196], thin deposit of peaty organic material	0.70m-0.80m long, 1.30m wide, 0.08m deep				Pit	19th century (MOD)/4
195	Structure	Stone lining of pit [196], ironstone, kiln lining and brick	2.15m long, 0.50m-0.30m wide, 0.55m deep				Pit	19th century (MOD)/4
196	Cut	Sub-rectangular stone-lined cesspit	2.15m long, 2.15m wide, 0.55m deep				Pit	19th century (MOD)/4
197	Layer	Layer of firm mid yellow-grey clay				Same as 218	Layer	16th-18th centuries (M7, PM1, PM2, PM3, PM4)?
198	Wall	Ironstone boundary wall with mortar, later faced with brick	1.80m long, 0.60m wide, 0.38m deep				Wall	19th century (MOD)
199	Structure	Stone lining of pit [139], ironstone, heavily robbed	0.89m long, 0.62m wide				Wall	18th-19th centuries (PM4, MOD)?
200	Structure	Mortar floor of pit [139], a bedding layer for robbed flagstones	0.77m long, 0.42m wide				Floor	18th-19th centuries (PM4, MOD)?

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
201	Fill	Pit [141], furnace waste, slag, and clinker	0.30-0.10m deep	Brick/tile			Pit or well	19th century (MOD)
202	Fill	Pit [141], furnace waste, slag, and clinker	0.30-0.10m deep	Pottery, Brick/tile			Pit or well	19th century (MOD)
203	Structure	Ironstone lining of circular cesspit, heavily robbed	0.16m wide, 0.10m deep				Wall	19th century (MOD)
204	Layer	Mid grey-brown sandy silt layer	>3.0m long, >2.0m wide, 0.20m deep	Pottery, flint, animal bone		Same as 119	Layer	14th-15th centuries (M4, M5, M6)
205	Fill	Stone-lined cesspit [213], sandy silt mixed with building debris		Pottery, animal bone, clay tobacco pipe, oyster shell			Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
206	Floor	Flagstone floor on base of pit [213]					Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
207	Fill	Bedding deposit for flagstone floor (206) in pit [213]		Clay tobacco pipe	10		Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
208	Fill	Robber pit [214], grey-brown sandy silt and mortar and ironstone fragments	1.00m long, 0.53m wide, 0.40m deep	Pottery, animal bone, glass, clay tobacco pipe, daub			Robber cut	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
209	Structure	Stone lining of cesspit [213], unmortared ironstone	0.90-0.49m long, 0.37m wide, 0.40m deep				Wall	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
210	Fill	Pit [212], sandy silt, mortar and ironstone fragments	1.0m long, 0.65m wide, 0.11m deep	Pottery, animal bone, glass, clay tobacco pipe	11		Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
211	Fill	Pit [212], sandy silt, mortar and ironstone fragments	1.0m long, 1.94m wide, 0.10-0.36m deep				Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
212	Cut	Rectangular pit	1.50m long, 1.50m wide, 0.38m deep				Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
213	Cut	Cut for stone-lined (209) cesspit	0.49m-0.90m long, 0.37m wide, 0.40m deep				Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
214	Cut	Robber cut	1.0m long, 0.32m wide, 0.17m deep				Robber cut	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
215	Structure	Stone lining of cesspit [181], unmortared ironstone	2.70m long, 1.20m wide, 0.96m deep				Wall	18th century (PM3, PM4)
216	Fill/layer	Dump deposits or fill of mid black-grey clay silt	1.0m long, 1.16m wide, 0.14m deep	Pottery, animal bone, brick/tile	12, 13		Layer	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
217	Fill/layer	Dump deposits or fill of dark grey-brown clay silt	1.0m long, 1.20m wide, 0.22m deep	Pottery, antler, brick/tile, shell, coke	14		Layer	16th-18th centuries (M7, PM1, PM2, PM3, PM4,)

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
218	Layer/floor	Compacted layer of mid light blue-grey clay and sandy silt, probable terracing	1.0m long, 1.20m wide, 0.10m deep				Layer	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
219	Layer	Layer of mid grey-brown clay silt, probable terracing	1.00m long, 0.50m wide, 0.40m deep	Pottery, animal bone	15	Same as 119	Layer	14th-15th centuries (M4, M5, M6)
220	Layer	Spread of disturbed demolition material from foundry	3.90m long, >3.00m wide				Layer	19th century/ modern (MOD)
221	Wall	Continuation of ironstone boundary with brick cladding	3.8m long, 0.60m wide			Same as 198	Wall	19th century (MOD)
222	Fill	Pit [223]	0.89 long, 0.79m wide, 0.30m deep	Pottery, animal bone, clay tobacco pipe, brick/tile		Group 267	Pit	Modern (MOD)
223	Cut	Pit or possible asymmetrical posthole	0.89 long, 0.79m wide, 0.30m deep			Group 267	Pit	Modern (MOD)
224	Fill	Pit [226]	0.72m long, 0.42m wide, 0.03m deep			Group 267	Pit	Modern (MOD)
225	Fill	Pit [226]	0.72m long, 0.96m wide, 0.16m deep	Pottery, animal bone		Group 267	Pit	Modern (MOD)
226	Cut	Pit or possible asymmetrical posthole	0.72m long, 0.96m wide, 0.16m deep			Group 267	Pit	Modern (MOD)
227	Fill	Pit [228]	1.10m long, 0.70m wide, 0.20m deep	Pottery, animal bone, shell			Pit	12th-13th centuries (M1, M2)
228	Cut	Possible pit	1.10m long, 0.70m wide, 0.20m deep				Pit	12th-13th centuries (M1, M2)
229	Fill	Pit [230]	1.85m wide, 0.19m deep	Pottery, animal bone			Pit	12th-13th centuries (M1, M2)
230	Cut	Shallow possible pit	1.85m wide, 0.19m deep				Pit	12th-13th centuries (M1, M2)
231	Layer	Mid grey-brown sandy clay, with building debris	0.35m deep			Same as 119	Layer	14th-15th centuries (M4, M5, M6)
232	Fill	Pit [233]	1.72m long, 0.50m wide, 0.25m deep	Pottery, animal bone			Pit	12th-13th centuries (M1, M2)
233	Cut	Irregular-sided possible pit	1.72m long, 0.50m wide, 0.25m deep				Pit	12th-13th centuries (M1, M2)
234	Layer	Mid brown-orange sand silt, natural substrate in Area B					Natural	
235	Fill	Pit [236]	0.73m long, 0.58m wide			Group 267	Pit	19th century (MOD)
236	Cut	Pit or possible posthole	0.73m long, 0.58m wide			Group 267	Pit	19th century (MOD)
237	Fill	Pit [238]	0.64m long, 0.61m wide	Glass		Group 267	Pit	19th century (MOD)
238	Cut	Square pit or possible posthole	0.64m long, 0.61m wide			Group 267	Pit	19th century (MOD)

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
239	Fill	Pit [240]	0.90m long, 0.65m wide			Group 267	Pit	19th century (MOD)
240	Cut	Rectangular pit or possible posthole	0.90m long, 0.65m wide			Group 267	Pit	19th century (MOD)
241	Fill	Pit [242]	0.99m long, 0.80m wide			Group 267	Pit	19th century (MOD)
242	Cut	Square pit or possible posthole	0.99m long, 0.80m wide			Group 267	Pit	19th century (MOD)
243	Fill	Pit [244]	1.1m long, 0.45m wide			Group 267	Pit	19th century (MOD)
244	Cut	Sub-rectangular pit or possible posthole	1.1m long, 0.45m wide			Group 267	Pit	19th century (MOD)
245	Fill	Pit [246]	0.97m long, 0.76m wide, 0.09m-0.15m deep	Animal bone		Group 267	Pit	19th century (MOD)
246	Cut	Rectangular pit or possible posthole	0.97m long, 0.76m wide, 0.09m-0.15m deep			Group 267	Pit	19th century (MOD)
247	Fill	Pit [248]	0.82m long, 0.62m wide			Group 267	Pit	19th century (MOD)
248	Cut	Rectangular pit or possible posthole	0.82m long, 0.62m wide			Group 267	Pit	19th century (MOD)
249	Fill	Pit [250]	0.83m long, 0.79m wide			Group 267	Pit	19th century (MOD)
250	Cut	Pit or possible posthole	0.83m long, 0.79m wide			Group 267	Pit	19th century (MOD)
251	Fill	Pit [252]	0.65m long, 0.70m wide			Group 267	Pit	19th century (MOD)
252	Cut	Square pit or possible posthole	0.65m long, 0.70m wide			Group 267	Pit	19th century (MOD)
253	Fill	Pit [254]	0.73m long, 0.67m wide			Group 267	Pit	19th century (MOD)
254	Cut	Square pit or possible posthole	0.73m long, 0.67m wide			Group 267	Pit	19th century (MOD)
255	Fill	Pit [256]	0.80m long, 0.70m wide			Group 267	Pit	19th century (MOD)
256	Cut	Rectangular pit or possible posthole	0.80m long, 0.70m wide			Group 267	Pit	19th century (MOD)
257	Fill	Pit [258]	0.88m long, 0.80m wide			Group 267	Pit	19th century (MOD)
258	Cut	'L'- shaped pit or possible posthole	0.88m long, 0.80m wide			Group 267	Pit	19th century (MOD)
259	Fill	Pit [260]	1.00m long, 0.83m wide	Pottery		Group 267	Pit	19th century (MOD)
260	Cut	'L'-shaped pit or possible posthole	1.00m long, 0.83m wide			Group 267	Pit	19th century (MOD)
261	Fill	Natural hollow [262]	1.00m long, 1.03m wide, 0.20m deep	Pottery, animal bone, brick/tile			Natural hollow	

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
262	Cut	Natural hollow	1.00m long, 1.03m wide, 0.20m deep				Natural hollow	
263	Fill	Natural hollow [264]	1.03m long, 0.81m wide, 0.20m deep	Pottery, animal bone, brick/tile			Natural hollow	
264	Cut	Natural hollow	1.03m long, 0.81m wide, 0.20m deep				Natural hollow	
265	Fill	Natural hollow [266]	1.30m long, 1.0m wide, 0.20m deep	Pottery, animal bone, brick/tile			Natural hollow	
266	Cut	Natural hollow	1.30m long, 1.0m wide, 0.20m deep				Natural hollow	
267	Cut	Group of square pits in Area B					Pit	Modern (MOD)
268	Fill	Brick structure [269]	1.80m long, 2.10m wide, >0.35m deep				Brick structure	Modern (MOD)
269	Structure	Square brick structure, with walls 2 bricks thick	2.15m long, 2.52m wide, 0.39m deep				Brick structure	Modern (MOD)
270	Cut	Square construction cut for brick structure	2.25m long, 2.60m wide				Brick structure	Modern (MOD)
271	Wall	Front foundation wall building facing on to St John's Lane, brick and limestone with lime mortar	5.10m long, 0.65-0.85m wide, 0.40m high				Wall	19th century (MOD)
272	Cut	Wall foundation	5.10m long, 0.65-0.85m wide, 0.40m deep				Wall	19th century (MOD)
273	Fill	Quarry pit [277]	1.60m long, 1.20m wide, 0.30m deep				Pit	12th-13th centuries (M1, M2)
274	Fill	Quarry pit [277]	1.50m long, 1.20m wide, 0.47m deep				Pit	12th-13th centuries (M1, M2)
275	Fill	Quarry pit [277]	1.05m long, 1.20m wide, 0.15m deep				Pit	12th-13th centuries (M1, M2)
276	Fill	Quarry pit [277]	1.10m long, 1.20m wide, 0.20m deep				Pit	12th-13th centuries (M1, M2)
277	Cut	Quarry pit	1.60m long, 1.20m wide, 0.98m deep				Pit	12th-13th centuries (M1, M2)
278	Fill	Quarry pit [281]	0.50m long, 1.20m wide, 0.40m wide		<2>		Pit	12th-13th centuries (M1, M2)
279	Fill	Quarry pit [281]	1.10m long, 1.20m wide, 0.35m deep	Pottery, animal bone	<7>		Pit	12th-13th centuries (M1, M2)
280	Fill	Quarry pit [281]	1.10m long, 1.20m wide, 0.40m deep	Pottery, animal bone			Pit	12th-13th centuries (M1, M2)
281	Cut	Sub-circular quarry pit	1.10m long, 1.20m wide, 0.98m deep				Pit	12th-13th centuries (M1, M2)
282	Fill	Quarry pit [286]	3.00m long, 1.00m wide,	Pottery,	<1>		Pit	12th-13th centuries (M1,

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
			0.70m deep	animal bone				M2)
283	Fill	Quarry pit [286]	3.00m long, 1.00m wide, 0.10m-0.50m deep				Pit	12th-13th centuries (M1, M2)
284	Fill	Quarry pit [286]	3.00m long, 1.00m wide, 0.20m deep				Pit	12th-13th centuries (M1, M2)
285	Fill	Quarry pit [286]	3.00m long, 1.00m wide, 0.30m deep				Pit	12th-13th centuries (M1, M2)
286	Cut	Sub-circular quarry pit	3.00m long, 1.00m wide, 0.98m deep				Pit	12th-13th centuries (M1, M2)
287	Fill	Quarry pit [281]	1.05m long, 0.75m wide, 0.60m deep				Pit	12th-13th centuries (M1, M2)
288	Fill	Well [177]	2.00m long, 1.82m wide, >0.6m deep	Pottery, animal bone			Pit/ well	19th century (MOD)
289	Fill	Well [177], with foundry debris	2.00m long, 1.82m wide, >0.6m deep				Pit/ well	19th century (MOD)
290	Fill	Well [177]	2.00m long, 1.82m wide, >0.6m deep				Pit/ well	19th century (MOD)
291	Fill	Well [177]	2.00m long, 1.82m wide, >0.6m deep				Pit/ well	19th century (MOD)
292	Fill	Well [177]	2.00m long, 1.82m wide, >0.6m deep				Pit/ well	19th century (MOD)
293	Fill	Well [177]	2.00m long, 1.82m wide, >0.6m deep				Pit/ well	19th century (MOD)
294	Fill	Well [177]	2.00m long, 1.82m wide, >0.6m deep				Pit/ well	19th century (MOD)
295	Fill	Well [177]	2.00m long, 1.82m wide, >0.6m deep				Pit/ well	19th century (MOD)
296	Fill	Well [177]	2.00m long, 1.82m wide, >0.6m deep				Pit/ well	19th century (MOD)
297	Fill	Well [177]	2.00m long, 1.82m wide, >0.6m deep				Pit/ well	19th century (MOD)
298	Fill	Well [177]	2.00m long, 1.82m wide, >0.6m deep				Pit/ well	19th century (MOD)
299	Fill	Pit [300], sandy clay with foundry & demolition debris	1.70m long, 1.56m wide, 0.60m-0.25m deep	Pottery, animal bone, glass, clay tobacco pipe		Same as 182	Pit	19th century (MOD)
300	Cut	Sub-circular pit	1.70m long, 1.56m wide, 0.60m-0.25m deep			Same as 183	Pit	19th century (MOD)
301	Fill	Pit [302]	1.47m long, 0.74m wide, 0.10m deep	Flint			Pit/ natural hollow	12th-13th centuries (M1, M2)
302	Cut	Shallow pit	1.47m long, 0.74m wide, 0.10m deep				Pit/ natural hollow	12th-13th centuries (M1, M2)

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
303	Fill	Natural hollow [304]	2.20m long, 2.00m wide, 0.08 deep	Pottery, animal bone			Pit/ natural hollow	12th-13th centuries (M1, M2)
304	Cut	Natural hollow/tree bowl	2.20m long, 2.00m wide, 0.08 deep				Pit/ natural hollow	12th-13th centuries (M1, M2)
305	Fill	Silting deposit, pit [307]	1.44m long, 0.80m wide, 0.08m deep	Pottery			Pit	14th-15th centuries (M4, M5, M6)
306	Fill	Pit [307]	1.44m long, 0.80m wide, 0.15m deep				Pit	14th-15th centuries (M4, M5, M6)
307	Cut	Sub-circular pit	1.44m long, 0.80m wide, 0.25m deep				Pit	14th-15th centuries (M4, M5, M6)
308	Fill	Silting deposit, pit [309]	3.80m long, >2.89m wide				Pit	12th-13th centuries (M1, M2)
309	Cut	Sub-circular quarry pit	3.75m long, >2.75m wide				Pit	12th-13th centuries (M1, M2)
310	Fill	Silting deposit, pit [311]		Pottery			Pit	12th-13th centuries (M1, M2)
311	Cut	Sub-ovoid quarry pit [311]					Pit	12th-13th centuries (M1, M2)
312	Fill	Pit [313]	3.50m long, 2.60m wide, 0.40m deep	Pottery			Pit	12th-13th centuries (M1, M2)
313	Cut	Pit	3.50m long, 3.80m wide, >1.10m deep				Pit	12th-13th centuries (M1, M2)
314	Fill	Pit [315]	>2.3m, 0.44m deep	Pottery			Pit	12th-13th centuries (M1, M2)
315	Cut	Sub-circular quarry pit	>2.3m, 0.44m deep				Pit	12th-13th centuries (M1, M2)
316	Fill	Silting deposit within pit [390]		Pottery			Pit	12th-13th centuries (M1, M2)
317	Cut	Sub-circular quarry pit				Same as 338?	Pit	12th-13th centuries (M1, M2)
318	Fill	Silting deposit within pit [319]					Pit	12th-13th centuries (M1, M2)
319	Cut	Sub-circular quarry pit					Pit	12th-13th centuries (M1, M2)
320	Structure	An enclosed brick culvert with brick base leading from the foundry	4.80m long, 0.32m wide, 0.32m high				Drain	19th century (MOD)
321	Fill	Brick culvert (320)	4.80m long, 0.34m high, 0.22m deep	Pottery, brick/tile, clay tobacco pipe	16-20, 24-37 <3>		Drain	19th century (MOD)
322	Cut	Culvert with vertical sides	4.80m long, 0.55m high, 0.40m deep				Drain	19th century (MOD)
323	Wall	Ironstone wall	2.20m long, 0.55m wide, 0.06m deep				Wall	13th-14th centuries (M3)

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
324	Fill	Wall foundation cut [325], possibly bedding layer	1.50m long, 0.65m wide, 0.15m deep				Wall	13th-14th centuries (M3)
325	Cut	Wall foundation	1.5m long, 0.65m wide, 0.15m deep				Wall	13th-14th centuries (M3)
326	Fill	Posthole [327]	0.5m long, 0.35m wide, 0.52m deep			Assoc. with posthole [340] and wall [325]	Posthole	13th-14th centuries (M3)
327	Cut	Circular posthole	0.5m long, 0.35m wide, 0.52m deep			Assoc. with posthole [340] and wall [325]	Posthole	13th-14th centuries (M3)
328	Fill	Quarry pit [331]	0.65m long, 0.40m wide, 0.25m deep				Pit	12th-13th centuries (M1, M2)
329	Fill	Quarry pit [331]	0.65m long, 0.65m wide, 0.25m deep	Pottery, animal bone			Pit	12th-13th centuries (M1, M2)
330	Fill	Quarry pit [331]	0.65m long, 0.65m wide, 0.20m deep				Pit	12th-13th centuries (M1, M2)
331	Cut	Quarry pit	1.40m long, 0.65m wide, 0.54m deep				Pit	12th-13th centuries (M1, M2)
332	Layer	Spread of material over quarry pit	1.50m long, 1.5m wide, 0.12m deep	Pottery, animal bone			Layer	12th-13th centuries (M1, M2)
333	Fill	Quarry pit [331]	1.00m long, 0.27m wide, 0.17m deep				Pit	12th-13th centuries (M1, M2)
334	Fill	Quarry pit [331]	0.30m long, 0.27m wide, 0.20m deep				Pit	12th-13th centuries (M1, M2)
335	Fill	Quarry pit [336]	0.90m long, 0.90m wide, 0.25m deep	Pottery, animal bone	<4>		Pit	12th-13th centuries (M1, M2)
336	Cut	Quarry pit	0.90m long, 0.90m wide, 0.25m deep				Pit	12th-13th centuries (M1, M2)
337	Fill	Quarry pit [338]	1.0m long, 0.70m wide, 0.23m deep	Pottery, animal bone			Pit	12th-13th centuries (M1, M2)
338	Cut	Sub-circular quarry pit	8.50m long, 0.70m wide, 0.23m deep			Same as 317?	Pit	12th-13th centuries (M1, M2)
339	Fill	Two circular postholes [340]	0.40m long, 0.40m wide, 0.10m deep	Pottery, animal bone		Assoc. with posthole [327] and wall [325]	Posthole	13th-14th centuries (M3)
340	Cut	Two circular postholes	0.40m long, 0.40m wide, 0.10m deep			See posthole [327] & wall [325]	Posthole	13th-14th centuries (M3)
341	Fill	Pit [313]	2.20m wide, 0.40m deep				Pit	12th-13th centuries (M1, M2)

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
342	Fill	Pit [313]	3.50m long, 3.80m wide, 1.10m deep				Pit	12th-13th centuries (M1, M2)
343	Fill	Pit [313]	0.60m wide, 0.70m deep				Pit	12th-13th centuries (M1, M2)
344	Fill	Construction pit [345]					Pit	12th-13th centuries (M1, M2)
345	Cut	Sub-circular pit					Pit	12th-13th centuries (M1, M2)
346	Natural	Natural geology within Area A; light orange-yellow & mid orange-brown clay, & ironstone					Natural	
347	Fill	Pit [355]	1.50m long, 0.30m deep				Pit	12th-13th centuries (M1, M2)
348	Fill	Pit [349], quarry waste	2.50m long, 0.92m deep				Pit	12th-13th centuries (M1, M2)
349	Cut	Sub-circular quarry pit	2.54m long, 0.92m deep				Pit	12th-13th centuries (M1, M2)
350	Fill	Pit [353]	1.20m wide, 0.30m deep				Pit	12th-13th centuries (M1, M2)
351	Fill	Pit [353]	1.10m wide, 0.30m deep				Pit	12th-13th centuries (M1, M2)
352	Fill	Pit [353]	1.60m wide, 0.80m deep				Pit	12th-13th centuries (M1, M2)
353	Cut	Sub-circular pit [353]	>0.50m, 1.60m wide, >0.80m deep				Pit	12th-13th centuries (M1, M2)
354	Fill	Pit [355]	0.92 long, 0.06m deep				Pit	12th-13th centuries (M1, M2)
355	Cut	Circular quarry pit	1.50m long, 0.30m deep				Pit	12th-13th centuries (M1, M2)
356	Fill	Quarry pit [390]	5.68m long, 0.41m deep				Pit	12th-13th centuries (M1, M2)
357	Fill	Quarry pit [390]	3.54m long, 0.18m deep				Pit	12th-13th centuries (M1, M2)
358	Fill	Quarry pit [390]	1.00m long, 0.04m deep				Pit	12th-13th centuries (M1, M2)
359	Fill	Large quarry pit [317]	1.88m long, 0.04m deep				Pit	12th-13th centuries (M1, M2)
360	Fill	Large quarry pit [317]	2.00m long, 2.40m wide, 0.2m deep				Pit	12th-13th centuries (M1, M2)
361	Fill	Large quarry pit [317]	2.00m long, 7.00m wide, 0.80m deep				Pit	12th-13th centuries (M1, M2)
362	Fill	Large quarry pit [317]	>0.50m long, >0.80m wide, >0.30m deep				Pit	12th-13th centuries (M1, M2)
363	Fill	Possible post-medieval drain [365]	>1.2m long, 0.6m wide, >0.2m deep				Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
364	Fill	Possible post-medieval drain [365]	>1.2m long, 0.6m wide, >0.2m deep				Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
365	Cut	Possible post-medieval drain	1.2m long, 0.6m wide, >1.00m deep				Pit	16th-18th centuries (M7, PM1, PM2, PM3, PM4)
366	Fill	Possible pit [367]	2.22m long, 0.34m deep				Pit	12th-13th centuries (M1, M2)
367	Cut	Possible pit	2.22m long, 0.34m deep				Pit	12th-13th centuries (M1, M2)
368	Fill	Possible pit [370]	0.54m long, 0.12m deep				Pit	12th-13th centuries (M1, M2)
369	Fill	Possible pit [370]	0.76m long, 0.22m deep				Pit	12th-13th centuries (M1, M2)
370	Cut	Possible pit	0.76m long, 0.22m deep				Pit	12th-13th centuries (M1, M2)
371	Wall	Ironstone boundary wall, 4 courses	1.10m long, 0.38m high				Wall	13th-14th centuries (M3)
372	Fill	Foundation trench for wall (371)	1.10m long, 0.38m deep				Wall	13th-14th centuries (M3)
373	Cut	Wall foundation	1.10m long, 0.38m deep				Wall	13th-14th centuries (M3)
374	Fill	Stone-lined cellar/cesspit [378]	2.00m wide, 1.60m deep	Pottery, animal bone	<5>		Cellar/ cesspit	14th-15th centuries (M4, M5, M6)
375	Fill	Stone-lined cellar/cesspit [378]	2.00m wide, 1.60m deep		<6>		Cellar/ cesspit	14th-15th centuries (M4, M5, M6)
376	Wall	Stone walls of square cellar or cesspit, unmortared ironstone	1.20m long, 0.30m wide, 1.60m high				Cellar/ cesspit	14th-15th centuries (M4, M5, M6)
377	Fill	Pit [382]					Pit	12th-13th centuries (M1, M2)
378	Cut	Construction cut for stone cellar (376)	>1.25m long, 2.00 wide, >2.0 deep				Cellar/ cesspit	14th-15th centuries (M4, M5, M6)
379	Fill	Pit [382]	1.50m wide, 0.50m deep				Pit	12th-13th centuries (M1, M2)
380	Fill	Pit [382]	1.70m wide, 0.30m deep				Pit	12th-13th centuries (M1, M2)
381	Fill	Pit [382]	1.40m wide, >0.40m deep				Pit	12th-13th centuries (M1, M2)
382	Cut	Pit	1.70m wide, >1.00m deep				Pit	12th-13th centuries (M1, M2)
383	Fill	Possible pit [385]	1.12m long, 0.42m deep				Pit	12th-13th centuries (M1, M2)
384	Fill	Possible pit [385]	1.22m long, 0.53m deep				Pit	12th-13th centuries (M1, M2)
385	Cut	Possible pit	1.22m long, >0.78m deep				Pit	12th-13th centuries (M1, M2)

Context Number	Context type	Description	Dimensions	Artefacts	S. Finds & Samples	Notes	Feature type	Dating & Phasing
386	Fill	Pit [387]	>2.5m long, >2.00m wide, >0.50m deep				Pit	12th-13th centuries (M1, M2)
387	Cut	Sub-circular pit	>2.5m long, >2.00m wide, >0.50m deep				Pit	12th-13th centuries (M1, M2)
388	Fill	Pit [389]	>0.13m long, >0.49m wide				Pit	12th-13th centuries (M1, M2)
389	Cut	Sub-circular pit	>0.13m long, >0.49m wide				Pit	12th-13th centuries (M1, M2)
390	Cut	Quarry pit	*c*3.50m long, *c*0.60m deep				Pit	12th-13th centuries (M1, M2)
391	Fill	Large quarry pit [317]	*c*1.40m long, *c*0.18m deep				Pit	12th-13th centuries (M1, M2)

MOLA
Bolton House
Wootton Hall Park
Northampton
NN4 8BN
01604 700 493
www.mola.org.uk
sparry@mola.org.uk