ARCHAEOLOGICAL SERVICES
DURHAM UNIVERSITY

on behalf of
Business and Environmental Services
North Yorkshire County Council

The Market Place
Ripon
North Yorkshire

post-excavation analysis

report 2711
September 2011

Durham University

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1. Summary

The project

1.1 This report presents the results of archaeological excavations conducted in advance of a proposed development at The Market Place, Ripon. The works comprised a single open area trench and the monitoring of groundworks for associated services.

1.2 The works were commissioned by North Yorkshire County Council, and conducted by Archaeological Services Durham University.

Results

1.3 The excavation found evidence for the establishment of the Market Place in its present location in the later 13th century, with further medieval activity through to the late 15th or early 16th century. This activity initially comprised fence-lines, ditches and postholes, with occasional pits, but later a more formal market area had been established with the deposition of a cobbled surface. Following the deposition of waste material over this surface, the area was levelled up for a second cobbled surface. Associated with this was the base for a possible public monument. A lack of 16th- and 17th-century material may reflect a degree of truncation of deposits. In the 18th to 20th centuries, deposits mainly reflected cosmetic alterations to the appearance of the Market Place rather than any major reorganisation.

1.4 Significant quantities of medieval pottery (mainly 13th- to 15th-century) were recovered. Some of this was residual, reflecting later alterations to the Market Place which had resulted in truncation and landscaping. Large amounts of animal bone were also deposited in the area, mainly cattle and sheep. These originated from hide processing and human food waste. A small assemblage of roof tile was recovered, probably reflecting the demolition of nearby structures. A small quantity of leather offcuts indicates craft activity in the area. Industrial residues suggest that metal-working took place nearby.

1.5 Palaeoenvironmental remains remained consistent throughout the medieval period. The material deposited was mainly household waste, including cess, but also included tannery waste and crop processing waste.

Conclusions

1.6 The archaeological and documentary evidence indicates that the present Market Place at Ripon was established towards the end of the 13th century, having previously been located or incorporated an area to the north. The physical remains indicate that the market was initially a space with no formal surface, where temporary stalls were erected and where livestock was probably corralled. It may have had a formal boundary. Cobbled surfaces were later established, probably to prevent churning of the ground caused by regular market gatherings. Surfaces were however subsequently covered in deposits containing waste material. A later resurfacing was also subsequently buried by landscaping. The medieval layout continued into the post-medieval period, with minor alterations.

2. Project background

Location (Figure 1)

2.1 The site is located at The Market Place, Ripon, North Yorkshire (NGR centre: SE 3121 7128). It covers an area of approximately 1435m^2. The excavation area comprised the entire Market Place to the north of the obelisk, with archaeological monitoring also conducted to the north, east and south.

Development proposal

2.2 The excavation was undertaken as part of a scheme of improvement of Ripon Market Place, which included repaving and drainage works.

Objective

2.3 The objective of the scheme of works was to identify, excavate and record significant archaeological features within the area in advance of development.

Dates

2.4 Fieldwork was undertaken between 26th March and 24th October 2001. The main excavation phase was conducted between 26th March and 27th April 2001. Monitoring of further groundworks was undertaken between August and October 2001. This report was prepared for September 2011.

Personnel

2.5 Fieldwork was conducted by Mark Douglas, David Graham, Jane Gosling, Rachel Pope, Daniel Still and Steve Toase, and was supervised by Peter Carne. The initial post-excavation assessment was conducted by Peter Carne, Jacqui Cotton, David Graham, Andy Platell and Daniel Still. This report was prepared by Jamie Armstrong, with illustrations by David Graham, Janine Watson and Mark Hoyle. Specialist reporting was conducted by Ruth Leary (Roman ceramics), Dr Chris Cumberpatch (medieval and post-medieval ceramics), Louisa Gidney (animal bone), Alejandra Gutierrez (small finds and CBM), Dr Jacqui Cotton (industrial residues), Paul Stokes (clay pipes), Dr Hugh Wilmott (glass), Jennifer Jones (conservation and other finds) and Dr Charlotte O'Brien (palaeoenvironmental). The project manager and report editor was Peter Carne.

Archive/OASIS

2.6 The site code is **RMP01**, for **R**ipon **M**arket **P**lace 20**01**. The archive is to be deposited with Harrogate Museums Service: the accession number is HARGM:10583. Archaeological Services Durham University is registered with the **O**nline **A**cces**S** to the **I**ndex of archaeological investigation**S** project (**OASIS**). The OASIS ID number for this project is **archaeol3-108440**.

Acknowledgements

2.7 Archaeological Services is grateful for the assistance of Mouchel North Yorkshire, PBS Construction, the County Archaeologist for North Yorkshire, the Ripon Local Studies Research Centre, and the market traders and people of Ripon in facilitating this work.

3. Landuse, topography and geology

3.1 At the time of this assessment, the development area comprised an area used for car parking and for market stalls.

3.2 The area was level with a mean elevation of approximately 39m OD.

3.3 The underlying solid geology of the area comprises Edlington Formation Calcereous Mudstone of the Permian, which are overlain by Devensian glaciofluvial terrace deposits of sands and gravels.

4. Historical and archaeological background

Previous archaeological works

4.1 Four archaeological evaluation trenches had been excavated in advance of the development (YAT 2000); deposits were found dating to the medieval and post-medieval periods. This indicated that further archaeological investigation would be necessary prior to the development of the Market Place (HER 262).

4.2 There have also been investigations in the near vicinity. At the southwest corner of the Market Place is Wakeman's House, a restored timber-frame building dating to the 15th or 16th century. Excavations to the rear of this property revealed deposits dating to as early as the 11th-12th centuries (HER 19785).

4.3 To the east of the area of excavation (8-9 Market Place), an evaluation and archaeological monitoring have been conducted. These works established the presence of post-medieval activity along the street frontage and extensive medieval deposits to the rear, dating from the 10th century onwards, with industrial activity dating to the 12th to 14th centuries (HER 42, 314, 315, 316, 318). Work has also been conducted at 10 Market Place, but here no features earlier than the late 18th century were identified (HER 96, 330, 331 and 332).

4.4 Archaeological monitoring of work to insert new water pipes on Queen Street and North Street, including the area known as the Old Market Place, failed to find deposits of archaeological significance due to later disturbance.

4.5 Excavations to the west of the site identified a series of features dating to the later medieval period onwards (Archaeological Services 2008). This may indicate that the expansion of the town into this area post-dated the establishment of the market place.

The prehistoric and Roman periods (up to 5th century)

4.6 While there is a relatively large concentration of Neolithic and Bronze Age sites in the general vicinity of Ripon, particularly funerary and ritual monuments, there is presently little known evidence for prehistoric activity within the city itself. A small number of prehistoric objects have been found in the city, but all are now lost or lack proper provenance. Few Romano-British objects have been identified, although several residual sherds of Roman pottery were found during excavations at the Deanery Gardens, 270m to the southeast, and a Roman urn was found on the west side of North Street in the early 19th century. Further Roman artefacts found during excavations in the town include a fragment of mortarium and a 2nd-century Sestertius. This small body of evidence may indicate Roman activity in the city.

The medieval period (5th century to 1540)

4.7 The earliest firm evidence of activity in Ripon dates to the 7th century, with St Wilfrid establishing a minster in 672. This stood on the site of the present cathedral, as is shown by the presence of the crypt. It is believed that the contemporary town grew around the minster, with the site of the present Market Place lying further to the west. During the post-conquest period Ripon expanded. The minster was reconstructed as the present cathedral in the second half of the 12th century. The focus of settlement switched from north of the minster to Allhallowgate and then spread west and south.

The post-medieval period (5th century to 1540)

4.8 By the 16th century Ripon had suffered a decline in prosperity due to a reduction in cloth production. However, by the 17th century it had begun to recover, with several trade guilds having been established. Ripon remained relatively untouched by the Industrial Revolution, with the exception of the creation of the canal. 18th-and early 19th-century maps of the city show that the medieval town plan survived almost intact into the 19th century. They depict long narrow burgage plots running west of the Market Place / Fishergate / Blossomgate / Horsefair (now North Street).

5. The excavation

Introduction

5.1 The site was excavated in a series of discrete sections to enable continued use of the area. Over much of the northern part of the site, archaeological deposits continued beyond the depth of excavation: only limited examination of these deposits took place as they were not to be removed as part of the development. Deposits preserved *in situ* were covered with Terram. Archaeological monitoring was conducted during the excavation of 14 tree pits along the eastern and western edges of the Market Place, the excavation of a drainage trench running along the eastern and southern sides, and the resurfacing of the road to the north of the excavation area.

Natural

5.2 The underlying natural comprised reddy-orange sand [31=261].

Phase 1: 13th to 15th century [Figure 2]

5.3 The earliest features in the Market Place were exposed along the eastern edge of the site, cut into the natural sand. These included boundary features, stakeholes, postholes and pits. Some thin soil lenses were present immediately over the natural sand in parts of the Market Place, including a brown silty loam [149] and a dark red sand to the north of the site [136: over 2.5m long, over 1m wide and up to 0.42m thick].

5.4 A substantial linear boundary ditch [F229: over 24m long, 1.5m wide and 0.6m deep] was aligned north-south along the eastern edge of the Market Place. The ditch continued beyond the southern and northern limits of excavation. The ditch was filled with yellow sand [231]. A possible pit [F502] filled with a grey-brown silt [239] was exposed in the side of the ditch: this was not excavated. The ditch had been re-cut [F233: over 24m long, 1.5m wide and 0.62m deep] to include a slot along the bottom of the ditch. The primary fill was a light brown silt containing some sand [230: up to 0.62m thick]: part of a sheep/goat bone was selected for radiocarbon

dating and returned a date range of 660 - 810 cal AD (95.4% probability). However, a sherd of late medieval pottery and a sherd of 19th-century pot were also present within the fill. The radiocarbon date is regarded as reflecting residual material deposited into the backfill of the ditch, and the 19th-century pottery is viewed as intrusive. It is possible that both sherds of pot are intrusive and that the radiocarbon date reflects the age of the deposit, but as the other datable artefacts relating to this phase are later medieval period this seems unlikely. The upper fill of the ditch was a yellowy-brown sand with occasional stone inclusions [232: over 16.5m long, 1.5m wide and over 0.42m thick]: this was identified only in the central and northern parts of the feature.

5.5 Parallel with the ditch was a linear fence slot [F37: over 4.5m long, 0.45m wide and 0.09m deep]. Into the base of the feature five stakeholes had been cut [F39; F41; F43; F45; F49: 0.07-0.16m in diameter and 0.05-0.15m deep]. These were filled with an orange clayey-silt [40; 42; 44; 46; 50]. The ditch was filled with an orange silty sand [38]. One sherd of late 13th- to 15th-century pottery was found within this deposit. The feature tapered to a terminal to the north and had been truncated to the south by a later pit. A modern service trench also disturbed the feature.

5.6 Close to the western side of fence slot F37 a rectangular posthole with vertical sides [F47: 018m long, 0.07m wide and 0.11m deep] had been cut into the natural sand. This was filled with an orange clayey-silt [48]. Also within close proximity to F37 two pits were cut into the natural: these were both steep-sided with flat bases. One [F33: 0.56m in diameter and 0.18m deep] was circular in shape and filled with a reddish brown gritty silty-sand [34]. The other [F35: up to 0.46m in diameter and 0.06m deep] was sub-rectangular in shape and filled with a brown silty sand [36].

Phase 2: 13th to 15th century [Figure 3]

5.7 Overlying ditch F229 was a thin layer of yellowy reddish-brown silty-sand [234: at least 10m long, at least 3m wide, and up to 0.02m thick]. A gully and several stakeholes were cut into this layer.

5.8 The linear gully [F187: at least 10m long, 0.5m wide and 0.5m deep] was on a similar north-south alignment to the earlier ditch F229, into which it had been cut. At its southern end the gully turned to the east, but a modern tree bole had truncated it so it was not possible to trace it further. The gully was filled with a light brown sandy-silt [188=235].

5.9 Close to the gully 26 stakeholes were excavated [F189; F191; F193; F195; F197; F199; F203; F205; F207; F209; F211; F213; F215; F217; F219; F221; F223; F225; F227; F240; F242; F244; F246; F248; F250; F252: 0.04-0.09m in diameter and 0.05-0.15m in depth]. They were filled with a brown sandy-silt [190; 192; 194; 196; 198; 200; 204; 206; 208; 210; 212; 214; 216; 218; 220; 222; 224; 226; 228; 241; 243; 245; 247; 249; 251; 253]. Many of the stakeholes were arranged in line along either side of the gully. Along with the phase 1 stakeholes and fence line in this area, these may reflect the construction of temporary enclosures, perhaps wattle hurdles to corral livestock during the early use of the area as a Market Place.

5.10 A further area of stakeholes and postholes was identified cut into the natural sand to the west of the southern end of the gully. Ten stakeholes [F152; F154; F156; F158; F160; F162; F176; F178; F180; F182: 0.07-0.18m in diameter and 0.12-0.17m deep]

were excavated. These were filled with an orange-brown clayey-silt [153; 155; 157; 159; 161; 163; 177; 179; 181; 183]. There were seven round postholes [F164; F166; F168; F170; F172; F174; F184: 0.16-0.3m in diameter and *c.*0.18m in depth]. These were filled with an orange brown clayey-silt [165; 167; 169; 171; 173; 175; 185]. The stakeholes and postholes did not form a discernible regular pattern.

Phase 3: 14th to 15th century [Figure 4]

5.11 In the northern part of the site two postholes were cut into the layer 136 [Phase 1]. The first pit [F129: 0.3m in diameter and 0.24m deep] was rounded and filled with an orange-yellow silty-sand [130], from which one sherd of medieval pottery was recovered. The second pit [F133: 0.4m in diameter and 0.24m deep] was sub-rounded and filled with a dark greyish-green clayey-sand [134]. There was a further sub-rounded cut [F139: 0.35m long, 0.3m wide and 0.15m deep]. This was filled with a primary deposit of light greyish-brown silty-clay [109: up to 0.15m thick] which was a levelling deposit for a white limestone post-pad [F108: 0.25m long, 0.25m wide and 0.08m thick].

5.12 A large, deep irregularly-shaped pit [F122: 5.3m long, 4m wide and 1.5m deep] was cut into the soil 136, and also cut through posthole F135. The primary fill of the pit was a mixed light-dark green silty-clay [132: over 0.3m thick] which contained 4 sherds of pottery dating to the late 13th to 15th centuries. Overlying this was a very wet dark yellowy-black compact fibrous organic fill [123: over 0.3m thick]: a sample of charcoal was taken for radiocarbon dating and produced a date range of 1290 - 1410 cal AD (95.4% probability). The pit had been twice cut by smaller oval or sub-oval pits: one [F137: 1.3m long, 1.2m wide and 0.18m thick] was filled with a dark grey-brown silty sand [126], which contained 3 sherds of medieval pottery, one dated to the 14th-15th century, along with two fragments of 13th- to 15th-century tile, two joining fasteners (SF6) and another fastener (SF7) which may be part of the same object, of medieval or early post-medieval date; the other [F138: 1.1m long, 0.9m wide and 0.24m thick] was filled with a dark greyish-black organic peaty-clay [104]. A fragment of Roman mortarium dating to *c.*AD65-100 was recovered from this deposit. However, this is clearly either residual or intrusive, as a further 16 sherds of pot dating to the late 13th-15th centuries or the later medieval period were also found, together with five fragments of tile. Several leather pieces were also recovered from this deposit.

Phase 4: 14th to 15th century [Figure 5]

5.13 A bedding layer of reddy-orange sand [32=107=275: 0.06m thick] for a cobbled surface was deposited across much of the site. Onto this was laid a compacted layer of rounded and sub-rounded cobbles [F22=F100=F263: up to 0.1m thick, with each cobble 0.03-0.1m in diameter]: they formed the earliest surviving formal surface of the Market Place, although it is presumed that the Market Place was used for markets prior to this. Only patches of cobbles survived in parts of the Market Place, and in some areas they had been entirely removed by later activity. The cobbled surface was not perfectly level, instead following the undulations of the natural topography. Four fragments of tile were recovered from the cobbled surface. There was some resurfacing of this surface during this phase [F151]: the northern central area of the cobbles was not completely exposed as the deposits continued below the agreed depth of excavation.

Phase 5: 14th to 15th century [Figure 6]

5.14 Over parts of the northern and eastern Market Place, layers of black silt were identified over the cobbles. Directly over the cobbles was a layer of mottled dark grey silty-loam [293: over 2.8m long, over 1.6m wide and 0.12m thick]: this was very stony containing a variety of large, medium and small angular and sub-angular stones, but was not indicative of a stone surface. Three sherds of late 13th- to 15th-century pottery and nine fragments of tile were recovered from this deposit. This was below a dark greyish-black organic peaty layer [262=264=276=278: over 15m long, over 12m wide and 0.12m thick], containing sub-rounded and sub-angular stone inclusions. This layer also contained large amounts of well preserved animal bone, wood, and leather: an uncharred nutshell was selected for radiocarbon dating and returned a date range of either 1300-1370 cal AD or 1380-1420 cal AD (95.4% probability). In addition, 193 sherds of late 13th- to 15th-century pottery, 202 tile fragments, and part of a copper-alloy belt mount (SF8) of a type that has been dated to the medieval and post-medieval period were also recovered from this deposit, along with several pieces of leather. No intrusive material was found, indicating the pottery, tile and the radiocarbon date represent a reliable indictor for the date of the deposition of this layer. Another similar but discrete layer of dark greyish-black friable organic silt [281: at least 4.5m long and 4m wide] was identified against the eastern side of the site.

5.15 Cut into context 276 was a north-south linear feature [F289: over 8m long, over 1m wide, and at least 0.3m deep]: the full width and length of this feature could not be established as the northern end continued below the baulk while the southern end had been truncated by a later cut. It was filled with an orange silty-sand [290: at least 0.3m thick]. Within this context, toward the southern end of the feature, was a linear alignment of large rounded stones [F503: each stone measuring up to 0.3m in diameter]. Directly opposite these, a similar alignment was seen in section on the eastern side of the feature [F292], also within the fill [290]. The feature was also filled with a yellow sand [291: 0.06m thick] which abutted 290. This was possibly a drainage ditch or gully, although the presence of linear alignments of stone may point to a structural function.

5.16 In the central area of the site the Phase 4 cobbles [F100] had been cut by a feature [F504: 0.32m long, 0.38m wide and 0.3m deep] filled with a black clay loam [186], which was recorded in section (Section 43). This feature was not fully excavated, but was found to contain a single fragment of tile, as well as bone and slag.

5.17 A green-grey silty sandy layer with gravel inclusions [294: at least 2.5m long, 0.8m wide and 0.1m thick] was uncovered within the western part of the site, below the later levelling. A small sondage was dug into this layer but its total extent is unknown. Eight sherds of late 13th- to 15th-century pottery and a single sherd of tile, along with animal bone and slag, were recovered from this deposit.

5.18 Overlying the organic silt layers were further deposits. These included a dark grey silty-clay loam [257: 0.08m thick], which contained 55 sherds of late 13th- to 15th-century pottery and 38 fragments of tile of a similar date, and a grey and gritty sandy-silt with charcoal fleck inclusions [277: 4m long, 1.5m wide and 0.04m thick] from which were recovered three sherds of late 13th- to 15th-century pottery and 4 fragments of tile. A black silt layer [102: 0.19m thick] overlay the cobbles at the north-east, which were dipping away to the east in this area.

Phase 6: 14th to 15th century [Figure 7]

5.19 A make-up layer [21=103: up to 0.05m thick] of mixed soil and stone was deposited across the site. This contained quantities of poorly-preserved animal bone, pottery and tile: the pottery consisted of 15 sherds of 13th- to 15th-century material, and there were also 38 tile fragments, both floor and roof, of similar date. Also found in this deposit was a drawn wire pin (SF4) of a type that was manufactured between the 12th and 19th centuries. A second surface of cobbles [F4= F94=F125=F269: up to 0.15m thick: each cobble 0.05-0.15m in diameter] was laid onto this material and overlay most of the Market Place, forming a flatter surface than the earlier cobbles. Context 269, identified in three sondages to the south-west of the site, was made of cobbles that were not as consistently small and formed a less compact surface than the earlier cobbled surface seen elsewhere. Though the full extent of cobbled surface was not exposed here it can be assumed that it extended across the south-western part of the site below the later levelling layers. Associated with this cobble surface in the northwest part of the site was layer 256, comprising stones within a dark greyish-black silty-sand. 100 sherds of mid 13th- to 16th-century pottery and 94 tile sherds were retrieved from the cobble and stoney layers: a majority of the pottery has been dated to the late 13th to 15th centuries, but some (36 sherds) dates from the 14th to 15th centuries, which may indicate a more precise period for when deposition took place.

5.20 A white sandstone base had been constructed in the eastern half of the site [F150: approximately 2m square]: the cobbles abutted this feature, indicating that the base was in position before the cobbles were laid, although it seems likely that the two features are contemporary with one another and resulted from a resurfacing and reordering of the Market Place.

Phase 7: up to 19th century [Figure 8]

5.21 Within the eastern part of the site several pits were cut into the cobble layer. Four pits were located along the eastern edge of the site: two of these were excavated. The southernmost pit [F17: over 0.45m long, 0.47m wide and 0.3m deep] extended beyond the trench edge, but appeared to be oval in shape and was filled with a green sand [18], which contained five sherds of pottery dating mainly to the 19th century and one tile fragment. The second pit [F19: over 0.62m long, 0.7m wide and 0.44m deep] also extended beyond the trench edge and appeared sub-square in shape with a rounded base. It was filled with a greyish-brown sand with cobble inclusions [20] from which five sherds of 19th-century pottery were recovered. A further two small irregular pits remained unexcavated: pit [F24: 0.8m long, 0.67m wide]; and pit [F26: 0.45m long and 0.42m wide].

5.22 A further teardrop-shaped pit [F201: 1.5m long, 0.7m wide and 0.2m deep] was located 7m west of the eastern side of the site: a post slot had been cut into the feature at its northern end. The pit was filled with a dark reddy-brown sandy-clay [202], from which two sherds of pot were recovered, one dating to the 14th to 15th century, and the other to the 18th to 19th century, as well as 1 fragment of tile. A north-south linear gully [F97: over 1.65m long, 0.52m wide and 0.18m deep] also cut the later cobbles in this area. This was filled with a greyish-brown sandy-silt with cobble and stone inclusions [98]. A copper alloy dress pin (SF9) was recovered from this deposit: this was of a type that was in use between the late 7th and 11th centuries, and is therefore likely to be residual.

5.23 Two pits were located along the northern edge of the site but extended beyond the baulk and remained unexcavated. The pit [F105: over 0.75m long and 0.75m wide] may have been oval in shape and was filled with red sand [106]. Pit [F110: over 0.6m long and 1m wide] was sub-square in shape and was also filled with a red sand [111].

5.24 A layer of dark grey-black silt [128=143=501: over 12m long, over 6m wide and 0.4m thick] overlay the later cobbles in the eastern part of the site: this contained 38 sherds of late 13th- to 15th-century pottery as well as 29 fragments of tile. Several pieces of leather were also recovered from this deposit. The layer had been cut by a square pit [F112: 2m wide by 2m long and at least 0.4m deep]. The primary fill of the pit was an orangey-yellow silty-sand with gravel inclusions [140: 0.1m thick]. This was overlain by a clean orange sand [113: 0.25m thick]. Cutting the western side of the pit was a feature [F141: over 0.08m long, 0.5m wide and 0.4m deep] with almost vertical sides which was only partially excavated as it extended beyond the limits of excavation and so its form and function could not be determined. This was filled with a mid-dark grey clayey-silt with stone and mortar inclusions [142]. This feature was noted in section but not fully investigated. Above 113 was a further fill consisting of large cobbles [F135=F144: 1.3m long, 1.1m wide and 0.15m thick, with each cobble up to 0.28m in diameter]: these were laid on end forming a tightly packed surface. The cobbles dipped into the centre in a concave shape. The large cobbles were covered by an off-white mortar layer [114: 1.3m long, 1m wide and 0.1m thick] which contained a single sherd of medieval pottery and two fragments of tile. The cobbles and mortar did not cover all of 113 but left a band of the sand exposed around the edges. This indicates that the feature formed a firm foundation, of unknown function. The layer 128 had also been cut by an oval pit [F120: 1.3m long and 0.75m wide], which was filled with a red silty-sand [121]. This feature was not excavated.

5.25 On the eastern part of the site a yellow sand layer [300] was uncovered, continuing to the east below the baulk. The layer was unexcavated.

5.26 The silt layer 128=143 was covered by a dark greyish-brown clayey-silt [124: 5.9m long and 2.2m wide] with stone and mortar inclusions, from which six sherds of 13th- to 15th-century pot and four fragments of tile were recovered. A posthole was cut into this layer, surviving as a void [F115: 0.25m long, 0.15m wide and 0.6m deep].

5.27 A dark-grey black sandy silt layer [127: over 6m long and 1.71m wide] was also uncovered from this phase but was not excavated.

Phase 8: 19th century [Figure 9]

5.28 Above the later cobbles a layer of greyish-brown silty-loam was deposited [3=99=265: 0.1m thick], containing quantities of animal bone, tile, pottery and slag. The pottery consisted of 69 sherds which mainly dated to the late 13th- to 15th-centuries, but also included four sherds of 19th-century wares. Also present were 73 tile fragments, an undiagnostic copper-alloy buckle pin (SF10), and a bone handle (SF11), probably from a spoon or spatula. A square pit with vertical sides [F15: 0.55m long, over 0.22m wide and 0.38m deep] had been cut into context 5. This was filled with an orangey-brown sand [16], from which was recovered one sherd of 19th- or early 20th-century pot was recovered.

5.29 Above these layers, substantial layers of re-deposited natural sands and gravels had been dumped as levelling layers. These layers included yellowy-green mixed gravely-sand [285], orange sand [286], dark olive green silty-sand with charcoal flecks [282=284], yellowy-green silt [283], reddy-orange sand [270], yellowy-brown sandy gravel [258], greenish-black sand [23] which contained a 2nd-century AD Sestertius (SF2), and yellow sand [101]. A layer of dark green clayey-silt [148] was also deposited at this time directly overlying the natural. Stakeholes had been cut into the layer 286 but these did not form any regular pattern and were not excavated.

5.30 Also cut during this phase within the eastern part of the site was a large oval feature [F116: over 10m long, over 8m wide and over 0.3m deep]. This was filled with a loose, mixed orangey-yellow sandy gravel [117] which contained ten sherds of 19th- or 20th-century pottery. This had been cut by a pit [F118: 0.75m long and 0.75m wide], filled with an orangey-red sand [119]. A second large irregular feature [F273: 11m long and over 8m wide] had been cut into 258 on the western part of the site, and was also filled with loose gravel and sand [274]. These features were not excavated as they continued below the maximum depth of excavation.

Phase 9: 19th to 20th century [Figure 10]

5.31 The final levelling layers included a red sand [93=295:0.2m thick] which covered most of the site and contained 11 sherds of late 13th- 15th-century pottery, as well as 12 fragments of ceramic tile and one possibly made from Bakelite. Overlying this was a dark yellow sand [30]. A curvilinear depression [F91] within the red sand make-up layer 93 was filled with a green sand with very occasional charcoal flecks [92].

5.32 A series of post-medieval features were cut into the make-up layer 93: in the eastern part of the site these included stakeholes, postholes and pits. The stakeholes [F51; F53; F57; F59; F61; F71; F87: 0.18-0.28m long, 0.11-0.22m wide, 0.03-0.12m deep] and rounded or sub-rounded postholes [F55; F63; F67; F73; F77; F83: 0.28-0.36, long, 0.23-0.32m wide, and 0.07-0.20m deep] were filled with grey to light grey sandy-silts [52; 54; 58; 60; 62; 72; 88; and 56; 64; 68; 74; 78; 84]. The stakeholes and postholes did not form any discernible regular pattern. The pits [F65; F75; F79; F81; F85: 0.67-1.13m long, 0.52-0.99m wide, and 0.13-0.25m deep] were filled with mid- to light grey sandy-silts [66; 76; 80; 82; 86]: deposit 66 contained 18 sherds of pottery mainly dating to the 19th century; deposit 75 contained six sherds of 19th-century pottery; deposit 82 contained one sherd of mid 15th- to 17th-century pot; and deposit 86 contained three sherds of 19th-century pottery.

5.33 Four further pits were also cut into make-up layer 93 along the eastern edge of the site. The southernmost pit [F7: 2.52m long, 2.3m wide, and 0.38m deep] was sub-oval and filled with a dark brown silty-sand [8], which contained two fragments of tile. North of this was a round pit [F6: 0.44 long, 0.3m wide, 0.38m deep] filled with a dirty brown sand with orange sand lenses [5] which contained one sherd of 13th- to 15th-century pottery. The top of the pit had been capped by a layer of large cobbles. Further to the north was an oval pit [F9: 1.14m long, 0.8m wide and 0.38m thick], the base of which had been by a vertical-sided post slot [F11: 0.28m long, 0.19m wide and 0.4m deep], filled with a brown silty-sand [12]. The pit itself was filled with a brown silty-sand [10] which contained three sherds of 19th-century pot and one fragment of tile. The final pit [F13: 0.76m long, 0.63m wide and 0.31m deep] was

sub-rounded and was filled with a dark brown silty-sand [14] from which eight sherds of pottery were recovered, mainly dating to the 19th century.

5.34 The rounded pit [F69: 0.73m long, 0.5m wide and 0.27m deep] also cut into context 93 and was filled with a dark greyish-brown sandy silt [70], from which four sherds of pottery dating from the late 13th to the 17th centuries were recovered. On the eastern side this had been cut by a posthole [F89: 0.4m long, 0.3m wide and 0.07m deep], which was filled with a light greenish-grey silty sand [90].

5.35 Two other pits were identified: pit [F238] was filled with cobbles [F505] and contained 5 sherds of pottery, one of which dated to the 15th or 16th centuries, with the rest being 19th century; and pit [F287: 4.4m long and over 1.5m wide] a possibly sub-rectangular pit filled with medium-sized gravel [288].

5.36 A large sub-rectangular pit [F266: 5.8m long and 4.8m wide] had been cut into make-up layer 93 in the central part of the site in order to construct an arched rectangular brick vault used for water storage [F279: over 4m long and over 2m wide]. This had been covered by large, flat white limestone slabs [F268], which formed a firm level surface. The pit was backfilled with an orange silty-sand around the edges of the vault, with mixed soil and rubble above the vault [267]: this contained 50 sherds of predominantly 19th-century pottery and two fragments of tile. A water pipe [F280: over 1.2m long and 0.4m in diameter] connected the reservoir to a modern control valve west of the feature. The reservoir was also connected to a manhole within the centre of the site. The manhole was built within the cut [F145], with a green sand [147] constituting the lower fill of the feature: this contained four sherds of 19th- or early 20th-century pot. Overlying this was a rubble fill within a black sandy-loam matrix [146], from which 17 sherds of mainly 19th- or early 20th-century pot and one fragment of pantile were recovered.

5.37 The Market Place was covered in the 19th century by a layer of cobbles [F2: each cobble 0.1-0.2m in diameter]. Some small patches of this surface were identified but the vast majority of this layer of cobbles was removed during initial machining as the later concrete surface was laid directly over the Victorian cobbles. Some of the features identified in this phase may have been cut through the cobble layer.

Phase 10: 20th century [Figure 10]

5.38 A number of modern services were noted [F28: over 2m long and 0.35m wide, and filled with 29; F296: over 2m long and 0.35m wide, and filled with 297; F298: over 2m long and 0.35m wide, and filled with 299], including electric cabling around the edge of the Market Place connected to street lamps. The Market Place had been covered in modern times by a layer of concrete [1: up to 0.2m thick]. This covered the entire area of excavation. Iron rings had been set into the concrete for tethering animals: a sample of these rings were kept during removal of the concrete. The evaluation trenches [F260: 5.1m long and 1.3m wide] excavated by the York Archaeological Trust were identified, backfilled with yellow dolomite [259]. Several tree pits [F95: 2m in diameter; F272: 2.1m in diameter] were also recorded around the edge of the Market Place, filled with dark brown-black sandy silty-loam [96; 271].

6. The finds

Roman pottery

6.1 A fragment of mortarium rim and flange (from context [104] weighing 98g) was submitted for identification. The vessel was in a soft cream fabric with a rather powdery feel and small quartz and flint grits in the flange. The form is a Gillam 238 and this is clearly a North Gaulish mortarium Hartley group II, for which a source around Noyon (Oise) in northern France has been established (Hartley 1998, 203). This form has a date range of *c.*AD65-100AD, and was a type very important at York (Monaghan 1997, 939) and Castleford (Rush *et al* 2000, 171). It was common in the north east, as at Piercebridge and at Binchester, where it was the most common Flavian-Trajanic mortarium type (Evans and Mills 2008, 200). Such imports are most common on military sites, but do sometimes occur on civilian sites in the North and Midlands. In north Lincolnshire a late Iron Age to early Roman group excavated at Winteringham included a North Gaulish mortarium as well as other imported wares such as Spanish and Gallic amphorae, a black sand flagon from Campania, Northern and Central Gaulish Terra Nigra, a North Gaulish mortarium, butt beaker and Central Gaulish colour-coated ware (Precious 2008). However such an early import in north Yorkshire would be unusual on a non-military site.

Medieval and post-medieval pottery

Summary

6.2 The pottery assemblage from the excavations in Ripon Market Place (RMP01) was examined by the author in November 2010. The assemblage consisted of pottery from stratified contexts (676 sherds weighing 13,379 grams representing a maximum of 626 vessels), from unstratified contexts (seventy-five sherds weighing 1233 grams and representing a maximum of fifty-four vessels) and ceramic building material from both stratified and unstratified contexts. A piece of an early type of plastic, possibly Bakelite, was identified in context [93] (Phase 8). The data are summarised in Tables 1.2 to 1.4 with the abbreviations used set out in Table 1.5.

Results

6.3 In terms of the identification of the medieval pottery, the assemblage falls into two groups. The largest of these consists of wares which are well-known from other sites and have been discussed in the literature, while the smaller consists of wares which, while recognisably part of the regional ceramic tradition, have yet to be defined and related to a specific source or sources.

6.4 Pottery predating the late 13th century was limited to a sherd of *Gritty ware* from context [257]. Other distinctively early types, such as those identified in other excavations in Ripon (Whyman 1997), were absent. It is possible that some of the unidentified sandy wares described below were also of an early date but this cannot be asserted as definite at the present time.

6.5 Amongst the medieval wares of known type, *Humberware*, including the distinctive Humberware drinking jugs, was the commonest type. Humberwares can be seen as lying within the wider late medieval regional tradition of fine reduced green glazed wares, although unlike the Reduced Greenwares of the north-east, the external surfaces were often oxidised to a dull orange colour and the glaze was applied more sparingly. Humberwares are known to have been manufactured at Holme-on-Spalding Moor and Cowick in East Yorkshire and in Blue Bridge Lane, York, but production was probably more widespread, particularly in East Yorkshire. The type

has been discussed extensively in the literature (Hayfield 1985, 378-84; 1992; Mayes and Hayfield 1980; Hayfield and Grieg 1990; Vince and Steane 2005; Watkins 1987) while the drinking jugs, (formerly known as Skipton-on-Swale drinking jugs) have been defined and described by Jennings and Barclay (1994, see also Vince and Steane 2005). As discussed below the number of drinking jugs from the site was unusual, but in general terms the quantity of Humberware is not unexpected and the situation recalls that seen in the later medieval deposits at Pontefract Castle (Cumberpatch 2002). A distinctive and repeated feature of the drinking jugs was the presence of deep fingernail impressions at the point where the handles were attached to the body of the vessels. The trait is distinctive enough for it to be suggested that the vessels were the product of the same pottery.

6.6 In two cases drinking jugs appeared in unusual fabrics. The example from context [126] may simply be an atypical Humberware, but the Buff Sandy ware base from context [262] was clearly the product of another pottery, indicating that other potters were also making the same type of vessel, presumably for the same purpose.

6.7 Other local and regional types were present in much smaller quantities. These included the local *Winksley type ware* (Bellamy and Le Patourel 1970) together with *Brandsby type ware* (Watkins 1987; Brooks 1987, 153-4) and *Hambledon ware* (Brookes 1987, 159-160), Beverley type ware (Watkins 1987, 1991; Didsbury and Watkins 1992) and small quantities of *Scarborough II ware* (Watkins 1987, 111-2). Other local whitewares have been described as *North Yorkshire Whitewares* to allow for uncertainty over the actual location of production.

6.8 Unidentified medieval wares have been ascribed generic names which describe their principle characteristics (*Oxidised Sandy ware*, *Reduced Sandy ware*, *Buff Sandy ware*). The majority were distinguished by their sandy texture and sparse to moderate fine quartz temper, with the similarity amongst the oxidised wares in particular suggesting production in a limited number of potteries. There was nothing to indicate a significantly earlier date than that indicated by the identifiable wares and it is probable that most were the work of local potters located in countryside around the medieval town.

6.9 The problem of attributing medieval pottery from North Yorkshire to specific potteries and of relating it to the dating framework was highlighted by Mellor (1994) and will shortly be reiterated by the Medieval Pottery Research Group in a new survey of medieval pottery studies in England and Wales (MPRG in prep). The lack of a regional type series and supporting documentation remains a significant problem when dealing with assemblages from sites in North Yorkshire, although in the present case the unusual quantity of Humberware means that the problem is less acute than on some (notably rural) sites.

6.10 Imported pottery was limited to a small quantity of German stoneware. This included both *Frechen-Köln* and *Siegburg* type, the latter represented by a splayed, pinched base. While other types of European pottery are rarely found outside sea and river ports, German stonewares are not uncommon on inland sites, although as here they generally occur in only small quantities.

6.11 Very late medieval and early post-medieval wares were represented by the *Late Humberware* and *Green Glazed Sandy ware* and the single sherd of *Cistercian ware*.

The date range of the Green Glazed Sandy ware (aka Green Glazed Coarseware) is less well established than the Cistercian ware (Watkins 1987, 106), but they appear to be at least in part, contemporary, as they are with the Late Humberware. The scarcity of post-medieval wares and early modern wares *(c.*1720 – 1840) is regrettable but presumably relates either to the character of use of the market place during these periods or to the truncation of the archaeological deposits in question during the 19th century. Very small sherds of 18th-century *Slipware*, *Tin Glazed Earthenware (c.*1550 – *c.*1750) and possible sherds of *Creamware (c.*1740 – *c.*1820) and *Pearlware (c.*1780 – *c.*1840) both plain and transfer printed, and *Edged ware* attest to activity in the area at this time, but the size of the sherds and the small quantities involved precludes any useful interpretation.

6.12 In contrast to the later post-medieval and early modern periods, the recent period *(c.*1840 to the early 20th century) was well represented with a range of the typical wares of the period including utilitarian types (*Brown* and *Yellow Glazed Coarseware*, *Brown Salt Glazed Stoneware* (BSGSW) and other *Stonewares*, *Unglazed Red Earthenware* (URE) and tablewares with the latter being commoner than the former. The range of tablewares was not unusual and included *Whitewares* and *Bone China* (both plain and transfer printed), *Cane Coloured wares* (plain, slip banded and Mocha decorated) *Sponged ware (c.*1830 and later). Date ranges for individual sherds and vessels are indicated in the data tables. The range of transfer printed designs on both the Pearlwares and the later Whitewares was not unusual and included the ubiquitous 'Willow' together with unidentified floral and geometric designs and a possible example of the 'Eton College' design.

6.13 The stratigraphic phasing of the site indicated a larger number of phases of activity than were detectable from the pottery evidence and which, in some cases (notably phase 9), could be sub-divided on ceramic grounds. The following description of the pottery follows the stratigraphic phasing but also indicates the points at which the pottery evidence departs from that of the interpretation of the stratigraphic data.

Phase 1

6.14 The pottery assemblage from phase 1 contexts was both small and mixed. Context [230], the fill of ditch [299], included a small sherd of transfer printed Whiteware of mid to late19th-century date, somewhat at odds with the early stratigraphic position of the context and the presence of a sherd in an oxidised gritty fabric. Context [38], associated with the fence [37], produced a small fragment from the base of a Humberware jar or jug. Neither of the medieval sherds indicated a significantly earlier date than the later 13th century, although the dating of the handle from context [230] is less secure than might be desired, given that the fabric remains unidentified.

Phase 3

6.15 Four features attributed to phase 3 produced pottery; posthole [134] and pits [122], [137] and [138]. Of these, pit [122] was the earlier with the smaller features [137] and [138] cut into it. In spite of the earlier date of the larger feature, the pottery recovered from it was not distinctively earlier than that from the two smaller pits (although the definite dating of such sherds is inevitably difficult and it might well be that future work will show them to be of later 12th- or 13th-century date). The only sherds identifiable to specific known types were the Humberwares, which were present in both the smaller pits, but the characteristics of the Oxidised and Reduced

Sandy wares suggested that they were of a broadly contemporary date, as discussed above. The implications of the presence of these wares in this stratigraphically early phase, which is paralleled by their presence in much later phases would seem to be that the development of the market place took place within a period that is hard to sub-divide using ceramic data. While it would be difficult to argue for a very short timescale on the basis of the pottery (given the broad date range of the Humberwares noted above), the fact that both conventional jugs and hollow wares were accompanied by the base of a drinking jug makes parallels between phase 3 in general and pit [138] (which produced the greatest quantity of Humberware) and later phases (notably phase 5) inevitable.

Phase 4

6.16 The cobbled surface [238] produced a small, mixed assemblage which included a small fragment of a German stoneware bottle (probably Frechen-Köln) alongside later sherds. How far residuality or intrusion was responsible for this mixed assemblage is impossible to determine from the pottery evidence alone.

Phase 5

6.17 Contexts attributed to phase 5 produced a large and relatively homogeneous assemblage of pottery from a series of layers (contexts [257], [262], [264], [276], [277], [278] and [293]). Of these, [293] was the earliest, overlain by [276=264=262=278], with [257] and [277] above it. Although all of these contexts produced small quantities of local and regional wares (Beverley type ware, North Yorkshire Whiteware, Scarborough II ware, Hambledon ware and the various generic wares), Humberwares predominated, and the numbers of drinking jugs were particularly significant. Only two sherds of pottery were recovered from context [293] but these were almost indistinguishable from the larger assemblages recovered from the later contexts. A small quantity of Late Humberware from context [257] may hint at some chronological differentiation within the contexts, but otherwise the assemblage appears to be remarkably homogenous and is also directly comparable to phases 3, 6 and parts of phase 7.

6.18 Context [294], part of a layer which was only partially excavated, produced a small group of sherds similar in character to those from other contexts belonging to phase 5.

Phase 6

6.19 Two groups of contexts in phase 6 produced assemblages of pottery; the second cobbled surface ([256] and [F4]) and the make-up layer for the cobbles ([21] and [103]). Both groups produced similar assemblages of pottery dominated by Humberware jugs and drinking jugs with small quantities of other local sandy wares (North Yorkshire Whiteware, Winksley type ware and generic sandy wares) with a very small number of sherds of late medieval types (Green Glazed Sandy ware and Late Humberware).

Phase 7

6.20 The assemblages from contexts assigned to Phase 7 formed two very distinct groups. The pottery from contexts [124], [128], [114] and [501] was virtually indistinguishable in date range and character from phases 3, 5 and 6. In contrast, the contents of the pits (contexts [18], [20] and [202]) were clearly significantly later and

included medieval pottery only as a residual element alongside 18th- and, predominantly, 19th-century wares.

6.21 The late medieval pottery from the first group of contexts included two sherds of German stoneware, the base of a Siegburg bottle or mug and a body sherd of probable Frechen-Köln type. Small numbers of local wares and unidentified sandy wares were present together with a sherd of later medieval or early post-medieval Purple Glazed Humberware, but the greater part of the assemblage consisted of Humberwares and Humberware drinking jugs similar to the assemblages from earlier phases.

6.22 The sherds from pits [17], [19] and [201] were generally small in size, and it may be of significance that the largest sherds from these features were residual medieval wares. This would seem to suggest that the formation processes which led to the creation of the deposits were significantly different to those responsible not only for the earlier assemblages but also for broadly contemporary ones such as feature [116] in phase 8.

Phase 8

6.23 Features in phase 8 showed a similar pronounced split to that described above for phase 7. The cut features, [116] and pit [15] contained pottery of 19th-century date, while the layers (contexts [99] and [265]) and the levelling deposit [93] were dominated by medieval wares with Humberwares the commonest single type. Only context [3], which included a small number of sherds of 19th-century pottery amongst the familiar Humberware-dominated assemblage, differed from this general profile.

Phase 9

6.24 While the greater part of the assemblage from phase 9 was recovered from the large 19th-century water tank or cistern (contexts [146], [147] and [267]) and was consistent in its composition with an early 20th-century date for its backfilling, the pits proved somewhat more varied in their character. In each case the quantity of sherds was small which means that some caution must be exercised in assuming that the pottery directly dates the fill of the features, and other sources of dating should be considered in determining the most plausible date for these features. This having been noted, the pits do seem to contain distinctive assemblages. Pit [6] may be the earliest with a single sherd of Humberware, while pits [81] and [69] might be slightly later. Context [82], the fill of pit [81], was particularly unusual in being the only feature on the site to produce any Cistercian ware *(c.*1450 – *c.*1600), a type normally found quite commonly throughout the north Midlands and northern England. The fill of pit [69] may be slightly later with a residual sherd of Humberware accompanied by post-medieval Green Glazed Sandy ware and 17th-century Blackware (also unusually rare on the site). Pit [75] might be argued to date to the early modern period or the earliest phase of the recent period, but the remaining pits seem to be somewhat later in date and all include mid to late 19th-century wares alongside earlier types, presumably residual.

Unstratified pottery

6.25 The unstratified pottery is listed in Table 2. The material from the cleaning layers in the northern part of the site conformed closely to the profile established for the medieval phases of the site, while that from the southern area was of 19th-century

date. Other unstratified sherds which were not identified as coming from any specific part of the site maintained this distinction. Overall there was nothing in the assemblage to contradict the conclusions drawn from the stratified data.

Discussion

6.26 The pottery assemblage from Ripon Market Place is one with a highly distinctive character which sets it apart from others encountered by the author in Yorkshire. While the range of wares present is entirely unexceptional (as described above), the compositional profile is extremely unusual, most obviously in the numbers of Humberware drinking jugs represented. While not uncommon, these vessels are usually present only in small numbers, and to find them comprising 18.56% of the total number of sherds from stratified contexts (based on the estimated (maximum) number of vessels) is unusual. This figure rises to 22.3% if the later post-medieval and later pottery is eliminated from the calculation. The high proportion of Humberware jugs and other hollow wares is less unexpected as the Humberware potters appear to have achieved a high level of market penetration in the later medieval period, and other sites (such as Pit 290 at Pontefract Castle, Cumberpatch 2002) have also produced assemblages dominated by Humberware. Comparing the assemblage with others from Ripon suggests that the assemblage is also atypical of the town more generally (although the small number of sites excavated and published does limit the extent to which such comparisons can be seen as significant) and as such some caution should be exercised in interpreting the data.

6.27 The pottery assemblage from the site in Deanery Gardens / Low St Agnesgate excavated by the York Archaeological Trust (Whyman 1997) appeared to be somewhat earlier than the one considered here, although the presence of Winksley type ware and Brandsby type ware on both sites does provide some connection between the two. If the presence of these sherds in the Market Place assemblage indicates contemporaneity of use of these wares and the Humberwares, then it may be that the latest phases of the Deanery Gardens site are roughly contemporary with the Market Place site, although it could also be argued that these sherds were of residual character. Further work in and round the Market Place is required before this issue can be resolved.

6.28 Perhaps of more significance than the chronology is the fact that the two assemblages were of rather different character, with the Deanery Gardens assemblage being dominated by cooking pots with relatively few jugs and no drinking jugs (Mainman 1997, 129), while such vessels were notable by their absence from the Market Place. It is the case that Gritty ware cooking pots are somewhat rarer in later medieval assemblages than they are in earlier ones (related to the wider availability of metal cooking pots in the later medieval period), but their apparent complete absence from this assemblage remains an unusual feature.

6.29 An excavation by Archaeological Services WYAS at 8-9 Market Place also produced an assemblage of medieval and later pottery (Cumberpatch 1999) with a somewhat broader date range than the one considered here. The report is unsatisfactory on a number of grounds, but it does seem clear that there are broad parallels between the two assemblages with later medieval pottery predominant and an apparent hiatus in activity (or extensive truncation) affecting the post-medieval and early modern periods, although quantities were not as small as in the assemblage considered here. 19th-century pottery was present in Trenches 2 and 3. The

presence of the Humberware drinking jugs in the assemblage considered here does not seem to be paralleled in the 8-9 Market Place site.

6.30 Without considering the evidence of the animal bone and other sources of information, the most obvious interpretation of this assemblage is that it represents the waste from an inn or ale house, a context in which drinking jugs in particular might be expected to be common. This interpretation is, however, based upon the expectation that the term drinking jug accurately describes the function of these vessels, and this may not be the case. Jennings notes that while their use as urinals is documented in the margins of manuscripts, and archaeological finds have included such vessels as the containers of coin hoards, there is little archaeological evidence for their use as mugs or tankards. Indeed, in some ways such a use would be anomalous as there is little evidence of ceramic drinking vessels in common use until the appearance of Cistercian wares around 1450 and the much rarer appearance of lobed cups in the late 14th and 15th centuries. The rather crude manufacture of the drinking jugs contrasts with the greater investment of time represented by the lobed cups and the Cistercian wares, and it is not impossible that the conventional name is misleading as to their actual function. Quite what role such vessels might play in the extraction and processing of neat's-foot oil, suggested by the analysis of the faunal assemblage to have been one of the trades on the site, is unclear. If small, cheap ceramic vessels were involved, then Humberware drinking jugs would be highly appropriate. This question is one that cannot be resolved in the present context.

Animal bone

Summary

6.31 Excavation of the northern half of Ripon Market Place recovered animal bones from nine phases of activity, spanning medieval to modern deposits. Animal bones were also recovered from the watching brief and unstratified deposits. The pottery indicates occasional post-medieval intrusions within the medieval phases but these produced few, if any, faunal remains. The pottery confirms the impression gained of the faunal assemblage during recording, that the contents of the individual phases were largely homogenous.

6.32 Preservation of the bones varied with the age and nature of the deposits. The earliest deposits in phases 1-4 produced small numbers of bones. These were distinguished by creamy surface colouration, with some specimens brittle and some with poor surface preservation. The massive deposits of bone in phase 5 were originally in very good condition with the dark brown patina associated with waterlogging, confirmed by the presence of vivianite on some elements. Unfortunately the drying out during storage has resulted in many instances of bones cracking longitudinally and the surfaces splintering off. This has impacted on the numbers of measurable specimens. Phase 6 also appears to have had waterlogged contexts but the condition of the bones suggested that these had been subject to *in situ* cycles of wetting and drying, leading to surface disintegration. The animal bones from the remaining contexts were in generally good condition.

Methods

6.33 For cattle, sheep/goat and pig bones, fragments were counted as identifiable only if they encompassed a 'zone', or discrete, diagnostic feature. The zones used are those defined by Rackham (1987). This approach reduces multiple recording of fragments potentially from the same bone. A record was only made of the identifiable

fragments present. Incisor teeth of cattle, sheep and pig were not recorded, as these are easily lost from the jaw *post mortem*. Mostly vertebrae, but also a very few ribs, were recorded as either cattle or sheep size, and included with these species for some analyses. All identifiable fragments of the remaining species were noted.

6.34 The identifiable fragments from the watching brief and unstratified deposits were recorded. The former clearly derive from the waterlogged deposits of phase 5 while the latter contain an admixture of all periods. These finds are not included in most analyses.

Results

Species

6.35 The range of species present on this site is listed in Table 1.6. It is immediately apparent that the majority of the faunal remains were recovered from phases 5-8 and that at least half of the identifiable fragments in each of these phases are cattle bones. Sheep bones, with the occasional specimen of goat, are present in all phases. Pig remains are far less abundant and absent from the very small groups from phases 2 and 4. Cat bones are more numerous than those of dog, being recovered from phases 4-8, whereas dog is represented only in phases 5 and 8. Horse remains were found in phase 2 and phases 5-9. The predominance of domestic species of meat animals together with domestic companion animals is not unexpected for a medieval town. In contrast, the presence of deer remains in phases 2, 5, 6, 8 and 9 is of note. Despite the excellent preservational conditions in the waterlogged deposits, bird bones are surprisingly scarce and restricted to domestic fowl, goose and duck. Table 1.7 shows that the only marine mollusc shells regularly encountered were oysters, with mussel shells also present in phases 5, 6 and 8. Hand-recovered fish bones are usually restricted to elements from large examples of the gadid family but even these were confined to phase 8. The inland location of Ripon appears to have precluded routine consumption of large fish species in the establishments depositing refuse in the market place.

6.36 Table 1.8 shows the proportions of fragments of the three principal food species in phases 5-8. Phases 5 and 6 are practically identical, indicating continuity in consumption and disposal practices. Approaching two thirds of the identified fragments are cattle and just less than one third sheep, with a few pig remains. Phase 7 shows an increase in the proportion of sheep bones at the expense of both cattle and pig. This may merely be a reflection of the smaller size of the assemblage from this phase, as Phase 8 shows a pattern consistent with that seen for phases 5 and 6.

6.37 The predominance of cattle bones and the lack of variation in species composition between phases 5-8 may genuinely represent waste disposal patterns and a relatively short chronology of deposition. However, it is salutary to recall that recovery by hand excavation favours bone fragments 6cm or greater in size (Jones and Ruben 1987, 197-8; O'Connor 2003, 98-9). In practice this means that hand collected bone fragments have been subjected to a uniform selection process during excavation, which may not necessarily be representative of the assemblage in the ground.

6.38 Extensive modification of the bones appears to have taken place prior to deposition. Both butchery and gnawing marks were clearly visible throughout the assemblage

and their presence was recorded. Tables 1.9 and 1.10 quantify the occurrence of such marks. The larger bones of cattle show consistently high levels of butchery marks but conversely few gnawing marks. The smaller bones of sheep and pig show lower levels of butchery marks but higher incidences of gnawing marks compared to the cattle bones. The difference in the proportions of gnawed bones between cattle and the smaller species is interesting. Cattle marrow bones are very palatable to dogs. The paucity of gnawing marks may suggest that the cattle bones were incorporated into the ground before dogs had access to them, which may indicate disposal of commercial, rather than domestic, refuse. Alternatively, the local dogs may have been of small stature and thus unable to damage robust cattle bones. Dogs clearly had enhanced access to sheep and pig bones, which may suggest feeding of kitchen and table scraps to household dogs. Preferential destruction of the smaller bones of sheep and pig, particularly porous bones from juvenile animals, will have skewed the species representation in the surviving bones.

Cattle

6.39 Since cattle bones comprise the bulk of the assemblage, this species offers the most scope for analysis of consumption and disposal patterns.

Body part representation

6.40 Graphs 2.1 and 2.2 show the relative frequency of twenty elements representative of the head, neck, fore and hind limbs in phases 5-8. Counts of vertebrae and phalanges have been adjusted to equate with paired elements. There are some clear broad trends, such as the abundance of mandible and metapodial fragments. The recording system used is biased towards over-representation of mandible fragments but not metapodials. The major meat-bearing bones of the fore and hind limbs occur in comparable proportions. The superabundance of metapodials suggests discard of more cattle feet than those associated with the beef carcase bones. Similarly, even allowing for over-recording, more mandible fragments were deposited than the associated skull and neck fragments. Graph 2.3 shows the relative frequency of the most common individual, non-repeatable, skeletal element zones for the cattle bones in phases 5-8. The basic pattern seen in Graphs 2.1 and 2.2 is repeated with metapodials still being the most abundant elements and jaw fragments more common than those of the skull. However there is less disparity between the frequency of mandible and forelimb elements. Furthermore, the proportion of the ilium relative to the other hind limb elements has increased. The data on which these graphs are based are presented in Tables 1.11 and 1.12. Table 1.11 shows the numbers of fragments whereas Table 1.12 gives an indication of the numbers of bones represented by the occurrence of individual zones.

Teeth

6.41 The stages of eruption and wear of teeth generally give a more detailed indication of the cull cohorts of immature animals than the equivalent stages of epiphysial fusion. Table 1.13 includes both maxillary and mandibular teeth in broad wear categories. Despite the high numbers of mandible fragments observed in the assemblage, it can be seen that the number of teeth present is disappointingly low, particularly in phases 6-8. However, teeth from very young animals are as, or more, common than those from young adults with permanent teeth at early stages of wear. Older animals with the permanent teeth in full attrition are well represented. The robust butchery of the cattle bones, including the mandibles has resulted in the survival of few complete tooth rows from which Mandible Wear Stages (MWS, Grant 1982)

could be calculated. Graph 2.4 shows a distinct polarity between very young calves at MWS 0 and very old adults with advanced wear on the permanent dentition at MWS 42-54. The high proportion of very young jaws could merely reflect the difference in size, with less fragmentation of the younger jaws. MWS are a relative system of ageing and calendar ages for MWS will be influenced by such factors as feeding regimes. An indication of the possible age range of the adult cattle from Ripon is suggested by mandibles in the author's reference collection from three Dexter cows aged 13-17 years, which were kept under traditional husbandry. Mandibles from all three cows fall at MWS 46-47.

6.42 Jones and Sadler (2004) have devised a method using the cement-enamel junction (CEJ) to separate elderly from adult mandibles, given the range of variation in the accessory pillar on which TWS j is based, and used as the separating point between adult and elderly. Two mandibles at MWS 54, one from phase 7 and one from phase 8, were noted for their extreme wear. Both are at Jones and Sadler's stage z, with the root arch visible above the alveolar border. The method is still under development but this is the most advanced wear stage possible, indicating very elderly animals.

6.43 Table 1.14 shows the tooth wear stages (TWS) for all the mandibular teeth, whether loose or *in situ*. All but one of the deciduous 4th premolars (dp4) fall in TWS b-d, indicating culling of calves that were very young but old enough to have eaten sufficient solid food to expose the dentine. The slight variation in wear may reflect different feedstuffs as much as different age. The possible age of these calves is suggested by a 6 week old Dexter heifer calf with dlp4 at TWS b and a 10 week old Jersey heifer calf at TWS d, in the author's reference collection. In the 19th century, Mrs Beeton (1861 facs., 401-4) observed that veal calves were about eight weeks old. The Ripon calves may also have been about this age. The remaining dp4 is at an advanced wear stage, indicating it would shortly have been shed from the jaw. The majority of the permanent molars fall in the advanced wear stages h-p. Young adults are only represented by the third molars at TWS c in phases 5 and 7.

6.44 All three methods of looking at tooth eruption and wear as a guide to slaughter patterns suggest that there was a dichotomy between infant veal and beef from mature to elderly cattle. There is little evidence for consumption of immature and young adult cattle that might be considered as prime beef. Such a pattern of cattle exploitation suggests that veal calves, dairy cows and plough oxen were more profitable than fatstock.

Fusion

6.45 The epiphysial fusion data in Table 1.15 complements the pattern seen from the teeth. There are rare examples of post-cranial elements from very young calves. The majority of the epiphysial ends are fused, from adults. Unfused or fusing bones from immature and young adult cattle are infrequent.

Measurements

6.46 The preponderance of cattle metapodials has provided a useful dataset from which to attempt to distinguish sex ratios in the slaughter population. Unfortunately not one single metacarpal or metatarsal was deposited intact, so no estimate of the withers height of the cattle is possible. This routine breakage of the metapodials suggests that these trimmings from the raw skins were used in the production of

neat's foot oil to dress the tanned leather. Since the distal ends were almost entirely fused, it was considered appropriate to measure the proximal ends too. As the proximal metapodials do not have a separate epiphysis but grow throughout life, analysis of such metrical data can be obscured by age differences as well as sex ratio and regional livestock types. Phases 5-8 are considered together for the metrical analyses.

6.47 The metacarpal should demonstrate clear dimorphism between entire males and females, with castrates being less well defined. Graph 2.5 depicts the distribution of the breadth of the distal condyle. There is a clear grouping at 50-54mm breadth, which may be assumed to be cows. The remaining groups subdivide into either two or four groupings. The lack of definition may reflect overlap between males castrated as calves, males castrated as young adults and entire breeding bulls. One of the larger examples with a breadth of 62.7mm is not fully fused, suggesting that this may be a castrate. Unusually, the proximal breadth measurements in Graph 2.6 show a clear tripartite division with a large group of smaller bones, presumed to represent cows and two smaller groups of larger animals. Which are the bulls and which the oxen is moot and will be discussed further in the succeeding section on pathology.

6.48 The metatarsals are generally thought to give a less clear division between male and female but Graph 2.7 shows a classic bipartite separation of the distal breadth measurements. The proximal breadths show less clear separation than the metacarpals, though two extremely large bones are indicated on both Graphs 2.6 and 2.8.

6.49 The inference from the size distribution of the metapodials is that the larger proportion of the cattle bones excavated derives from cows.

Pathology

6.50 Commonly encountered pathological changes to cattle bones may be divided into those that are congenital, those that are associated with age-related joint degeneration and those that are interpreted as possibly indicating the employment of individuals for draught work. The distinctions between these broad categories are not clear cut.

6.51 The proximal medial articulation of the cattle metacarpal can exhibit a small, roughly circular, depression. This is *osteochondritis dissecans*, a manifestation of malformation in the cartilage of the joint surface. It is unclear whether this is merely a congenital non-metrical trait or whether this is caused by traumatic injury. The preponderance of metapodials in this assemblage provided an opportunity to quantify the occurrence of this feature. The overall incidence in phases 5-8 was 25%, or 8 of the 32 of the proximal metacarpals. However the feature was most prevalent in phase 5, with 4 examples out of 7 bones. Such a high level of incidence suggests a genetic, rather than traumatic, origin.

6.52 Oral problems were rare. One maxillary third molar from phase 5 exhibits severe malocclusion, resulting in an elongated or hooked posterior cusp. This condition is a common contributory cause of death in Chillingham cattle, due to the inability to cud efficiently (Ingham 2002).

6.53 Two acetabula, one male from phase 5, Figure 18, and one female from phase 7, Figure 19, show bridging of the ilial-pubic border forming a foramen. This is an age-related condition, currently being studied by Gidney and Beglane (in prep.). It is of note that there is an area of eburnation on the pubic facet of the female acetabulum but not on the male example. Groot (2005) suggests that such eburnation is caused by use of cows for draught work, without considering that temporary paralysis, caused by compression of the obturator nerves during calving, is common in elderly cows and affects both the gait and hip joint.

6.54 Given the overall composition of the cattle bone assemblage, most of the remaining degenerative changes were associated with the feet. A centroquartal from phase 5 exhibits fusion of tarsal 2+3, exostoses on the proximal lateral border and pitting of the distal lateral articular surface (Figures 20 and 21). This appears to be a case of spavin, a condition found in both draught oxen and stalled dairy cattle. Inheritance appears to be a predisposing factor (Bartosiewicz *et al* 1997, 70-71). A distal metatarsal from phase 5 exhibits eburnation on the medial border of the medial condyle, indicating damage to the cartilage of the joint surface. Two first phalanges from phase 6 show pronounced lipping round the proximal end together with eburnation and grooving of the medial articular surface, typical of arthritis.

6.55 Identification of draught oxen relies on the incidence of morphological changes to the feet. Johannsen (2005, 40-41) suggested that the presence of an exostosis on the proximal end of the third phalanx could be a reliable indicator of the draught ox. Unfortunately the numbers of phalanges recovered are only a fraction of the number that would correlate to the distal metapodials found. Four of the 14 third phalanges from phases 5-8 exhibit this feature, a similar incidence to the depression on the proximal metacarpal. Figure 22 illustrates a normal third phalanx and one with the heel extension, both from phase 5, context 276. Contrary to Johannsen (2005), this feature may not be an indicator of the draught ox as a 13 year old Dexter bull in the author's reference collection has this extension on all 8 third phalanges. Figure 23 compares the Ripon example with two Dexter bulls. One of the examples from phase 6, Figure 24, appears to derive from the same foot as a first phalanx with advanced lipping and eburnation. The reference Dexter bull also has lipping and exostoses on the first phalanges, though not eburnation, suggesting that the mature breeding male may develop similar osteological changes to the draught ox and therefore this feature may not be a reliable character for the identification of oxen. Returning to the extremely broad distal metacarpals noted above, one of these, from phase 5, shows broadening of the condyles and exostoses on the distal shaft falling between stages 2 and 3 for these conditions as observed on modern oxen (Bartosiewicz *et al* 1997, 40-41). A first phalanx from phase 5 shows comparable broadening of the proximal articulation and also distal extension of the articulation on the dorsal side of the diaphysis (Bartosiewicz *et al* 1997, 49). The latter feature is the only pathological change that is not so pronounced on either of the author's reference Dexter bull skeletons and may therefore be a more reliable indicator of draught cattle.

Sheep and goat

6.56 Goat is definitely represented on this site, with finds of horn cores from phases 1, 6 and 8. Since goat was positively identified at the assessment stage, the more diagnostic post-cranial elements, such as the metacarpal, were closely examined during cataloguing but no unequivocal goat limb bones were observed. It can be

seen that cranial elements positively identified as sheep were recorded in phases 1, 3, 5, 7, 8 and 9 in numbers far in excess of the equivalent goat fragments. The assumption is therefore made that the bulk of the fragments in the sheep/goat category are of sheep, and will be discussed as such.

6.57 The sheep supplied to Ripon appear to have been a horned type. Only one female skull with bony scurs, Figure 25, rather than fully developed horn cores, was observed in phase 5 and there were no examples of polled skulls. There may have been some bias towards disposal of horn cores, as the butchery marks indicate robust removal of the horns. The horn cores may therefore represent disposal of refuse from horn working, if only on a domestic scale. Single examples of female horn cores with "thumbprint" depressions were seen in phases 3, 5, 7 and 8 but on only one male horn core from phase 5. These depressions are thought to indicate periods of malnutrition, particularly during adverse winter weather. The horn cores from phases 1-8 comprise five from entire males, eight from females, nine probably from females but possibly castrates and three from either entire or castrate males. The high proportion of males may reflect selection of these larger horns for craft work.

Body part representation

6.58 Graphs 2.9 and 2.10, showing the relative abundance of skeletal element fragments, display trends broadly comparable to those observed from the cattle bones. Mandible and metapodial fragments predominate. The scapula, humerus and radius of the forelimb and tibia of the hindlimb are disproportionately well represented. These elements are particular robust, so survive well, and are readily recognised during excavation. While some of the pattern therefore reflects taphonomic processes, the coincidence of high proportions of metapodials for both cattle and sheep suggests disposal of the waste from trimming of raw cattle hides and sheep fells. Graph 2.11 shows the relative frequency of the skeletal element zones for the sheep bones in phases 5-8. While the preponderance of metapodials seen in Graphs 2.9 and 2.10 is still apparent, there is little disparity between the proportions of mandibles and forelimb bones. This suggests either a bias in the recording system towards mandibles or greater breakage of the mandible compared to the forelimb bones. The zone data demonstrate that the tibia occurs in similar frequency to the forelimb bones but that there is a genuine paucity of the other hind limb elements, especially in contrast to the superabundance of metatarsals. This strongly suggests that taphonomic and recovery factors have militated against the retrieval of hind limb elements. Overall, there appear to be roughly twice as many metapodials as the equivalent limb bones, indicating disposal of feet from skins as well as from carcases. The data for these graphs are given in Tables 1.16 and 1.17.

Teeth

6.59 The tooth eruption and wear data in Table 1.13 show a complete absence of very young animals, in contrast to the cattle. Small numbers of hoggets, in their second year, are indicated but the majority of the teeth are from the permanent dentition and in full attrition, indicating supply of mutton. Far more complete tooth rows survive for the sheep mandibles, compared to the cattle, though these were concentrated in phase 5. Only the jaw at MWS 30 does not have the third molar in full wear. The advanced wear indicated by MWS 43-45 suggests that not only prime mutton but also "crones", as old ewes were known, were utilised. Table 1.18 gives the TWS. Stage g is full wear but is a standstill stage through much of the reduction

of the tooth crown height. It is clear that more teeth are present from animals with tooth wear extending beyond this stage than from younger animals that had not reached TWS g.

Fusion

6.60 The pattern of fusion in Table 1.19 confirms the pattern of age at slaughter indicated by the teeth. No infant animals are represented. Unfused bones among those that fuse in the second year imply over-wintered hoggets. Bones fusing in the group that fuse by the fourth year indicate prime mutton, by modern standards, with the fused bones in this category and the fused vertebrae indicating older muttons. These may include five year old wethers, which were once the most prized of mutton sheep, as well as the elderly crone ewes.

Measurements

6.61 The sheep metapodials had not suffered the universal mid shaft breakage seen for the cattle bones. Consequently nine metacarpals and nine metatarsals were recovered intact, from which measurements to estimate stature were taken. All the stratified bones were recovered from phases 5-8, with two examples from comparable deposits in the watching brief and one unstratified find. Graph 2.13 shows the range of estimated heights using the factors of Teichert (Driesch & Boessneck 1974, 339). The mean height is 0.58m with a standard deviation of 0.03m. The preponderance of shorter animals suggests that mostly females are represented. The taller animals are assumed to be males. The tallest animal is from phase 5. This might possibly be a wether, as castrates generally grow taller than females and entire males. A larger sample of 25 proximal metacarpals was measurable. The distribution is plotted in Graph 2.14. By itself, this is not very informative. Graph 2.15 plots the same data against a sample from the large assemblage of mostly complete 18th-century metacarpals from York (O'Connor 1984) and 18th-century sheep metacarpals used to peg stone roof tiles at Richmond. The Ripon and York examples, despite some disparity between medieval and post-medieval contexts, form an overlapping cluster, which includes the smaller examples from Richmond. The majority of the Richmond examples fall beyond the upper range of the Ripon and York bones. This is supporting evidence for the original contention that large and robust bones from male animals would be preferred for use as roofing pegs at Richmond. The majority of smaller animals may therefore represent disposal of bones from cull females. Less variation is apparent in the breadth of the distal metacarpals of sheep, compared to cattle. Graph 2.16 plots the distribution of distal breadth measurements, which again shows a peak at the lower end of the scale suggestive of a majority of smaller females represented in the assemblage.

6.62 The distal humerus fuses in the first year, so the pattern seen in Graph 2.17 may include both relatively young through to aged animals. This element is also diagnostic between sheep and goats, so the metrical data should pick up any examples of goat that were undifferentiated during recording. The spread of smaller to larger examples may reflect age as much as gender but the roughly tripartite division may suggest ewes, castrates and entire males. The anomalous example to the top left is from phase 9 and suggests a change in conformation in the post-medieval era, rather than an example of goat.

6.63 The distal tibia is not a strongly sexually dimorphic element and therefore illustrates the distribution within a population. Graph 2.18 shows a pattern which is compatible with the supply of sheep of one broadly similar type.

Pathology

6.64 Phase 5, context 276, produced a small concentration of abnormalities. One mandible has expansion of the mandible on both the lingual and buccal aspects of premolar 4 and molar 1. Lamellar bone is forming on the buccal side but woven bone is present on the lingual side, indicating that this inflammation was still active at the time of death. A further jaw has substantial deposits of calculus on the buccal and lingual sides of molar 2, extending onto molars 1 and 3. A metatarsal has a pronounced ridge on the proximal medial aspect. Thomas (2005, 46-7) reviews the evidence for this condition and there is, as yet, no consensus on the aetiology, though an ossified haematoma is a possibility (Thomas 2005, 61). Two possible causes of such trauma are either the animal being repeatedly caught by the leg using a leg crook, or an habitual fence jumper who regularly caught the same leg in the top bar of a hurdle or gate. Phase 5 context 277 produced a humerus with an exostosis of the distal lateral articulation. While this is commonly referred to as "penning elbow", age-related ossification of soft tissue attachments is as probable as a traumatic origin. A further example of this condition was present in phase 8.

Pig

6.65 As previously noted, far fewer bones of pig were recovered compared to those of cattle and sheep. There is therefore correspondingly less information on the cull pig population.

Body part representation

6.66 Table 1.20 shows the paucity of individual skeletal elements from phases 5-8. Graph 2.19 presents the totals from phases 5-8 but it can be seen that the sample size is still too small for more than general comment and that consideration of the zone data would be meaningless. The mandible and forelimb, or hand of pork, bones are better represented than the hindlimb, or ham, bones. The prevalence of the humerus, a robust bone that survives well, suggests that taphonomic factors, such as the dog gnawing detailed in Tables 1.9 and 1.10, have impacted on the survival of bones and distorted representation of the body parts originally consumed. The find of a pig phalanx 1 in phase 8 with the surface acid etching characteristic of passage through the canine gut, suggests that many more fragments of comparable size have not survived ingestion.

Teeth

6.67 Table 1.13 shows that, despite the relative abundance of mandible fragments, pig teeth were rare finds and absent from phases 7 and 8. Young adults in their second year are suggested by the wear on permanent teeth that erupt in the first year together with deciduous teeth present and permanent teeth with little wear among those that erupt in the second year. One adult breeding pig is indicated by the molar 3 in wear. Two tooth rows from phase 5 were intact for MWS to be calculated, young pigs at MWS 6 and 7. Overall, either surviving canine teeth or surviving tooth sockets indicate three male and three female examples. There were no examples of mandibles from sucking pigs, aged a few weeks old.

Fusion

6.68 Table 1.21 shows that bones from juvenile pigs, about or under a year old, are represented in phase 5 but not in phases 6 and 8. Phase 5, context 276, produced a concentration of immature pig bones that were clearly older than sucking pig but still very young. The mandible at MWS 7 from the same context suggests these fragments might all derive from one pig, or litter mates, about six months old. The bones in phases 5 and 8 that fuse in the third year and have the fusion lines still visible suggest that the earlier medieval practice (Rees 1924, 11) of culling breeding stock as three year olds was commonplace.

Measurements

6.69 Only three adult bones were measurable:
Phase 5 humerus Greatest Breadth Trochlea 30.2mm Length Trochlea 30.1mm
Phase 5 humerus Greatest Breadth Trochlea 30.4mm Length Trochlea 28.5mm
Phase 6 metacarpal 3 Greatest Length 78.3mm

Pathology

6.70 A distal humerus from phase 5, context 276, had a crease between the condyles of the type now known as *osteochondrosis*. It is unclear whether this is merely a congenital anomaly or represents traumatic damage to the developing cartilage of the joint surface.

Cat

6.71 Cat bones were recovered from phases 4-8. One partial skeleton was recovered from phase 5, context 278. This was a juvenile animal that appears to have died between about 196 days old, when the proximal radius fuses (Smith 1969) as this is fused, and 210-280 days old as the proximal femur, which fuses in this period, is unfused (Smith 1969). Further concentrations of cat bones in phase 5 context 264, phase 6 context 256 and phase 7 context 124, suggest that further bodies were not recognised during the exigencies of excavation. Many of the bones are damaged and there are no mandibles or maxillae present to determine whether skinned carcases had been deposited or whether these were merely occasional disposals of household companion animals. Four of the five other cat bones with epiphysial ends present are fused, which may suggest the latter option.

Dog

6.72 Actual bones of dog were only recovered in phases 5 and 8. Bones with gnawing marks indicate the presence of dog in phase 6 and the earliest group of phases but not in phase 7. The paucity of dog bones may genuinely reflect the presence of few dogs as smaller, and therefore harder to retrieve, cat bones were found in phases that produced no dog bones. Phase 5 produced one skull, which is now fragmentary and cannot be measured for cranial indices. There is little wear on the teeth, suggesting that bones were not a significant component of its diet. Three limb bones from one context may represent disturbance and/or partial recovery of a skeleton. The tibia gives an estimated withers height of 0.38m using the factor of Harcourt (1974, 154). A further grouping of four elements derive from more than one individual. Phase 8 produced one cluster of 3 dog bones, of which the distal radius had clearly been chopped. Smith (1998) summarises the evidence for the exploitation of dogs in medieval Scottish towns and it is clear that dog ownership was associated with drovers and butchers, with efforts made to restrict the urban

dog population. The Scottish evidence also includes examples of skinning and butchery marks on dog bones; nothing was wasted.

Horse

6.73 Finds of horse remains were overall slightly more numerous than those of either cat or dog. Given the disparity in size between cat and horse, and the fact that many of the smaller bones of cat may have been missed during hand recovery, it can be seen that horse elements were not commonly incorporated in the refuse deposited in these contexts. The body part representation of the horse elements is interesting with a roughly equal split between head and hindlimb and minimal fragments of forelimb or vertebrae:

Head and teeth	10
Forelimb	2
Spine	3
Hindlimb	7

6.74 The horse's head had many uses, some associated with superstitious practices (Merrifield 1987, 123-6). All but one of the "head" fragments are loose teeth, which are easily lost from a curated skull and become incorporated in general refuse. The hindlimb fragments comprise parts of pelves and tibiae, but not femora. There are unequivocal butchery chop marks on all but the single complete tibia but only one ilium has clear gnawing marks. This is a very small sample but does suggest possible removal of the femur with the meat attached. Whether this was to feed dogs or humans is unclear. The paucity of horse bones compared to those of cattle suggests that horse would not have been regularly eaten by people. The low incidence of dog and cat bones, and of dog gnawing marks, might suggest that the horse bones indicate an adequate supply of meat for the cats and dogs represented.

6.75 All the horse bones are from adults with fused epiphysial ends. The teeth include examples at advanced stages of wear, indicative of elderly animals that might have died rather than been slaughtered. The lumbar vertebra from phase 2 has exostoses round the cranial and caudal borders of the centrum, related to age and either or both multiple pregnancies and work related strain on the spine. The one complete tibia from phase 7 gives an estimated withers height of about 1.3m, a pony sized animal in the region of 13 hands, based on the factor of Kiesewalter (Driesch & Boessneck 1974, 333).

6.76 Measurements were possible on two distal tibiae, which indicate a broad similarity:
Phase 5 BD 64.1 mm DD 38.2 mm
Phase 8 BD 69.7 mm DD 43.5 mm

<u>Fallow and roe deer</u>

6.77 A single shed roe deer antler was recovered from phase 2. This is the only specimen of this wild species and may have been an opportunistic find. There is no evidence to suggest use of this antler.

6.78 Fallow deer remains were found in phases 5, 6 and 9, besides the watching brief and unstratified deposits. Phases 5 and 6 produced small concentrations of antler. In phase 5, context 264 produced many fragments which may derive from more than one antler. One beam had been sawn at the base and one tine had been sawn off. In phase 6, context 103 contained palmate antler and three tines, of which one had

been sawn off. These tines were recorded as "deer sp." as they are not in themselves diagnostic but the balance of probability is that they are also fallow deer.

6.79 Limb bones of fallow deer were found in phase 9, a radius, the watching brief, a metacarpal, and an unstratified metatarsal. Only the radius is associated with venison. The metapodials were generally left attached to the skin, as previously discussed for the cattle and sheep.

6.80 Antler had both culinary and medicinal uses. In the kitchen, it was a source of gelatine for fine aspic jelly. Medically, it was used in the distillation of ammonia based products, such as smelling salts.

6.81 Fallow deer were emparked and managed game, unlike the roe deer. It would appear that the local magnates with deer parks permitted some small supply of antler to the medieval town but not venison. Only one bone suggests post-medieval consumption of venison in the town.

Birds

6.82 The bird species identified are the suite of domestic fowl, goose and mallard size duck. Since preservational bias may be discounted, recovery bias may partly explain the low proportions of bird bones from phases 5-8. The tiny assemblages from phases 1 and 3 have proportionally better representation of bird bones. Domestic fowl bones are roughly twice as numerous as those of geese but are concentrated in phase 5, whereas the smaller number of goose bones were recovered from a broader span of phases. Goose is absent from phase 6 but may have been temporarily replaced by a taste for duck, which is only represented in phases 5 and 6.

Fish and marine molluscs

6.83 Marine shells were present in phases 3-9. Oyster shells were the most common finds with examples of mussel shell only in phases 5, 6 and 8. Hand recovered fish bone was restricted to phase 8.

6.84 These scant finds complement the bird bones in suggesting that these resources were available in Ripon but were not widely consumed in the vicinity of the market place, for the remains to be disposed of there.

Samples

6.85 The sampling strategy was primarily designed for the recovery of botanical material, not to act as a control on the recovery of faunal remains, so samples were taken from some contexts which did not produce hand-recovered animal bones.

Phase	No of contexts sampled	No of contexts with indet frags	No of contexts with id frags
1	3	3	
2	1	1	
3	2		2
5	3		3
6	1	1	
7	3	1	2
9	2		2

6.86 It can be seen from this table that many of the contexts sampled did not contain identifiable fragments of bone. Such tiny, unidentifiable fragments can still be of interest as indicating the disposal of floor sweepings after the chopping up of marrow bones and the disposal of dog faeces from animals fed on bones. The latter may be associated with the tanning of fine leathers, possibly implied by the supply of sheep skins alluded to previously. The sampling strategy was not designed to plot the distribution and density of such small fragments, so no further comment can be made.

Phase	No of samples	Cattle present	Sheep/goat present	Pig present	Cat present	Bird present	Fish present
3	2	X	X				X
5	2	X	X	X	X	X	X
7	1		X				X
9	1			X			
9	1		X				

6.87 The identifiable bones from the samples suggest that smaller species are indeed under-represented in the hand collected finds. Smaller fish, comparable in size to herring, appear more common than was apparent at the assessment phase from the 5 litre sub-samples. The cat bones include further examples from the partial skeleton in phase 5 context 278.

Samples >10mm fraction

Phase	No. of samples	Oyster present	Mussel present
1	1		X
3	1	X	
5		X	
6	1		X
9	1	X	

6.88 The samples confirm the presence of oyster but suggest mussel shells may have been more common than indicated by the hand-recovered finds.

6.89 The flots from seven of the samples also contained faunal remains. The majority of these are tiny, unidentifiable fragments. However, context 278, (phase 5) also produced a vertebra from a small species of fish and part of the sternum of a teal. Context 276, phase 5, produced a sheep/goat second phalanx and a wing third phalanx from a small species of bird. In phase 7, the find of a fish vertebra in the sample residue of context 294 is augmented by fish scales and further small fish vertebrae in the flot. Context 128 contains a vertebra of a small mammal, though larger than mouse/vole size. The flots have therefore extended the evidence for the presence of small species of mammal, bird and fish on the site, which was not apparent from either the hand-recovered finds or the sample residues.

Discussion

6.90 The faunal remains from Ripon market place suggest continuity in consumption and disposal of animal products. The high proportion of cattle and sheep metapodials indicate disposal of hide processing waste as well as human food consumption waste. The finds of leather offcuts confirm the presence of leatherworkers contributing to the refuse deposited. The pottery assemblage has an unusually high proportion of “drinking jugs” and Cumberpatch suggests that these may belie their

modern name and be associated with neat's foot oil, given the abundance of cattle metapodials. Such small and cheap ceramic vessels would appear ideally suited for the storage and sale of neat's foot oil for leather dressing. A gas chromatography analysis of appropriate sherds might identify the presence of the appropriate lipids to confirm this suggestion.

6.91 The market place economy appears to have been geared to the trade in cattle and sheep. The other domestic and companion animals represented appear to have been of minimal economic significance in comparison. The cull pattern of the cattle, split between very young veal calves and aged cows, indicates that dairy produce would have been an important commodity, traded in the market and consumed in the town. A variety of readily available dairy produce may partly explain the lack of diversity in diet suggested by the low numbers of, for example, poultry bones. The bones of smaller fish species, recovered from the sieving of the whole of the bulk samples, suggest that items such as kippers or pickled herrings may have been more widely consumed than was at first apparent.

6.92 There is no evidence for refuse from a town house of a local magnate with access to wild and managed game, such as hare, rabbit, peafowl, woodcock, partridge, known from other urban sites in north-eastern England. There is also a striking absence of the commensal urban species that might be anticipated to scavenge the refuse deposited in the market place. For example, there are no corvids among the bird bones.

6.93 The overall impression gained from this assemblage is of moderate prosperity based on a ready supply of cattle and sheep, both for the tanning and leather trades and as butcher's meat. The cull pattern of the cattle bones suggests that the, otherwise invisible, production and trade in dairy produce formed the other important strand of supply and redistribution in Ripon market. While these trends seem common to phases 5-8, and many analyses have had to amalgamate data from all four phases, there may, however, have been a perturbation in phase 7.

6.94 The fall in the number of identifiable animal bones in phase 7, compared to phases 6 and 8, together with an increase in the proportion of sheep bones relative to those of both cattle and pig may hint at an indication of a wider economic phenomenon. The 13th- to 15th-century time span of phases 5-8 covers the agrarian crisis of the earlier 14th century (Kershaw 1973). An epidemic of cattle murrain or plague started in 1319 (Slavin 2010), with national herd mortality rates estimated at about 65% (Newfield 2009), following on from wet weather in 1314-16, which caused widespread harvest failure and decimation of sheep flocks by liver fluke (Kershaw 1973). In predominantly pastoral regions, one response to re-stocking was to increase the sheep flock and to milk ewes as a substitute for cows, while cattle herds were regenerating (Slavin 2010). The high reproductive rate of sheep produced a surplus for sale to amass income to fund the purchase of replacement cattle, which could explain the relative increase in sheep to cattle bones in phase 7. The advanced age noted for some of the cattle from the extreme tooth wear, seen particularly in phases 7 and 8, also fits this suggestion. Cattle that survived the plague had lifetime immunity to further outbreaks (Newfield 2009). Adult breeding cows were at a premium for re-stocking, but the priority was to replace the oxen necessary to cultivate the arable. Bull calves were more valuable to rear in this case than heifer calves. There would therefore be an incentive to keep productive cows to greater

ages rather than investing in replacement heifers. The absence of dog gnawing marks in phase 7 may also be linked to this period of famine. With the loss of the cattle for the dogs to herd and guard and the paucity of food for humans, dogs may have been disposed of as being an unnecessary mouth to feed.

Clay pipe

6.95 19 fragments of clay pipe were recovered during the excavations, from contexts in Phases 7, 8 and 9. Only one partial clay pipe bowl could be identified to type (Context 82). It conforms to the Tyneside Type 6 (Edwards 1988, 9) dating between *c.*1650-1680. Another fragment consisted of part of a bowl base and stem. This was unstratified, and is similar to either Type 3a, 3b or 7, all of which date to *c.*1650 to 1675/80. All the other pieces of stem were plain with no marking, and were therefore undateable. The data is contained within Table 1.22.

Glass

6.96 All the glass dated from the 18th century onwards, the majority from glass vessels, with 3 sherds of modern window glass. Most of the 18th- to 19th-century sherds were fragments from wine bottles. A full catalogue is contained within Table 1.23.

Leather

Summary

6.97 A small assemblage of 31 pieces of leather was recovered from organic deposits in nine contexts from the excavation and the watching brief. Most of the pieces of leather are small and all are fragmentary.

Results

6.98 The assemblage is detailed in Table 1.24, and consists mainly of leather offcuts (24), though shoe sole fragments (5), a thong fragment (1) and a sheet fragment (1) were also found. Some of the offcuts have some cut (as opposed to torn) edges, but very few pieces show distinguishing features or modifications; the piece of sheet leather from context [501] has decoration in the form of a border of punched holes, and three of the shoe sole fragments have traces of stitch holes. The placing of these suggests that at least one is a repair clump.

Discussion

6.99 The leather assemblage provides very little dating evidence, the material being too fragmentary to retain any typologically dateable features. All contexts appear to place the leather in medieval phases, and pottery data from several of the 'major' leather producing contexts ([104], [276]) has produced dates around the 13th-15th centuries.

6.100 The dominance of leather offcuts suggests that leatherworking was taking place in the vicinity. None of the fragments recovered retain any traces of shaped cuts to indicate the precise nature of the manufacturing activity, but the thickness of the leather (2-3mm) would be suitable for a range of everyday applications such as shoes (parts of soles and uppers) or clothing. Leather of this thickness would be rather thin for the manufacture of saddlery, and too thick for finer, more specialised uses such as book binding.

6.101 The shoe repair clump from environmental sample <59> context [276] suggests that shoe repair or cobbling was also taking place. This practice was constrained in its use

of new leather by laws brought in under pressure from medieval shoe makers (cordwainers), in a bid to clearly demarcate the different trades (Grew and de Neergaard 1988, 89). Consequently, cobblers were obliged to use largely reclaimed leather for repairing shoes.

Building materials analysis

Summary

6.102 A small assemblage of 525 sherds of roof tiles was recovered from the excavation (25.56 kg). The assemblage was divided into fabrics by eye, counted and weighed. The group consisted of fragmented small sherds, with rare diagnostic features, and as a result only general fabric groupings were made. The fabric types identified are listed and described below.

Results

6.103 The tile assemblage is dominated by the presence of flat tiles; a few medieval ridge tiles (10 sherds) were also found, together with some modern pantiles (3). A small proportion of the assemblage derives from unstratified contexts (24 sherds; 1.2 kg). Among the roof tile assemblage a group of objects made of tile was also identified.

6.104 A breakdown of the tiles by fabric is shown in Table 1.25 and a full recording is available in the site archive. A sherd from each fabric has been bagged separately as a fabric sample.

6.105 Two main fabrics dominate the assemblage:
-Fabric T1: red fabric with inclusions of quartz and sand temper. Flat tiles with two holes for suspension; round or square holes. None of the sherds was glazed, but one fragment had a drop of green glaze on the surface, and another a drop of purple. Tiles of variable thickness, from 12mm to 13, 14 and 15mm.
-Fabric T5: fine red fabric, sometimes with a grey core, with occasional limestone inclusions and no sand. These tiles are sometimes overfired, with darker colours and grey core. Some sherds also have a marbled effect from poorly mixed clay. Flat tiles with two holes for suspension. None of the sherds was glazed. Tiles of variable thickness, from 11mm to 13, 14 and 15mm thickness.

6.106 Other fabrics were also identified:
-Fabric T9: Fine fabric with grey core and light buff/grey surfaces. Medieval ridge tile. Green-glazed on exterior surface. Decorated with ‘spurs’, finger-impressed at the base.
-Fabric T2: similar to fabric T1, but T2 is lighter in colour and softer (11mm thick).
-Fabric T6: light yellow fabric, sometimes with a grey core. Some sand inclusions. Slightly thicker tiles (18-19mm), and also some very thick fragments (34mm) that may be thin bricks. One sherd was found with a drop of green glaze on its surface.
-Fabric T10: orange fabric, very fine, with no visible inclusions. Flat tile made on a sanded mould.
-Fabric T1P: dark red fabric with abundant inclusions of ?iron ore. Modern pantile.
-Fabric T8: dark red fabric with abundant inclusions of ?iron ore. Modern pantile.

Tile objects

6.107 Apart from the roof tile, a group of five discs and a rectangle were recovered. These were cut out from tile fragments and derive from the medieval contexts in phases 5 (contexts 262 and 276) and 6 (F4) (Table 1.26). They range in diameter between 4

and 7.5 cm (Graph 2.4) and may have been used as small pot lids or counters for addition or for gaming. Three are more or less the same diameter (around 5cm). These type of 'counters' are also known from York, where they have been identified in a range of materials, including pottery and stone, and chronological span (Mainman and Rogers 2000, 2566). Their use here is also unknown.

Discussion

6.108 Except for two sherds from medieval phase 5 (context 257), most of the medieval ridge tiles are residual in phases 7 and 8 (contexts 124, 128, 3, 99 and 22), including the large illustrated sherd which comes from context 124 (Figure 15: ridge tile Fabric 9). The decoration of an applied conical crest with finger impressions at the base is similar to that found in the pottery kilns at nearby Winksley, where it was dated to the 13th century (Bellamy and Le Patourel 1970, Fig 48, no. 54).

6.109 The rest of the flat tiles appear across all the stratigraphy, from phase 3 onwards. This would confirm the use of flat tiles on roofs from the medieval period onwards, the difficulty in dating them being largely due to a lack of diagnostic features and little changes through time. Modern pantiles appear in contexts from phase 7 to 9 (contexts 3, 124 and 146) and are known in this region from the 17th century onwards (Garside-Neville 1998b).

6.110 Excavations seldom yield complete medieval roof tiles but sherds from Ripon fall within recorded examples from York, where tiles of similar thickness and between 27 and 36.7 cm long by 14.9 and 21.4 cm width have been measured (Betts 1985, 459). The assemblage from the excavations at Ripon is similar to others from sites elsewhere in the town, which have also produced medieval plain roof tiles (Garside-Neville 1995; 1998a; 2001).

6.111 The thicker sherds in fabric T6 may represent 'wall tiles' which were used as infill for walls inside timber-framed buildings. They are similar to examples from York, for example, where they are dated between the 14th and 16th centuries (Betts 1985, 387, 510).

Small finds analysis

Summary

6.112 A small assemblage of finds was recovered from the excavations, including 57 metal objects, 7 stone, 3 wooden artefacts and 1 bone object. Around half of them were recovered from medieval contexts (phases 1 to 6), 15 from post-medieval phases (phases 7 to 10) and another 17 were unstratified, having been found while metal detecting the spoilheaps. The assemblage includes 18 nails, 8 small pieces of lead (sheeting and possible window casing) and two musket shots from unstratified contexts. They represent both personal and structural items. Only objects of intrinsic interest will be catalogued here, the rest are recorded in the site archive.

Results and discussion

<u>Copper-alloy objects</u>

6.113 – Sf 9, context 98. Phase 7: medieval with later (19th-century) material (Figure 15). Copper-alloy dress pin with coiled head and tapering shank (3-1mm). Made by rolling lengthwise a sheet of metal; then dividing it into two at the head, curving and rolling outwards the two strands. Almost complete; shank broken in two and missing part of the middle section. Bent from use.

6.114 This type of pin is known from early medieval contexts across the country. Examples made of silver or copper alloy have been recovered, although more commonly with the coils rolling inwards. They are frequent in middle Anglo-Saxon contexts, such as at Eccles (Kent), Shakenoak (Oxfordshire), Hartlepool (Cleveland), Hamwic (Southampton) or York, where they are dated between the late 7th to the 9th centuries (Hawkes 1973, 283; Jackson 1989, fig 33.8; Hinton 2005, fig 3.5; Rogers 1993, 1363). Later examples from York found in contexts of the mid 9th to 11th century indicate that they had a longer time span than was initially thought (Mainman and Rogers 2000, 2578, no. 10462).

6.115 – Sf 4, context 21. Phase 6: 13th-15th centuries.
Pin with solid head of hemispherical shape; slightly damaged head, flat underneath at the joint with the shank. Almost complete, missing just the tip. 2.5mm long; shank 1mm thick; bent from use.

6.116 Drawn wire pins, such as this, were manufactured from the 12th century onwards, changing little in form until the arrival of mechanised manufacture in the 19th century (Caple 1991; Biddle and Barclay 1990, 564). EDXRF analysis carried out during conservation work found the shank to be of leaded brass, probably tinned, and the head to be leaded bronze (Jones 2011). The tinned shank would originally have been white in colour, presumably imitating silver.

6.117 – Sf 6, context 126. Phase 3: 14th-15th centuries (Figure 15).
Two joining fasteners (incomplete), each made of three strands of wire held together by finely coiled wire twisted around them. Each strand finishes in a closed eye and both fasteners are attached through these. Further eyes, most probably the remains of a chain or another fastener, are also attached, although it is not possible to distinguish exactly how this was achieved as the item is fused together and rigid.

6.118 This type of wirework is typical of many dress and personal accessories in the medieval and early modern periods; sometimes being decorated with glass beads. The trio of bound wires are more frequently found as individual fasteners with hooks, and they were used throughout the medieval period up to the 16th century to fasten clothing. Pendants have also been found with similar type of eyes and binding (Margeson 1993, 6 and 19). Some of the more complex items similar to this are rare finds from excavations. They have been interpreted as hair gear or 'chatelaines' (Egan and Forsyth 1991) and individual toilet implements which would have been hung from chains with similar eyes and wirework. They are known from medieval London, for example, and from post-medieval Norwich (Egan and Pritchard 1991, 378, acc. no. 3753; Margeson 1993, no. 405). No complete set survives to show how the toilet items and fasteners were attached.

6.119 EDXRF analysis carried out during conservation work found the metal to be leaded brass (Jones 2011).

6.120 – Sf 7, context 126. Phase 3: 14th-15th centuries (Figure 15).
Part of a fastener made of three strands of wire held together by twisted wire (for a length of 31 mm) and ending in an eye (the other two are broken), with another eye/chain link attached. This item is very similar to Sf 6 though it has no hooks

attached. Given that it was found in the same context, it is very possible that Sf 6 and Sf7 are part of the same object.

6.121 EDXRF analysis also confirmed it to be leaded brass (Jones 2011).

6.122 – Sf 3, unstratified. (Figure 15).
Copper-alloy strap end. Composite strap end with pointed end and one hole for rivet.

6.123 Although this find is unstratified, there are numerous parallels from later medieval contexts (Egan and Pritchard 1991, 147, no. 699).

6.124 – Sf 8, context 264. Phase 5: 13th-15th centuries (Figure 15).
Copper-alloy rectangular plate with two rivets, part of a belt mount.

6.125 The plain plate is undatable in its own right, but numerous examples are known dating from the medieval to the modern period (Margeson 1993, no. 267).

6.126 – Sf 10, context 99. Phase 8: 13th-20th centuries (Figure 15).
Copper-alloy buckle pin. Plain, undecorated pin with pointed tip and broken loop.

6.127 Undatable in itself, but from medieval and later context.

6.128 – Sf 2, context 23. Phase 8: 13th-20th centuries.
Roman coin. Sestertius, probably Faustina I (138-141 AC). Very worn. 29.5mm diameter, 3mm thick (thank you to Sam Moorhead, British Museum, for the identification).

Bone object

6.129 – Sf 11, context 265. Phase 8: 13th-15th centuries (Figure 15).
Bone handle. The shaft end is decorated with fretted work; it is broken at the other end, where the start of a ?scoop is visible. The shaft is straight, with no obvious widening at the broken end. The bone is from a cattle-sized long bone (L. Gidney pers. comm.).

6.130 Although the artefact is broken and its function is difficult to determine, this is probably a handle for a spoon or spatula. Bone spoons took many different forms, sometimes having wide bowls rather similar to modern spoons, sometimes with narrow, spatulated bowls. They can be finely ornate or plain but show little chronological variation (Morris and Margeson 1993, 136; MacGregor 1985, fig. 98). In this case, although there is no visible widening for a bowl, the object may be either a spoon, especially since the groove for the spoon bowl in some examples begins quite high up on the handle (for example, White 1984, fig 2, no. 11).

6.131 Another possibility is that this is a toilet implement. Decorated shafts with metal rivets and a spoon-like shape have also been interpreted as toilet items (for example, from Battle Abbey, although in this case the spatula is flat; Geddes 1985, fig 47, no. 42).

6.132 Small ear-scoops of similar diameter to the Ripon find are also known, although without their handles (for example, Courtney 1993, fig 106, no. 18). Other complete

examples are shorter and usually have means of attachment to a chain or to the rest of the toilet set (Margeson 1993, fig. 32; MacGregor 1985, fig. 57).

Industrial residues analysis

6.133 All of the slag from the excavation has been described as undiagnostic. With the exception of Context 3, slag remains were present in only small quantities. The weight of slag found in Context 3 was equivalent to the quantity produced in the production of a 1.7kg bloom of iron (English Heritage 2001). This size indicates that it may not reflect the main deposit of a nearby metal working industry. Contexts 34, 104, 124, 256, 267, 276 and 293 contained slag with a vitrified surface, while the majority of slag comprised sediment-encrusted, moderate to small sized amorphous blocks, many with gravel components or imprints of gravel or cobbles. The characteristics of the finds suggest that these low quantities of slag may have been used for construction purposes (i.e. incorporated within the cobbled surfaces) and do not indicate a metal working waste dump. The data is contained within Table 1.27.

7. The palaeoenvironmental evidence

Wood analysis

7.1 Seven wood samples (all unworked) from five contexts were extracted by hand and retained. Thin sections were made of the radial, tangential and transverse axes of each sample. The sections were analysed at high magnification for diagnostic anatomical features. These were compared with modern and published (e.g. Brazier & Franklin 1961; Schweingruber 1978) reference material held in the Environmental Laboratory at Archaeological Services, University of Durham. The results of the identification are detailed in Appendix 1.29. Six of the wood samples were identified as oak, while the remaining sample from Context 14 was willow.

Macrofossil analysis

7.2 Following palaeoenvironmental assessment, six bulk samples were recommended for plant macrofossil analysis based on their potential to provide information about diet, agricultural practices and the socio-economic status of the site and former environmental conditions (Archaeological Services 2001). The remaining unprocessed soil from these samples was manually floated and sieved through a 500μm mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification using a Leica MZ7.5 stereomicroscope for waterlogged and charred botanical remains. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997). Habitat classifications follow Preston *et al* (2002).

7.3 The waterlogged conditions on the site resulted in the samples producing very large flots with abundant waterlogged plant remains. For this reason, the four largest flots were subsampled, with the waterlogged remains counted in 50% of context [104], 10% of context [123], 33% of context [276] and 33% of context [278]. The results were multiplied up to give an estimate of the full contents of the flots, with the entire flot scanned in each case to ensure that all charred remains were recovered and any additional waterlogged taxa were noted.

7.4 Charcoal fragments >4mm were identified up to a maximum of 100 fragments per sample. A selection of the largest waterlogged wood fragments from the samples was also identified. Charcoal and wood identifications involved examining the transverse, radial and tangential sections at up to x600 magnification using a Leica DM 2500 microscope. Identifications were assisted by the descriptions of Hather (2000) and Schweingruber (1978), and modern reference material held in the Environmental Laboratory at Archaeological Services Durham University.

Results

7.5 The waterlogged and charred plant remains are discussed below and are listed in Appendix 1.30. In addition to botanical remains, the samples comprised fragments of pot, bone, leather, mortar, fuel waste, hammerscale, insect/beetle remains, snails and marine shell (including mussel and oyster). Vivianite, a blue mineral which indicates the former presence of organic material in wet or waterlogged conditions (McGowan & Prangnell 2006), was also noted.

Phase 3

7.6 Plant macrofossil analysis was undertaken on two fills assigned to Phase 3. These were context [123], the fill of a large pit [F122] located in the northern part of the Market Place, and context [104], the fill of recut [F138] of the same pit. The few charred plant remains in these fills comprised grain/and or chaff of oats, barley, rye and wheat. A few charred culm nodes (straw) were also present. The three barley grains were noted to be hulled, but the barley chaff was in a poor condition, and could not be identified to species. Although wheat grain morphology is variable, the short, stout shape of the grains is characteristic of *Triticum aestivo-compactum* (bread wheat), and the presence of the diagnostic rachis fragments of bread wheat, confirms the use of this crop at the site. A waterlogged barley rachis and bread wheat rachis were also recorded. The identified charcoal fragments included birch, hazel, ash, Maloideae (Hawthorns, whitebeams, apple etc), plum/sloe, oak and willow/poplar.

7.7 A diverse range of waterlogged seeds was present in both samples, with wet ground plants such as sedges, spike-rushes and marsh cinquefoil particularly numerous in the large flot of context [123]. Arable, ruderal and woodland/scrub taxa were abundant in both flots, with grassland and heathland plants also recorded. Hazel nutshell fragments and fig seeds were present in context [104], and a single hemp seed was noted in context [123]. A few weld seeds were also recorded.

Phase 5

7.8 Over parts of the northern and eastern Market Place, layers of silt were identified over a cobbled surface. Plant macrofossil analysis was undertaken on context [293] which lay directly over the cobbles, and on the overlying silt layer, context [276=278]. The small assemblages of charred cereal remains were similar for both layers, with barley, rye and bread wheat recorded. Oat grains were present in contexts [276] and [278], but were absent from [293], and a larger number of barley chaff fragments were noted in context [293] than contexts [276] and [278]. Considering the small number of charred plant remains present, these differences are unlikely to be significant. Charcoal included alder, birch, hazel, ash, Maloideae, plum/sloe, oak and willow/poplar. Many of these species were also present as waterlogged wood.

7.9 Waterlogged seeds were numerous in both layers, and many of the arable, ruderal, wet ground and woodland/scrub taxa noted in the Phase 3 samples were also recorded in these contexts. Fig seeds were present, and weld seeds were recorded in context [293]. Grape pips were present in [276] and [278], with a few crab apple pips also noted in [276], and a sloe fruitstone identified in [278].

Phase 7

7.10 Plant macrofossil analysis was undertaken on context [128], a layer of silt overlying the later cobbles in the eastern part of the site. The only charred plant macrofossil in this sample was a barley grain. The few charcoal fragments >4mm were alder, birch, hazel, oak and willow/poplar. The assemblage of waterlogged remains was dominated by sedges, with arable, ruderal, grassland, heathland, wet ground and tree/shrub species as recorded elsewhere on the site. Fig and weld seeds were again noted.

Discussion

Economic plants

7.11 Although the contexts being analysed were assigned to three separate phases of medieval activity (Phases 3, 5 and 7), the charred and waterlogged plant macrofossil assemblages did not differ significantly between samples/phases. This homogeneity is in line with the pottery evidence from these phases, which was predominantly composed of material dating to the late 13th-15th centuries. Radiocarbon dates from context [123] (Phase 3) and context [276] (Phase 5) also provided similar date ranges (1290-1410 cal AD and 1300-1420 cal AD respectively). The following discussion has therefore not been separated by phase.

7.12 The charred plant remains are relatively few in number in all of the samples, but they can provide some information about agricultural practices in Ripon during the medieval period. The cereal crops recorded are oats, hulled barley, bread wheat and rye, which are typical arable crops of the medieval period throughout Britain (Greig 1991; Hall & Huntley 2007). The presence of chaff and occasional weed seeds may indicate that the samples comprise some crop processing waste.

7.13 The waterlogged remains indicate that a range of wild fruits and nuts was available, including hazelnuts, crab apples, elderberries, blackberries, strawberries and sloes. While some of these may have grown in orchards, most are likely to have been collected from scrub woodland, hedgerows or opportunistic shrubs growing in and around the town. Fruitstones are frequently recorded from waterlogged deposits on urban sites, as was evident in the 10th-century cesspit at Coppergate, York, which comprised remains of sloe, plum, crab apple, blackberry and hawthorn fruitstones (McCobb *et al* 2001). While it is likely that direct human consumption was one of the main reasons for collecting these wild foods, the fruitstones may also indicate tanning or tawing of leather using the vegetable extract of berries. Finds of leather offcuts, and evidence from the faunal remains of hide-processing waste, suggests the presence of leather-working waste at the site.

7.14 The remains of figs and grapes reflect the use of introduced ‘luxury’ food plants within the town. Evidence from customs records indicates that shiploads of dried figs were imported to Britain (Greig 1996), and although figs can be grown in the warmest parts of England now (Roach 1985), Greig (1996) suggests that most

archaeological finds of fig and grape seeds probably derive from imported dried fruits. Fig seeds are also a particularly common component of cesspits (Murphy & Scaife 1991), for example they were the main seeds recorded in the 11th-century cesspit at Danes Terrace, Lincoln (Moffett 1995). It is therefore possible, that cess material is a component of some of the samples.

7.15 A single hemp seed was recorded in pit fill [123]. Hemp was an important crop in Britain, grown mainly for its fibre which was used to make sails, ropes, fishing nets and clothes, as well as oil from hempseed (Gearey *et al*. 2005). The fibre crop was particularly important for the ship-building industry; demand for ship's rigging in the 16th century was such that legislation was passed that required a proportion of tillage land to be dedicated to the production of hemp or flax (Godwin 1967).

7.16 A few waterlogged weld seeds were recorded in four of the samples. Weld is a common weed of disturbed ground habitats, but may have been collected for use as a yellow dye plant. Clothworking sites often record abundant weld seeds, such as at Eastgate and Dyer Lane, Beverley (McKenna 1992; Hall *et al* 1984).

Palaeoenvironment

7.17 The large assemblages of waterlogged plant remains in the samples allow a reconstruction of the palaeoenvironment at the site. Damp marshy conditions are reflected in the diverse range of wet ground species recorded. These include wetland herbs such as bugle, marsh-marigold, spike-rushes, marsh pennywort, marsh cinquefoil, bogbean, rushes, black bog-rush, lesser spearwort, yellow iris and sedges. Pondweed and crowfoot suggest there was some standing water, although the low frequency of these aquatic plants suggests that these areas of water may have periodically dried out. Some of these wetland remains could derive from thatch, or locally-collected fen peat used for fuel or turf walls/roofing. Seeds of numerous arable weeds were also present, including fool's parsley, corncockle, stinking chamomile, cornflower, fat-hen, corn marigold, sun spurge, fumitories, corn buttercup, black bindweed, wild radish, small nettle and narrow-fruited cornsalad. While some of these may have been brought to the town with the crops, many are also likely to have thrived on areas of disturbed waste ground at the site. The ruderal weeds would also have favoured these disturbed habitats, with species such as common nettle, redshank and common mallow indicating nutrient-enriched conditions (Preston *et al* 2002), possibly as a result of the presence of manure. Sheep's sorrel may have grown on nearby acid heaths or dry grassland, and fairy flax is common on grassland and fen-meadow (Preston *et al* 2002). Plants which include species from a range of habitats, such as docks, buttercups, thistles and cinquefoils, are likely to have mainly occupied arable, disturbed ground and damp meadow environments.

7.18 The charcoal, waterlogged wood fragments and remains of nut and fruit-bearing trees reflect the proximity of areas of woodland to the site, which would have provided a source of wood for fuel and building materials. Identifications of the wood and charcoal fragments suggest that small branchwood and twigs were collected predominantly, although larger stemwood was also recorded, particularly of oak and ash. These larger trees may have been felled from high canopy woodland further from the site, while hazel, Maloideae and elder may have formed scrub woodland near the town. Alder, birch and willow/poplar may have grown in wetland areas nearby, for example along the banks of the River Ure.

Regional context

7.19 The results from Ripon are comparable with other urban medieval sites in northern and eastern England in terms of the cereal crops cultivated, the use of locally-grown fruits and nuts, the importation of dried foods and possible evidence for the use of fibre and dye plants. Bread wheat, oats, hulled barley and rye were the cereal crops identified in 12th- to 16th-century occupation deposits at Headland Town Square, Hartlepool (Archaeological Services 2008), in addition to the use of legumes. A grape pip provided evidence for use of dried imported fruit at the site. Further north, bread wheat, oats, barley and rye were also the main crops recorded at medieval sites at Shotton, Northumberland (Archaeological Services 2010), Tuthill Stairs, Newcastle upon Tyne (Archaeological Services 2007a), Old Rectory, Ponteland (Archaeological Services 2009), Walkergate, Berwick upon Tweed (Archaeological Services 2007b) and Embleton, Northumberland (Archaeological Services 2006). Archaeobotanical studies of waterlogged pits and cesspits, mainly dating to the 12th to mid 14th century at Cartergate, Grimsby, Lincolnshire also recorded these cereals, in addition to cf. rivet wheat and legumes (Archaeological Services 2011). Also present on this site were a range of wild fruits and nuts, imported commodities including figs, walnuts and grapes, the fibre plants hemp and flax, and the dye plant weld. At Eastgate, Beverley, hemp and flax were frequently recorded, and imported foods included walnuts, figs and grapes (McKenna 1992).

Conclusions

7.20 The edible and economic plants recorded at Ripon are typical of other medieval urban sites in northern and eastern England. The plant macrofossil assemblages showed little variation between the samples from Phases 3, 5 and 7, and the homogeneity of the waterlogged plant remains suggests that environmental conditions in the north and east of the Market Place were relatively similar. The samples comprise domestic waste, in addition to natural accumulations of organic material due to the waterlogged conditions. Cess, tanning waste and crop processing waste may also have been minor components. The use of imported goods such as figs and grapes points to a relatively affluent society, and other economic plants included hemp and weld, which may have been used for the production of fibre, oil and dyes.

8. Results summary

8.1 In Phase 1 a north-south ditch which had been re-cut, a parallel gully with associated stakeholes forming a fence-line, and two postholes were identified along the eastern limit of excavation. These have been dated to the 13th-15th centuries and may reflect activity pre-dating the foundation of the market place, or may relate to early market activity.

8.2 In Phase 2 a spread of material was identified in the eastern part of the site, perhaps reflecting an informal surface of the market place. This was cut by another north-south gully which turned east at its southern end and was associated with several stakeholes suggesting a second fence-line. A group of postholes in this area is further evidence for temporary structures. These structures may indicate early use of the site as a market, with stalls and stock areas.

8.3 In Phase 3, activity comprised a series of pits and postholes, concentrated in the northern part of the site.

8.4 In Phase 4 the first formal cobbled surface for the Market Place was established. There was evidence for the maintenance of this surface through patching.

8.5 In Phase 5 a series of deposits were laid over the cobbled surface. It is likely that these represent the dumping of waste material in the market area from the surrounding properties. The presence of a north-south linear feature which included stone clusters within the fill may reflect an attempt to create a structure within the Market Place.

8.6 In Phase 6 the Market Place was landscaped to create a flatter area by dumping waste material across. It was then resurfaced with a further cobbled surface. Associated with this was a large sandstone base, perhaps the foundation for a market cross or other public monument.

8.7 Phase 7 activity was mainly concentrated in the northeast part of the site. It comprised several pits and postholes, a short section of gully, and a spread of material across the northern part of the site. It is possible that one of the pits, a sub-square feature with a foundation of rubble and clay, formed the base of another public monument.

8.8 Phase 8 activity was spread across the whole site and mainly reflected further landscaping through the dumping of deposits. A cluster of stakeholes in the southern part of the site reflects temporary structures in this area.

8.9 In Phases 9 and 10, activity related to late 19th- and 20th-century occupation. A series of postholes were present in the northeast part of the site, and several tree pits indicate a change in the presentation of the Market Place. A large water tank was also present in the centre of the site.

8.10 Significant quantities of medieval pottery (mainly 13th to 15th century) were recovered. Some of this was residual, reflecting later alterations to the Market Place resulting in truncation and landscaping. Large amounts of animal bone were also found, mainly cattle and sheep, originating from hide processing and human food waste. A small assemblage of roof tile was recovered, indicating that the demolition of structures led to material being spread across the Market Place. Waterlogged conditions on site allowed the recovery of leather off-cuts. Industrial residues suggested that metal working took place nearby. A small assemblage of small finds was also collected.

8.11 Environmental remains suggest that the palaeoenvironment remained consistent throughout the medieval period. The material deposited was mainly household waste, including cess, as well as suggestions of tannery waste and crop processing waste. The presence of imported items indicates that at least some of the residents of the town were able to access delicacies.

9. Discussion

9.1 For medieval and later towns to grow they needed trade, and markets were vital to this (Hindle 1990, 39). For many towns trade would be their *raison d'être*, but even where it was not, a market place would normally be centrally located and an important focus of activity. Sawyer states that the foundation of medieval markets predates the 9th century, but often little or nothing is known of this because of a lack of documentary evidence. He takes this as an indication that markets were originally founded on a haphazard basis, but that from the 9th century onwards they came under royal protection or control, and that this gradually required the granting of charters to formalise their existence. This eventually (by the 13th century) led to the convention that no market or fair could be held without a royal charter, allowing those in authority to control trade and charge tolls, thereby profiting financially (Sawyer 1981, 155).

9.2 However, there are problems with examining market places through archaeological excavation. They can be continuously occupied through to the present day, making it unusual that a market place itself is ever subject to large-scale archaeological excavation. They can also be partially or wholly redeveloped during the later medieval or post-medieval periods, with the result that deposits are unlikely to survive. A further problem with market places is that when these sites are investigated they are, by their nature, broadly level open areas with few features except for surfaces of gravel or cobbles (Schofield and Vince, 2003, 58). Interpreting any features that are found can therefore be difficult. This is supported by recent excavations at a number of sites, including Norwich (Percival 2008), Durham (Archaeological Services Forthcoming), and Darlington (Archaeological Services 1995), although at these sites only a small area of the market places was examined. The opportunity to examine a large area of the Market Place at Ripon was therefore a rare event. Whilst there may be problems with interpreting the archaeological evidence, these other sites can potentially provide a useful comparison.

Ripon Market Place origins

9.3 **T**here is no direct evidence that there was a market at Ripon during the early medieval period, but it seems likely that some form of trading was taking place: pre-Conquest markets are known to have been located at religious centres to take advantage of the regular church attendances, sometimes even being held in churchyards (Sawyer 1981, 160), making Ripon a likely location. While there is no mention of a market at Ripon in Domesday Book, this is not unusual as Domesday mentions only 60 markets and 1 fair, and is known to omit markets that were in existence (*ibid.* 156). The granting of a post-Conquest charter did not preclude there being a market in existence prior to that time, and Sawyer indicates that the market charter for Ripon, along with other Yorkshire towns, had been granted to validate a market that had long been held by tradition (*ibid.* 155). This therefore indicates that the market at Ripon was older than its charter, and in all likelihood existed before the Conquest. The pre-Conquest origins of the market place are likely to lie closer to Ripon Cathedral.

9.4 Hall and Whyman (1996, 137-40) suggest that the early medieval layout of Ripon extended on its western side from Kirkgate to Fishergate / North Street, forming a single thoroughfare which crossed the eastern and northern sides of the later Market Place. This interpretation is partially based on the existing natural topography of Ripon at that time (*ibid.* 141). When the Market Place was established

it would therefore have been laid out obliquely across this route (*Ibid.*, 137 and Fig. 36). However, aside from two Roman finds, a radiocarbon date that is presumed to be from a residual artefact, and a single sherd of 11th- to 13th-century gritty ware and a copper alloy pin both from later contexts, no evidence of activity either before the Conquest or even prior to the 13th century was identified within the area of excavation. This may genuinely reflect a lack of activity in this area, or may be the product of a mixture of later truncation in certain areas and the fact that in some areas the surviving deposits extended below the agreed level of excavation. Certainly the western part of the site suffered from this, with no activity identified prior to phase 4. The presence of numerous Phase 1 to 3 features in the eastern part of the site suggests that there was less disturbance here, and that if any earlier activity had taken place in this area it should have survived. This is in contrast to sites such as Norwich, where excavations have demonstrated that later medieval and post-medieval activity had completely truncated the earliest remains. The Phase 1 and 2 features are laid obliquely across the route of the proposed thoroughfare, indicating (along with the pottery evidence) that they do not belong to this phase. Consequently, no archaeological evidence was found to support Hall and Whyman's hypothesis of a road connecting Kirkgate to Horsefair / North Street. However, the route they proposed (*Ibid.* Fig. 36) barely crosses the northeast corner of the area of excavation, and it is entirely possible that it could lie slightly further to the east. This is supported by the presence of possible 10th-century activity at 8-9 Market Place and Moss Arcade (Elsworth 2003, 23).

Post-Conquest developments

9.5 During the post-Conquest period Ripon expanded and considerable alterations were made to the town plan, including the formal establishment of a market. This was established by Archbishop Thurstan of York who, during the early years of the reign of Stephen (1135-1154), secured for Ripon a charter to hold a market weekly every Wednesday, and also a fair (MacKay 1982, 73). The Archbishop had authority to appoint a Clerk of the Market or Bailiff to act as an overseer to all the transactions, collect the dues and tolls, and keep the peace (Mauchline 1972, 24). The influence on Ripon of the Archbishop of York remained strong throughout the medieval period: amongst other privileges he controlled the borough court. The other forces in the town were the Chapter of Canons of the collegiate church, and the Wakeman. In 1228 the Canons claimed the right to hold their own market and fair (Mauchline 1972, 22), indicating that there was conflict over trade in the town. The Wakeman's main responsibilities were law and order and guarding the rights of the inhabitants to common land and secular property (Hagerty 1972, 12-13), but another of his roles was regulating trade and marketing in the town: part of his payment was a portion of corn known as the market sweepings (*ibid.* 14).

9.6 Ripon Market Place itself is not in its original location. This is not unusual: markets were often relocated for various reasons, as was the case at Norwich and Durham. Documentary and cartographic sources have been used to suggest that the market was located north of the present Market Place: a document of 1228 makes mention of "*the archbishop's market place*" (*ibid.* 78), in apparent recognition of Thurstan's role in founding it; a map of 1771 marks this area as "*Old Market Place*" (Figure 16). Furthermore, Leland, during his visit to Ripon in 1545, differentiated between the "*olde towne*", lying in the north part of the town along Allhallowgate, and the area of "*newer buldynge*" around the present Market Place (*ibid.*, 78). This indicates that the modern Market Place was a more recent addition to the town plan.

9.7 An examination of the modern map of the area shows that Fishergate and Queen Street extend the eastern and western sides of the Market Place to the north before meeting Old Market Place. Together these roads, along with the existing Market Place, form a larger rectangular space. Therefore it is possible that, if the Market Place originally extended further to the north, the buildings along Market Place North represent infilling: early maps of the city (Jeffrey 1771; Humphrey 1800; Langdale 1820; 1st edition OS map 1856) show that there was originally a row of buildings which divided Queen Street, creating Middle Street. These have the appearance of structures constructed to replace a row of stalls such as can be seen at St Albans or Ludlow (Hindle 1990, 41): the original evaluation report pointed out that the area of the old and present market places could together have formed a larger rectangular market place which had later been partially infilled (YAT 2000, 8). This would therefore have isolated a smaller area of the market, which could perhaps have continued in use as a specialised market. However, there is presently no archaeological evidence to clarify this: monitoring work in the area of the Old Market Place has found only disturbed deposits (Elsworth 2003, 32).

9.8 If the Market Place was relocated the most likely reason for moving the market was space, such as happened at Peterborough and Bury St Edmunds (Hindle 1990, 40), although there were sometimes political reasons for relocation such as at post-Conquest Norwich and possibly also at Durham. At Ripon, the area of the Old Market Place, presuming that was the location of the original market and that it has retained its original medieval layout more or less intact, is rather small and cramped: MacKay suggests that the original market was larger, perhaps stretching as far as the west end of Allhallowgate (1982, 78). There is presently no evidence to support this suggestion. Nevertheless, moving or expanding to its current location would have ensured that there would be much more space available. This could reflect an increase in trade within Ripon, indicating a growing importance of the town during the medieval period. An alternative explanation would be that the move represents an alteration to the layout of the town itself, perhaps reflecting a change in use of the original site.

Foundation of the present Market Place

9.9 The earliest documentary reference to the location of a market place is 1281, although this may have been in reference to the older site. Property deeds indicate that the area of the present Market Place had tenements around it by 1305, and that by 1320 Ripon had expanded south of Allhallowgate. MacKay takes this to indicate that the modern Market Place was established in the second half of the 13th century (MacKay 1982, 79).

9.10 The layout of the present Market Place at Ripon is a rectangle, which would indicate that it was a deliberate foundation that was created as part of urban planning with burgage plots extending back from it. However, the shape of a market place was less important than its size (Hindle 1990, 39), and the present overall size of the market place of around 0.3ha indicates that it was a significant centre of trade for the region. The area of a market place needed to be large to accommodate livestock and cereals, with narrow entrances controlling entry and charge tolls: indeed most markets originated as simply a large space in which to conduct trade. This is certainly reflected at Ripon, and points also to a reason why the market was relocated, if the original site was eventually judged inadequate in size.

9.11 It is possible that the earliest area of the market place was formally laid out with defined boundaries. Both phases 1 and 2 consist of north-south boundary features close to the eastern boundary of the area of excavation. These have been dated to the 13th to 15th centuries, and as with all of the medieval phases it has been difficult to be more precise with the dating because of the broad date range of the pottery. A re-cut ditch with a fence line to the east with two possibly associated post-holes are the earliest features, indicating repeated attempts to establish a boundary along the eastern side of the Market Place. It is possible that they relate to activity prior to the creation of the Market Place, perhaps an attempt to establish burgage plots. They may alternatively be an attempt to allow tighter control of access for people, livestock and goods to the market and could therefore relate to tolls, although the location of Ripon Market Place at the junction of four fairly narrow streets would provide an easier method of control. Another possibility is that they could have been used as stock enclosures within the market itself. Thin layers of silty loam and sand in both phases are likely to predate the Market Place, or to have been deposited through use. If these earliest features relate to the first use of the site as a market place, there was no formal surface and that activity was conducted on the existing soil. The north-south boundary feature in phase 2 was shallower and shorter than the phase 1 ditch, and turned east were it was truncated by later activity: this points to a function as a subdivision of a larger area, rather than a boundary for the Market Place itself. Associated with the northern part of this feature was a series of stakeholes suggesting that this was a second fence-line with a similar function to its predecessor.

9.12 These stakeholes, and a group of stake- and postholes to the west of the gully, seem more characteristic of the type of temporary structures that may be expected to be present in a medieval market in the form of market stalls. This second cluster does not appear to form any coherent pattern and may reflect a series of stalls being erected and removed on a regular basis over a period of time. Medieval market places, being public spaces, were also the location of many public activities, including stocks for the punishment and humiliation of transgressions. These types of structures may have resulted in similar types of evidence. While the excavated evidence for phases 1 and 2 do not demonstrate that Ripon Market Place had been established by the end of the 13th century (as suggested in MacKay (1982, 80)), there is similarly no firm evidence that it was not.

9.13 The survival of deposits relating to the 13th century at Ripon Market Place contrasts with other market places. The excavations at Norwich (Norfolk HER 40773) failed to establish the presence of any deposits relating to the original Norman market due to truncation of the area around 1500, although the remains of a late medieval market cross were recorded as well as quarry pits and some surfaces (Percival 2008, 3). Similarly, work at Durham and Darlington did not find any evidence dating to the earliest known activity (Archaeological Services 1995, 4-5; Archaeological Services, Forthcoming). This reinforces the significance of the archaeological remains found at Ripon.

Early development

9.14 Phase 3 activity (14th to 15th century) would indicates some sort of change in function or reorganisation of the existing space. A series of pits and postholes were excavated in the northern part of the site. One of these pits included a limestone pad, possibly for a more permanent building within the Market Place; no other

associated structural evidence was found, which may be due in part to its proximity with the limit of excavation. The building does not appear to have lasted long, as it was cut by a large irregular pit filled with organic material: the environmental evidence indicates that this was a mixture of domestic waste as well as plants growing *in situ*, reflecting a damp, possibly waterlogged environment existing in this part of the Market Place. This was in turn cut by further pits, one of which contained leather off-cuts, as well as pot and tile and evidence of cess.

9.15 Firm evidence for the establishment of the Market Place can be seen in phase 4, with the deposition of a cobbled surface which survived across the eastern and northern parts of the site. This did not create a completely level area and instead followed the existing topography, indicating that there was no general landscaping of the area at this time. There is evidence that the surface was well maintained, with some resurfacing present. This activity has been dated to the 14th-15th centuries, which would fit well with documentary evidence indicating that burgage plots had been established around the Market Place by the early 14th century (MacKay 1982, 79). Similar cobbled surfaces have been found at Durham, although analysis of the material is still required to establish the date for these. Nevertheless, cobbled surfaces are common during the medieval period and indicate that there was a desire by the town authorities to improve the environment.

9.16 Phase 5 reflects the use of this surface both as a market and on a day to day basis. It comprised layers of black silt containing angular and sub-angular stone, as well as significant quantities of pottery and bone along with organic remains such as wood and leather. Small amounts of grain were also identified. This is all likely to be waste material probably from activity around the edge of the Market Place, rather than within it: this would suggest that the market place was seen as a convenient place to deposit broken and unwanted material. Some of the material gives an indication of the sorts of goods being produced and traded in Ripon. Large quantities of cattle and sheep metapodials indicate hide processing as well as butchery, and leather off-cuts point to a shoe and clothe manufacturing in the area: the presence of such organic waste in a busy urban environment is likely to have created some unpleasant odours. This general dumping of waste material within the streets of Ripon appears to have continued for some time, as is reflected in a later order of 1629 "*...all householders... [are] ...not to suffer any rubbish, dunghills or the like to lye in the streets, which is too commonly practised to the great disgrace and prejudice of this town...*" (Hagerty 1972, 16). Neat's foot oil may be another product being made (see Gidney's animal bone analysis, this report), and industrial residues were also recovered indicating metalworking was taking place in the area.

Infilling and encroachment

9.17 The concentration of stones within one of these phase 5 deposits may represent the remains of a surface or building that was present in this area. It may be related to a north-south probable ditch identified in the centre of the site, which contained two linear alignments of stone: this feature was only exposed on its western side, so the full extent of it was not determined. It has been interpreted as being a drainage ditch, but the presence of stone may suggest that it was a structural feature. The presence of rubble in the surrounding deposits may point to the presence of a larger structure, either on or close to the Market Place, possibly reflecting an attempt to infill part of the Market Place: if so it was clearly unsuccessful. There is overall little evidence of infilling of the Market Place: at many other sites temporary stalls on the

market place became permanent structures which infilled the area, leading to the creation of shops (e.g. St Albans). While there is evidence of temporary structures in the form of postholes and stakeholes during different phases at Ripon, there is little evidence of more substantial permanent buildings either in the medieval or the post-medieval period.

9.18 There is also little evidence for encroachment onto the Market Place. This is contrary to the development of many other markets, where surrounding buildings often extended into the market space (e.g. Norwich). However, the lack of excavations along the market side of the street frontages makes it difficult to establish whether there was any encroachment of buildings during the medieval or early post-medieval periods. Excavations at 8-9 and 33 Market Place and also on the Moss Arcade (on the southern and eastern sides) have established the presence of medieval deposits, around the Market Place. These mainly date to the 12th century or later, but possible 10th-century activity was found at 8-9 Market Place and Moss Arcade (Elsworth 2003, 23). As these two sites are closer to the early medieval settlement there is no reason to suppose that there were burgage plots located along a street frontage in this area in the 10th century, and that instead they reflect a more general spread of activity. It therefore seems likely that, as at Durham, the present street plan largely reflects the 13th-century town layout, and so the southern, eastern and western boundaries are unlikely to have encroached. This lack of development on the Market Place probably reflects the general success of Ripon as a market, as it would be necessary to prevent any encroachment to ensure the space remained undisturbed and trade could continue.

Late medieval resurfacing

9.19 During Phase 6 (14-15th century) the Market Place was resurfaced with another layer of cobbles, laid onto levelling deposits containing animal bone, pottery and tile. The overall effect of this second layer of cobbles was to smooth out the uneven ground of the Market Place creating a surface which was more regular, suggesting a general reordering and consolidating of the Market Place, and perhaps also an attempt to address the waste deposits laid down during Phase 5, which are likely to have been malodorous, by sealing them below the cobbles. This is supported by the presence of a large (*c.*2m²) sandstone base towards the centre of the excavation area: this may have supported some type of public monument, perhaps even a small market cross.

9.20 Documentary records indicate that the market was thriving at this time. The Poll Tax of 1379 shows that by this time the Market Place was well populated, with twice as many inhabitants as Westgate or Stonebridgegate; it was also the highest proportion of servants indicating that its inhabitants were wealthy. Also, the most highly taxed individual was John de Hawkeswick who lived on the Market Place (Mauchline 1972, 29).

Post-medieval activity

9.21 Early in Henry VIII's reign the cloth trade in Ripon had undergone a sharp decline (Maunchline 1972, 33), leading to a drop in Ripon's prosperity. The Reformation saw the minster church reduced in status to a parish church, which further contributed to a decline. At the same time however, the Market Place was hosting various fairs selling livestock, particularly horses (Elsworth 2003, 11), and this became an important source of revenue for the town. By the start of the 17th century several

guilds were present in the town, indicating a turnaround in its economic fortunes. In 1604 James I granted a charter of incorporation, reflecting the decline in influence of both the Chapter and the Archbishop, although the Archbishop remained a force in Ripon until the bishopric of Ripon was established in 1837. Amongst their rulings was one stating that "*noe forreyner* [i.e. outsider] *doe kill oxen or sell flesh within this towne exceptinge on the Markit Daye or other days to be allowed...*" (Hagerty 1972, 16). The Market Place itself saw some documented alterations in 1702 with the erection of the obelisk which stands there today. This was commissioned by John Aislabie of Studley Royal, but bears the 1781 inscription of William Aislabie, modestly commemorating his own 60 years as MP for Ripon: it is believed that William actually only repaired the obelisk and also made some small alterations (Heritage Gateway List Entry No.: 1315492). 18th- and early 19th-century maps of the city show that the medieval town plan survived almost intact into the 19th century. They depict long narrow burgage plots running west of the Market Place / Fishergate / Blossomgate / North Street.

9.22 Excavated evidence of activity from the end of the medieval period to the 19th century is confined to phase 7. The general lack of activity in comparison to the more intensive use and development of the Market Place during the earlier phases is presumed to be partly the result of later truncation (a factor at other sites such as Norwich and Darlington), but may also be due in part to the decline of Ripon towards the end of the medieval period. Features in this phase often contain residual medieval pottery, which is to be expected given the quantity of medieval pottery deposited in the underlying deposits. Activity is generally reflected by the excavation and backfilling of pits, one of which contained a post-slot indicating it was part of a structure. The presence of further leather off-cuts within a deposit of silt overlying the later medieval cobble surface indicates that leather working was still being conducted in the area. This was cut by a *c.*2m² square pit which contained a deposit of tightly-packed cobbles which formed a foundation for a structure of unknown function. This is similar in size to the large sandstone base in phase 6 (above, 9.19) and may reflect the relocation of a structure during the post-medieval period, before it was later removed altogether.

9.23 Phase 8 is characterised by ground-raising deposits. Where the later medieval cobbles had not been overlain they were buried by material which, as with earlier layers, contained quantities of bone, tile, pottery and slag. Much of the pottery dated to the medieval period, indicating that there was some redeposition of material from elsewhere, perhaps in the Market Place. Other deposits comprised re-deposited natural sands and gravels. A small cluster of stakeholes were recorded in the central southern part of the site, but did not form a pattern and, given their appearance late in the stratigraphic sequence, they are likely to form a temporary structure, presumably once again relating to market stalls. The construction of the 18th-century obelisk had limited impact upon the Market Place space. The presence of such monuments was similar to those found at, for example, Durham Market Place where during the 18th and early 19th centuries there was a loggia at the edge of the market, and also a pant or well head: this is unsurprising as market places, as public spaces, provide an ideal area for the elite to proclaim their authority and success, and are often the location of memorials and statues.

9.24 The final phases (9 and 10) generally reflect remodelling of the Market Place at the end of the 19th and early 20th centuries. Cosmetic alterations were made to the

market place during this period. The most significant feature was a large brick water tank positioned in the centre of the site: recent excavations in Durham (Archaeological Services, Forthcoming) have established the presence of a similar buried water tank associated with the pant, and also a series of culverts. At Ripon and Durham these water tanks were municipal features presumably designed to provide the inhabitants with clean water, although there is no cartographic evidence for a pump at Ripon. A series of postholes and pits along the eastern and north-eastern edge of the site are likely to relate to temporary structures.

The modern period

9.25 Modern changes to the area around the Market Place are largely restricted to the amalgamation of burgages into larger plots, and the construction of a number of infill buildings to the rear of the street frontages. A concrete surface was put in to preserve the ground conditions during cattle markets. However, cattle-trading was eventually moved out of the town altogether, and in time the main use of the market place was for car parking with continued use as a market venue (Elsworth 2003, 11-12).

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Appendix 1: Data tables

Table 1.1: Context data

The • symbols in the columns at the right indicate the presence of finds of the following types: P pottery, B bone, M metals, I industrial residues, G glass, C ceramic building material, L leather, CP clay pipe, O other materials.

No	Phase	Description	P	B	M	I	G	C	L	CP	O
1	10	Concrete									
F2	9	Cobbled surface									
3	8	Levelling deposit	•	•		•	•	•			
F4	6	Cobbled surface	•	•		•		•			
5	9	Fill of pit F6	•	•							
F6	9	Cut of pit									
F7	9	Cut of pit									
8	9	Fill of pit F7		•				•			
F9	9	Cut of pit									
10	9	Fill of pit F9	•	•				•			
F11	9	Cut of posthole									
12	9	Fill of posthole F105									
F13	9	Cut of pit									
14	9	Fill of pit F13	•								
F15	8	Cut of pit									
16	8	Fill of pit F15	•	•						•	
F17	7	Cut of pit									
18	7	Fill of pit F17	•	•				•		•	
F19	7	Cut of pit									
20	7	Fill of pit F20	•	•							
21	6	Make-up layer	•	•	•	•		•			
F22	4	Cobbled surface		•				•			
23	8	Levelling deposit			•						
F24	7	Cut of pit									
25	7	Fill of pit F24									
F26	7	Cut of pit									
27	7	Fill of pit F26									
F28	10	Service trench									
29	10	Fill of service trench F28		•							
30	9	Levelling deposit									
31	-	Natural									
32	4	Bedding layer for cobbled surface F22									
F33	1	Cut of pit									
34	1	Fill of pit F33		•		•					
F35	1	Cut of pit									
36	1	Fill of pit F35									
F37	1	Fence slot cut									
38	1	Fill of fence slot F37	•	•		•					
F39	1	Stakehole cut									
40	1	Fill of stakehole F39									
F41	1	Stakehole cut									
42	1	Fill of stakehole F41									
F43	1	Stakehole cut									
44	1	Fill of stakehole F43									
F45	1	Stakehole cut									
46	1	Fill of stakehole F45									
F47	1	Posthole cut									
48	1	Fill of posthole F47									
F49	1	Stakehole cut									
50	1	Fill of stakehole F49									
F51	9	Stakehole cut									
52	9	Fill of stakehole F51									
F53	9	Stakehole cut									

No	Phase	Description	P	B	M	I	G	C	L	CP	O
54	9	Fill of stakehole F53									
F55	9	Posthole cut									
56	9	Fill of posthole F55									
F57	9	Stakehole cut									
58	9	Fill of stakehole F57									
F59	9	Stakehole cut									
60	9	Fill of stakehole F59									
F61	9	Stakehole cut									
62	9	Fill of stakehole F61									
F63	9	Posthole cut									
64	9	Fill of posthole F63									
F65	9	Cut of pit									
66	9	Fill of pit F65	•	•		•				•	
F67	9	Posthole cut									
68	9	Fill of posthole F67		•							
F69	9	Cut of pit									
70	9	Fill of pit F69	•	•			•			•	
F71	9	Stakehole cut									
72	9	Fill of stakehole F71									
F73	9	Posthole cut									
74	9	Fill of posthole F73									
F75	9	Cut of pit									
76	9	Fill of pit F75	•								
F77	9	Cut of posthole									
78	9	Fill of posthole F77		•							
F79	9	Cut of pit									
80	9	Fill of pit F79									
F81	9	Cut of pit									
82	9	Fill of pit F81	•							•	
F83	9	Posthole cut									
84	9	Fill of posthole F83									
F85	9	Cut of pit									
86	9	Fill of pit F85	•			•				•	
F87	9	Stakehole cut									
88	9	Fill of stakehole F87									
F89	9	Cut of posthole									
90	9	Fill of posthole									
F91	9	Cut of feature									
92	9	Fill of F91									
93	9	Levelling deposit	•	•		•		•			
F94	6	Same as F4		•		•		•			
F95	10	Tree pit									
96	10	Backfill of tree pit F95									
F97	7	Cut of gully									
98	7	Fill of pit F97		•	•	•					
99	8	Same as 3	•	•	•	•		•		•	
F100	4	Same as F22		•		•					
101	8	Levelling deposit									
102	5	Layer									
103	6	Same as 21	•	•		•		•			
104	3	Fill of pit F138	•	•		•		•	•		•
F105	7	Cut of pit									
106	7	Fill of pit F105		•							
107	4	Same as 32									
F108	3	Limestone post pad filling									
109	3	Fill of cut F139									
F110	7	Cut of pit									
111	7	Fill of pit F110									
F112	7	Cut of pit									

No	Phase	Description	P	B	M	I	G	C	L	CP	O
113	7	Fill of pit F112									
114	7	Mortar layer	•					•			
F115	7	Cut of posthole									
F116	8	Cut of feature									
117	8	Fill of feature F116	•								
F118	8	Cut by pit									
119	8	Fill of pit F118									
F120	7	Cut of pit									
121	7	Fill of pit F120		•							
F122	3	Cut of pit									
123	3	Fill of pit F122		•					•		
124	7	Layer	•	•		•		•			
F125	6	Same as F4									
126	3	Fill of pit F137	•	•	•	•		•			
127	7	Layer									
128	7	Layer	•	•		•		•	•		
F129	3	Cut of posthole									
130	3	Fill of posthole F129	•								
131	-	VOID									
132	3	Primary fill of pit F122	•								
F133	3	Cut of posthole									
134	3	Fill of posthole F133		•							
F135	7	Cobbled surface									
136	1	Layer		•							
F137	3	Cut of pit									
138	3	Cut of pit									
F139	3	Cut for post pad F108									
140	7	Fill of pit F112		•							
F141	7	Cut of feature									
142	7	Fill of F141									
143	7	Same as 128									
F144	7	Same as F135									
F145	9	Manhole for F266									
146	9	Backfill for F145	•	•		•	•	•		•	
147	9	Backfill for F145	•							•	
148	8	Levelling deposit		•							
149	1	Layer		•							
F150	6	Sandstone base									
F151	4	Resurfacing of cobbles F22									
F152	2	Cut of stakehole									
153	2	Fill of stakehole F152									
F154	2	Cut of stakehole									
155	2	Fill of stakehole F154									
F156	2	Cut of stakehole									
157	2	Fill of stakehole F156									
F158	2	Cut of stakehole									
159	2	Fill of stakehole F158									
F160	2	Cut of stakehole									
161	2	Fill of stakehole F160									
F162	2	Cut of stakehole									
163	2	Fill of stakehole F162									
F164	2	Cut of posthole									
165	2	Fill of posthole F164		•							
F166	2	Cut of posthole									
167	2	Fill of posthole F166									
F168	2	Cut of posthole									
169	2	Fill of posthole F168									
F170	2	Cut of posthole									
171	2	Fill of posthole F170									

No	Phase	Description	P	B	M	I	G	C	L	CP	O
F172	2	Cut of posthole									
173	2	Fill of posthole F172									
F174	2	Cut of posthole									
175	2	Fill of posthole F174									
F176	2	Cut of stakehole									
177	2	Fill of stakehole F176									
F178	2	Cut of stakehole									
179	2	Fill of stakehole F178									
F180	2	Cut of stakehole									
181	2	Fill of stakehole F180									
F182	2	Cut of stakehole									
183	2	Fill of stakehole F182									
F184	2	Cut of posthole									
185	2	Fill of posthole F184									
186	6	Fill of unexcavated feature		•		•		•			
F187	2	Cut of gully									
188	2	Fill of gully F187		•		•					
F189	2	Cut of stakehole									
190	2	Fill of stakehole F189									
F191	2	Cut of stakehole									
192	2	Fill of stakehole F191									
F193	2	Cut of stakehole									
194	2	Fill of stakehole F193									
F195	2	Cut of stakehole									
196	2	Fill of stakehole F195		•							
F197	2	Cut of stakehole									
198	2	Fill of stakehole F197									
F199	2	Cut of stakehole									
200	2	Fill of stakehole F199									
F201	7	Cut of pit									
202	7	Fill of pit F201	•	•				•			
F203	2	Cut of stakehole									
204	2	Fill of stakehole F203									
F205	2	Cut of stakehole									
206	2	Fill of stakehole F205									
F207	2	Cut of stakehole									
208	2	Fill of stakehole F207									
F209	2	Cut of stakehole		•							
210	2	Fill of stakehole F209									
F211	2	Cut of stakehole									
212	2	Fill of stakehole F211									
F213	2	Cut of stakehole									
214	2	Fill of stakehole F213									
F215	2	Cut of stakehole									
216	2	Fill of stakehole F215									
F217	2	Cut of stakehole									
218	2	Fill of stakehole F217									
F219	2	Cut of stakehole									
220	2	Fill of stakehole F219									
F221	2	Cut of stakehole									
222	2	Fill of stakehole F221									
F223	2	Cut of stakehole									
224	2	Fill of stakehole F223									
F225	2	Cut of stakehole									
226	2	Fill of stakehole F225									
F227	2	Cut of stakehole									
228	2	Fill of stakehole F227									
F229	1	Cut of boundary ditch									
230	1	Fill of ditch F233	•	•							

No	Phase	Description	P	B	M	I	G	C	L	CP	O
231	1	Fill of ditch F229									
232	1	Upper fill of ditch F233									
F233	1	Recut of ditch F229									
234	2	Layer		•							
235	2	Fill of gully F187: same as 188		•							
236	-	VOID									
237	-	VOID									
F238	9	Cut of pit	•	•		•					
239	1	Possible pit fill									
F240	2	Cut of stakehole									
241	2	Fill of stakehole F240									
F242	2	Cut of stakehole									
243	2	Fill of stakehole F242									
F244	2	Cut of stakehole									
245	2	Fill of stakehole F244									
F246	2	Cut of stakehole									
247	2	Fill of stakehole F246									
F248	2	Cut of stakehole									
249	2	Fill of stakehole F248									
F250	2	Cut of stakehole									
251	2	Fill of stakehole F250									
F252	2	Cut of stakehole									
253	2	Fill of stakehole F252									
254	-	VOID									
255	-	VOID									
F256	6	Same as F4	•	•		•		•			
257	5	Layer	•	•		•		•			
258	8	Levelling deposit									
259	10	Dolomite backfill trial trench F260									
F260	10	YAT trial trench									
261	1	Same as 31									
262	5	Organic peaty layer	•	•		•		•	•		•
F263	4	Same as F22		•				•			
264	5	Same as 262	•	•	•			•	•		•
265	8	Same as 3	•	•	•	•		•			
F266	9	Cut of pit									
267	9	Fill of pit F266	•	•		•	•	•			
F268	9	Limestone slabs covering F279									
F269	6	Same as F4									
270	8	Levelling deposit		•							
271	10	Backfill of tree pit F272									
F272	10	Tree pit									
F273	8	Cut of feature									
274	8	Fill of feature F273		•							
275	4	Same as 32									
276	5	Same as 262	•	•		•		•	•		•
277	5	Layer	•	•				•			
278	5	Same as 262	•	•		•		•	•		
F279	9	Brick vaulted water storage tank									
280	9	Water pipe connected to F280									
281	5	Fill of unexcavated feature									
282	8	Levelling deposit									
283	8	Levelling deposit									
284	8	Same as 282									
285	8	Levelling deposit									
286	8	Levelling deposit									
F287	9	Cut of pit									
288	9	Fill of pit F287									
F289	5	Possible drainage feature									

No	Phase	Description	P	B	M	I	G	C	L	CP	O
290	5	Fill of F289									
291	5	Fill of F289									
F292	5	Stone alignment filling F289									
293	5	Stony layer of silt	•	•		•		•	•		•
294	5	Layer	•	•		•		•			
295	9	Same as 295									
F296	10	Service trench									
297	10	Fill of service trench F296									
F298	10	Service trench									
299	10	Fill of service trench F298									
300	7	Layer									
501	7	Same as 128	•	•					•		

Table 1.2: Pottery from stratified contexts

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
1	38	Humberware type	1	4	1	Base	Hollow ware	U/Dec	LC13th – C15th	Small fragment in a dense reduced fabric w/ oxidised int & ext margins	12	
1	230	Oxidised Gritty ware	1	13	1	Rim & handle	Jug	U/Dec	Late Medieval	Rod handle springs from rounded rim		
1	230	TP Whiteware	1	1	1	Rim	Plate	Willow border	M – LC19th			
3	104	Humberware	2	29	2	BS	Hollow ware	Dark green glaze ext	LC13th – C15th	Fine thin reduced fabric; cf. Cowick		
3	104	Humberware	1	21	1	BS	Hollow ware	Green glaze ext w/ shallow ridges ext	LC13th – C15th	Reduced Humberware, cf Cowick		
3	104	Humberware DJ	1	84	1	Base	Drinking jug	U/Dec	C14th – C15th	Dense fine oxidised fabric; narrow diameter base		
3	104	Humberware type	1	15	1	BS	Hollow ware	Dark green glaze ext	LC13th – C15th	Very thin walled vessel in a very fine dark grey reduced body	7	
3	104	Humberware type	1	6	1	Rim	Jug	Patchy dark green glaze ext	LC13th – C15th	Very thin walled vessel in a very fine dark grey reduced body	7	
3	104	Humberware type	2	11	2	BS	Hollow ware	Green glaze over combed wavy lines	LC13th – C15th	Fine Humberware type fabric, slightly sandier than Cowick		
3	104	Oxidised Sandy ware	1	48	1	Strap handle	Jug	Wide shallow grooves on top; pale green glaze	Late Medieval	Hard dense buff fabric w/ a pale grey core		
3	104	Oxidised Sandy ware	1	30	1	Base	Hollow ware	Pale green glaze ext	Late Medieval	Fine oxidised fabric w/ pale grey core ; very fine w/ occasional rounded quartz up to 0.7mm		
3	104	Oxidised Sandy ware	4	28	4	BS	Hollow ware	U/Dec	Late Medieval	Fine, hard, dense oxidised sandy fabric w/ sparse quartz sand		
3	104	Oxidised Sandy ware	1	15	1	BS	Hollow ware	Streaky glaze ext	Medieval	Fine oxidised body w/ abundant fine quartz sand		
3	104	Oxidised Sandy ware	1	11	1	BS	Hollow ware	U/Dec	Medieval	Fine pale orange to light buff fine sandy body w/ sparse quartz up to 0.5mm		
3	104	Roman mortarium	1	98	1	Rim	Mortarium	N/A	c.65-100AD	See report in text		
3	126	Humberware type	1	8	1	BS	Hollow ware	Green glaze ext	LC13th – C15th	Fine reduced body		
3	126	Oxidised Sandy	1	7	1	BS	Hollow ware	Green glaze ext	Medieval	Fine pale orange to light grey		

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
		ware								sandy fabric up to 0.7mm		
3	126	Oxidised Sandy ware	1	7	1	BS	?Drinking Jug	U/Dec	C14th – C15th	Possibly part of a Humberware drinking jug		
3	130	Oxidised Sandy ware	1	5	1	BS	Hollow ware	U/Dec	Medieval	Oxidised orange to buff body w/ quartz up to 1mm but mainly finer		
3	132	Oxidised Sandy ware	1	8	1	BS	Hollow ware	Thin green glaze ext	Medieval	Sub-angular quartz up to 0.7mm & occasional red iron-rich grit up to 2mm		
3	132	Reduced Sandy ware	2	34	1	Rim & spout	Jug	Green glaze ext	LC13th – C15th	Pinched spout; Fine sandy reduced body; slightly sandier than typical for Humberware		
3	132	Reduced Sandy ware	1	27	1	BS	Hollow ware	Small spots of glaze ext	LC13th – C15th	Black core, orange int & ext margins; fine sandy fabric; possible part of a pot disc		
4	238	BGCW	1	20	1	Handle	?Jug	Patchy brown glaze ext	C18th – EC19th			
4	238	German Stoneware	1	5	1	BS	Bottle	Mottled brown iron-wash ext	C15th – C16th	Probably Frechen-Koln		
4	238	Stoneware	2	47	1	Base	Bottle/flagon	Pale green glaze int & ext	C19th			
4	238	Stoneware	1	5	1	BS	Hollow ware	Pale green glaze int & ext	C19th			
5	257	Gritty ware	1	15	1	BS	Hollow ware	U/Dec	LC11th – LC13th	Grey reduced gritty ware		
5	257	Humberware	1	68	1	Handle	Jug	Grooves & green glaze on handle	LC13th – C15th			
5	257	Humberware	3	94	3	Base	Hollow ware	Green glaze ext	LC13th – C15th			
5	257	Humberware	2	57	2	Handle stumps	Jug	Green glaze ext	LC13th – C15th			
5	257	Humberware	1	153	1	Rim & handle	Large jug	Thin green glaze w/ thumb impressed band below lid-seated rim	LC13th – C15th	Unusual form with very wide, lid seated rim		
5	257	Humberware	1	9	1	Rim	Jug	Green glaze ext	LC13th – C15th			
5	257	Humberware	2	14	1	BS	Hollow ware	Applied strip w/ comb impressions under green glaze	LC13th – C15th			
5	257	Humberware	17	308	17	BS	Hollow ware	Green glaze ext	LC13th – C15th			
5	257	Humberware	7	125	7	BS	Hollow ware	Spots & streaks of glaze ext on some sherds	LC13th – C15th			
5	257	Humberware	1	7	1	BS/pot disc	Hollow ware	Green glaze ext	LC13th – C15th	Oval pot disc 25x36mm		

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
5	257	Humberware DJ	4	105	1	Base	Drinking jug	U/Dec	C14th – C15th			
5	257	Humberware DJ	4	46	4	Base & BS	Drinking jug	U/Dec	C14th – C15th			
5	257	Humberware DJ	1	35	1	Handle & neck	Drinking jug	U/Dec	C14th – C15th	Rod handle		
5	257	Humberware DJ	2	36	2	BS	Drinking jug	U/Dec	C14th – C15th			
5	257	Humberware DJ	1	3	1	Rim	Drinking jug	U/Dec	C14th – C15th			
5	257	Late Humberware	3	51	3	BS	Hollow ware	Thin green glaze int & ext	LC14th – C15th	Flaked & abraded int & ext		
5	257	Late Humberware	1	18	1	BS	Hollow ware	Green glaze int & ext	LC14th – C15th			
5	257	Late Humberware	2	20	2	BS	Hollow ware	Green glaze int & ext; combed lines ext	LC14th – C15th	Flaked & abraded int & ext		
5	257	Oxidised Sandy ware	2	44	1	BS	Hollow ware	Thin green glaze ext	Medieval	Fine oxidised sandy body; abraded, unlike most sherds in this context		
5	262	Buff Sandy ware	3	59	1	Base	Drinking jug	U/Dec	Medieval	Drinking jug base but in a soft, buff/white sandy fabric, not Humberware		
5	262	Humberware	1	126	1	Rim & neck	jug	Finger impressed rim; multiple deep finger impressions at top of handle; green glaze	LC13th – C15th	Part of a large decorated jug		
5	262	Humberware	22	272	22	BS	Hollow ware	Green glaze ext	LC13th – C15th			
5	262	Humberware	14	205	14	BS	Hollow ware	Patchy and streaky green glaze ext	LC13th – C15th			
5	262	Humberware	5	218	4	Strap handle	Jug	Green glaze ext	LC13th – C15th			
5	262	Humberware	2	141	2	Base	Hollow ware	Green glaze ext	LC13th – C15th			
5	262	Humberware	1	63	1	Strap handle	Jug	Applied & imp strip around body from handle; green glaze ext	LC13th – C15th			
5	262	Humberware	2	33	1	BS	Hollow ware	Parallel impressed lines under green glaze ext	LC13th – C15th			
5	262	Humberware	1	16	1	BS	Hollow ware	App & comb-impressed circular motif ext	LC13th – C15th			
5	262	Humberware	1	13	1	BS	Hollow ware	Patchy green glaze ext; impressed wavy line	LC13th – C15th			
5	262	Humberware	2	19	2	BS	Hollow ware	Impressed parallel lines under green glaze	LC13th – C15th			
5	262	Humberware	2	6	2	BS	Hollow ware	Thin impressed lines ext; thin pale green glaze ext	LC13th – C15th			

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
5	262	Humberware	1	4	1	Fragment	U/ID	Decorative element	LC13th – C15th			
5	262	Humberware	1	22	1	?Rim	?Spout	U/Dec	LC13th – C15th	Possibly part of a parrot-beak or bridge spout and unusual form in Humberware		
5	262	Humberware	2	18	2	BS	Hollow ware	U/Dec	LC13th – C15th			
5	262	Humberware DJ	5	114	5	Base	Drinking jug	U/Dec	C14th – C15th			
5	262	Humberware DJ	3	30	3	Rod handle	Drinking Jug	U/Dec	C14th – C15th			
5	262	Humberware DJ	1	15	1	Rod handle	Drinking Jug	U/Dec	C14th – C15th	Deep fingernail impressions at base of handle		
5	262	Humberware DJ	2	56	2	Rim & rod handle	Drinking Jug	U/Dec	C14th – C15th			
5	262	Humberware DJ	5	38	5	Rim	Drinking Jug	U/Dec	C14th – C15th			
5	262	Humberware DJ	18	205	18	BS	Drinking Jug	U/Dec	C14th – C15th			
5	262	Humberware type	1	10	1	BS	Hollow ware	Patchy green glaze ext	LC13th – C15th	Oxidised throughout		
5	262	Humberware type	1	4	1	Rim	Jug	Patchy green glaze ext	LC13th – C15th	Oxidised throughout		
5	262	Oxidised Sandy ware	1	18	1	Rim & handle stump	Jug	Spots of green glaze ext	Medieval	Soft fine sandy fabric; abraded		
5	262	Oxidised Sandy ware	1	15	1	Rim & handle stump	Jug	Spots of green glaze ext	Medieval	Soft fine sandy fabric; abraded		
5	262	Oxidised Sandy ware	1	17	1	BS	Hollow ware	Combed wavy lines ext w/ thin patchy green glaze	Medieval	Soft dark orange fabric w/ moderate fine mica visible on int surface		
5	262	Reduced Sandy ware	1	12	1	Rim	Jar	Patchy green glaze int	Medieval	Fine sandy reduced fabric w/ buff margins; sharply everted wide rim		
5	262	Reduced Sandy ware	1	15	1	Rim	Bowl	Patchy light green glaze int	Medieval	Reduced core & buff margins; fine quartz sand up to 0.5mm		
5	262	Reduced Sandy ware	1	8	1	BS	Hollow ware	Pale green glaze ext	Medieval	Fine sandy reduced sherd w/ buff margins int & ext; fine quartz sand up to 0.5mm		
5	262	Reduced Sandy ware	3	6	3	BS	Hollow ware	Green glaze ext	Medieval	Small pale grey reduced body sherds w/ abundant fine quartz sand		
5	262	Scarborough ware II	4	13	3	BS	Hollow ware	Pale green glaze ext	LC13th – C14th	Fine hard white sandy fabric		
5	262	Scarborough ware II	1	13	1	Base	Hollow ware	Pale green glaze on underside	LC13th – C14th	Fine hard white sandy fabric		

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
5	264	Humberware	7	132	7	BS	Hollow ware	Green glaze ext	LC13th – C15th			
5	264	Humberware	1	96	1	BS & handle stump	Jug	Green glaze ext	LC13th – C15th	Triple handle thumbing		
5	264	Humberware	1	81	1	Base	Baluster jug	Green glaze ext	LC13th – C15th			
5	264	Humberware	1	13	1	BS	Hollow ware	Patchy green glaze ext over thin impressed lines	LC13th – C15th			
5	264	Humberware	1	18	1	Strap handle	Jug	Green glaze	LC13th – C15th			
5	264	Humberware DJ	1	133	1	Base	Drinking Jug	U/Dec	C14th – C15th			
5	264	Humberware DJ	2	57	2	Rod handle	Drinking Jug	U/Dec	C14th – C15th			
5	264	Humberware DJ	1	17	1	Handle stump	Drinking Jug	U/Dec	C14th – C15th	Deep fingernail impressions; cf context 128 for a similar sherd		
5	264	Humberware DJ	1	17	1	Rod handle	Drinking Jug	U/Dec	C14th – C15th	Deep fingernail impressions at base of handle; cf context 128		
5	264	Humberware DJ	22	167	22	BS	Drinking jug	U/Dec	C14th – C15th			
5	264	Humberware DJ	1	58	1	Base	Drinking jug	U/Dec	C14th – C15th			
5	264	Humberware DJ	1	29	1	BS	Drinking jug	U/Dec	C14th – C15th			
5	264	Humberware type	1	23	1	Strap handle	Jug	Green glaze; blistered & misfired	LC13th – C15th	Sandy textured reduced fabric w/ fine quartz		
5	264	Late Humberware	1	5	1	BS	Hollow ware	Green glaze int & ext	LC14th – C15th			
5	264	Oxidised Sandy ware	1	79	1	Strap handle	Jug	Patchy green glaze ext	?C13th – C15th	Deep fingernail imps on triple thumbing; soft orange sandy fabric w/ fine quartz		
5	264	Reduced Sandy ware	1	115	1	Strap handle	Jug	Green glaze ext	?LC13th – C15th	Form resembles Humberware but then fabric is sandier w/ abundant sub-rounded quart up top 0.5mm		
5	276	Hambledon type ware	1	4	1	BS	U/ID	Green glaze int & ext	C14th – C15th			
5	276	Humberware	1	7	1	BS	Hollow ware	Applied & impressed strip; green glaze ext	LC13th – C15th			3
5	276	Humberware	4	52	4	BS	Hollow ware	Green glaze ext	LC13th – C15th			3
5	276	Humberware	1	227	1	BS & handle	Jug	Dark green glaze ext	LC13th – C15th	Large jug; strap handle w/ prominent thumbings		
5	276	Humberware	4	140	4	Base	Hollow ware	Dark green glaze ext	LC13th – C15th			
5	276	Humberware	1	8	1	Spout	Jug	Green glaze ext	LC13th – C15th	Pulled spout		
5	276	Humberware	15	206	15	BS	Hollow ware	Green glaze ext	LC13th – C15th			

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
5	276	Humberware	1	26	1	BS	Hollow ware	Combed wavy lines & parallel ridges & grooves ext	LC13th -C15th			
5	276	Humberware	2	3	2	BS	Hollow ware	U/Dec	LC13th – C15th		59	
5	276	North Yorks Whiteware	3	22	3	BS	Hollow ware	Patchy yellow-green glaze ext	LC13th – C14th	Finer than Brandsby or York Glazed ware; buff w/ pale grey core		
5	277	Humberware	1	20	1	Base	Hollow ware	Green glaze ext & on underside of base	LC13th – C15th			
5	277	Humberware	1	11	1	BS	Hollow ware	Green glaze ext	LC13th – C15th			
5	277	North Yorks Whiteware	1	5	1	BS	Hollow ware	Bright green glaze ext over impressed grooves	LC13th – C14th	White to pale grey w/ abundant fine rounded quartz up to 0.5mm		
5	278	Beverley ware type	1	43	1	Rim & handle	Jug	Narrow strap handle; patchy clear glaze ext	C13th – C14th	Fine red micaceous fabric		
5	278	Humberware	1	5	1	BS	Hollow ware	Green glaze ext	LC13th – C15th			
5	278	Humberware	1	5	1	BS	Hollow ware	U/Dec	LC13th – C15th			
5	278	Humberware DJ	1	34	1	Base	Drinking Jug	U/Dec	C14th – C15th			
5	278	Oxidised sandy ware	1	6	1	BS	Hollow ware	Clear glaze int & ext	Medieval	Heavily abraded BS in a sandy fabric w/ sub-angular quartz up to 1mm		
5	278	U/ID Sandy ware	1	13	1	BS	Hollow ware	Spots of yellow-green glaze ext	Medieval	Secondarily burnt and discoloured sherd in a fine sandy fabric up to 0.5mm	63	
5	293	Humberware	2	21	2	BS	Hollow ware	Green glaze ext	LC13th – C15th			
5	293	Oxidised Sandy ware	1	1	1	BS	Hollow ware	U/Dec	?Late Medieval	Small sandy red sherd	61	
5	294	Humberware	1	33	1	BS	Hollow ware	Patchy dark green glaze ext	LC13th – C15th			
5	294	Humberware	1	12	1	BS	Hollow ware	Blistered overfired green glaze ext	LC13th – C15th			
5	294	Humberware type	1	1	1	BS	Hollow ware	Green glaze ext	LC13th – C15th		62	
5	294	North Yorks Whiteware	1	2	1	BS	Hollow ware	Mottled green glaze ext	LC13th – C14th		62	
5	294	North Yorks Whiteware	1	33	1	Rod handle	Jug	Patchy mottled green glaze on top of handle; irregular combed lines ext	LC13th – C14th	White fabric w/ sub-angular quartz up to 1mm; cf. York Glazed ware		
5	294	Oxidised Sandy ware	1	10	1	BS	Hollow ware	U/Dec	Medieval	Orange sandy body w/ sparse fine quartz grit		
5	294	Reduced Sandy ware	2	30	1	BS	Hollow ware	Pale green glaze ext	Medieval	Fine pale grey w/ light grey margins int & ext w/		

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
										occasional fine quartz grains		
6	21	Humberware	1	40	1	Base	Hollow ware	Streaks of green glaze ext	LC13th – C15th			
6	21	Humberware	2	52	2	Base	Hollow ware	Patchy green glaze on underside	LC13th - C15th			
6	21	Humberware	1	7	1	BS	Hollow ware	Patchy green glaze ext	LC13th – C15th			
6	21	Humberware	1	29	1	Rim & handle stump	Jug	Patchy green glaze ext	C13th – C15th	Handle springs from immediately below rim		
6	103	Humberware	1	37	1	Base	Hollow ware	Green glaze ext	LC13th – C15th			
6	103	Humberware	1	16	1	BS	Hollow ware	Patchy green gaze ext	LC13th – C15th			
6	103	Humberware DJ	1	33	1	BS & handle stump	Drinking jug	U/Dec	C14th – C15th	Deep fingernail impression on handle stump; cf cxt 128 for a similar sherd		
6	103	Humberware DJ type	2	10	2	BS	?Drinking jug	U/Dec	C14th – C15th	Thin walled drinking jug type		
6	103	North Yorks Whiteware	1	8	1	BS	Hollow ware	Mid-green mottled glaze ext	LC13th – C14th	White fabric w/ sub-angular quartz up to 0.5mm		
6	103	Orange Sandy ware	1	5	1	BS	Hollow ware	Clear glaze ext	Medieval	Fine sandy fabric, bright orange w/ occasional fine quartz		
6	103	Oxidised Sandy ware	1	86	1	Handle	Jug	Patchy green glaze on square-sectioned rod handle	Medieval	Oxidised sandy ware w/ quartz sand up to 0.5mm		
6	103	Oxidised Sandy ware	1	52	1	Rod handle	Jug	Patchy green glaze ext	Medieval	Oxidised sandy ware w/ quartz sand up to 1mm		
6	103	Reduced Greenware type	1	11	1	BS/handle stump	Jug	Green glaze ext	LC13th – C15th	Sandier w/ more quartz than normal for Humberware		
6	256	Green Glazed Sandy ware	3	122	3	BS	?Drinking jug	Green glaze int & ext	C15th – C16th	Fine pale grey fabric, possibly a late Humberware type; pitted and abraded		
6	256	Humberware	24	246	24	BS	Hollow ware	Green glaze ext	LC13th – C15th	Fine pale grey body; cf. Cowick		
6	256	Humberware	2	24	1	Rim	Jug	Patchy green glaze ext	LC13th – C15th	Flat-topped clubbed rim		
6	256	Humberware	2	20	1	Rim	Jug	Patchy green gaze ext	LC13th – C15th	Flat-topped clubbed rim		
6	256	Humberware	2	59	2	BS	Jug	Applied and thumb-impressed strips under green glaze ext	LC13th – C15th	Fine reduced body		
6	256	Humberware	1	25	1	Handle	Jug	Green glaze ext; shallow groove ext	LC13th – C15th	Fine reduced body		
6	256	Humberware	1	18	1	BS	Jug	Applied circular impressed design	LC13th – C15th	Fine reduced body; cf. Cowick		

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
6	256	Humberware	2	156	1	BS & strap handle	Jug	Patchy green glaze int & ext; impressed lines down handle	LC13th – C15th	Fine reduced body		
6	256	Humberware	1	52	1	BS & handle stump	Jug	Green glaze ext; deep handle thumbing	LC13th – C15th	Fine reduced body		
6	256	Humberware	5	147	5	Base	Hollow ware	Patchy green glaze ext; stacking scars on underside	LC13th – C15th	Reduced Humberware body		
6	256	Humberware	1	7	1	BS	Hollow ware	Green glaze ext w/ stamped grid pattern	LC13th – C15th	Reduced Humberware		
6	256	Humberware	1	10	1	BS	Hollow ware	Green glaze ext over applied & impressed decoration	LC13th – C15th	Reduced Humberware		
6	256	Humberware	1	67	1	Base	Hollow ware	Patchy green glaze ext	LC13th – C15th	Coarse sandy Humberware fabric		
6	256	Humberware	1	31	1	BS	Hollow ware	Patchy glaze ext	LC13th – C15th	Overfired dense reduced fabric and glaze		
6	256	Humberware	1	7	1	Base	Hollow ware	Spots of glaze on underside	LC13th – C15th			
6	256	Humberware	1	6	1	BS	Hollow ware	Bright green glaze; impressed wavy line ext	LC13th – C15th			
6	256	Humberware	2	9	2	BS	Hollow ware	Pale green glaze ext	LC13th – C15th			
6	256	Humberware	1	4	1	BS	Hollow ware	Patchy green glaze ext	LC13th - C15th			
6	256	Humberware	1	3	1	BS	Hollow ware	Shiny green glaze ext	LC13th – C15th			
6	256	Humberware DJ	1	254	1	Base	Drinking jug	U/Dec	C14th – LC15th			
6	256	Humberware DJ	2	89	1	Base	Drinking jug	U/Dec	C14th – LC15th			
6	256	Humberware DJ	1	36	1	Base	Drinking jug	U/Dec	C14th – LC15th			
6	256	Humberware DJ	4	109	4	BS	Drinking jug	U/Dec	C14th – LC15th			
6	256	Humberware DJ	2	53	1	BS	Drinking jug	U/Dec	C14th – LC15th			
6	256	Humberware DJ	1	23	1	Base	Drinking jug	U/Dec	C14th – LC15th			
6	256	Humberware DJ type	13	45	13	BS	?Drinking jug	U/Dec	C14th – LC15th	Upper body sherds in fine orange fabrics resembling Humberware DJ but thinner than expected		
6	256	Humberware DJ type	4	27	4	Rim	?Drinking jug	U/Dec	C14th – LC15th	Small everted clubbed rims; cf Humber DJ but finer and thinner; cf body sherds		
6	256	Humberware DJ type	2	10	1	BS	?Drinking jug	U/Dec	C14th – LC15th	Upper body sherds in fine orange fabric resembling Humberware DJ but thinner than expected		
6	256	Humberware DJ	1	12	1	Rod handle	?Drinking jug	U/Dec	C14th – LC15th	Small rod handle w/		

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
		type								fingernail impressed terminal		
6	256	Humberware type	3	81	3	BS & handle stump	Jug	Patchy green glaze ext	LC13th – C15th	Sandy Humberware		
6	256	Humberware type	1	59	1	BS	Jug	Green glaze int & partially ext; combed wavy line & horizontal lines ext	LC13th – C15th	Sandy Humberware type		
6	256	Late Humberware	1	10	1	BS	Hollow ware	Green glaze int	C15th – C16th	Sandy textured reduced body		
6	256	Oxidised Sandy ware	2	33	1	Tube spout	Jug	Green glaze ext	Medieval	Two fabrics; fine oxidised sandy body & a coarser quartz tempered pale grey fabric for the spout		
6	256	Oxidised Sandy ware	2	13	1	BS	Hollow ware	Patchy pale green glaze ext	Medieval	Oxidised sandy body w/ moderate sub-rounded quartz up to 1.25mm		
6	256	Oxidised Sandy ware	1	15	1	BS	Hollow ware	U/Dec	Medieval	Buff ext, pale grey int; fine sandy fabric		
6	256	Winksley type ware	2	21	1	BS	Hollow ware	Mottled bright green glaze ext	MC13th – MC14th	Fine light buff to white fabric w/ sparse well-sorted fine black grit		
6	256	Winksley type ware	1	6	1	BS	Hollow ware	U/Dec	MC13th – MC14th	Fine dense pale buff fabric w/ occasional fine rounded rock frags		
6	F4	Humberware	2	12	2	BS	Hollow ware	U/Dec	LC13th – C15th	Fine sandy Humberware type fabric		
6	F4	Humberware DJ	1	22	1	Base	Hollow ware	U/Dec	C14th – C15th	Oxidised base		
7	18	Cane Coloured ware	1	1	1	BS	Hollow ware	U/Dec	C19th			
7	18	Edged ware	1	1	1	BS	Plate	Blue feather-edge paint ext	c.1790- *c.*1830			
7	18	North Yorks Whiteware	1	9	1	BS	Hollow ware	Patchy green glaze ext	LC13th – C14th			
7	18	Slipware	1	1	1	BS	Hollow ware	Feathered slip decoration ext	C18th			
7	18	Whiteware	1	1	1	BS	U/ID	U/Dec	M – LC19th	Could be Pearlware		
7	20	BSGSW	1	3	1	Rim	?Bowl	U/Dec	C19th			
7	20	Cane Coloured ware	1	1	1	BS	U/ID	U/Dec	C19th			
7	20	TP Whiteware	1	1	1	BS	Flatware	Unidentifiable TP design	M – LC19th			
7	114	North Yorks Whiteware	1	3	1	BS	Hollow ware	Pale green glaze ext	LC13th – C14th			

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
7	124	Humberware	4	14	4	BS	Hollow ware	Green glaze ext	LC13th – C15th			
7	124	North Yorks Whiteware	1	6	1	BS	Hollow ware	Green glaze ext	C13th – C14th	Grey core, white ext surface, orange int surface; abundant fine sub-angular quartz up to 0.5mm		
7	124	Oxidised Sandy ware	1	1	1	BS	Hollow ware	U/Dec	Medieval	Sandy oxidised fabric w/ abundant fine quartz up to 0.2mm		
7	128	Buff Sandy ware	2	31	1	Base	Hollow ware	Spots of clear glaze ext	LC13th – C15th	Buff ext w/ pale grey int; moderate quartz up to 1mm & fine black grit up to 0.5mm		
7	128	Humberware	1	2	1	BS	Hollow ware	Green glaze ext	LC13th – C15th		20	
7	128	Humberware	15	129	15	BS	Hollow ware	Green glaze ext	LC13th – C15th			
7	128	Humberware	1	13	1	?BS	Hollow ware	Deep grooves & ridges & green glaze ext	LC13th – C15th	Unidentified vessel part		
7	128	Humberware DJ	1	15	1	BS & handle stump	Drinking jug	U/Dec	C14th – C15th	Deep fingernail impressions on handle thumbing; cf cxt 103 for a similar trait		
7	128	Humberware DJ	3	19	3	BS	Drinking jug	Sparse, patchy, very thin green glaze ext	C14th – C15th			
7	128	Humberware DJ	1	28	1	Rim & handle	Drinking jug	Sparse, patchy, very thin green glaze ext	C14th – C15th	Small rod handle w/ double thumbing		
7	128	Humberware type	1	26	1	Base	Hollow ware	Patchy green glaze ext	LC13th – C15th	Slightly sandier than typical Humberware		
7	128	Humberware type	1	81	1	Base	Hollow ware	Green glaze ext	LC13th – C15th	Abraded base in a sandy Humberware type fabric		
7	128	Humberware type	1	14	1	Base	Hollow ware	U/Dec	LC13th – C15th	Sandy Humberware; sooted ext		
7	128	Humberware type	1	24	1	BS	Hollow ware	Pale green glaze ext	LC13th – C15th			
7	128	Humberware type	3	15	3	BS	Hollow ware	Thin pale green glaze ext	LC13th – C14th	Pale grey reduced Humberware body		
7	128	Late Humberware	1	54	1	Base	Hollow ware	Green glaze ext, thin green glaze int	?C15th	Appears to be a later form in a softer sandy Humberware type fabric		
7	128	Oxidised Sandy ware	3	24	3	BS	Hollow ware	U/Dec	LC13th – C15th	Possibly an oxidised Humberware fabric		
7	128	Oxidised Sandy ware	2	4	2	BS	Hollow ware	U/Dec	Medieval	Sandy oxidised fabrics		
7	128	Rhenish	1	1	1	BS	Hollow ware	Rilled ext w/ thin grey salt	C14th – C15th	Possibly Frechen-Koln;		

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
		stoneware						glaze ext		unusually thin vessel		
7	202	BGCW	1	1	1	BS	Hollow ware	Brown glaze int	LC18th – C19th			
7	202	Coal Measures Whiteware	1	6	1	BS	Hollow ware	Mottled green glaze ext	C14th – C15th			
7	501	Humberware	1	11	1	BS	Hollow ware	Groups of thin parallel incised lines ext under green glaze	LC13th – C15th			
7	501	Humberware	1	15	1	Neck	Jug	Parallel combed wavy lines ext	LC13th – C15th			
7	501	Purple Glazed Humberware	1	9	1	BS	Hollow ware	Impressed line ext	LC15th - C16th			
7	501	Siegburg stoneware	1	157	1	Base	Tankard/jug	Splayed ;'elephant foot' base	LC14th – C15th	Grey stoneware, unglazed		
8	3	Brown Glazed Fineware	2	22	2	BS	Hollow ware	Brown glaze int & ext	LC18th – C19th	Contact scar on larger sherd		
8	3	Coarse Sandy ware	1	10	1	BS	Hollow ware	U/Dec	Medieval	Reduced w/ buff int margin; abundant sub-rounded quartz up to 0.5mm		
8	3	Humberware	2	49	1	Strap handle	Jug	Deep grooves on top of handle under green glaze	LC13th – C15th			
8	3	Humberware	1	55	1	Strap handle	Jug	Green glaze	LC13th – C15th			
8	3	Humberware	20	174	20	BS	Hollow ware	Green glaze ext	LC13th – C15th			
8	3	Humberware	1	8	1	Neck	Jug	Combed wavy line under green glaze	LC13th – C15th			
8	3	Humberware	1	9	1	Handle thumbing	Jug	Mottled green glaze ext	LC13th – C15th			
8	3	Humberware DJ	1	6	1	BS	Drinking Jug	U/Dec	C14th – C15th			
8	3	Humberware type	2	37	1	Rim	Jug	Green glaze int & ext	LC13th – C15th	Reduced sandy fabric; not typical of the East Yorks Humberware		
8	3	Humberware type	2	15	2	BS & flake	Hollow ware	U/Dec	LC13th – C15th			
8	3	Medieval Whiteware	1	2	1	BS	Hollow ware	Green glaze ext	Medieval	White sandy fabric w/ fine quartz & sparse fine black grit		
8	3	Oxidised Sandy ware	1	10	1	BS	Hollow ware	U/Dec	Medieval	Fine dull orange sandy ware w/ grey core; ?Beverley ware type		
8	3	Oxidised Sandy ware	1	4	1	Base	Hollow ware	U/Dec	Medieval	Fine sandy fabric w/ fine quartz sand		

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
8	3	Sponged ware	1	1	1	BS	Flatware	Blue sponging int	c.1830+			
8	3	Whiteware	1	14	1	Footring base	Flatware	U/Dec	MC19th – EC20th			
8	16	Stoneware	1	276	1	Base	Flagon	Stamped line above base	C19th – EC20th			
8	93	Humberware	9	50	9	BS	Hollow ware	Green glaze ext	LC13th – C15th			
8	93	Humberware	1	6	1	BS	Hollow ware	Green glaze ext under green glaze	LC13th – C15th			
8	93	Humberware DJ	1	4	1	BS	Drinking Jug	U/Dec	C14th – C15th			
8	99	Humberware	1	24	1	Handle stump	Jug	Green glaze ext	LC13th – C15th	Deep fingernail impressions on handle stump; cf. Drinking jugs		
8	99	Humberware	9	71	9	BS	Jug	Green glaze ext	LC13th – C15th			
8	99	Humberware	1	13	1	BS	Hollow ware	Thin parallel lines ext under green glaze	LC13th – C15th			
8	99	Humberware DJ	1	206	1	Base & body	Drinking Jug	U/Dec	C14th – C15th			
8	99	Humberware type	1	48	1	Base	Hollow ware	Patchy green glaze ext	LC13th – C15th			
8	99	Humberware type	1	12	1	Rim	Jug	Streaky misfired glaze ext	LC13th – C15th			
8	99	Humberware type	1	13	1	BS	Hollow ware	U/Dec	LC13th -C15th			
8	99	Late Humberware	1	33	1	BS	Bowl	Streaky brown glaze int	C15th – EC16th			
8	99	Scarborough ware II	1	6	1	Small rod handle	?Jug	Bright green glaze all-over	LC13th – C14th	Small flattened rod; possibly a decorative handle or element		
8	117	BGCW	3	107	3	Rim & BS	Pancheon	Brown glaze int	C19th – EC20th	Late BGCW		
8	117	Bone China	1	10	1	Footring base	Saucer	U/Dec	LC19th – C20th			
8	117	Pearlware	2	16	1	Ring foot base	Hollow ware	U/Dec	c.1780 – *c.*1840	Angular ring foot base		
8	117	Relief Banded ware	1	25	1	Recessed base	Hollow ware	Relief bands ext	C19th – EC20th			
8	117	TP Whiteware	1	8	1	BS	Flatware	Willow	M – LC19th			
8	117	TP Whiteware	1	2	1	BS	Hollow ware	Willow	M – LC19th	Rectangular vessel		
8	117	URE	1	108	1	Base	Flowerpot	U/Dec	C19th – C20th			
8	265	Brandsby type ware	1	11	1	BS	Hollow ware	Patchy bright green glaze int & ext	LC13th – C15th			
8	265	Humberware	1	23	1	Neck	Jug	Prominent applied & impressed horizontal strip around neck under green glaze	LC13th – C15th	See parallels from other contexts		

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
8	265	Humberware	5	23	5	BS	Hollow ware	Green glaze ext	LC13th – C15th			
8	265	Humberware	3	30	3	BS	Hollow ware	Applied & impressed vertical strips	LC13th – C15th			
8	265	Humberware	1	2	1	BS	Hollow ware	Combed wavy line ext	LC13th – C15th			
8	265	Humberware DJ	2	11	2	BS	Drinking Jug	U/Dec	C14th – C15th			
8	265	Humberware type	1	12	1	BS	Hollow ware	Sparse green glaze int & ext	?C15th	Could be late Humberware		
9	5	Humberware	1	16	1	BS/Base	Hollow ware	Patchy green glaze ext	LC13th – C15th			
9	10	Slip Banded CC ware	1	1	1	BS	Hollow ware	Thin brown slip lines ext on a cane coloured body	C19th			
9	10	TP Bone China	1	1	1	BS	Cup/bowl	Chinese landscape border	C19th			
9	10	TP Whiteware	1	1	1	Rim	Cup	Geometric TP border int	C19th			
9	14	?Creamware	1	1	1	BS	Flatware	U/Dec	LC18th – EC19th			
9	14	?Whiteware	2	1	2	BS	Flatware	U/Dec	C19th	Small fragments		
9	14	Bone China	2	1	2	BS	U/ID	U/Dec	C19th	Small body sherds		
9	14	Hambledon ware	2	21	1	Base	Hollow ware	Green glaze on underside	C15th	Pale grey fabric w/ white external margin		
9	14	YGCW	1	2	1	BS	Bowl/pancheon	White slip int under clear glaze	LC18th – C19th	Dense orange body		
9	66	?Pearlware	1	6	1	BS	Hollow ware	U/ID dark blue design ext	LC18th – EC19th	Could be Flow Blue decorated Whiteware *(c.*1840+)		
9	66	Bone China	2	3	2	BS	Hollow ware	Blue sprigged decoration ext	C19th			
9	66	Cane Coloured ware	1	1	1	BS	Hollow ware	U/Dec	C19th			
9	66	Cane Coloured ware	1	1	1	Rim	Hollow ware	Black line around rim	C19th		9	
9	66	Edged ware	1	1	1	BS	Plate	Relief moulded edge	c.1790 – *c.*1830			
9	66	Pearlware	1	2	1	Ring foot base	Cup/bowl	U/Dec	c.1780 – *c.*1840	Angular ring foot base		
9	66	Pearlware	1	1	1	BS	Cup/bowl	Hand painted blue linear decoration ext	c.1780 - *c.*1840			
9	66	Reduced Sandy ware	1	2	1	BS	Hollow ware	U/Dec	Medieval	Reduced core w/ thin buff margins int & ext; very fine sandy body	9	
9	66	Tin Glazed Earthenware	2	4	2	Base & BS	Hollow ware	U/ID	MC16th – MC18th	Heavily abraded, most glaze removed		
9	66	TP Pearlware	1	1	1	BS	Cup/bowl	TP star-shaped decoration	c.1780 – *c.*1840			

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
								ext				
9	66	TP Pearlware	1	3	1	BS	Flatware	U/ID hand painted blue design int	c.1780 – *c.*1840			
9	66	Whiteware	5	3	5	BS	U/ID	U/Dec	C19th	Small fragments		
9	70	Blackware	1	8	1	BS	Hollow ware	Black glaze int & ext	C17th			
9	70	Green Glazed Sandy ware	1	17	1	Base	Hollow ware	Green glaze int & ext	LC15th – EC17th	Fine pale grey sandy body		
9	70	Humberware	2	11	2	BS	Hollow ware	Green glaze ext	LC13th – C15th	Fine reduced body		
9	76	?Pearlware	4	5	4	BS	Flatware	U/Dec	c.1780 – *c.*1840	Very light Pearlware		
9	76	Edged ware	2	11	2	Rim	Plate	Wavy edge w/ blue feather-edge paint	c.1810 – *c.*1830			
9	82	Cistercian ware	1	5	1	BS	Cup	Dark brown glaze ext & partially int	c.1450 – *c.*1600			
9	86	Humberware type	1	3	1	BS	Hollow ware	Green glaze ext	LC13th – C15th			
9	86	TP Whiteware	1	1	1	BS	Flatware	U/ID TP design	C19th	Could be TP Pearlware		
9	86	TP Whiteware	1	1	1	BS	Hollow ware	Geometric TP design ext	C19th	Could be TP Pearlware		
9	146	BGCW	1	67	1	Rim	Pancheon	Brown glaze int only	C19th	Wide everted rim		
9	146	Cane Coloured ware	1	5	1	Ring foot base	Bowl	U/Dec	C19th			
9	146	Creamware	1	6	1	BS	Plate	U/Dec	c.1740 – *c.*1820	Light Creamware; ?EC19th		
9	146	Creamware	1	4	1	Rim	Hollow ware	U/Dec	c.1740 – *c.*1820	Folded rim w/ cavity; light Creamware		
9	146	Late Blackware	1	17	1	BS & handle stump	Hollow ware	Black glaze int & ext	C18th	Stump of a strap handle; fine red fabric		
9	146	Reduced Greenware	1	19	1	BS	Hollow ware	Dark green glaze ext	LC13th – C15th	Fine dark grey reduced fabric		
9	146	Slip Banded CC ware	1	1	1	BS	Hollow ware	Thin white slip lines ext on cane coloured body	C19th			
9	146	Slipware	1	6	1	Base	Dish	Red & white trailed slip design int only	C18th	Fine red fabric		
9	146	Stoneware	1	12	1	BS	Hollow ware	Dark brown glaze ext; pale brown int	C19th			
9	146	Stoneware	1	1	1	BS	Hollow ware	Mottled glaze ext	C19th			
9	146	TP Whiteware	1	5	1	BS	Flatware	Red printed design int; ?Eton College	M – LC19th			
9	146	TP Whiteware	1	3	1	BS	Hollow ware	Red printed design int & ext; stylised fir trees	M – LC19th			
9	146	URE	1	46	1	Base	Flowerpot	U/Dec	MC19th –			

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
									C20th			
9	146	URE	1	8	1	Rim	?Flowerpot	U/Dec	MC19th – EC20th	Small everted, folded rim w/ cavity		
9	146	Whiteware	1	3	1	Ring foot base	Server/tureen	U/Dec	M – LC19th	Sub-rectangular footed base		
9	146	Whiteware	1	2	1	BS	Flatware	U/Dec	M – LC19th			
9	146	Whiteware	1	4	1	BS	?Lid	Flow blue band on upper surface & lustre band	c.1840+			
9	147	Bone China	1	28	1	Ring foot base	Cup	U/Dec	C19th – EC20th			F145
9	147	Cane Coloured ware	1	9	1	Rim	Dish/bowl	Low relief moulded wavy rim	C19th			F145
9	147	TP Whiteware	1	14	1	Rim	Bowl	Dendritic TP design int & ext	M – LC19th			F145
9	147	Whiteware	1	3	1	BS	Hollow ware	Relief banded decoration	C19th			F145
9	267	BGCW	4	202	4	BS	Pancheon	Brown glaze int only	LC18th – C19th			4
9	267	BGCW	1	49	1	Rim	Pancheon	Brown glaze int only	LC18th – C19th	Everted, slightly thickened rim		4
9	267	BGCW	1	29	1	BS	Pancheon	Brown glaze int only, wide streak of glaze ext	LC18th – C19th			4
9	267	BGCW	1	360	1	Base	Pancheon	Brown glaze int only	LC18th – C19th	Use-wear on underside of base		4
9	267	Bone China	1	5	1	BS	Hollow ware	Blue sprigged flower decoration ext	C19th			4
9	267	BSGSW	2	246	1	Base	Jar/flagon	Brown glaze ext, buff int	C19th – EC20th			4
9	267	BSGSW	1	47	1	BS	Hollow ware	Stamped & rouletted ext	C19th – EC20th	Brown int & ext		4
9	267	BSGSW	2	17	2	BS	Hollow ware	Brown glaze int & ext	C19th – EC20th			4
9	267	Green Glazed Sandy ware	1	20	1	BS	Dish/bowl	Green glaze int, patchy green glaze ext	LC15th – C16th	Fine sandy pale orange fabric		4
9	267	Green Glazed Sandy ware	1	19	1	Rim	?Jar	Green glaze int & ext	LC15th – C16th	Lid seated rim; unusual form		4
9	267	Mocha ware	2	14	1	BS	Bowl	Pale blue & white bands on a cane coloured body w/ part of brown mocha tree	C19th			4
9	267	Sponged ware	1	6	1	Rim	Cup/bowl	Blue sponged decoration ext & inside rim	c.1840+			4
9	267	Stoneware	2	65	2	BS	Hollow ware	U/Dec	MC19th – EC20th	Pale white/buff stoneware		4
9	267	Stoneware	19	1381	1	Rim, base &	Flagon	Very pale green glaze ext	MC19th –	Pale cream-green stoneware		4

Phase	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	Sample	No. in Sq
						handle			EC20th			
9	267	TP Whiteware	1	180	1	Ring foot base	Bowl	TP design int; Graphs 2.in a stylised rural landscape	M – LC19th	Rather a poor quality print		4
9	267	TP Whiteware	2	18	1	BS	Tureen/server	Willow border ext	M – LC19th			4
9	267	TP Whiteware	3	23	1	Rim	Saucer	Black printed abstract stippled design int only	LC19th – C20th			4
9	267	TP Whiteware	1	2	1	BS	Tureen/server	Willow border	M – LC19th			4
9	267	Whiteware	1	1	1	BS	Hollow ware	U/Dec	M – LC19th			4
9	267	Whiteware	1	11	1	Rim	Plate	Relief moulded pattern of daisies around rim	C19th			4
9	267	YGCW	1	35	1	Rim	Bowl/pancheon	White slip int on pale orange body	LC18th – C19th	Clubbed rim, glazed int only		4
9	267	YGCW	1	16	1	BS	Bowl/pancheon	White slip int on pale orange body	LC18th – C19th	Glazed int only		4
		Total	**676**	**13379**	**626**							

Table 1.3: Pottery from unstratified contexts

Area	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	No. in Sq
Cleaning	Humberware	2	19	2	BS	Hollow ware	Green glaze ext	LC13th – C15th		4
Cleaning NE Area	Humberware	2	39	2	BS	Hollow ware	Green glaze ext	LC13th – C15th		
Cleaning NE Area	Humberware	1	21	1	Base	Hollow ware	U/Dec	LC13th – C15th		
NE Corner/NE Area	Humberware	1	21	1	BS	Hollow ware	Green glaze ext	LC13th – C15th		
NE Corner/NE Area	Humberware	1	45	1	Base	Hollow ware	Green glaze ext	LC13th – C15th		
NE Corner/NE Area	North Yorks Whiteware	1	71	1	Tube spout	Jug	Mid green glaze ext	C13th – C14th	Fine white to light grey body w/ abundant fine quartz	
NW Area	Humberware	1	25	1	BS	Hollow ware	Green glaze ext	LC13th – C15th		
S Area	BGCW	1	40	1	Lug handle	Jar	Black glaze int & ext	C19th	Horizontal lug handle	
S Area	BGFW	1	2	1	BS	Hollow ware	Brown glaze int & partially ext	C19th		
S Area	Cane Coloured ware	1	59	1	Ring foot base	Bowl	U/Dec	C19th		
S Area	Slip Banded CC ware	1	1	1	BS	Hollow ware	Thin blue band ext	C19th		

Area	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	No. in Sq
S Area	Stoneware	1	5	1	BS	Hollow ware	U/Dec	C19th		
S Area	Whiteware	1	9	1	Footring base	Plate	U/Dec	M – LC19th		
-	BGCW	3	184	3	BS	Bowl	Brown glaze int only	C19th - EC20th		
-	BGCW	1	36	1	Rim	Bowl	Brown glaze int only	C19th - EC20th	Wide everted rim	
-	Bone China	4	18	1	Rim	Plate	Moulded w/ fluting int	C19th		
-	Bone China	2	12	1	BS	Vase	Hand painted brown, green & red floral design	C19th – EC20th		
-	BSGSW	1	37	1	Rim	Bowl	Rouletted band below everted rim	C19th	Sharply everted rim	
-	BSGSW	4	15	1	BS	Bowl	Brown ext, mottled glaze int	C19th		
-	Buff Gritty ware	1	39	1	Rod handle	Jug	Patchy clear glaze ext	Medieval	Buff to white body w/ quartz & rock frags up to 2mm	
-	Cane Coloured ware	2	35	2	BS	Bowl	U/Dec	C19th		
-	Cane Coloured ware	3	69	1	Ring foot base	Bowl	U/Dec	C19th		
-	Gritty ware	1	8	1	BS	BS	Thin green glaze ext	C13th – C15th	Pot disc 27x35mm	
-	Hambledon type ware	1	21	1	BS	U/ID	Patchy green glaze ext	C14th – C15th		
-	Hambledon type ware	2	8	1	BS	Hollow ware	Dark green glaze ext	C14th – C15th		
-	Humberware	1	61	1	BS	Hollow ware	Green glaze ext	LC13th – C15th		
-	Humberware	1	1	1	BS	Hollow ware	Green glaze ext	LC13th – C14th		
-	Humberware	1	8	1	BS	Hollow ware	Patchy green glaze ext	LC13th – C14th		
-	Humberware DJ	1	6	1	BS	Drinking Jug	U/Dec	C14th – C15th		
-	Mocha ware	2	17	1	BS	Bowl	While slip band w/ blue Mocha tree & thin blue line	C19th	Cane Coloured ware body	
-	Relief Banded ware	3	32	3	BS & handle stump	Jug	Moulded handle terminal	MC19th – EC20th		
-	Sponged ware	1	6	1	BS	Bowl	Blue sponging ext	c.1830+		
-	Sponged ware	2	29	1	Rim	Bowl	Blue sponging int & ext; moulded rim	c.1830+		
-	Sponged ware	2	2	1	Rim	Cup/bowl	Blue sponging int only; plain rim	c.1830+		
-	Stoneware	1	46	1	Base	Bottle	Pale green glaze ext	MC19th – EC20th		
-	Stoneware	1	32	1	BS	Hollow ware	Buff stoneware	MC19th – EC20th		

Area	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes	No. in Sq
-	TP Bone China	1	3	1	Rim	Saucer	U/ID blurred print int	C19th		
-	TP Whiteware	3	23	1	Profile	Plate	Willow	M – LC19th		
-	TP Whiteware	1	4	1	Footring base	Plate	Willow	M – LC19th		
-	TP Whiteware	1	3	1	Base	Plate	Willow	M – LC19th		
-	TP Whiteware	3	15	1	Rim	Cup	Stylised geometric/floral design int & ext	M – LC19th		
-	TP Whiteware	1	16	1	Rim	Plate	Willow border	M – LC19th		
-	TP Whiteware	1	3	1	BS	Hollow ware	U/ID TP design ext	M – LC19th		
-	URE	2	20	2	Rim	U/ID	U/Dec	MC19th – EC20th	Folded rim	
-	Whiteware	2	3	1	Flake	Bowl	U/Dec	M – LC19th		
-	Whiteware	4	64	1	BS	Vase	Dark Flow Blue band; hand-painted overglaze red stylised floral design ext	MC19th – EC20th		
	Total	**75**	**1233**	**54**						

Table 1.4: Ceramic building material and other items assessed as part of the pottery assemblage

Ph	Cxt	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
5	257	Tile	2	102	1	Corner	Floor tile	Green glaze on one side	Medieval	
5	262	?Tile	1	73	1	Fragment	?Tile	Green glaze on one side; pot disc	Medieval	66x65mm diam pot disc
5	276	Stone	1	4	1	Fragment	U/ID	Worked stone?	Medieval	
5	276	Tile	3	17	3	Fragment	Tile	U/Dec	Medieval	
6	21	Floor tile	2	63	1	Edge	Floor tile	Green glazed on one side	Medieval	
6	21	Roof tile	1	44	1	Fragment	Roof tile	U/Dec	Medieval	
6	256	?Tile	1	6	1	Edge	?Tile	Dark glaze on one side & edge	Medieval	
6	256	Tile	5	27	1	Fragments	Tile	U/Dec	Medieval	
7	124	Tile	1	307	1	Fragment	Roof tile	Patchy green glaze & relief decoration	Medieval	
7	128	Tile	3	105	3	Fragments	Tile	One w/ green glaze ext	Medieval	
8	3	?Tile	3	109	3	Fragments	?Tile	Green glaze on one side	Medieval	Includes one pot disc 47x39mm
8	93	Plastic	1	4	1	Fragment	U/ID		Recent	?Bakelite
8	99	Tile	1	59	1	Fragment	Tile	Green glaze on one side	Medieval	
8	99	Tile	1	18	1	Fragment	Tile	Patchy green glaze on one side	Medieval	

Table 1.5: Abbreviations used in Tables 1.1 to 1.3

Abbreviation	Type	Abbreviation	Type
BGCW	Brown Glazed Coarseware	Ph	Phase
BGFW	Brown Glazed Fineware	Slip Banded CC ware	Slip Banded Cane Coloured ware
BSGSW	Brown Salt Glazed Stoneware	TP	Transfer Printed
Cxt	Context	U/Dec	Undecorated
ext	External	U/ID	Unidentified
Humberware DJ	Humberware drinking jug	U/S	Unstratified
imp	Impressed	URE	Unglazed Red Earthenware
int	Internal	w/	With
No in Sq	Number in square (unrecognised code on bag)		

Table 1.6 Fragment counts for the species present (* = partial skeleton)

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Monitoring	Unstrat	Grand Total
Cattle	1	2	15	5	218	128	57	157	17	6	22	
Sheep/goat	4	2	9	1	97	58	43	80	20	4	13	
Sheep	1		5		10		6	4	4		3	
Goat	1					1		1				
Pig	1		1		36	16	2	17	1	1	2	
Cat				* 1	4	4	2	4			1	
Dog					8			4				
Horse		1			9	1	1	10	1		1	
Fallow deer					2	1			1	2	1	
Deer sp.						3		1				
Roe deer		1										
Dfowl	1				10	1		1				
Goose	1		1		2		1	1			1	
Duck					1	2						
Cattle size		1	3		21	10	1	4	1		2	
Sheep size					7			3				
Totals	**10**	**7**	**34**	**7**	**425**	**225**	**113**	**287**	**45**	**13**	**46**	**1212**

Table 1.7: Approximate counts of marine shells and fish bones

Species	Phase 3	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10	Monitoring	Unstrat.
oyster flat		19	8	2	20	1	1		
oyster curved	1	30	15		12			1	1
mussel		2	3		1			1	
fish sp.					2				

Table 1.8: Relative frequencies of the domestic farm animals

Species	Phase 5	Phase 6	Phase 7	Phase 8
Cattle & Cattle size	239 (61%)	138 (64%)	58 (53%)	161 (60%)
Sheep, goat & Sheep size	114 (29%)	59 (28%)	49 (45%)	88 (33%)
Pig	36 (9%)	16 (8%)	2 (2%)	17 (6%)
Totals	389	213	109	266

Table 1.9: Butchery & gnawing

Species	Phases 1-4		Phase 5		Phase 6		Phase 7		Phase 8	
	Chop	Gnaw	Chop	Gnaw	Chop	Gnaw	Chop	Gnaw	Chop	Gnaw
Cattle & Cattle size	10		154	12	81	3	31		89	5
Sheep, Goat and sheep size	12	2	34	21	16	15	12		27	6
Pig			13	8	7	4			5	3

Table 1.10: % of identified fragments with butchery and gnawing marks

Species	Phases 1-4		Phase 5		Phase 6		Phase 7		Phase 8	
	Chop	Gnaw	Chop	Gnaw	Chop	Gnaw	Chop	Gnaw	Chop	Gnaw
Cattle & Cattle size	37%		64%	5%	58%	2%	53%		55%	3%
Sheep, Goat and sheep size	52%	7%	30%	18%	27%	25%	24%		30%	6%
Pig			36%	22%	43%	25%			29%	17%

Table 1.11: Cattle anatomical fragments

Cattle	Phase 5	Phase 6	Phase 7	Phase 8	Totals
Hc	2	1	1		4
Jaw	25	17	6	14	62
Max	5	3		1	9
Frnt	3			2	5
Atlas	3	2	2	2	18
Axis		1	2		6
Scap	10	8	2	7	27
Hum	8	7	1	1	17
Rad	14	9	1	5	29
Uln	2	2	2	7	13
Mc	16	20	7	29	72
Acet	4	1	2	2	9
Ilm	11	1	1	4	17
Ish	7	2	1	3	13
Fem	11	9	2	4	26
Tib	12	3	2	5	22
Cal	1	3	1	4	9

Table 1.11: Continued

Cattle	Phase 5	Phase 6	Phase 7	Phase 8	Totals
Ast	6	3	1	1	11
Mt	29	13	7	28	77
Ph 1	9	7	3	11	8

Table 1.12: Cattle anatomical zones (after Rackham)

	Phase 5	Phase 6	Phase 7	Phase 8
Skull				
1	1	2	1	
2	3		1	
3				
4	1			
5	3			2
6	2			1
7		1		1
8	1		1	
9	3	1		
0	1			1
Jaw				
1	3	5		2
2	10	5	2	5
3	3	3		2
4	5	3	1	1
5	6	9	1	6
6	4	1	1	1
7	5	2	2	1
8	6	1	1	1
Scapula				
1	7	1	1	2
2	6	4		4
3	9	4	1	1
4				2
5	4		1	1
6				
7				
Humerus				
1		1		
2				
3				
4				
5				1
6	7	1		1
7	2	4	1	
8	1	1		1
9	8	2		

Table 1.12: Continued

	Phase 5	Phase 6	Phase 7	Phase 8
Radius				
1	7	3	1	
2	4	4		1
3	7	4	1	3
4	2	1		
5	2			
6	1	1		1
Ulna				
1				
2				3
3	3	1	2	5
4				
Metacarpal				
1	7	10	3	12
2	7	8	3	8
3	8	9	4	13
4	7	9	4	13
5	9	8	3	13
Innominate				
1				
2	2			1
3	2	1		
4	4	1	4	2
5	4	1	2	3
6	1			
7	7		1	5
8				
9	12	1	2	4
0	2	1		
Femur				
1	1	2		
2				
3	5	5	1	
4	6	1		3
5				
6	2			1
7			1	2
Tibia				
1			1	2
2				1
3			1	2
4	5			2
5	3	1		1
6	4	2	1	1
7	2			
Calcaneum				
1	1	2	1	2
2	1	3		3
3		1		1

Table 1.12: Continued

	Phase 5	Phase 6	Phase 7	Phase 8
Metatarsal				
1	9	8	4	10
2	12	6	2	7
3	15	4	3	9
4	15	4	3	10
5	17	6	3	11
Phalanx 1				
1	9	6	2	11
2	9	7	3	10
Phalanx 2				
1	3	3		5
Phalanx 3				
1	4	2	2	6
Astragalus				
1	6	3	1	1

Table 1.13: Tooth eruption and wear:

U = unerupted/deciduous, S/W = slight wear, H/W = heavy wear.
Approximate ages of eruption after Silver 1969

		Phase 5			Phase 6			Phase 7			Phase 8		
		U	**S/W**	**H/W**	**U**	**S/W**	**H/W**	**U**	**S/W**	**H/W**	**U**	**S/W**	**H/W**
Cattle													
5-6m	M1			12	1		2			6			1
5-18m	M1/M2	1		4		1	2						4
15-18m	M2			6			1			1			1
24-30m	P2	4	1	1	1			1					1
18-30m	P3	7	2	4				2	1				3
24-30m	M3		3	7					1	1			3
28-36m	P4	9	2	5	2		1	1	1		1	2	
Sheep/goat													
3-5m	M1			11			2			4			3
3-12m	M1/M2						1						3
9-12m	M2		1	8			3		1	2			2
21-24m	P2			2								1	
21-24m	P3		1	7						1		1	
18-24m	M3		1	12		2	5		1	4		1	2
21-24m	P4		1	7			1			4			3
Pig													
4-6m	M1		2	1			1						
7-13m	M2			1		1							
12-16m	P2												
12-16m	P3												
12-16m	P4	2	1			1							
17-22m	M3			1									

Table 1.14: Grant TWS

	a	b	c	d	e	f	g	h	j	k	l	m	n	o	p
Cattle: Phase 5															
dlp4		4	3							1					
P4			1			1		1							
M1								1		3		3			
M1/M2							1			1					
M2								1	2		2				
M3		2					2				2				
Cattle: Phase 6															
dlp4		1	1												
P4															
M1															
M1/M2						1	1				1				
M2															
M3															
Cattle: Phase 7															
dlp4		1													
P4				1	1										
M1							2		1					1	
M1/M2							1		1						
M2						1						1			
M3		2										1			
Cattle: Phase 8															
dlp4		1													
P4					2										
M1													1		
M1/M2									1			1			
M2												1			
M3											1		1		
Sheep/Gt: Phase 5															
dlp4															
P4							1	4	1						
M1							1	2	1	1	1	4			
M2							4	2	2						
M3					2		9								
Sheep/Gt: Phase 6															
dlp4															
P4								1							
M1							1					1			
M1/M2							1								
M2							1	1		1					
M3			1			1	3								
Sheep/Gt: Phase 7															
dlp4															
P4							2	1			1				
M1							2	1					1		
M2						1	1			1					
M3		1					3								

Table 1.14: Continued

	a	b	c	d	e	f	g	h	j	k	l	m	n	o	p
Sheep/Gt: Phase 8															
dlp4															
P4							2	1							
M1								1	1	1					
M1/M2							1		1						
M2							2								
M3					1		2								
Pig: Phase 5															
dlp4					1			1							
P4															
M1	1	1													
M2											1				
M3					1										

Table 1.15: Cattle epiphyses in approximate order of fusion

Ages of fusion after Silver (1969)

	Phase 5			Phase 6			Phase 7			Phase 8		
	Fused	**Just fused**	**Unfused**	**Fused**	**Just Fused**	**Unfused**	**Fused**	**Just Fused**	**Unfused**	**Fused**	**Just Fused**	**Unfused**
by 18 months												
Scap tub	6			2						2		
Acet symph	4			1			1			1		
Prox rad	7			5		1				2		
Dist hum	3		1	4			1					
Prox Ph 2	3			3					1	5		
Prox Ph 1	9			6			2			11		
by 2-3 years												
Dist tib	5			3			1			2		
Dist mc	7	1	1	9		1	4			12		4
Dist mt	15		1	4		1	3			12		3
by 3.5-4 years												
Prox cal	1			2					1	2		
Prox fem	1		2	1		1						
Dist rad	2		2			1						
Prox hum						1						
Prox tib							1			1		1
Dist fem	1		1						1		1	1
P&D uln												2
by >5 years												
Ant vert ep	8	1	7		1	4			1		1	1
Post vert ep	8		8		1	3	1		1		1	1

Table 1.16: Sheep/goat

	Phase 5	Phase 6	Phase 7	Phase 8	Totals
Hc	9	1	6	5	21
Jaw	20	8	11	5	44
Max	1				1
Frnt	1				1
Atlas	2				2
Axis					
Scap	2	4	2	7	15
Hum	5	5	1	8	19
Rad	12	11		6	29
Uln	2			1	3
Mc	13	13	7	13	46
Acet	4			3	7
Ilm	1	2	1	3	7
Ish	3				3
Fem	2			2	4
Tib	9	4	2	9	24
Cal	3	1		1	5
Ast					
Mt	14	7	8	14	43
Ph 1	1		1	1	3

Table 1.17: Sheep/goat

	Phase 5	Phase 6	Phase 7	Phase 8
Skull				
1				
2				1
3	1		1	
4				
5				
6				
7				
8	2	1		
9				
0				
Jaw				
1	11	2	2	1
2	12	2	2	3
3	12	1	3	3
4	9	3	1	1
5	10	5	4	1
6	4	3	1	
7	9	3	2	2
8	7	3	1	2

Table 1.17: Continued

	Phase 5	Phase 6	Phase 7	Phase 8
Scapula				
1	1	1		4
2	2	3	2	6
3	2	5	2	6
4				
5	1	2	1	5
6				
7				
Humerus				
1		1		
2				
3				
4				
5	1	4		4
6	4	3	1	7
7	3	3	1	6
8	3	3	1	5
9	4	3	1	7
Radius				
1	8	3		5
2	8	3		4
3	10	2		2
4	3	5		1
5	3	4		1
6	8	7		3
Ulna				
1	2			1
2	2			1
3	2			1
4				
Metacarpal				
1	9	9	6	10
2	8	9	5	9
3	2	4	2	5
4	1	3	5	7
5	12	7	5	8
Innominate				
1	1			
2	2	2	1	1
3	1			1
4	2			1
5	4			3
6				
7	7			2
8	2			
9	3			6
0	6			

Table 1.17: Continued

	Phase 5	Phase 6	Phase 7	Phase 8
Femur				
1				
2				
3	1			
4	2			1
5				1
6	1			1
7	1			1
Tibia				
1	1			1
2	1			
3	1			
4	3	1	1	3
5	7	3	1	4
6	6	3	1	5
7	7	2	1	5
Calcaneum				
1	2	1		1
2	2	1		1
3	3	1		1
Metatarsal				
1	10	7	5	12
2	9	7	5	12
3	4	2		5
4	4	2	1	5
5	10	3	4	7
Phalanx 1				
1	1		4	1
2	1		4	1
Phalanx 2				
1				1
Phalanx 3				
1				
Astragalus				
1				
Patella				
1				

Table 1.18: Relative frequency of the skeletal element zones of sheep/goat

Sheep/Gt	a	b	c	d	e	f	g	h	j	k	l	m	n	o
Phase 5														
dlp4														
P4							1	4	1					
M1							1	2	1	1	1	4		
M2							4	2	2					
M3					2		9							
Phase 6														
dlp4														
P4								1						
M1							1					1		
M1/M2							1							
M2							1	1		1				
M3			1			1	3							
Phase 7														
dlp4														
P4							2	1			1			
M1							2	1					1	
M2						1	1			1				
M3		1					3							
Phase 8														
dlp4														
P4							2	1						
M1								1	1	1				
M1/M2							1		1					
M2							2							
M3					1		2							

Table 1.19: Sheep/goat epiphyses in approximate order of fusion. Ages of fusion after Silver (1969)

	Phase 5			Phase 6			Phase 7			Phase 8		
	Fused	Just Fused	Unfused	Fused	Just Fused	Unfused	Fused	Just Fused	Unfused	Fused	Just Fused	Unfused
by 1year												
Dist hum	3			3			1			6		
Prox rad	8			3						5		
Scap tub	1			1						4		
Acet symph	1									2		
by 1-2 years												
Prox Ph 2										1		
Prox Ph 1	1						4			1		
Dist tib	6		1	3			1			5		
Dist mc	2		3	4		3	5			7		
Dist mt	4		2	1			1		3	5		
by 2.5-3.5 years												
Prox fem												
Prox cal	2			1						1		
Dist fem	1										1	
Prox tib		1								1		
Dist rad	3		2	3	2					1		1
Prox hum				1		1						
P&D uln	2										1	
by >5 years												
Ant vert ep	1	2								1		1
Post vert ep	1	1	2							2		1

Table 1.20: Pig

	Phase 5	Phase 6	Phase 7	Phase 8	Totals
Jaw	6		1		7
Max	1	1		1	3
Frnt				1	1
Atlas	1				1
Axis					
Scap	3	1		1	5
Hum	8	3		4	15
Rad	3	2			5
Uln	2	2	1		5
Mc	2	2		1	5
Acet				1	1
Ilm	1				1
Ish	1			1	2
Fem	2	1			3
Tib	2			2	4
Cal	1				1
Ast		1			1
Mt	1				1
Ph 1				1	1

Table 1.21: Pig epiphyses in approximate order of fusion. Ages of fusion after Silver (1969)

	Phase 5			Phase 6			Phase 7			Phase 8		
	Fused	Just Fused	Unfused	Fused	Just Fused	Unfused	Fused	Just Fused	Unfused	Fused	Just Fused	Unfused
by 1 year												
Acet symph										1		
Scap tub	1			1						1		
Prox rad	1	1	1	2								
Dist hum	1	1	3	1						3		
Prox Ph 2												
by 2-2.5 years												
Prox Ph 1										1		
Dist mc			1	1		1						
Dist tib												2
Dist mt												
Prox cal			1									
by 2.5-3.5 years												
P&D uln												
Prox tib			1									
Prox hum		1			1						1	
Dist rad												
P&D fem												
by >5 years												
Ant vert ep			1			1						
Post vert ep			1			1						

Table 1.22: The clay tobacco pipe data

Context	Phase	Description
U/S	n/a	4 fragments of pipe stem, one with bowl fragment attached - Tyneside Type 3a, 3b, 7 - 1650-1675/80.
16	8	1 fragment of pipe stem
18	7	1 fragment of pipe stem
66	9	1 fragment of pipe stem
70	9	2 fragments of pipe stem
82	9	3 fragments of pipe stem: 1 bowl fragment - Tyneside Type 6 1650-1680
86	9	1 fragment of pipe stem: 1 bowl fragment
99	8	1 fragment of pipe stem
146	9	1 fragment of pipe stem
147	9	1 fragment of pipe stem

Table 1.23: The glass

Context	Phase	Description	Century
U/S	-	3 fragments of clear flat window, with a black painted surface	20th
U/S	-	1 fragment of base & lower side, from a green wine bottle	Late 18th- early 19th
3	8	1 fragment of body, from a brown cylindrical bottle – probably a beer bottle	20th
70		1 fragment of base or lower side, from a green wine bottle	18th-19th
146	9	1 fragment of base 1 fragment of side, both from an olive green wine bottle	Late 18th-late 19th
267	9	1 fragment of base from a rectangular section green wine bottle 1 fragment of base from a green wine bottle, with a Sand-pontil mark 1 fragment of neck & string course from a poorly-made blue/green cylindrical bottle 1 fragment of thick base from a mould-pressed cylindrical jar	mid-late 18th 19th Late 19th – early 20th Late 19th – early 20th

Table 1.24: The leather

Context	Phase	LxWxTh (mm)	Description
u/s		133x80x3	right shoe sole fragment
104	3	60x70x3	offcut
104	3	90x100x2	offcut
104	3	30x20x2	offcut
104	3	70x50x2	offcut
123	3	32x12x3	offcut
123	3	34x22x2	offcut
128	7	30x80x2	offcut
262	5	40x30x3	offcut
264	5	120x40x3	offcut
264	5	80x80x2	offcut
264	5	20x10x2	offcut
264	5	60x40x2	offcut
264	5	50x50x2	offcut with punched hole
264	5	60x50x2	offcut
264	5	50x30x2	offcut
276	5	60x40x2	offcut
276	5	70x30x3	offcut
276	5	30x20x2	offcut

Table 1.24: Continued

Context	Phase	LxWxTh (mm)	Description
276	5	10x10x1	offcut
276	5	130x30x2	offcut
276	5	70x30x2	offcut
276 <59>	5	28x31x3	shoe sole fragment
276 <59>	5	75x44x3	shoe sole repair fragment with stitch holes
278	5	23x7x2	thong fragment
293	5	80x50x3	offcut
293	5	70x40x2	offcut
501	7	125x85x3	offcut
501	7	144x80x2	sheet frag with punched border decoration
501	7	140x55x3	shoe sole fragment with stitch holes
501	7	170x50x3	shoe sole fragment with stitch holes

Table 1.25: Tile

Order	Context	Ph	Fabric	Nos.	G	mm T	Holes	Sample	Comments
16	104	3	T1	3	104				
17	104	3	T5	1	89				
18	104	3	T6	1	32	17		•	Light colour
21	126	3	T1	1	13				
89	126	3	T1	1	114				
85	257	5	T1	7	590		Square		
86	257	5	T1	12	335				
87	257	5	T1	3	65				Same as that from 262?
88	257	5	T5	12	614				
90	257	5	T9	2	100				Ridge? Green glazed ext
5	262	5	T1	9	705	12, 15			
47	262	5	T1	9	720				
74	262	5	T1	8	1019				
75	262	5	T1	13	584				
76	262	5	T1	14	242				
80	262	5	T1	4	382		Square		
81	262	5	T1	1	184		Square		
82	262	5	T1	6	539		Square		1 hole post-fired
93	262	5	T1	19	1315		Round		Same as that from 262?
6	262	5	T5	2	154	13, 14			
46	262	5	T5	3	377	15			Grey core
77	262	5	T5	8	255				
78	262	5	T5	1	33		Round		
79	262	5	T5	1	109		Round		
94	262	5	T5	11	476		Round		
42	264	5	T1	45	2339				
45	264	5	T1	1	75	15	Round, not pierced through		
44	264	5	T1G	1	46	18			Drops of purple glaze
43	264	5	T5	5	149				
58	276	5	T1	20	922		Square E		
68	276	5	T1	3	17				
60	276	5	T1P	1	49	17			
59	276	5	T5	3	111				
102	277	5	T1	4	111		Round		

Table 1.25: Continued

Order	Context	Ph	Fabric	Nos.	G	mm T	Holes	Sample	Comments
116	278	5	T1	5	222		Round		
117	278	5	T5	4	75				
35	293	5	T1	7	364				
37	293	5	T1	1	43	15			Pantile?
36	293	5	T5	1	51				
115	294	5	T5	1	133				
26	21	6	T1	7	150				
25	21	6	T5	5	172	11			
27	21	6	Thin brick	4	274	19			Thin brick? Thick tile? Grey core, very fine
31	103	6	T1	1	2				
107	103	6	T1	10	444		Square		
108	103	6	T5	4	173				
2	256	6	T1	13	973	15, 13, 14	Round		
7	256	6	T1	15	528				
8	256	6	T1	15	630				
9	256	6	T1	5	43				Some overfired with grey core
12	256	6	T1	1	78	15			Some mortar underside
13	256	6	T1	1	40	12			1 drop of green glaze on upper surface
14	256	6	T1	1	43				Burnt
15	256	6	T1	1	292	13	Round		
3	256	6	T2	2	164	11			
4	256	6	T5	2	213			•	
10	256	6	T5	15	269				
11	256	6	T5	7	220				
113	256	6		1	59				Brick object? Round edge
98	F4	6	T1	4	75				
99	F4	6	T5	5	80				
103	18	7	T1	1	8				
66	114	7	T5	2	30				
92	124	7	T1P	1	12	11			Pantile; Ungl
91	124	7	T5	1	55				
84	124	7	T9	1	308				Ridge with crest
24	128	7	T1	14	559	17			
41	128	7	T1	7	216				
104	128	7	T1	1	60				
118	128	7	T1	1	7				From soil sample
73	128	7	T5	1	6				
72	128	7	T6	1	22				
71	128	7	T9	1	77				Green glazed ext; fine edges
69	202	7	T1	1	35				
48	3	8	T1	20	544				
49	3	8	T1	5	60				
50	3	8	T1P	1	95	18			Pantile
51	3	8	T5	3	141				
53	3	8	T6	1	80	18			Thin brick/thick tile
34	3	8	T9	3	106	13		•	Medieval ridge tile; green glazed
112	93	8	T1	12	396				

Table 1.25: Continued

Order	Context	Ph	Fabric	Nos.	G	mm T	Holes	Sample	Comments
29	99	8	T1	3	49				1 with drops of green glaze
63	99	8	T1	5	330				
105	99	8	T1	8	240				
106	99	8	T1T	1	33				Same as that from 262?
28	99	8	T5	7	128			•	
65	99	8	T9	2	78				Green glazed ext; ridge tile?
54	265	8	T1	8	377				
55	265	8	T5	1	18				
22	10	9	T1	1	2				
33	146	9	T8	1	593	20		•	Pantile; deep red with clay relicts
30	8		T1	2	72				
39	22		T1	1	19				
40	22		T6	1	79				Thin brick/thick tile
38	22		T9	1	125				Mortar underside
100	94		T1	3	177				
101	94		T5	1	67				
23	186		T1	1	4				
67	263		T10	1	12				Orange; no incl; flat tile on sanded mould; Roman-looking
32	[4] (267)		Thin brick/ Thick tile	2	324	34			Light yellow fabric; 1 drop of green glaze, rounded corner
109	U/S		T1	19	1030				
111	U/S		T1?	1	29				Ridge? Unglazed
110	U/S		T5	3	145				
114	U/S		T5	1	33				
	Total			**525**	**25560**				

Table 1.26: Tile artefacts

Order	Context	Ph	Fabric	Nos.	G	mm T	Holes	Sample	Comments	Dimensions
20	104	3	B/T	1	8				Machine made?	
1	265	8	Brick	1	227					
19	104	3	Brick	1	17					
52	3	8	Brick	1	11				Sliver	
56	265	8	Brick	1	29					
70	70	9	Brick	2	12					
83	262	5	Brick	1	30					
57	265	8	Crumbs	1	1					
61	276	5	T1SF	1	65				Tile disc	50X52mm
95	262	5	T1SF	1	53				Tile disc C	56X40mm
96	262	5	T1SF	1	53				Tile disc D	55X50mm
97	F4	6	T1SF	1	44				Tile rectangle	45X37mm
62	276	5	T5SF	1	92				Tile disc	72X75mm
64	262	5	T9SF	1	73				Tile disc	67mm Diam

Table 1.27: The industrial residues

Context	Phase	Description	Identification	Weight (g)
F4	6	amorphous, non-magnetic, large gravel inclusions	un-diagnostic slag	635.7
F94		amorphous, non-magnetic, large gravel inclusions	un-diagnostic slag	520.3
F100	4	amorphous, non-magnetic	un-diagnostic slag	71.4
3	8	amorphous, non-magnetic	un-diagnostic slag	6092.2
21	6	amorphous, non-magnetic	un-diagnostic slag	42.9
34	1	vitrified, shiny, amorphous, non-magnetic	un-diagnostic slag	63.4
38	1	amorphous, non-magnetic	un-diagnostic slag	14.6
66	9	amorphous, non-magnetic	un-diagnostic slag	8.4
86	9	amorphous, non-magnetic	un-diagnostic slag	26.8
93	8	amorphous, non-magnetic	un-diagnostic slag	1026.8
94	6	amorphous, non-magnetic, large gravel inclusions	un-diagnostic slag	2603.4
98	7	amorphous, non-magnetic	un-diagnostic slag	186.6
99	8	amorphous, non-magnetic	un-diagnostic slag	1127.8
103	6	amorphous, non-magnetic	un-diagnostic slag	72.4
104	3	amorphous, non-magnetic, some thin, flat, black, vitrified	un-diagnostic slag	347.2
124	7	black, shiny, vitrified, amorphous, non-magnetic	un-diagnostic slag	29
126	3	amorphous, non-magnetic	un-diagnostic slag	173.7
128	7	amorphous, non-magnetic	un-diagnostic slag	649.8
146	9	amorphous, non-magnetic	un-diagnostic slag	77.8
186	6	amorphous, non-magnetic	un-diagnostic slag	5.2
188	2	amorphous, non-magnetic	un-diagnostic slag	171
238	4	amorphous, non-magnetic, large gravel inclusions	un-diagnostic slag	53.5
256	6	vitrified, some gravel inclusions, amorphous, non-magnetic	un-diagnostic slag	979.9
257	5	amorphous, non-magnetic, gravel inclusions	un-diagnostic slag	399.0
262	5	amorphous, non-magnetic	un-diagnostic slag	40.5
265	8	amorphous, non-magnetic	un-diagnostic slag	672
267	9	vitrified, gravel inclusions, amorphous, non-magnetic	un-diagnostic slag	445.8
276	5	black, shiny, vitrified, amorphous, non-magnetic	un-diagnostic slag	397.9
278	5	amorphous, non-magnetic	un-diagnostic slag	7.8
293	5	black, shiny, vitrified, amorphous, non-magnetic	un-diagnostic slag	62.3
294	7	amorphous, non-magnetic	un-diagnostic slag	490.1

Table 1.28: Radiocarbon dates

Context #	Context type	Material	Sample #	Lab code	Measured radiocarbon age	Conventional radiocarbon age	2 sigma calibration
123	Fill of pit F122	Charcoal: Corylyus avelllana	18	SUERC-32888 (GU-23124)	605 ± 30	1345 ± 30 AD	Cal AD 1290 - 1410
230	Fill of ditch re-cut F233	Sheep/goat acetabulum	4	SUERC-32889 (GU-23125)	1275 ± 30	675 ± 30	Cal AD 660 - 810
276	Peaty layer	Uncharred nutshell: Corylus avellana	59	SUERC-32890 (GU-23126)	590 ± 25	1260 ± 25	Cal AD 1300 - 1370 Cal AD 1380 - 1420

Table 2.29: Wood

Context	Description	Identification	Species
104	uniseriate rays, simple perforation plates, heterogeneous rays	*Salix spp*	Willow
262	uni- and multiseriate rays, simple perforation plates, homogenous rays, solitary pores, bordered pits	*Quercus spp*	Oak
264	uni- and multiseriate rays, simple perforation plates, homogenous rays, solitary pores, bordered pits	*Quercus spp*	Oak
276 (1)	uni- and multiseriate rays, simple perforation plates, homogenous rays, solitary pores, bordered pits	*Quercus spp*	Oak
276 (2)	uni- and multiseriate rays, simple perforation plates, homogenous rays, solitary pores, bordered pits	*Quercus spp*	Oak
276 (3)	uni- and multiseriate rays, simple perforation plates, homogenous rays, solitary pores, bordered pits	*Quercus spp*	Oak
293	uni- and multiseriate rays, simple perforation plates, homogenous rays, solitary pores, bordered pits	*Quercus spp*	Oak

Table 1.30: Residue/flot contents and charred plant remains

Phase		3	3	5	5	5	7
Sample		7	18	59	63	61	20
Context		104	123	276	278	293	128
Feature		Recut F138 of Pit F122	Pit F122	Layer	Layer	Layer	Layer
Volume processed (l)		12	10	25	21	13	10
Volume of flot (ml)		900	3800	1500	1300	550	460
Residue contents							
Bone (calcined)	indet. frags	-	-	-	(+)	-	(+)
Bone (unburnt)	indet. frags	++	+	++	++	++	++
Bone (unburnt)	fish	-	-	+	(+)	-	(+)
Charcoal		+	-	-	+	+	-
Coal		+	-	+	+	-	+
Fired clay/CBM		(+)	(+)	+	+	+	(+)
Fuel waste		-	-	+++	-	++	(+)
Hammerscale	spherical/flake	+	(+)	++	+	+	+
Leather		-	-	+	-	(+)	-
Marine shell		(+)	-	+	+	+	-
Mortar		+	+++	+	-	+	+
Pot (number of fragments)		3	1	2	2	4	-
Tooth (animal)		-	-	3	-	-	-
Wood		++	-	+++	-	(+)	-
Flot matrix							
Bud		-	-	-	+	+	-
Bone (unburnt)	indet. frags	-	-	+	+	+	+
Bone (unburnt)	fish	(+)	-	-	+	-	-
Bracken (uncharred)	frond	(+)	+	-	-	(+)	-
Charcoal		++	+	++	++	++	++
Clinker/cinder		+	+	+	++	+	-
Coal		+	+	+	+	+	+
Insect/beetle		+	+	+	+	+	+
Monocot stems (uncharred)		-	+++	-	-	-	-
Moss		+	+	+	-	-	-
Puparia		-	+	-	-	-	-
Snails	freshwater/terrestrial	+	+	-	-	-	-
Vivianite		+	-	+	-	+	-
Wood		+++	++++	+	++	+++	+
Charred remains (total counts)							
(a) *Agrostemma githago* (Corncockle)	seed	-	-	-	-	1	-
(c) *Avena* sp (Oat species)	grain	2	1	2	3	-	-
(c) *Hordeum* sp (Barley species)	rachis fragment	3	2	1	-	48	-
(c) *Hordeum* sp (Barley species)	hulled grain	-	3	-	-	6	-
(c) *Hordeum* sp (Barley species)	grain	-	-	2	1	5	1
(c) *Secale cereale* (Rye)	grain	-	-	1	-	1	-
(c) *Secale cereale* (Rye)	rachis fragment	1	2	-	1	8	-
(c) *Triticum aestivum* (Bread Wheat)	rachis fragment	3	2	-	-	3	-
(c) *Triticum* cf. *aestivum* (cf. Bread Wheat)	grain	2	-	3	5	4	-
(c) *Triticum* sp (Wheat species)	grain	-	-	-	-	2	-
(c) Cerealia indeterminate	culm node	1	1	-	-	9	-
(c) Cerealia indeterminate	grain	-	1	-	2	7	-
(h) *Rumex acetosella* (Sheep's Sorrel)	nutlet	-	-	-	-	1	-
(t) *Alnus glutinosa* (Alder)	charcoal fragment	-	-	1	-	1	4
(t) *Betula* sp (Birch)	charcoal fragment	3	-	11	7	6	1
(t) *Corylus avellana* (Hazel)	charcoal fragment	9	-	35	36	10	2
(t) *Fraxinus excelsior* (Ash)	charcoal fragment	2	1	7	20	3	-
(t) Maloideae (Hawthorns, Whitebeams, Apple etc)	charcoal fragment	2	-	9	11	5	-
(t) *Prunus domestica/spinosa* (Plum/sloe)	charcoal fragment	1	-	1	-	-	-
(t) *Quercus* sp (Oak species)	charcoal fragment	2	2	9	7	15	4
(t) Salicaceae (Willow/Poplar)	charcoal fragment	8	-	7	20	1	1
(x) Poaceae undiff. (Grass family)	>2mm caryopsis	-	3	-	-	-	-
(x) *Vicia* sp (Vetches)	seed	-	-	1	-	-	-

[a: arable weed; c: cultivated plant; h: heathland; t: trees/shrubs; x: wide niche. (+): trace; +: rare; ++: occasional; +++: common; ++++: abundant]

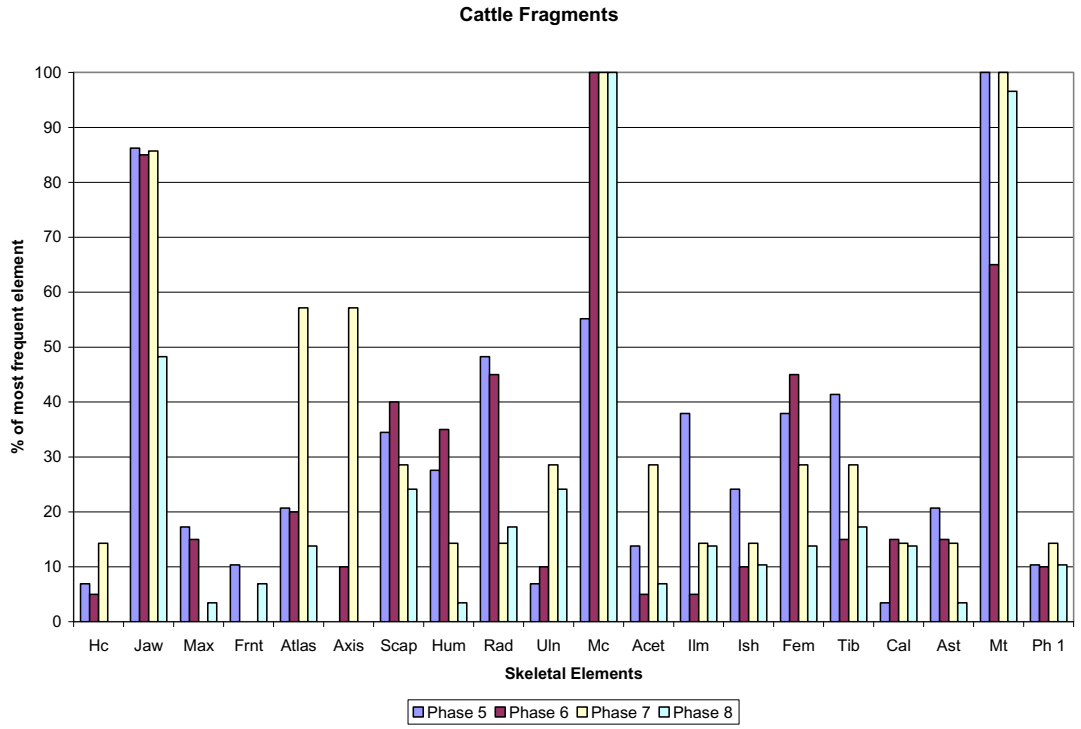
Table 1.31: Waterlogged plant remains

Phase		3	3	5	5	5	7
Sample		7	18	59	63	61	20
Context		104	123	276	278	293	128
Feature		Recut F138 of Pit F122	Pit F122	Layer	Layer	Layer	Layer
Volume processed (l)		12	10	25	21	13	10
Volume of flot (ml)		900	3800	1500	1300	550	460
Waterlogged remains (total counts)							
(a) *Aethusa cynapium* (Fool's Parsley)	fruit	8	19	6	3	2	-
(a) *Agrostemma githago* (Corncockle)	seed	4	19	-	-	-	-
(a) *Anthemis cotula* (Stinking Chamomile)	achene	2	10	-	-	-	-
(a) *Centaurea cyanus* (Cornflower)	achene	1	-	-	-	-	-
(a) *Chenopodium album* (Fat-hen)	seed	60	190	120	30	69	22
(a) *Chrysanthemum segetum* (Corn Marigold)	achene	74	57	36	9	1	8
(a) *Euphorbia helioscopia* (Sun Spurge)	seed	1	-	12	3	1	1
(a) *Fallopia convolvulus* (Black Bindweed)	nutlet	22	19	3	3	6	2
(a) *Fumaria* sp (Fumitories)	seed	-	-	3	-	-	-
(a) *Ranunculus arvensis* (Corn Buttercup)	achene	-	1	-	-	1	-
(a) *Raphanus raphanistrum* (Wild Radish)	pod fragment	18	38	12	9	9	2
(a) *Urtica urens* (Small Nettle)	achene	6	10	-	1	4	-
(a) *Valerianella dentata* (Narrow-fruited Cornsalad)	fruit	2	-	-	-	3	1
(c) *Cannabis sativa* (Hemp)	seed	-	1	-	-	-	-
(c) *Hordeum* sp (Barley species)	rachis fragment	-	1	-	-	-	-
(c) *Triticum aestivum* (Bread Wheat)	rachis fragment	1	-	-	-	-	-
(c) *Vitis vinifera* (Grape-vine)	seed	-	-	12	9	-	-
(g) *Linum catharticum* (Fairy Flax)	seed	6	-	-	-	-	1
(h) *Rumex acetosella* (Sheep's Sorrel)	nutlet	4	10	30	6	1	4
(q) *Potamogeton* sp (Pondweed)	fruit	-	-	1	-	-	1
(q) *Ranunculus* subgenus *Batrachium* (Crowfoot)	achene	2	10	3	3	1	1
(r) *Fragaria vesca* (Wild Strawberry)	achene	3	-	27	-	2	-
(r) *Galeopsis* sp (Hemp-nettles)	nutlet	6	38	3	3	1	1
(r) *Heracleum sphondylium* (Hogweed)	fruit	1	-	6	-	-	-
(r) *Hyoscyamus niger* (Henbane)	seed	-	-	3	-	-	-
(r) *Lapsana communis* (Nipplewort)	achene	6	10	1	3	3	1
(r) *Malva sylvestris* (Common Mallow)	seed	-	-	-	-	1	-
(r) *Persicaria maculosa* (Redshank)	nutlet	24	-	1	-	8	-
(r) *Polygonum aviculare* (Knotgrass)	nutlet	24	29	-	3	4	2
(r) *Reseda luteola* (Weld)	seed	8	1	-	-	8	7
(r) *Silene* sp (Campions)	seed	6	19	-	3	2	-
(r) *Sonchus asper* (Prickly Sow-thistle)	achene	8	124	1	-	1	2
(r) *Stellaria media* (Common Chickweed)	seed	20	-	-	-	-	1
(r) *Urtica dioica* (Common Nettle)	achene	28	76	45	21	23	25
(t) *Alnus glutinosa* (Alder)	roundwood	-	-	-	-	1	-
(t) *Betula* sp (Birch)	roundwood	-	-	-	-	1	-
(t) *Corylus avellana* (Hazel)	nutshell fragment	30	-	45	6	16	2
(t) *Corylus avellana* (Hazel)	roundwood	-	-	3	-	-	-
(t) *Ficus carica* (Fig)	seed	28	-	24	12	8	8
(t) Fraxinus excelsior (Ash)	roundwood	-	-	2	-	-	-
(t) Maloideae (Hawthorns, Whitebeams, Apple etc)	roundwood	1	-	-	-	-	-
(t) *Malus sylvestris* (Crab Apple)	pip	-	-	3	-	-	-
(t) *Prunus spinosa* (Sloe)	fruitstone	-	-	-	1	-	-
(t) *Quercus* sp (Oak species)	timber	-	-	2	-	3	-
(t) *Rubus fruticosus* agg. (Bramble)	fruitstone	8	10	12	15	4	3
(t) *Sambucus nigra* (Elder)	fruitstone	38	295	24	48	9	10
(w) *Ajuga reptans* (Bugle)	nutlet	2	10	1	-	-	-
(w) *Caltha palustris* (Marsh-marigold)	seed	-	10	-	-	-	-
(w) *Carex* sp (Sedges)	biconvex nutlet	14	48	1	6	2	4
(w) *Carex* sp (Sedges)	trigonous nutlet	98	67	150	102	46	128
(w) *Eleocharis* sp (Spike-rushes)	nutlet	72	485	12	9	7	4
(w) *Hydrocotyle vulgaris* (Marsh Pennywort)	fruit	-	10	-	-	-	-
(w) *Iris pseudacorus* (Yellow Iris)	seed	-	2	-	-	-	-
(w) *Juncus* sp (Rushes)	seed	-	-	-	-	-	4
(w) *Mentha* cf. *aquatica* (cf. Aquatic Mint)	nutlet	-	19	-	-	-	-
(w) *Menyanthes trifoliata* (Bogbean)	seed	1	-	3	-	1	1
(w) *Persicaria lapathifolia* (Pale Persicaria)	nutlet	30	19	3	3	1	-
(w) *Potentilla palustris* (Marsh Cinquefoil)	achene	-	200	-	6	-	3
(w) *Ranunculus flammula* (Lesser Spearwort)	achene	32	152	9	3	6	1
(w) *Schoenus nigricans* (Black Bog-rush)	nutlet	10	133	3	-	-	-
(x) Apiaceae cf. *Apium nodiflorum* (cf. Fool's-water-cress)	fruit	-	19	-	-	-	-
(x) *Aquilegia vulgaris* (Columbine)	achene	-	1	-	-	-	-
(x) Asteraceae undiff. (Daisy family)	achene	2	-	1	-	-	-
(x) Brassicaceae undiff. (Cabbage family)	seed	2	-	36	3	4	1
(x) Caryophyllaceae undiff. (Pink family)	seed	-	19	3	1	-	-
(x) Chenopodiaceae undiff. (Goosefoot family)	seed	2	29	-	-	3	2
(x) *Cirsium/Carduus* sp (Thistles)	achene	-	10	3	-	-	-
(x) Fabaceae undiff. (Pea family)	seed	-	19	-	-	-	-
(x) Potentilla sp (Cinquefoils)	achene	52	48	18	9	13	14
(x) *Prunella vulgaris* (Selfheal)	nutlet	4	-	9	3	-	1
(x) *Ranunculus* subgenus *Ranunculus* (Buttercup)	achene	130	133	90	66	35	25
(x) Rosaceae undiff. (Rose family)	thorn	1	-	-	-	1	-
(x) *Rumex* sp (Docks)	nutlet/tepal	32	114	15	6	7	12
(x) *Stachys* sp (Woundworts)	nutlet	-	19	-	3	-	-
(x) *Viola* sp (Violets)	capsule	2	-	-	-	-	1

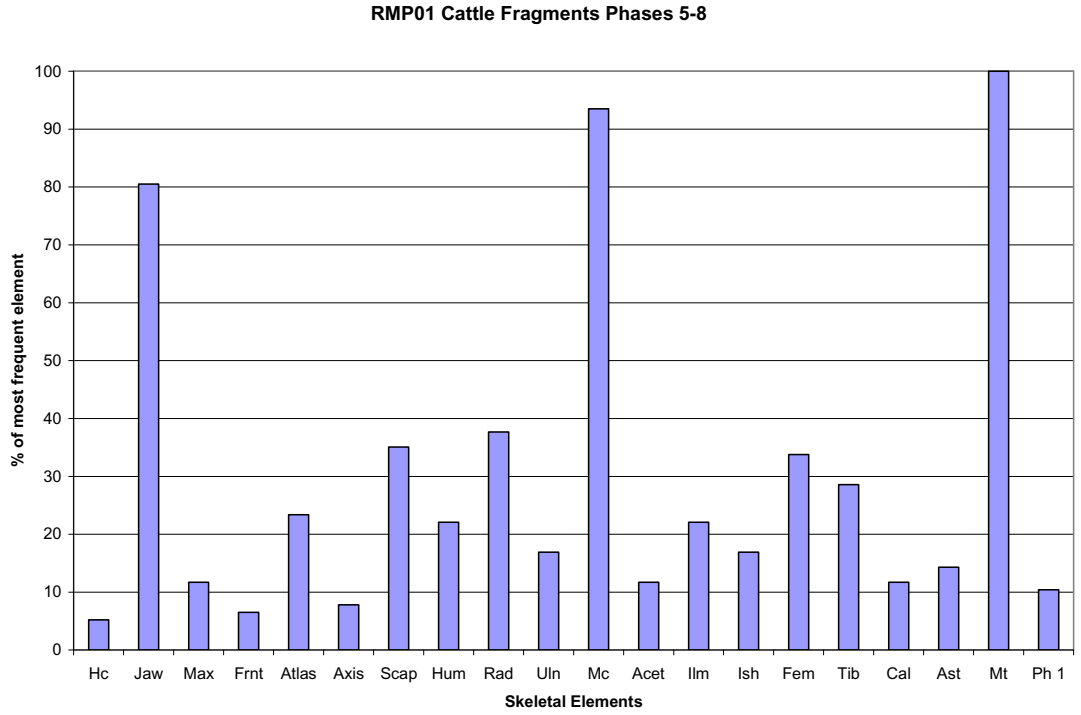
[a: arable weed; c: cultivated plant; g: grassland; h: heathland; q: aquatic; r: ruderal; t: trees/shrubs; w: wet/damp ground; x: wide niche]

Appendix 2: Graphs

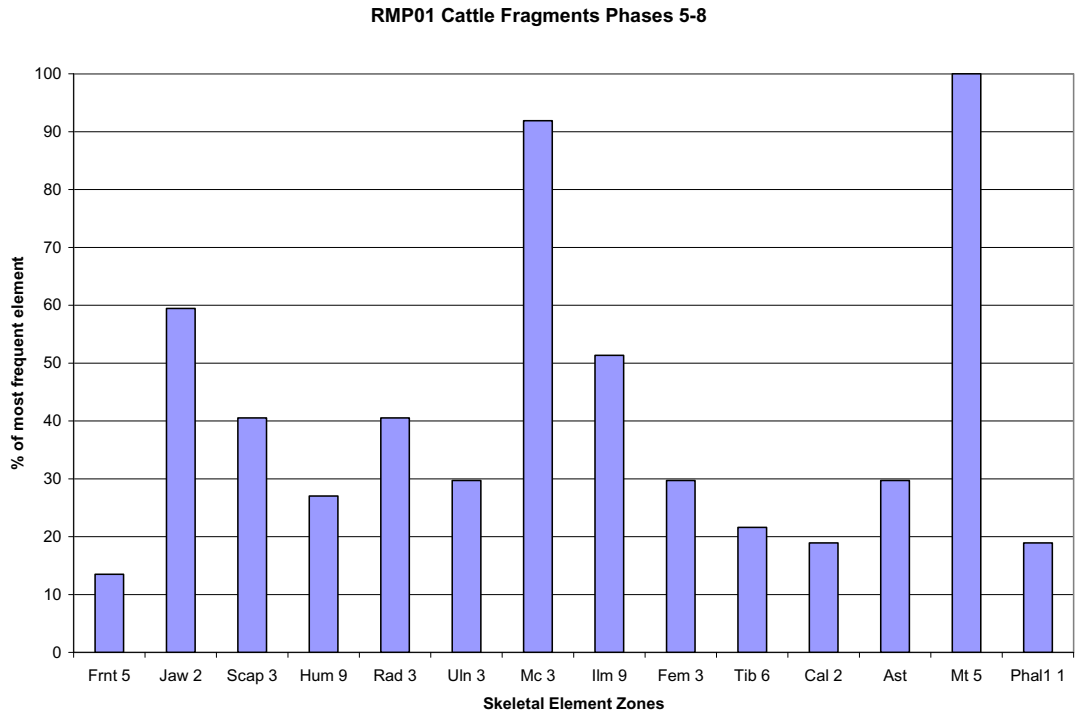
Graph 2.1



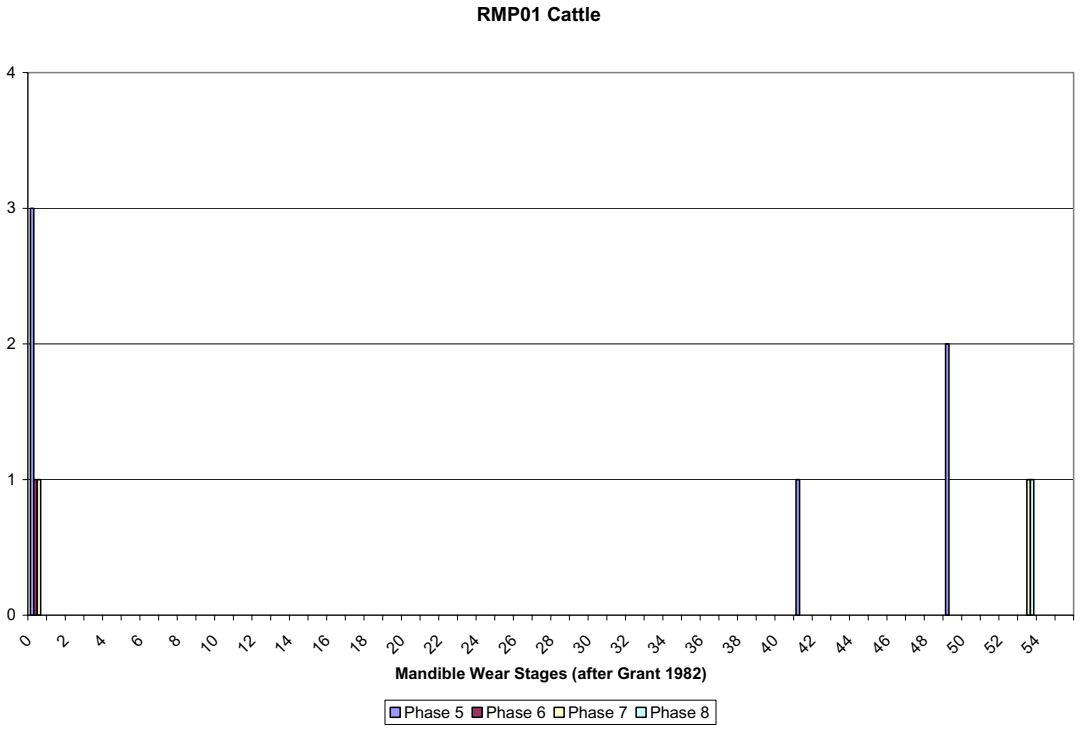
Graph 2.2



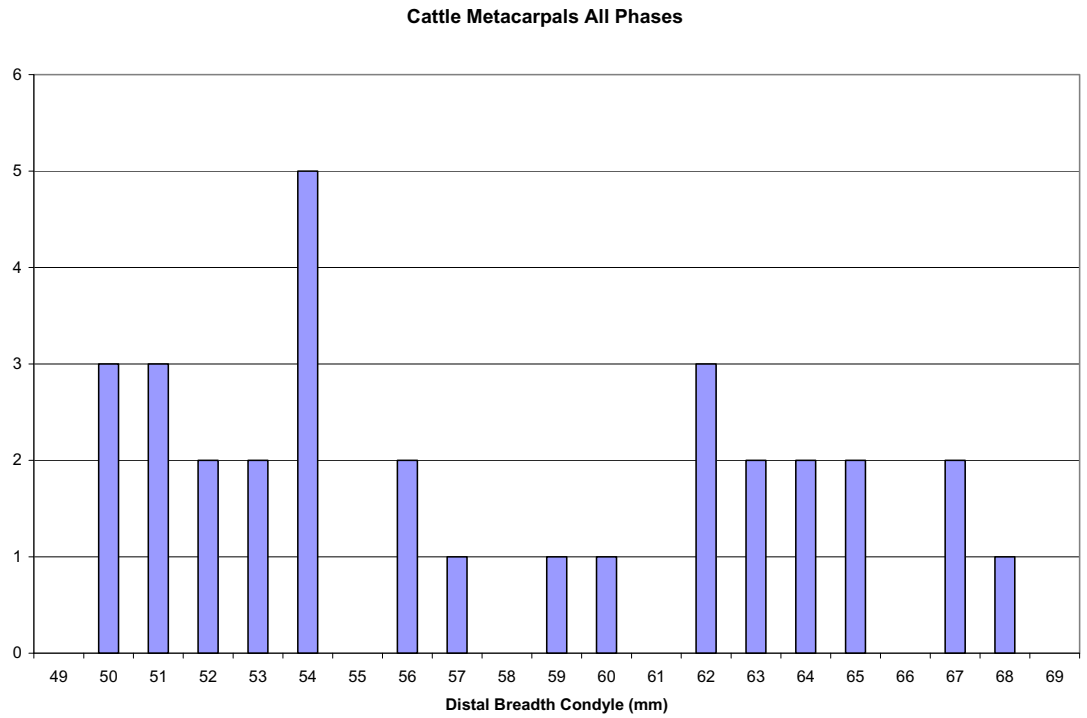
Graph 2.3



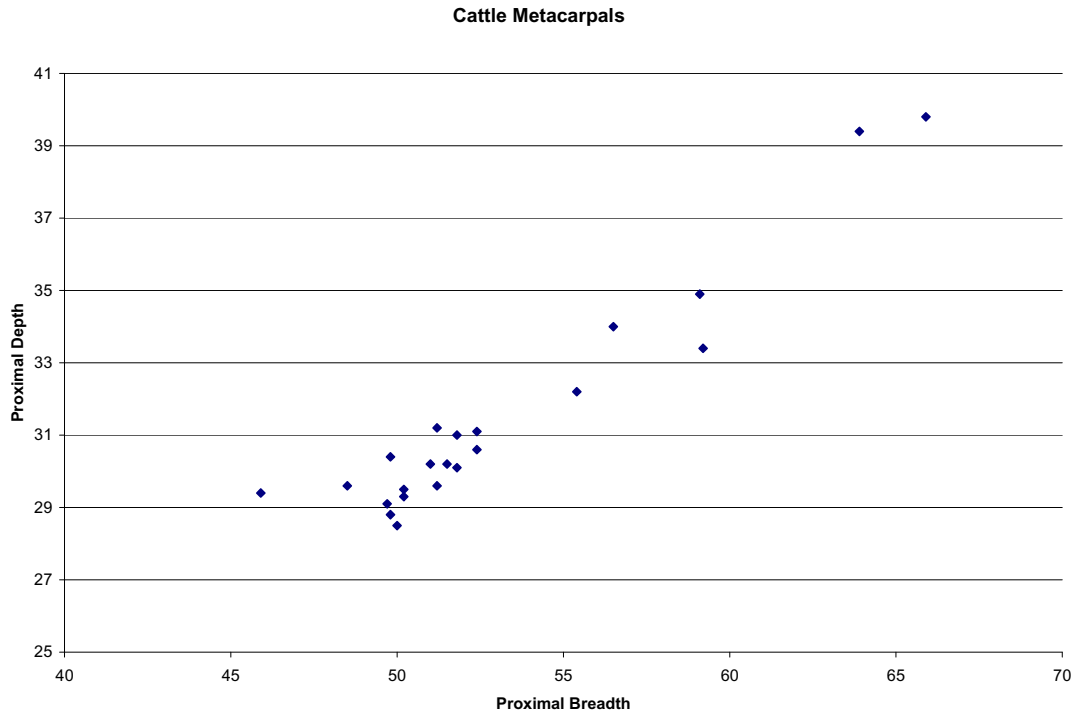
Graph 2.4



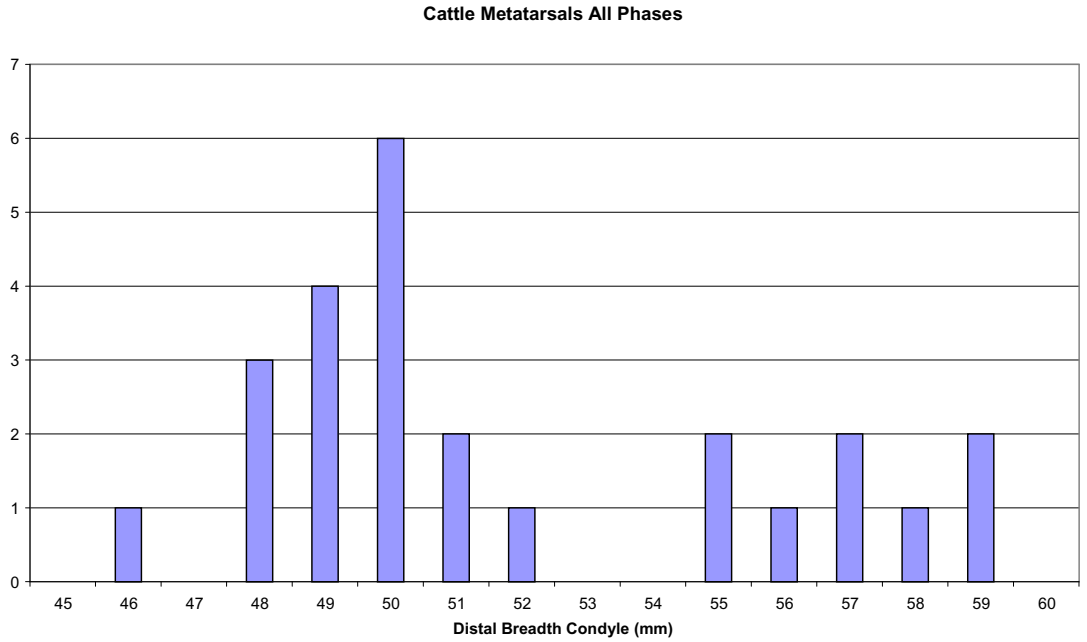
Graph 2.5



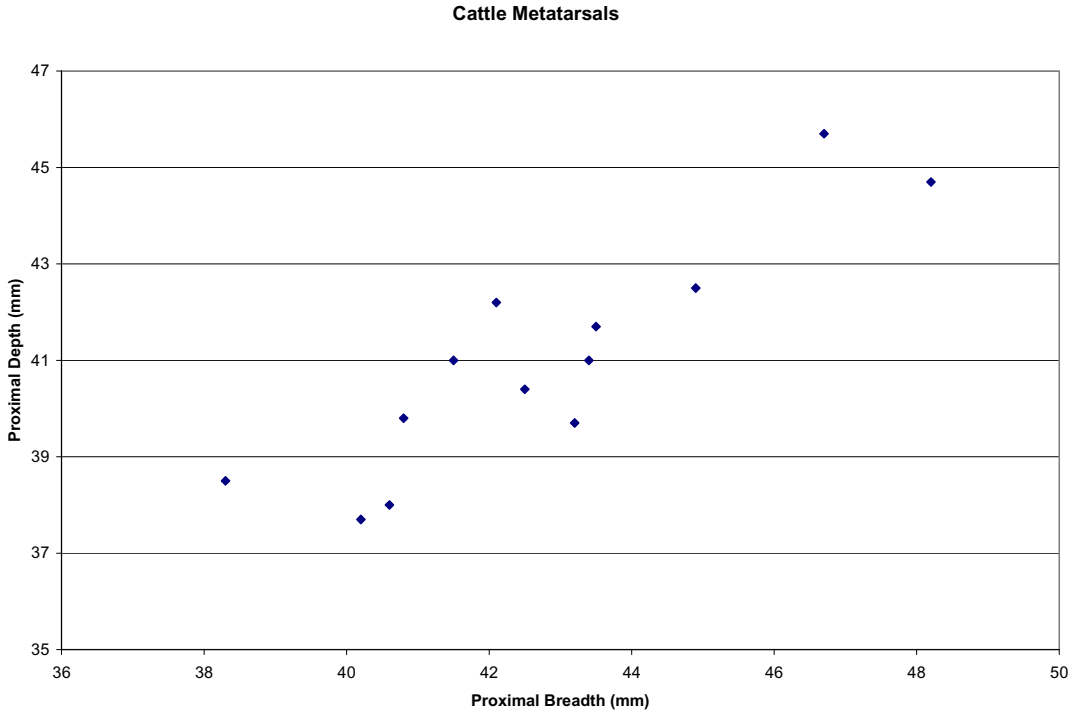
Graph 2.6



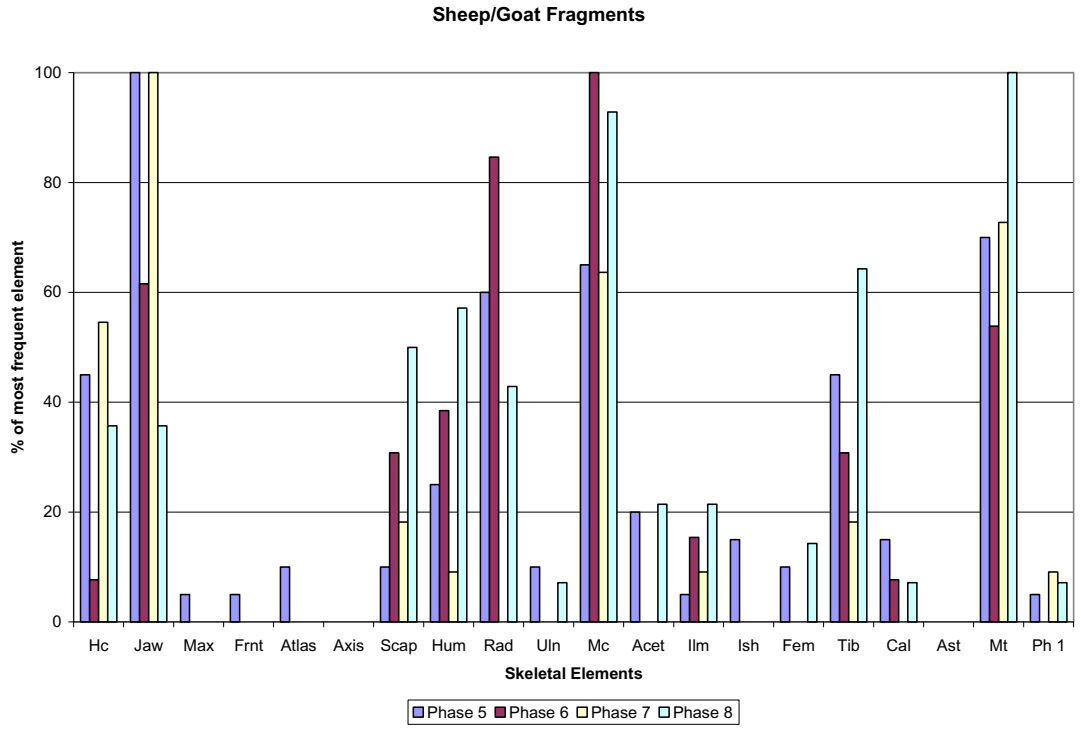
Graph 2.7



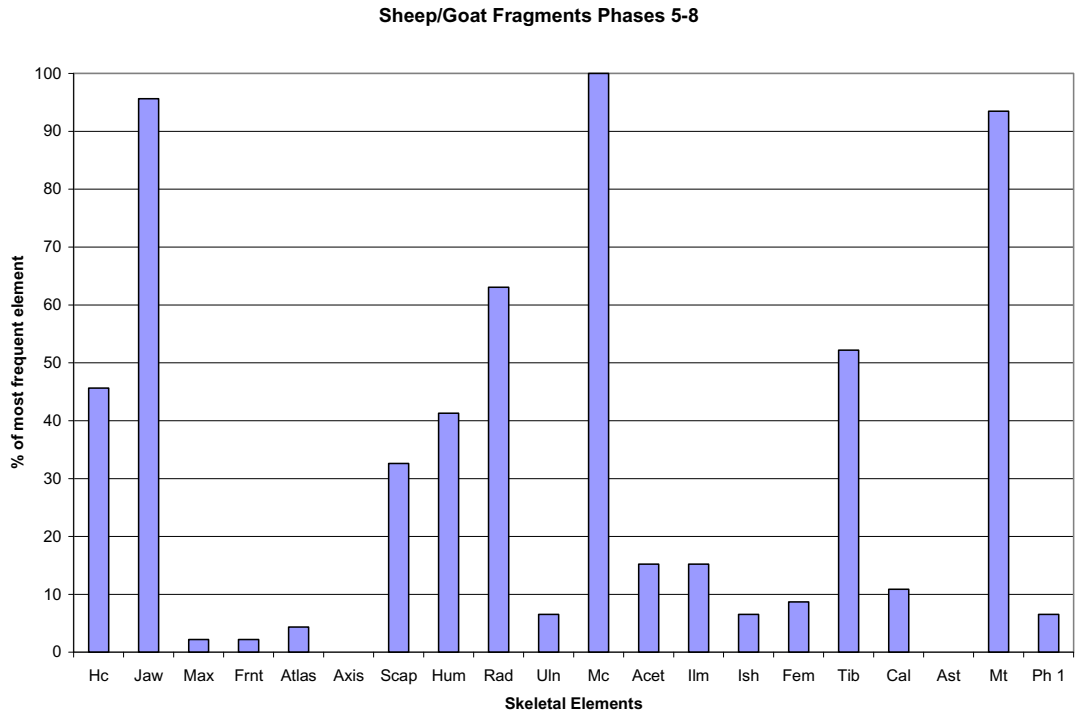
Graph 2.8



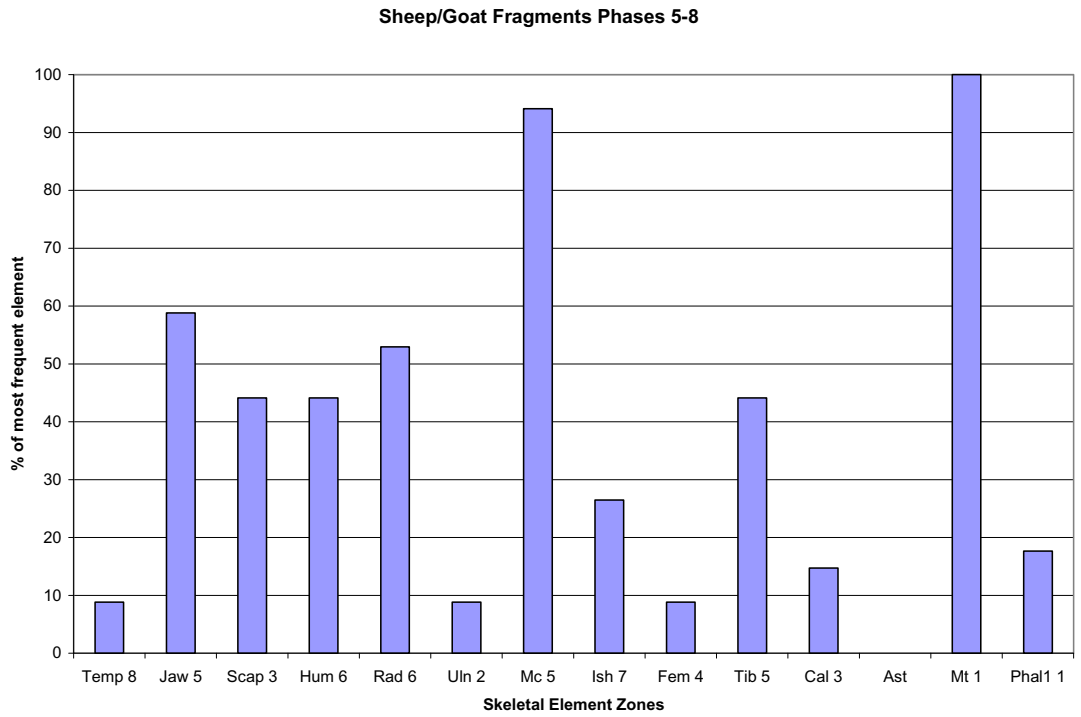
Graph 2.9



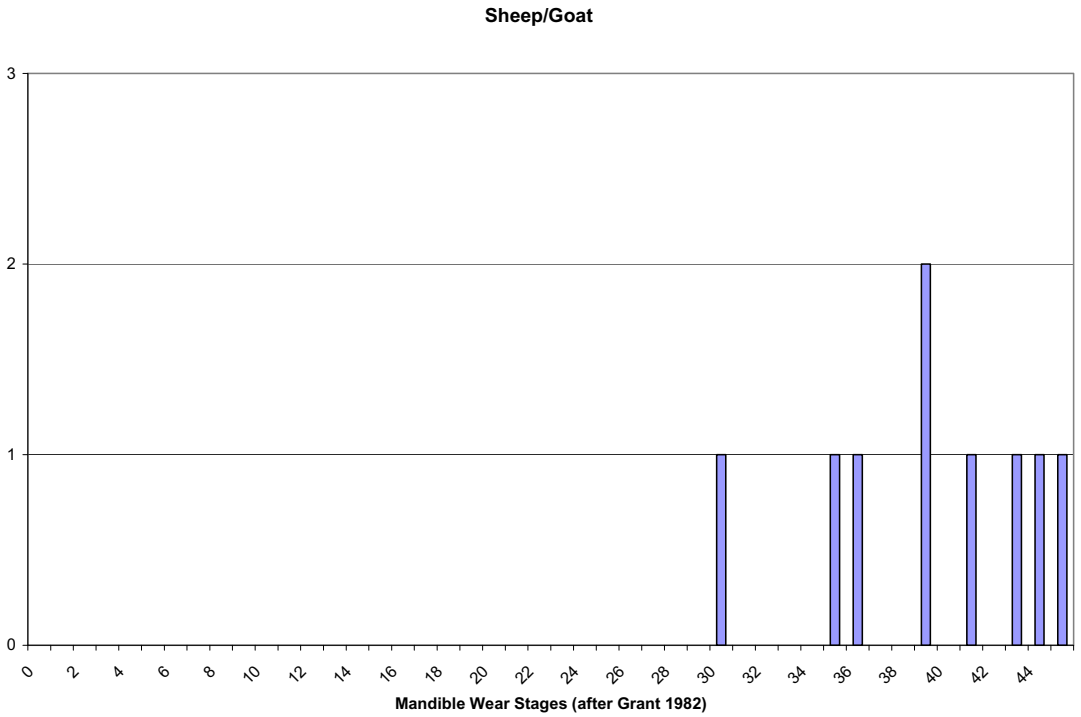
Graph 2.10



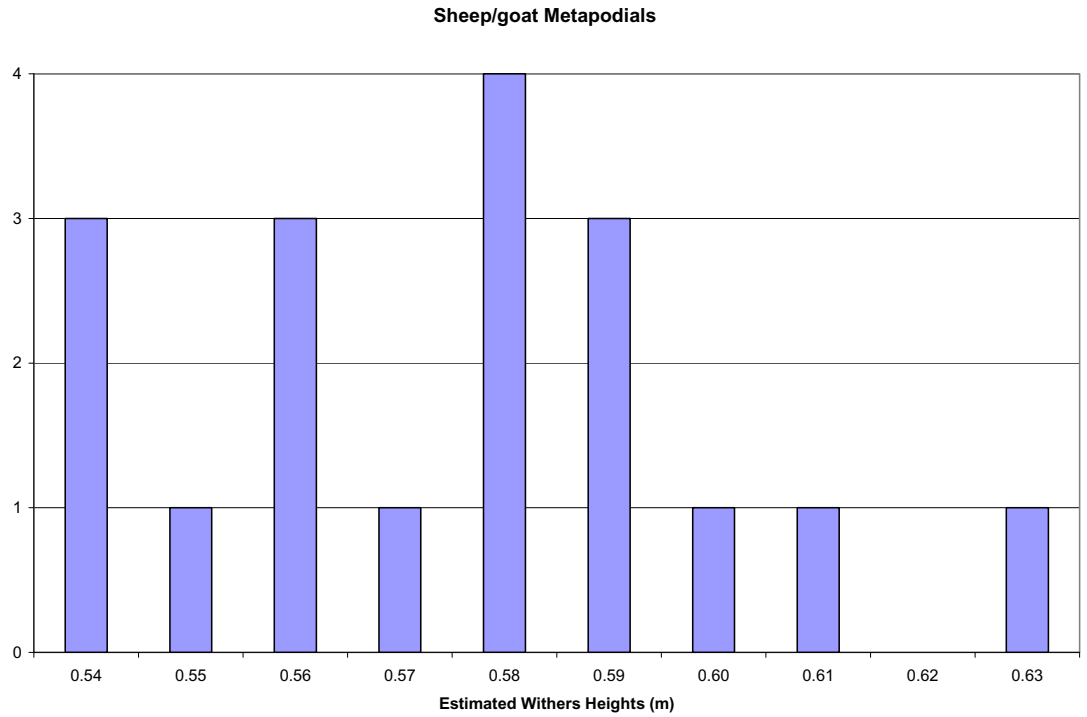
Graph 2.11



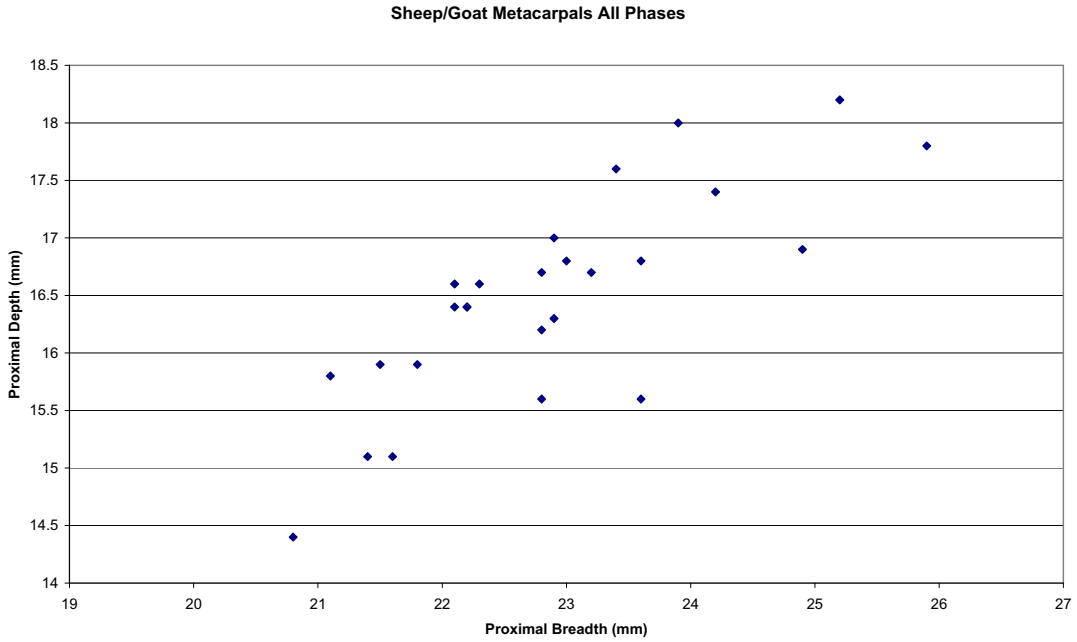
Graph 2.12



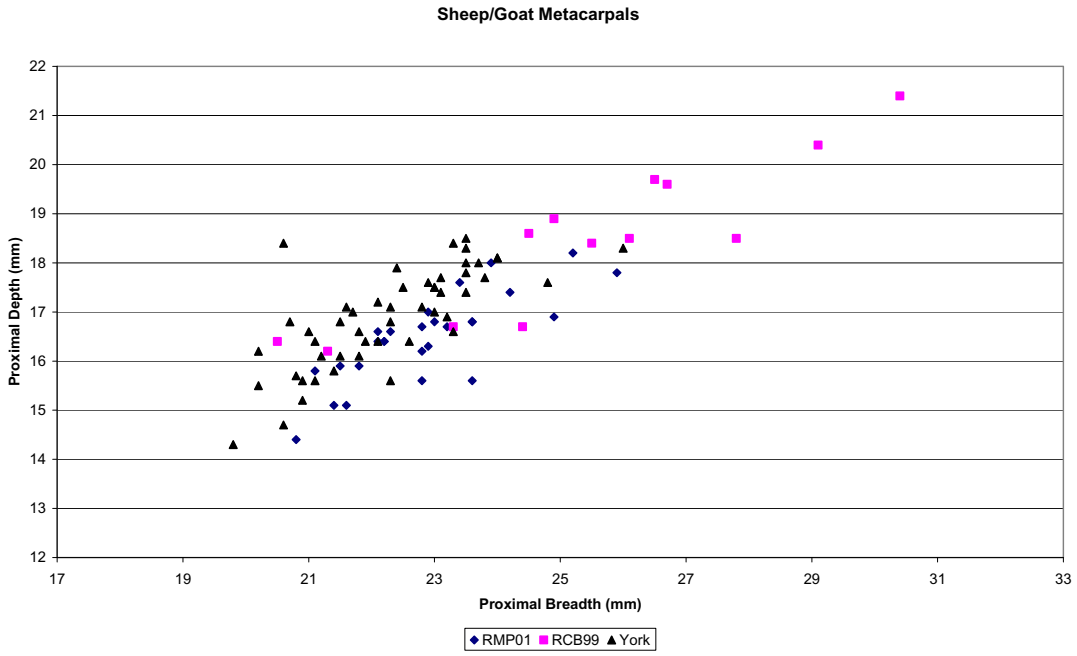
Graph 2.13



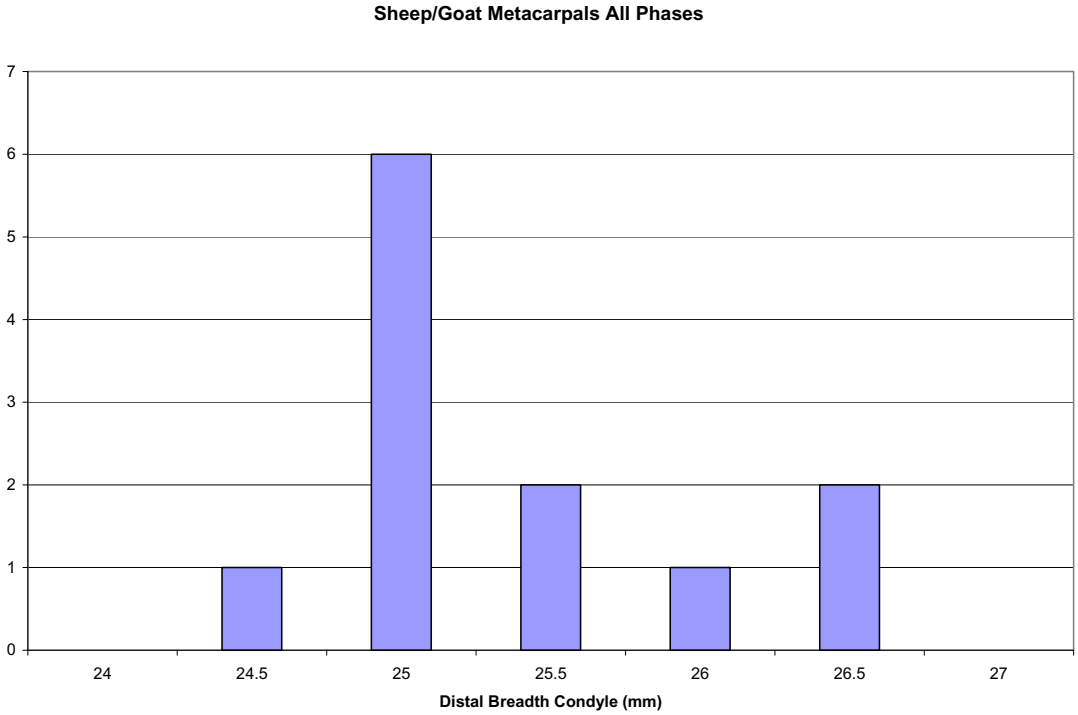
Graph 2.14



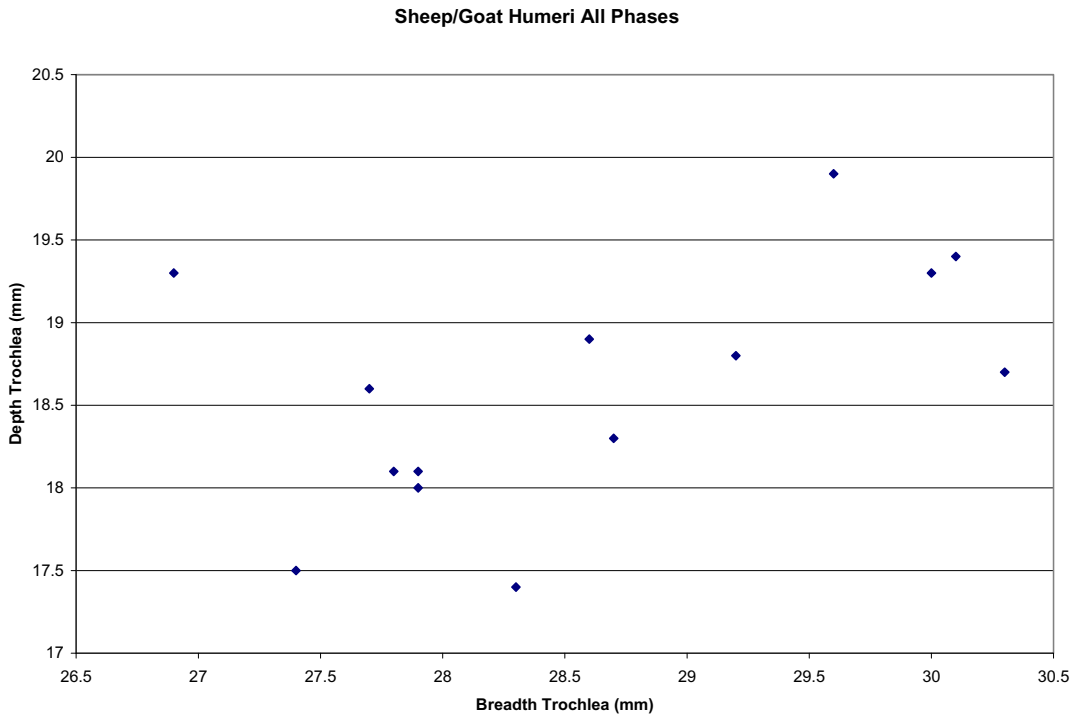
Graph 2.15



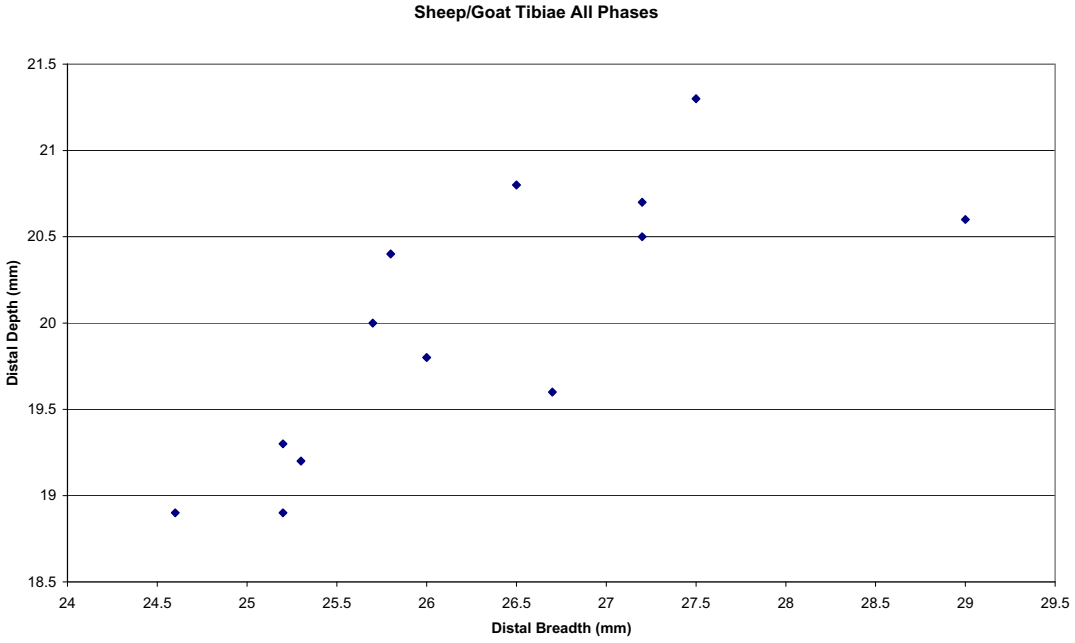
Graph 2.16



Graph 2.17



Graph 2.18



Graph 2.19

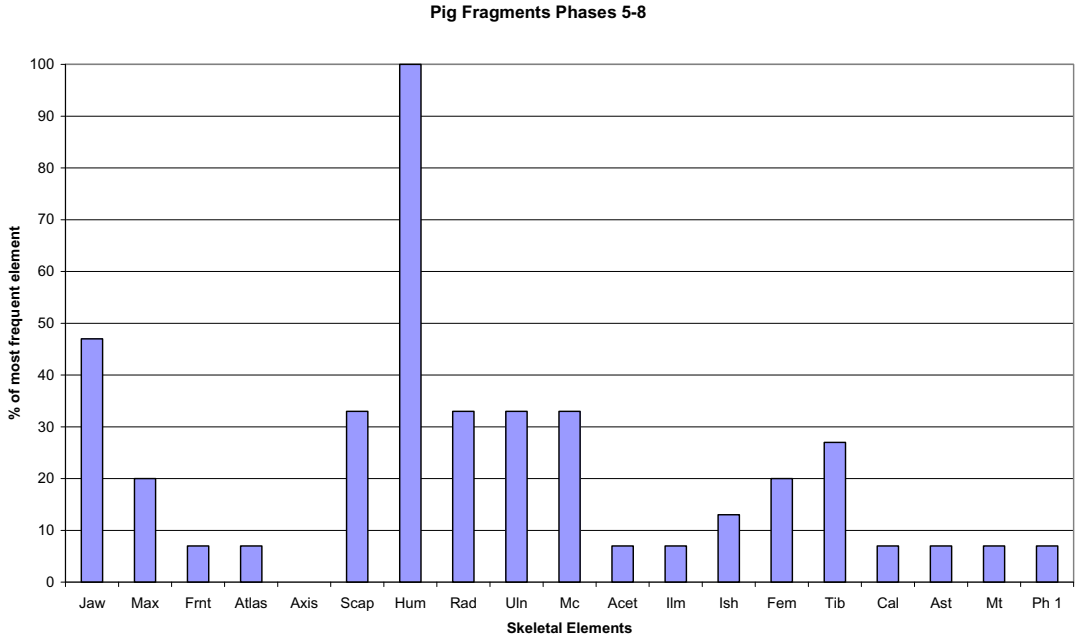

Pig Fragments Phases 5-8
% of most frequent element
100
90
80
70
60
50
40
30
20
10
0
Jaw
Max
Frnt
Atlas
Axis
Scap
Hum
Rad
Uln
Mc
Acet
Ilm
Ish
Fem
Tib
Cal
Ast
Mt
Ph 1
Skeletal Elements

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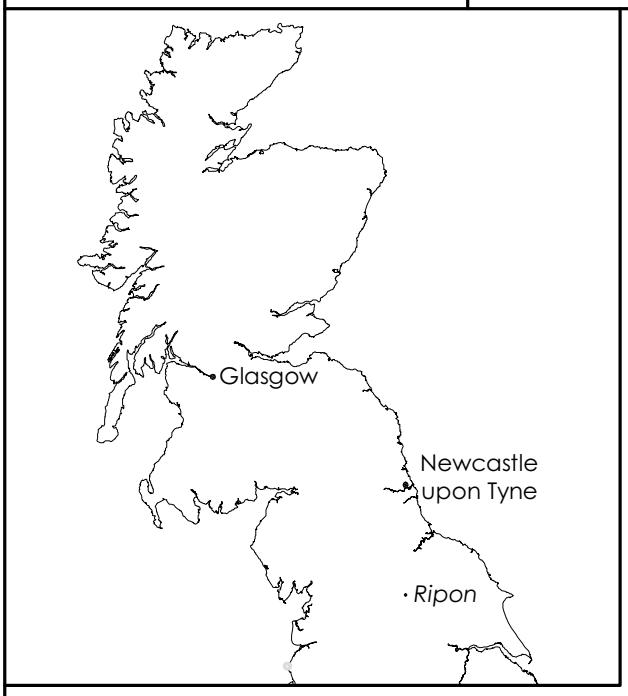
Figure 1: Location of excavation



Moss Arcade
Market Place North
Area A
area of archaeological excavation
Trench 2
Fishergate
Queen Street
obelisk
Trench 1
Westgate
Market Place South
Kirkgat
High Skellgate

extent of excavation

area of archaeological monitoring

0 30m
scale 1:750 for A4 plot

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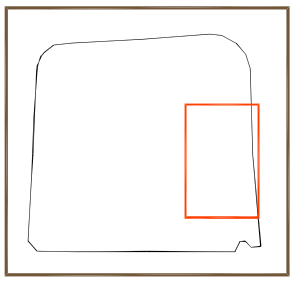
Figure 2: Phase 1 plan



inset showing location of features in excavated area

extent of excavation

2 section

postholes

0 5m
scale 1:100 for A4 plot

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Figure 3: Phase 2 plan

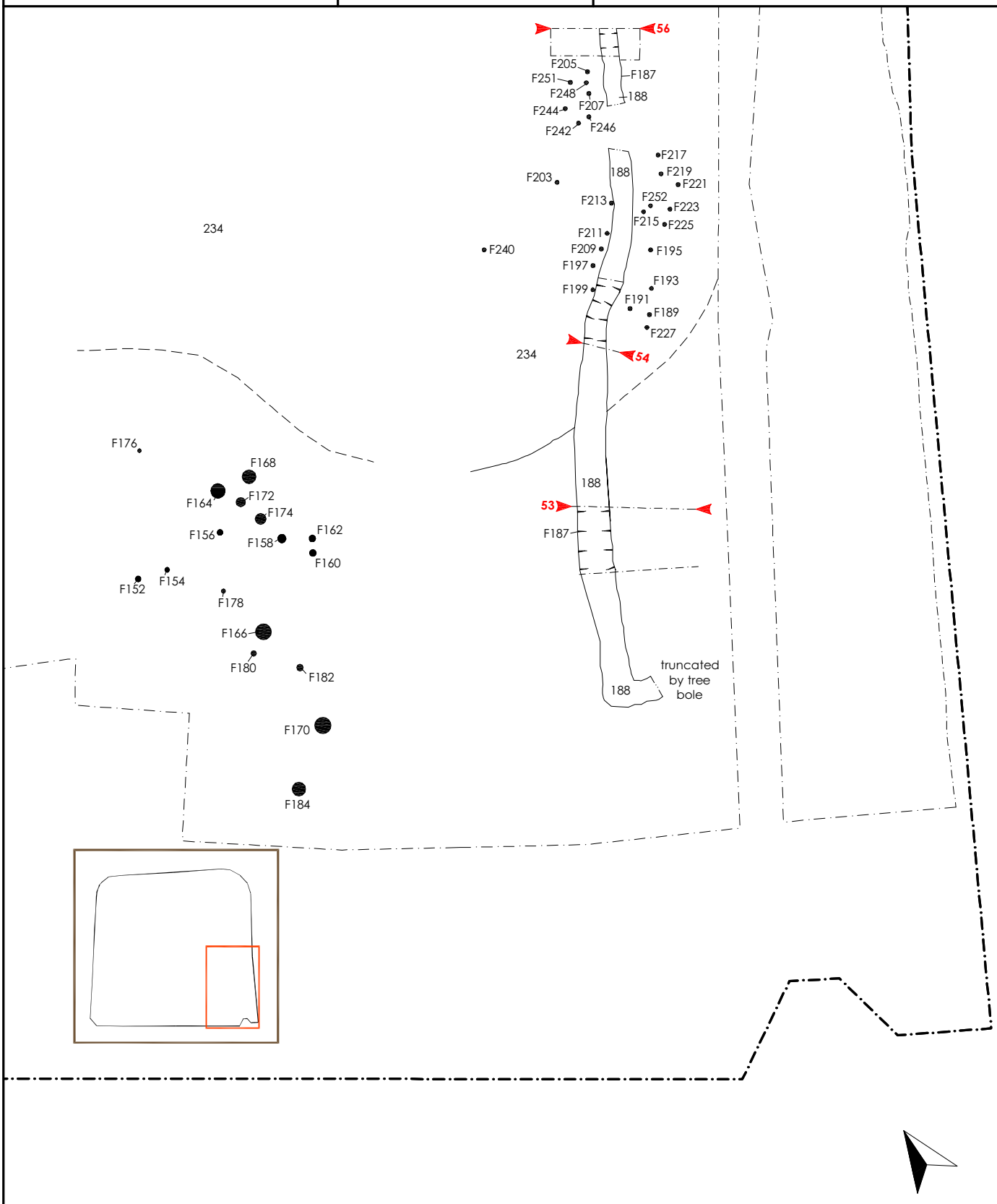

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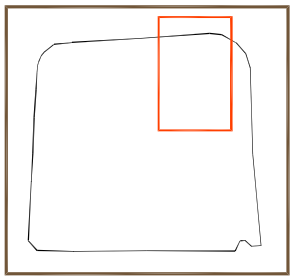
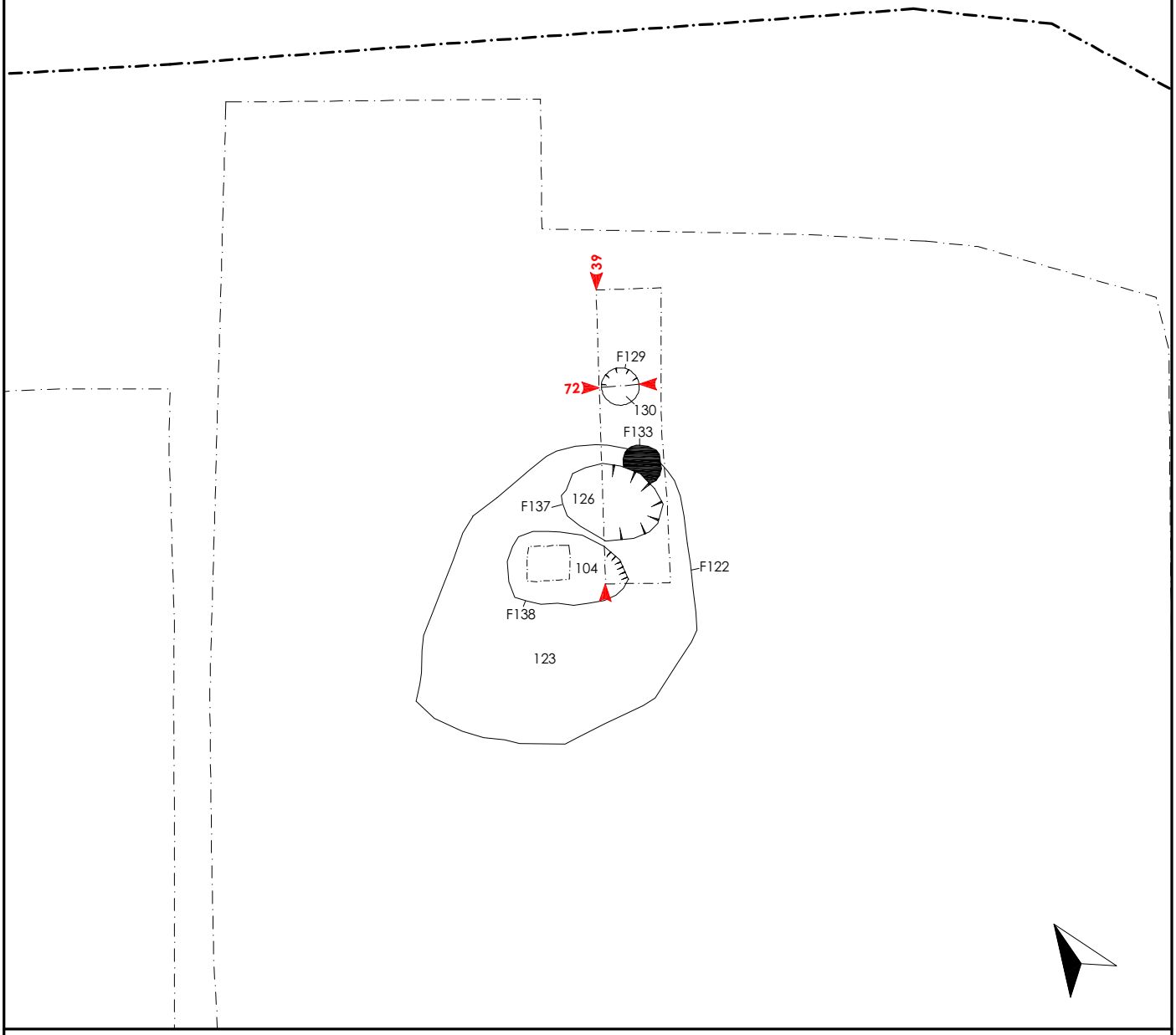
Figure 4: Phase 3 plan





extent of excavation

2 section

postholes

0 5m
scale 1:100 for A4 plot

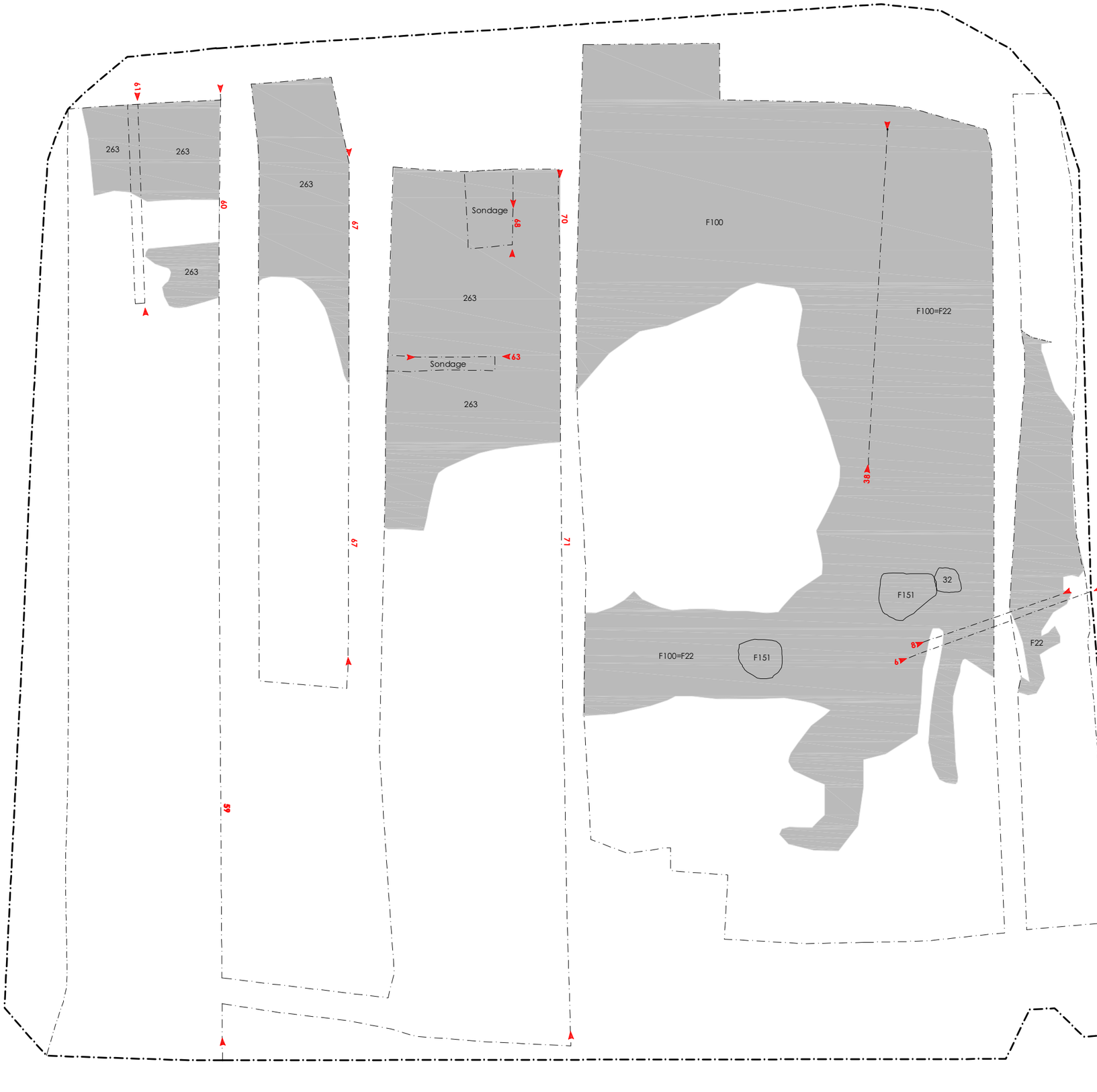


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Figure 5: Phase 4 plan

0 7.5m
scale 1:150 for A3 plot

extent of excavation

2 section

cobbles

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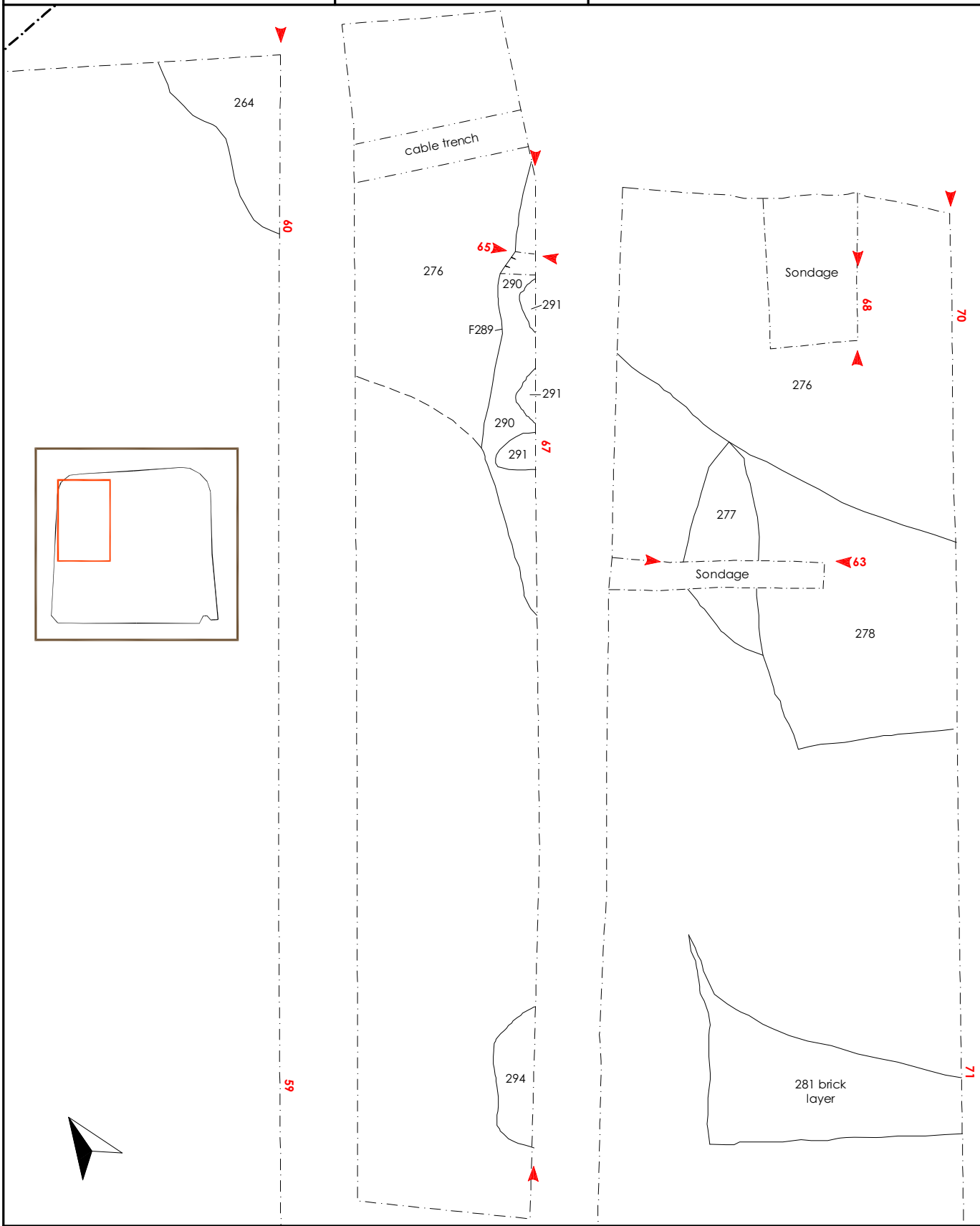
Figure 6: Phase 5 plan



extent of excavation

2 section

0 5m
scale 1:100 for A4 plot

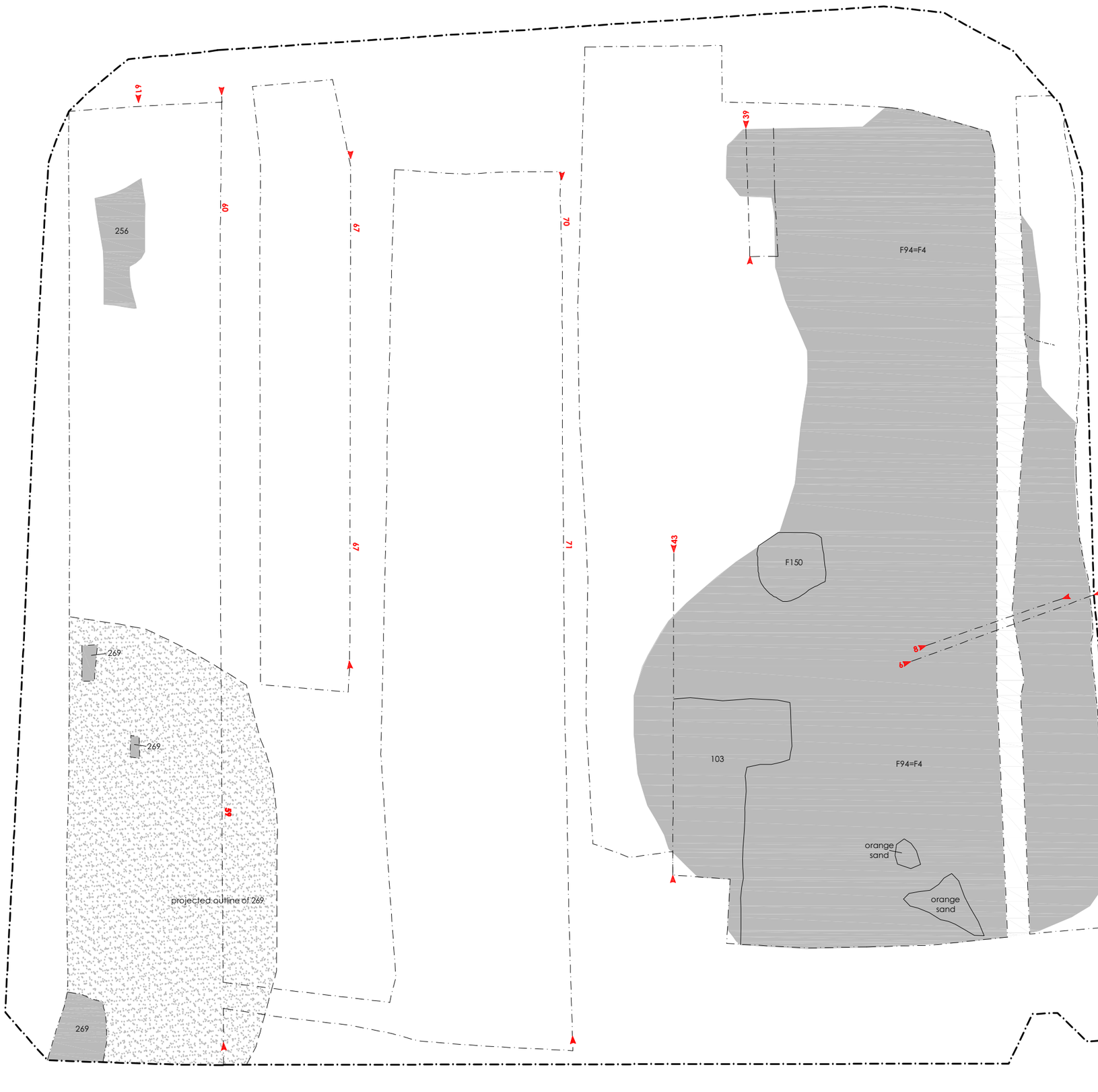


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Figure 7: Phase 6 plan

0 7.5m
scale 1:150 for A3 plot

extent of excavation

2 section

cobbles

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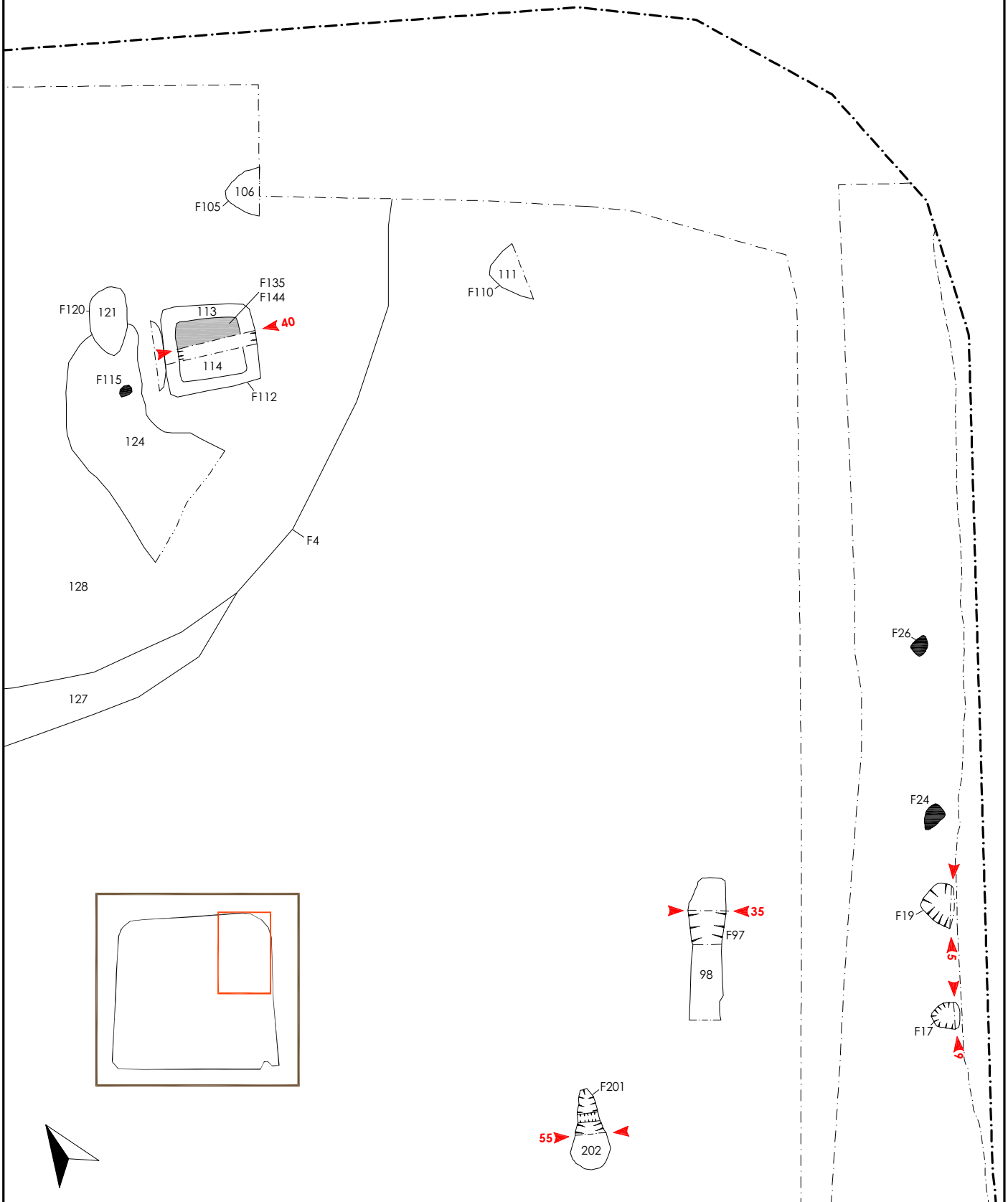
Figure 8: Phase 7 plan



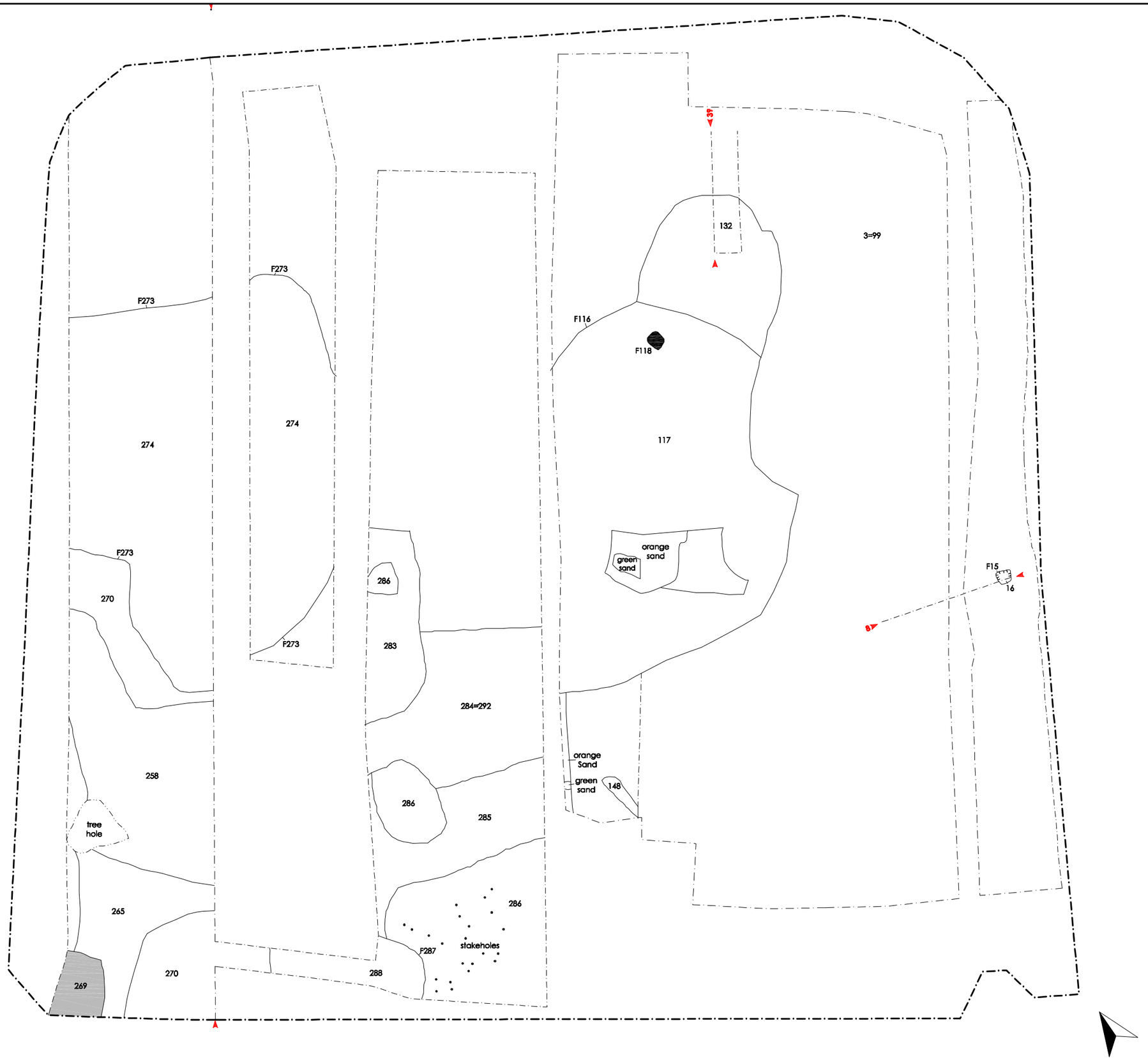


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Figure 9: Phase 8 plan

0 7.5m
scale 1:150 for A3 plot

extent of excavation

2 section

cobbles

postholes

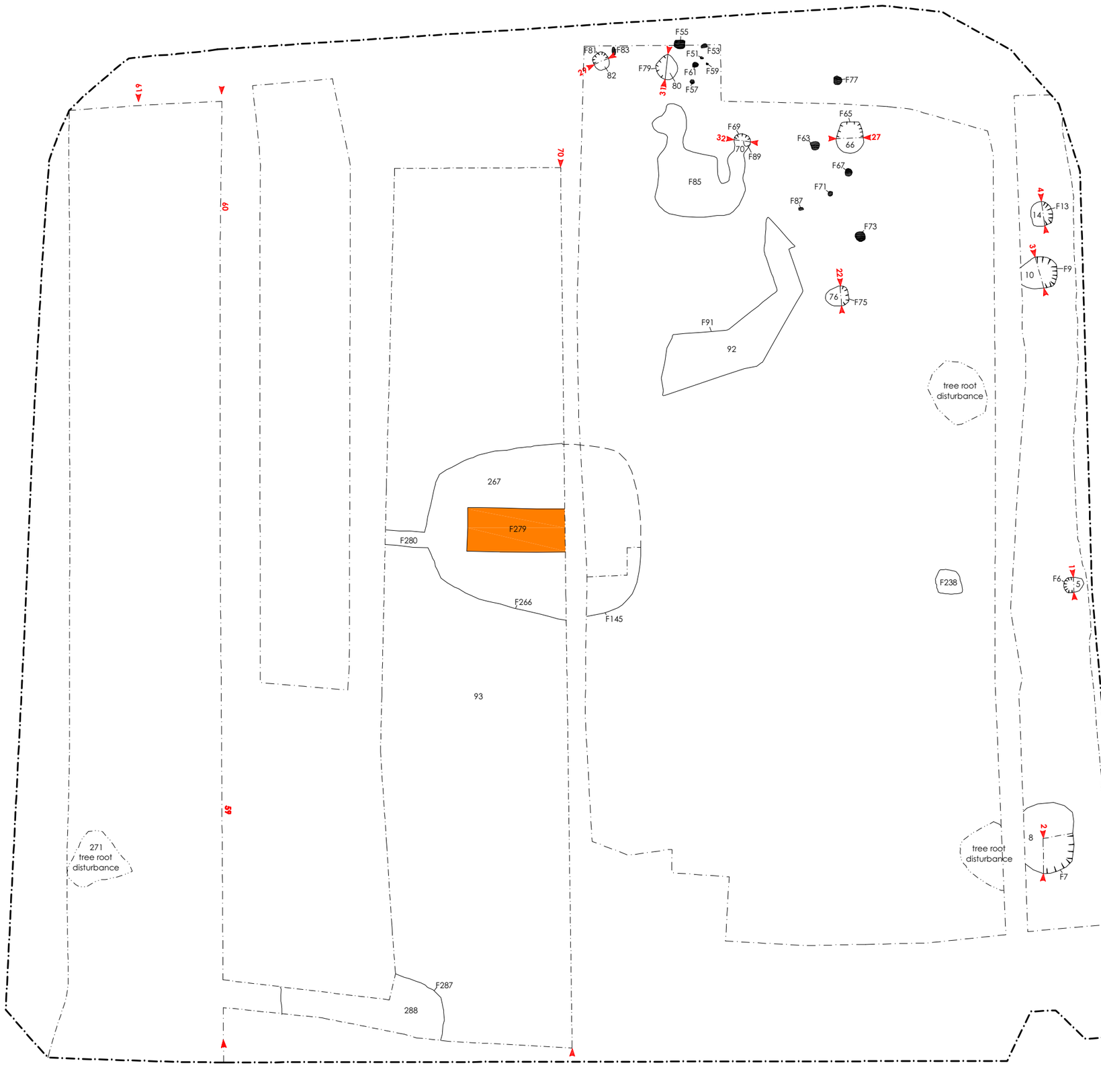

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Figure 10: Phase 9 and 10 plan

0 7.5m
scale 1:150 for A3 plot

- extent of excavation
- 2 section
- brick
- postholes

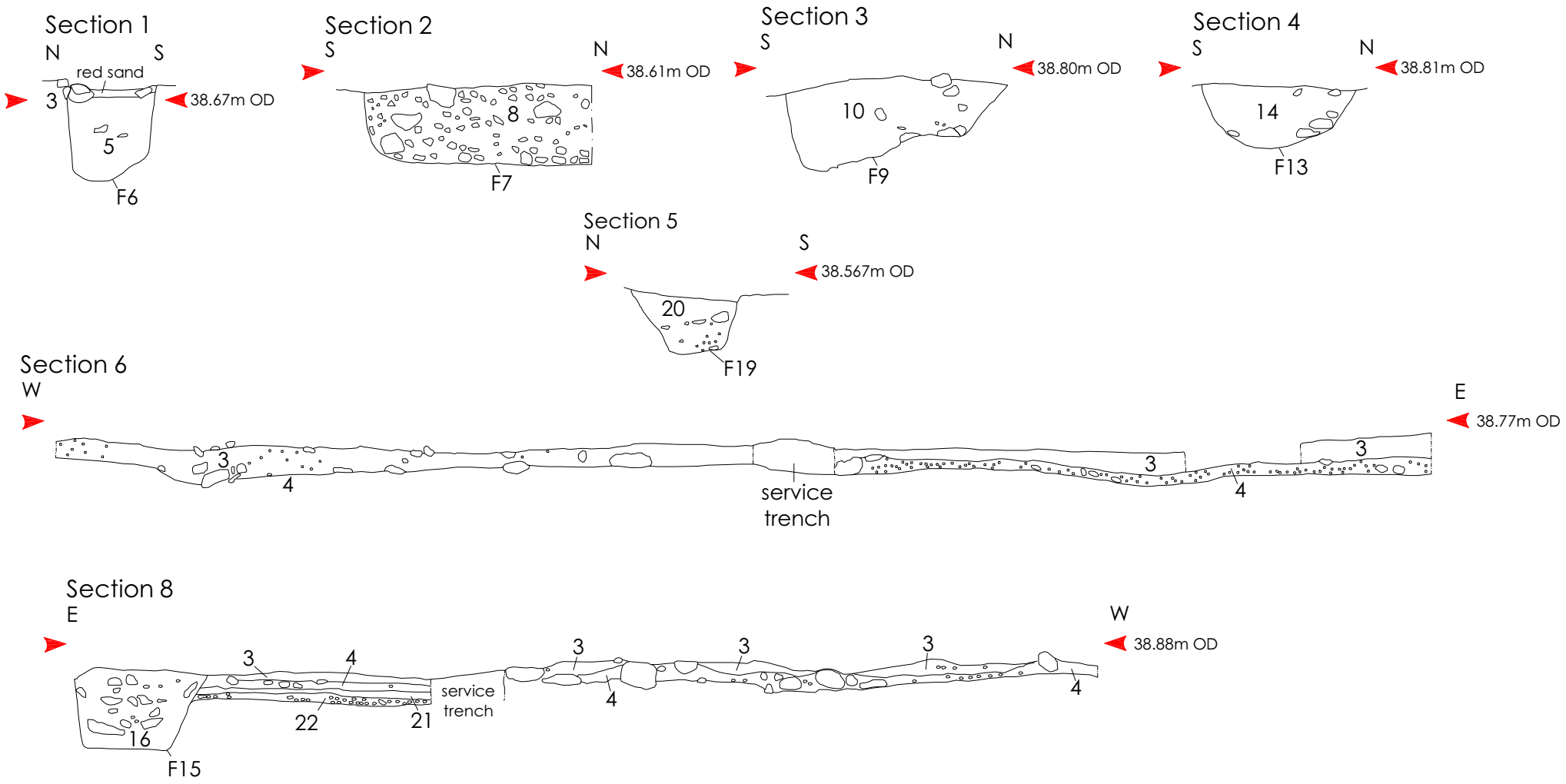

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Figure 11: Sections

extent of excavation

0 1.5m
scale 1:30 for A4 plot

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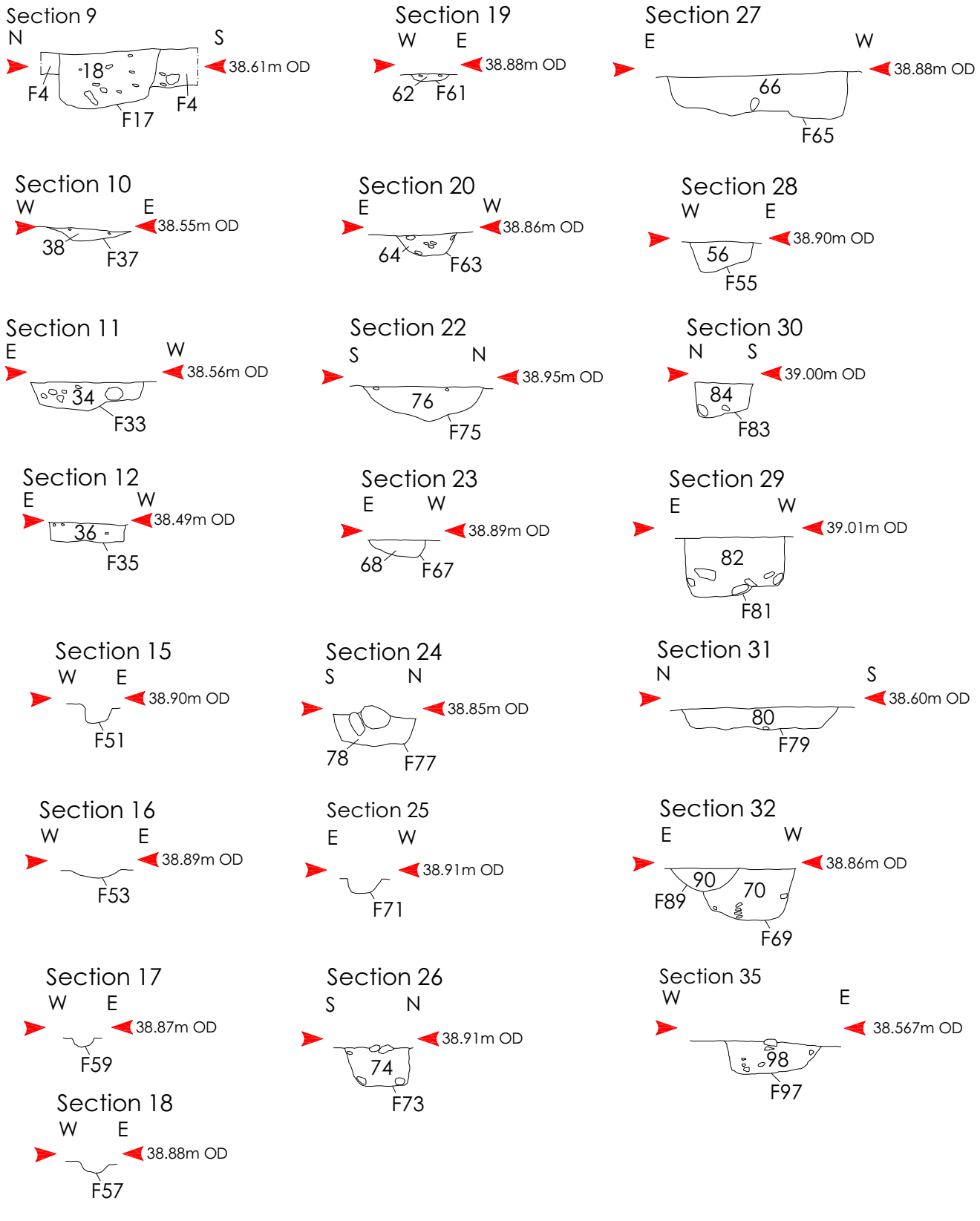
Figure 12: Sections



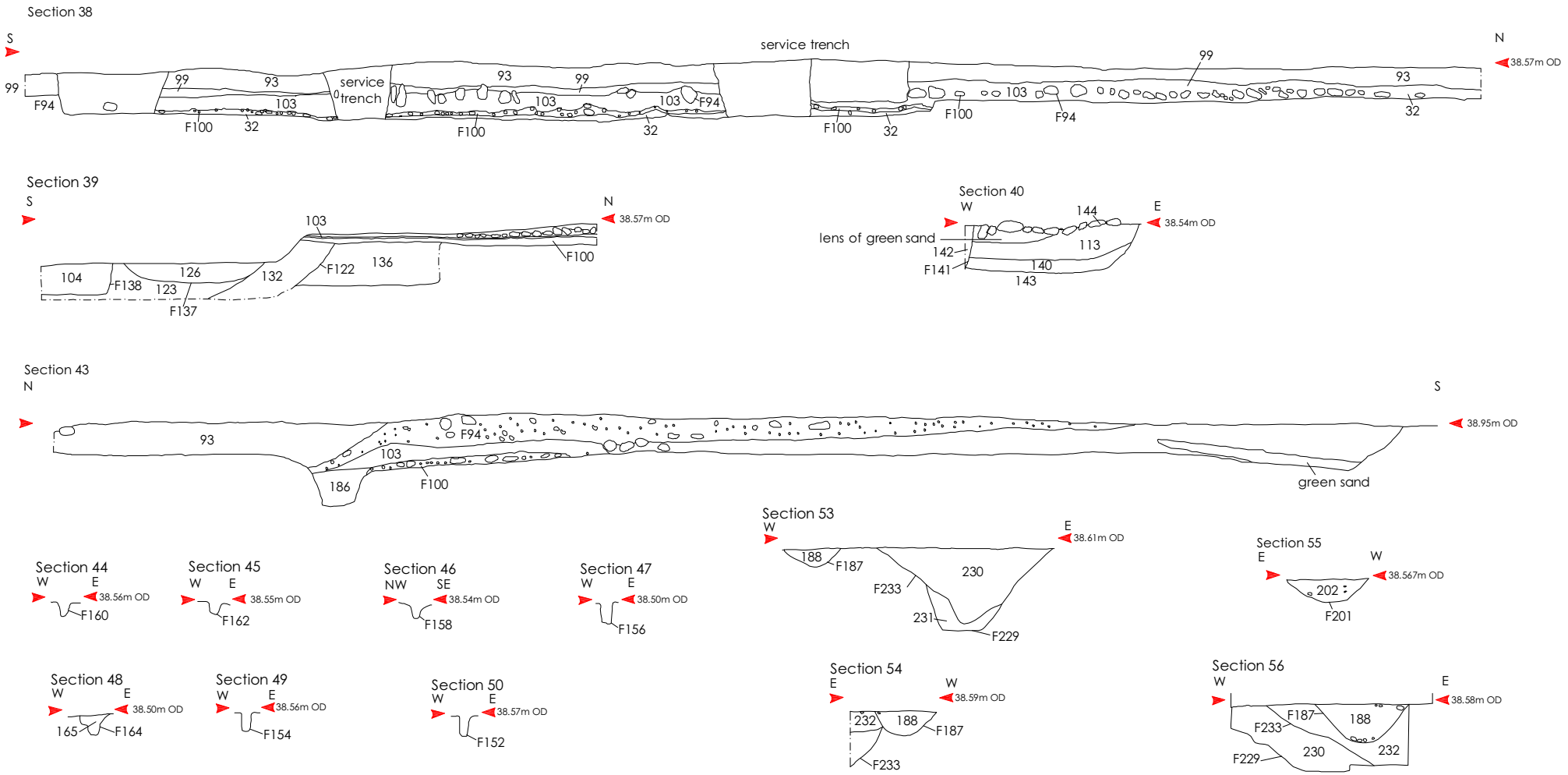


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Figure 13: Sections

extent of excavation

0 2m
scale 1:50 for A4 plot

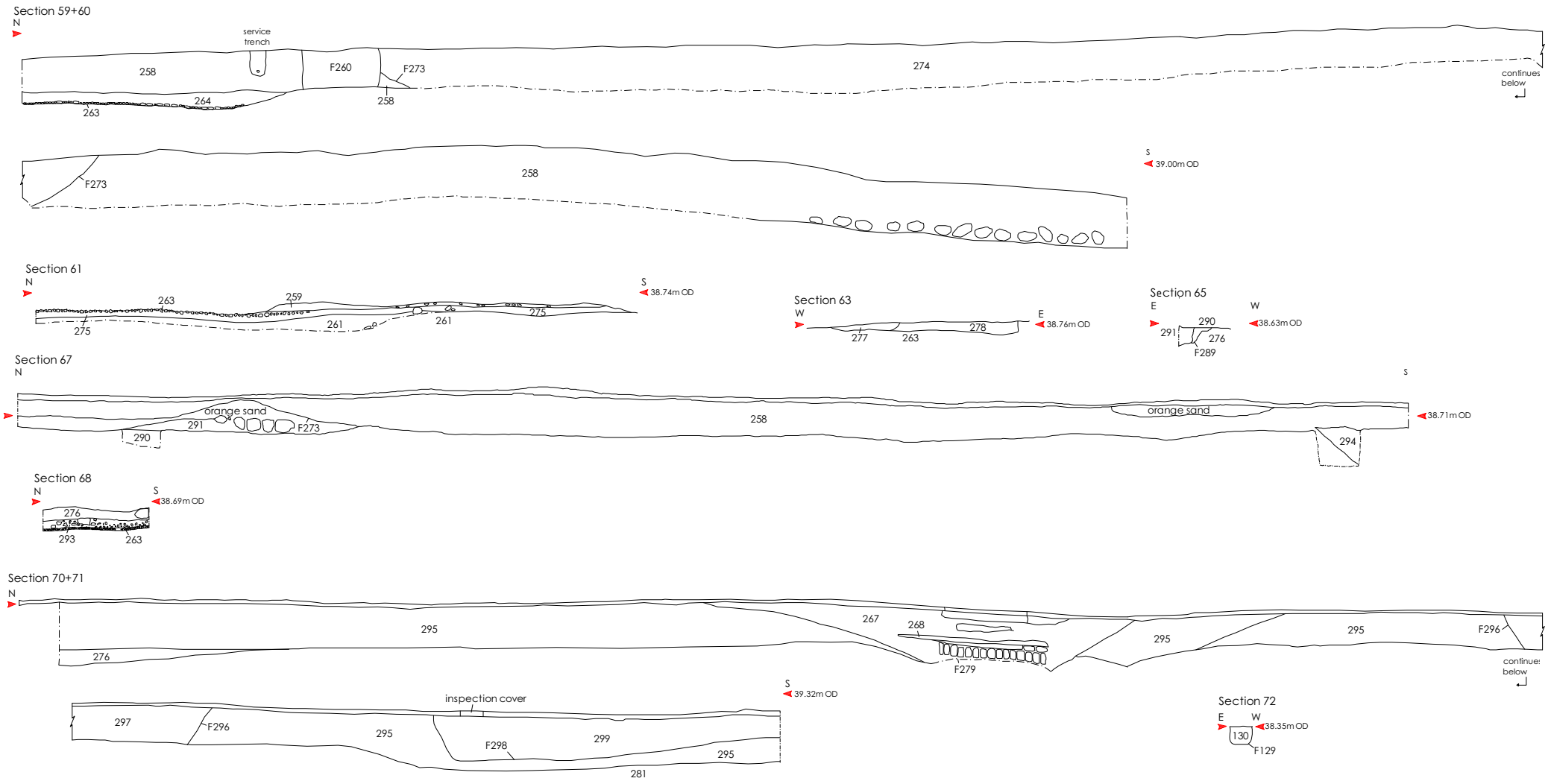

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Figure 14: Sections

extent of excavation

0 3m
scale 1:75 for A4 plot

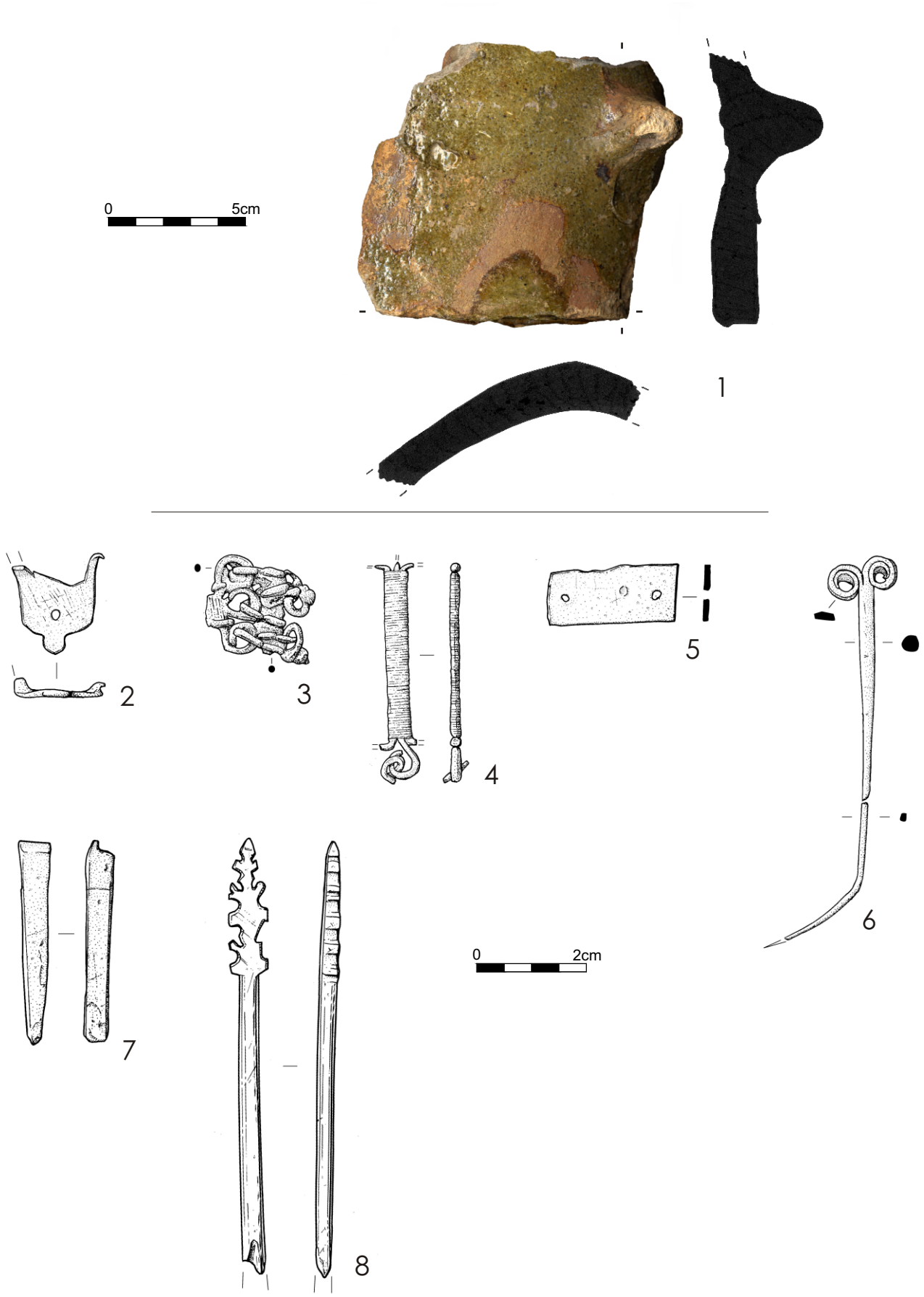

Figure 15:
1 - Decorated ridge tile (RMP01 124); 2 - Sf3 unstratified, copper-alloy strap end; 3 - Sf6 context 126, two joining fasteners; 4 - Sf7 context 126, part of a fastener; 5 - Sf8 context 264, part of copper-alloy belt mount; 6 - Sf9 context 98, copper-alloy dress pin; 7 - Sf10 context 99, copper-alloy buckle pin; 8 - Sf11 context 265, bone handle

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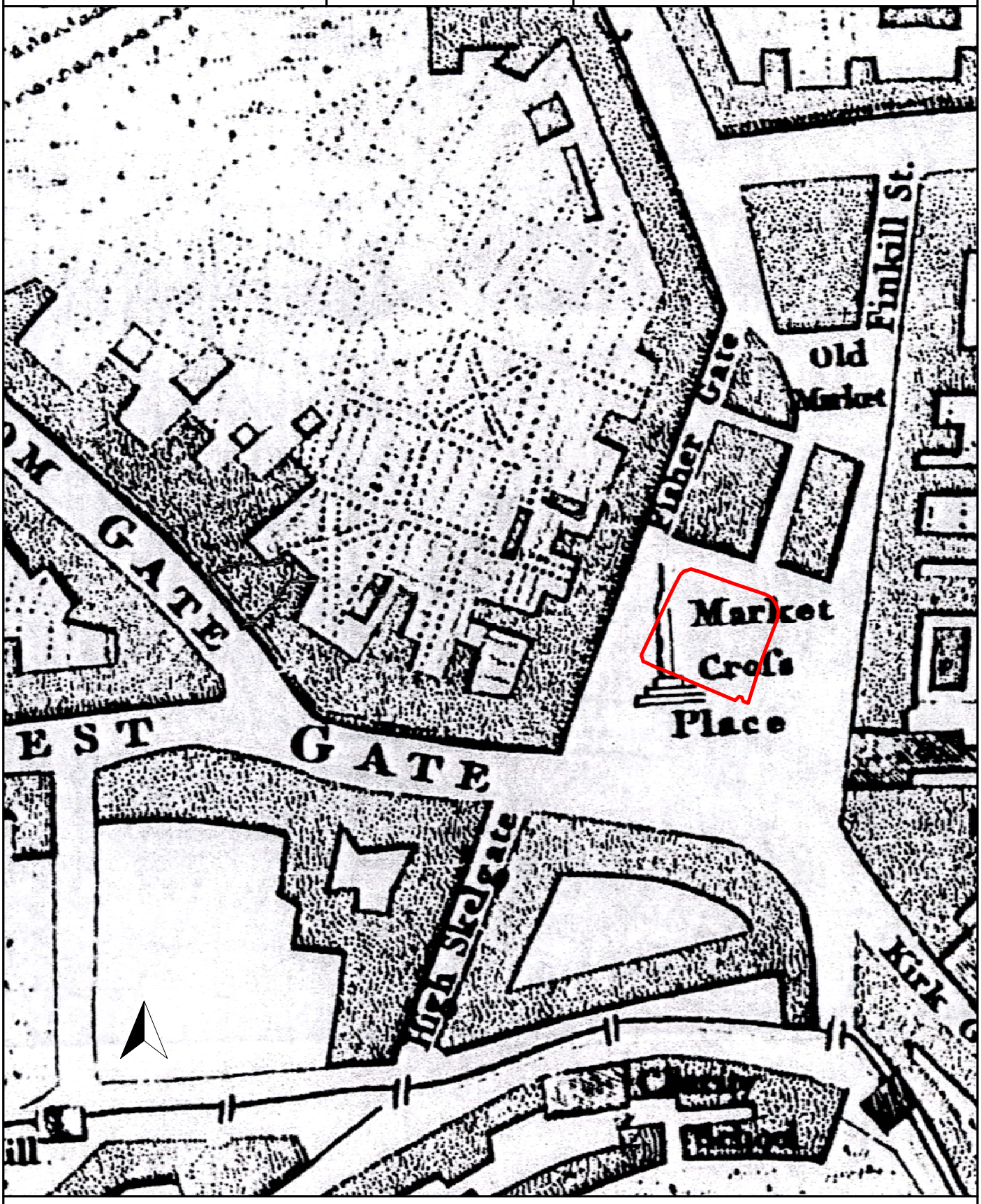
Figure 16: Exctract from Jeffrey's Plan of 1771 showing area of excavation



approximate location of the excavation

not to scale

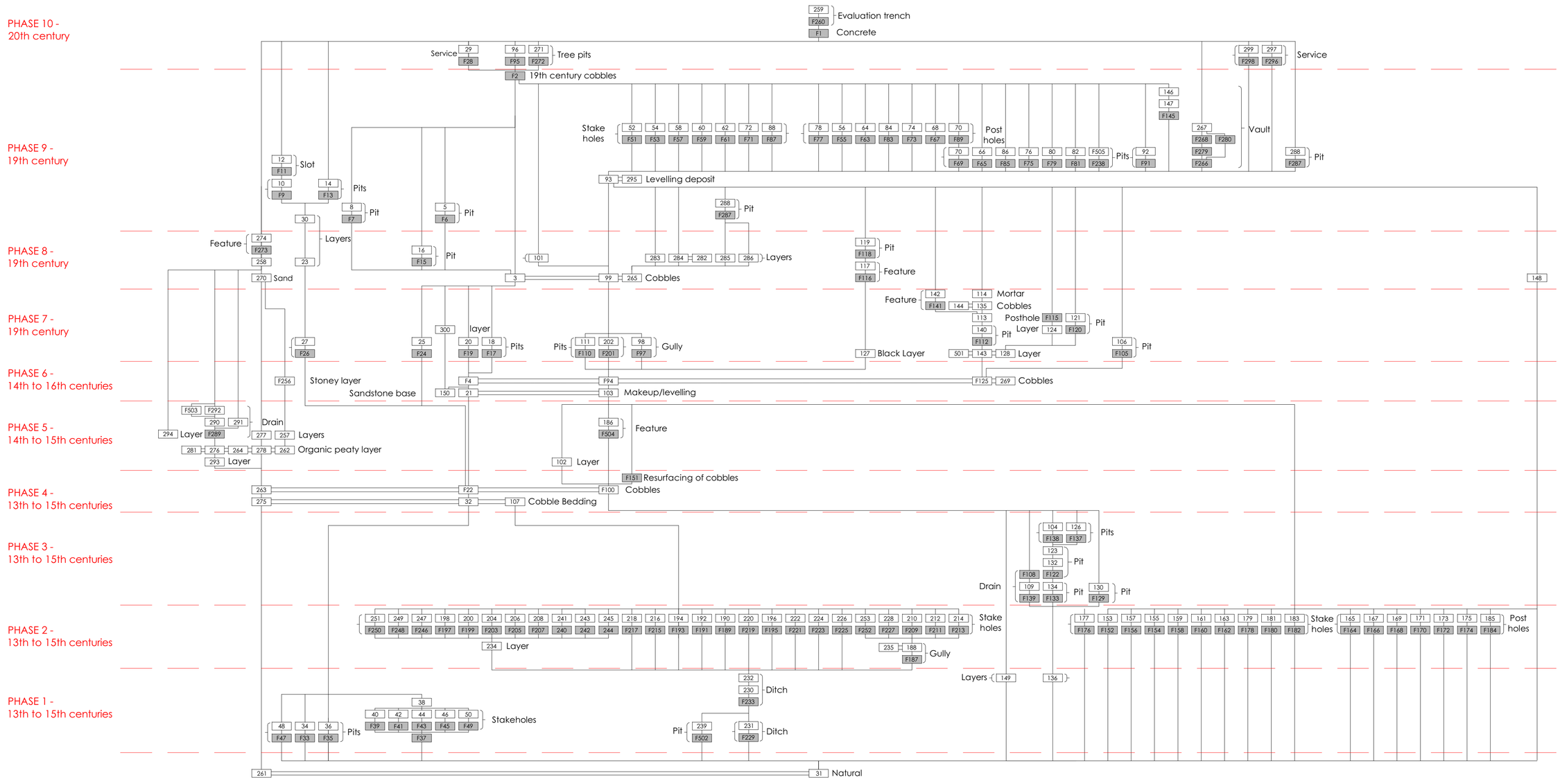


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Figure 17: Stratigraphic matrix

Figure 18: Male cattle acetabulum showing foramen formed by bridging of the ilial-pubic border

Figure 19: Female cattle acetabulum showing foramen formed by bridging of the ilial-pubic border and eburnation on the pubic facet

Figure 20: Cattle centroquartal exhibiting pathological changes associated with spavin

Figure 21: Cattle centroquartal exhibiting pathological changes associated with spavin

Figure 22: Two cattle third phalanges from phase 5, context 276, with one exhibiting a heel extension

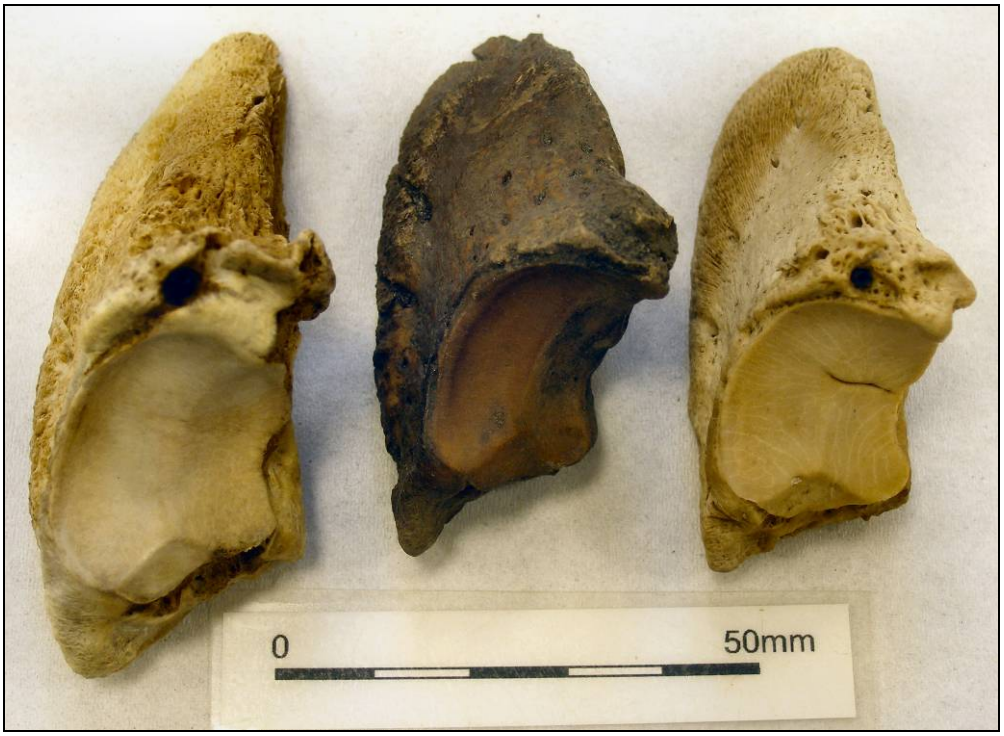

Figure 23: A comparison of the Ripon third phalanx with heel extension with examples from two Dexter bulls

Figure 24: A comparison of a further third phalanx with heel extension with a Dexter bull

Figure 25: Sheep skull exhibiting scurs rather than fully developed horn cores