York Archaeological Trust

Archaeological Investigations at
The North Annexe, York Guildhall

By B. Savine

YAT Analysis Report YA/2023/277 April 2024

YORK ARCHAEOLOGICAL TRUST

York Archaeological Trust undertakes a wide range of urban and rural archaeological consultancies, surveys, evaluations, assessments and excavations for commercial, academic and charitable clients. We manage projects, provide professional advice and fieldwork to ensure a high quality, cost effective archaeological and heritage service. Our staff have a considerable depth and variety of professional experience and an international reputation for research, development and maximising the public, educational and commercial benefits of archaeology. Based in York, Sheffield, Nottingham and Glasgow the Trust's services are available throughout Britain and beyond.

York Archaeological Trust, Cuthbert Morrell House, 47 Aldwark, York YO1 7BX

Phone: +44 (0)1904 663000 Fax: +44 (0)1904 663024

Email: archaeology@yorkat.co.uk Website: https://www.yorkarchaeology.co.uk

© 2024 York Archaeological Trust for Excavation and Research Limited
Registered Office: 47 Aldwark, York YO1 7BX
A Company Limited by Guarantee. Registered in England No. 1430801
A registered Charity in England & Wales (No. 509060) and Scotland (No. SCO42846)

CONTENTS

CONTENTS I

KEY PROJECT INFORMATION X

1 INTRODUCTION 11

2 METHODOLOGY 11

2.1 Site background and archaeological mitigation strategy 11

2.2 Excavation methodology 13

2.3 Recording methodology 14

3 LOCATION, GEOLOGY & TOPOGRAPHY 14

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND 15

5 CONTEMPORARY EXCAVATIONS IN THE ENVIRONS OF YORK GUILDHALL 17

6 RESEARCH CONTEXT 24

7 RESULTS 26

7.1 Period 1 — Naturally-occurring deposits 27

7.2 Period 1 — Possible re-worked naturally-occurring deposits 27

7.3 Period 2 — Late 1st to 2nd century ground preparation and related activity 27

7.4 Period 3 — 2nd to early 3rd century building, use and abandonment 29

7.5 Period 4 — Mid to late 2nd – early 3rd century structures and occupation 31

7.6 Late 2nd to 3rd century dumping 33

7.7 Period 5 — 3rd century structure 34

7.8 Period 5 — Cobble surface and stony levelling deposits across north-west of site 35

7.9 Period 6 – Late 11th to early 13th century activity 36

7.10 Late 12th - early 13th century refuse disposal in Excavation Area 2 38

7.11 Mid-11th to mid-13th century structures and related activity 39

7.12 Mid-13th to mid-14th century levelling, possible structure and associated features 40

7.13 Period 7 – Mid-13th to mid-14th century build-up in Excavation Area 1 41

7.14 Period 7 – Mid-13th to mid-14th century edge set tile hearth and associated structural remains 42

7.15 Period 7 – Landscaping and refuse disposal in Excavation Area 1 43

7.16 Period 8 – 14th century land division and associated structures 44

7.17 Period 8 – Medieval graveyard 45

7.18 Period 8 – Structures in the north-west of the site 48
7.19 Period 8 – Probable medieval activity 51
7.20 Period 9 – Post-medieval activity 52
7.21 Modern Activity 53
8 THE FINDS 54
8.1 The Roman Pottery 54
8.2 The Post-Roman Pottery 74
8.3 The Ceramic Building Material 90
8.4 Stone Building Materials 103
8.5 Mortar, Plaster and Painted Plaster 106
8.6 Daub and opus signinum 116
8.7 Mammal and Bird Bone 126
8.8 Fish Remains 132
8.9 Avian Eggshell 136
8.10 Mollusc Remains 137
8.11 The Human Bone 140
8.12 The Small Finds 148
8.13 The Coins 156
8.14 The Worked Stone 157
8.15 The Bulk Environmental Samples (First Phase of Excavation) 160
8.16 Roman Period material Culture and Identity at York Guildhall 165
9 SUMMARY AND INTERPRETATON 171
9.1 Period 1: Natural Geological Processes 173
9.2 Periods 2-5: Romano-British Activity 173
9.3 Period 6-8: Medieval Activity 179
9.4 Periods 9 and 10: Post-medieval and modern activity 187
10 DISCUSSION 187
10.1 Periods 1-2, late 1st to early 2nd century 187
10.2 Periods 3-4, mid-2nd to early 3rd century 188
10.3 Periods 5, 3rd and 4th century 190
10.4 Periods 6, Late 11th to early 13th century 192
10.5 Periods 7, Mid-13th to mid-14th century 194

10.6 Periods 8, 14th century land division and associated structures 196
10.7 Periods 9 and 10: Post-medieval and modern activity 198
11 CONCLUSION 198
11.1 The outcomes of the analysis 199
12 LIST OF SOURCES 203
13 REFERENCES 203
ACKNOWLEDGEMENTS 226
APPENDIX 1 – INDEX TO ARCHIVE 227
APPENDIX 2 – CONTEXT LIST 228
APPENDIX 3: PLATES AND FIGURES 249
APPENDIX 4: SPECIALIST TABLES 335
APPENDIX 5: RADIOCARBON DATING 500
APPENDIX 6: ROMANO-BRITISH POTTERY FABRIC DESCRIPTIONS 517
APPENDIX 7: OYSTER SIZE ESTIMATION 523

LIST OF PLATES

Cover: View of site
Plate 1 Gravel bank C19146, Phase 3, above glacial till. Facing south-east, 0.5m scale units 249
Plate 2 Flat cobbles at top of bank, C19205, Phase 3. Facing north-east, 0.1m scale units 249
Plate 3 Bedding or levelling deposits C3011-12, Phase 6. Facing north-west, 0.1m scale units 250
Plate 4 Bone pin SF22 from C3103, Phase 8. 10mm scale units 250
Plate 5 C19194, Phase 8, in centre of image. Facing east, 0.1m scale units 251
Plate 6 Floor bedding or levelling deposit C3092, Phase 10. Facing north, 0.1m scale units 251
Plate 7 Clay floor C3086, Phase 10. Facing north, 0.1m scale units 252
Plate 8 Mortar surface C19177, Phase11. Facing north-east, 0.1m scale units 252
Plate 9 Antler toggle SF239 from C19187, Phase 11 253
Plate 10 Demolition deposit C3026, Phase 12. Facing north, 0.1m scale units 254
Plate 11 Levelling deposit C3071, Phase 13. Facing north-west, 0.5m scale units 254
Plate 12 Channel C19150, Phase 13, cut into bank. Facing east, 0.1m scale units 255
Plate 13 Shale ring SF244 from channel fill C19151, Phase 13. 10mm scale units 255
Plate 14 Cobble and clay wall foundation C19114-15, Phase 14. Facing north-east, 0.1m scale units . 256
Plate 15 Stony levelling C3053, Phase 16. Facing north-west, 0.1m scale units 256
Plate 16 Enamelled copper alloy buckle plate SF45 257
Plate 17 Probable robbing backfill C19136, Phase18. Facing south-east, 0.1m scale units 258
Plate 18 Ground consolidation C19133, Phase 20. Facing north-east, 0.1m scale units 258
Plate 19 Wall foundation C19132, Phase 22. Facing north, 0.1m scale units 259
Plate 20 Build-up in Trench 3, C3081, Phase 26. Facing north-east, 0.5m scale units 259
Plate 21 Build-up in Trench 3, C3081, Phase 26. Facing north-west, 0.5m scale units 260
Plate 22 Heat fractured limestone C3114, Phase 27. Facing south-west, 0.1m scale units 260
Plate 23 Edge set tile hearth C3099 and C3107, Phase 27. Facing south-west, 0.5m scale units 261
Plate 24 14th century pit S1121, Phase 29, cut into to by buttress S1176 in Trench 2. Facing west 261
Plate 25 Medieval structures in Excavation Area 1. Facing north-east, 0.5m scale units 262

Plate 26 Cobbles at north-east end of wall foundation C3088, Phase 30. Facing south-east, 0.5m scale units 263
Plate 27 Profile of wall foundation C3088, Phase 30, in Trench 3. Facing south-east, 0.5m scale units 263
Plate 28 SF196-7 in grave S1154, Phase 31. Facing south-east, 10mm scale units 264
Plate 29 Relieving arch in wall Foundation C3090, Phase 32, Trench 4. Facing west 264
Plate 30 Sub floor structures S1171-72, Phase 32, butting up against wall foundation C3090 in NA WB 3. Facing north-west, 0.1m scale units 265
Plate 31 Profile of wall foundation C8092, Phase 33, NA WB 5. Facing north-west, 0.5m scale units .. 265
Plate 32 Wall foundation S1173 and buttress S1175, Phase 33. Facing west, 0.5m scale units 266
Plate 33 Edge of gravel surface butting up against wall in G195, Phase 34, NA WB 11. Facing north-east, 0.1m scale units 266
Plate 34 Disturbed grave S1192, Phase 36. Facing north-west 267
Plate 35 Brick and tile rubble S1189, Phase 36, between north-west side of site and wall foundation C3090. Facing north-east, 0.5m scale units 267
Plate 36 AF14, mid-12th to 13th century walling block with an integral capital 268
Plate 37 Post-medieval cobble surface C19033, Phase 37. Facing south-west, 0.1m scale units 268
Plate 38 Spouted pitcher with large chalk inclusion (C3052) 269
Plate 39 Spouted pitcher showing reduced and over-fired sherd and oxidized adjoining rim sherds .. 269
Plate 40 Splash Glazed Candlestick (C3050) 270
Plate 41 Splash Glazed Candlestick (C3052) 271
Plate 42 Pitcher rim showing strap handle twisted to the left at the lower end 272
Plate 43 Two handled pitcher (C3052) 273
Plate 44 Over-fired pitcher rim showing a scar where the handle was joined to the rim (3052) 273
Plate 45 Glaze over broken edge of pitcher rim sherd (C3052) 274
Plate 46 Gritty ware jar rims (C3052) 275
Plate 47 White Gritty ware body sherds, heavily sooted (C3052) 276
Plate 48 Tubular spout from fully glazed jug (C3052) 277
Plate 49 AF14, Scale units 50mm 277
Plate 50 Reverse (left) and front (right) of a plaster fragment from the Guildhall with keying lines on the reverse 278
Plate 51 A comparative example showing the reverse elevation of a fragment of mortar/plaster where keying was only present over part of the wall (Project 0834, Context 5117, SF 4526) 278
Plate 52 A cross-section of a Type 10 plaster fragment showing two superimposed layers of mortar/plaster 279
Plate 53 A comparative example of surface keying from within the legionary fortress at York 279
Plate 54 A fragment from the Guildhall with a triangular keying mark 280
Plate 55 Group 1 painted plaster with a black stripe on the front (left) and the reverse (right) 280
Plate 56 Group 1 painted plaster with a red surface 281
Plate 57 Group 1 painted plaster with a red surface with small patches of green above, possibly leaves 282
Plate 58 Group 1 plaster front (left and reverse) with patches of green paint 282
Plate 59 Group 1 front with a thin red line (left) and the reverse (right) 283
Plate 60 Group 1 plaster with a red and white stripe 284
Plate 61 Type 11 mortar with leaf and trellis design 285
Plate 62 Moulded plaster fragment with rebate 285
Plate 63 Moulded plaster fragment with part of hollow curve on the surface at the left hand side 286
Plate 64 Moulded plaster fragment with part of hollow curve on the surface 286
Plate 65 The keying on a Type 1b mortar fragment 287
Plate 66 Type 7a plaster with splashed red paint 287

Plate 67 Type 17 plaster with blue-green paint 288
Plate 68 SK 7, cranium displaying 'orange peel-like' surface. Scale 2cm 289
Plate 69 SK 7, cribra orbitalia. Scale 5cm 289
Plate 70 SK 7, dental pathologies of AMTL and a large carie highlighted. Scale 2cm 290
Plate 71 SK 10, osteophytes around the joint margins of a vertebra body attributed to degenerative joint disease and advancing age. Scale 2cm 290
Plate 72 SK 10, periosteal new bone on the right radial tuberosity attributed to degenerative joint disease, along with myositis ossificans of new bone growth along the interosseous crest linked to muscle trauma. Scale 5cm 291
Plate 73 SK 10, myositis ossificans on the left and right ischium displaying new bone on the ischial tuberosity related to muscle trauma. Scale 5cm 291
Plate 74 SK 10, myositis ossificans along the linea aspera on the left femur attributed to muscle trauma. Scale 2cm 292
Plate 75 1st metacarpal with a transverse fracture with evidence of healing. Scale 5cm 292
Plate 76 SF41 Silver penny of William I 293

List of Tables

Table 1 Contemporary Excavations in the Environs of the Guildhall 18
Table 2 Relevant regional research aims 171
Table 3 Index to archive 227
Table 4 Context list 228
Table 5 Romano-British pottery by ware types 335
Table 6 Ware totals by period and phase groups 335
Table 7 All Romano-British pottery by ware 335
Table 8 Amphorae 337
Table 9 Samian table wares by phase and production location 337
Table 10 Samian forms by estimated vessel equivalents (EVEs) and maximum number of vessels (MNV) 338
Table 11 Function and form by source — Roman vessels 339
Table 12 Fine wares other than Samian ware 341
Table 13 Mortaria 341
Table 14 Roman Coarse wares 342
Table 15 Roman vessel form by Period (not including amphorae) 342
Table 16 Roman ware groups by period, relative proportions by EVEs 343
Table 17 Post-Roman pottery quantification by context 344
Table 18 Post-Roman Pottery Analysis of Wares 404
Table 19 Post-Roman Pottery Weights 405
Table 20 Minimum Number of Vessels (MNV) and Estimated Vessel Equivalents (EVES) by Base 414
Table 21 Minimum Number of Vessels (MNV) and Estimated Number of Vessels Equivalents (EVES) by Rim 416
Table 22 CBM by form in relation to period 416
Table 23 CBM in relation to context 417
Table 24 Summary of features present on the Roman CBM 422
Table 25 Roman CBM fabrics 423
Table 26 Summary of features present on the medieval roofing tiles 423
Table 27 Medieval CBM fabrics 424
Table 28 Stone flags and tesserae by context 425
Table 29 Architectural fragment catalogue 426
Table 30 Building stone catalogue 428

Table 31 Mortar descriptions 429
Table 32 Summary of mortar/plaster types 429
Table 33 Mortar, plaster and painted plaster by context 431
Table 34 Summary of Roman mortar and plaster groups 432
Table 35 Details of the Roman painted plaster 432
Table 36 Building materials by phase 433
Table 37 Residuality by weight in grams in relation to historical periods 437
Table 38 Residuality as a % of the total volume for selected forms in relation to historical periods 438
Table 39 Percentage of gnawed to ungnawed bones (teeth are excluded) 438
Table 40 Number of Identified Specimens (NISP) from hand-collected bone 438
Table 41 Number of Identified Specimens (NISP) from environmental residues 439
Table 42 Mandibular ageing data 440
Table 43 Minimum Number of Elements (MNE) for cattle, sheep and pigs 440
Table 44 Detailed information on bones from Contexts C3026 and C19137 441
Table 45 Summary of fish remains 442
Table 46 Avian eggshell by context 443
Table 47 Summary of terrestrial molluscs from the Guildhall, York. MNI = minimum number of individuals. HC = hand collected 443
Table 48 Summary of marine invertebrates 443
Table 49 Infestations observed on European flat oyster shells 446
Table 50 Size estimation for oyster valves from the Guildhall, York, minimum number of valves (MNV) 446
Table 51 Quantification of marine species at the Guildhall, York, by minimum number of valves (MNV) and minimum number of individuals (MNI). L = left valve; R = right valve 446
Table 52 Skeletal Preservation 446
Table 53 Skeletal Demographic Attributes, Stature and Pathology 447
Table 54 Disarticulated Remains 449
Table 55 Small Find List 475
Table 56 Roman Frit Objects Catalogue 481
Table 57 Roman Vessel Glass Catalogue 481
Table 58 Roman Window Glass Catalogue 482
Table 59 Coin Catalogue 483
Table 60 Charred and mineralised plant macrofossils 485
Table 61 Waterlogged plant macrofossils from borehole samples 489
Table 62 Charcoal 497
Table 63 Oyster size estimation 523

List of Figures

Figure 1 Location map 294
Figure 2 North Annexe and other sites in the Environs of York Guidhall 295
Figure 3 North Annexe archaeological interventions and boreholes 296
Figure 4 Plan of sections figures 05.1–11.2 297
Figure 5 Section figure 05.1 298
Figure 6 Section figure 06.1 299
Figure 7 Section figure 07.1 301
Figure 8 Section figures 08.1 and 08.2 302
Figures 9 Section figures 09.1 – 09.4 303
Figure 10 Section figures 10.1 and 10.2 304
Figure 11 Section figures 11.1 and 11.2 305
Figure 12 Orthorectified view of section figure 05 306
Figure 13 Orthorectified view of section figure 06 307
Figure 14 Period 1: Naturally-occurring and possible re-worked naturally-occurring deposits. Phase 1 – 2 308
Figure 15 Period 2: Late 1st to 2nd century ground preparation and related activity. Phases 3 – 4 309
Figure 16 Period 2: Late 1st to 2nd century ground preparation and related activity. Phase 5 310
Figure 17 Period 3: 2nd to early 3rd century building, use and abandonment. Phase 6-7 311
Figure 18 Period 3: 2nd to early 3rd century builsing, use and abandonment. Phase 8 312
Figure 19 Period 3: 2nd to early 3rd century builsing, use and abandonment. Phase 9 313
Figure 20 Period 4: Mid to late 2nd – early 3rd century structures and occupation. Phases 10 and 11 314
Figure 21 Period 4: Mid to late 2nd – early 3rd century structures and occupation. Phase 12 315
Figure 22 Period 4: late 3nd to 3rd century dumping. Phase 13 316
Figure 23 Period 5: 3rd century structure and associated deposits. Phases 14-17 317
Figure 24 Period 6: Late 11th to early 13th century activity. Phases 18-19 318
Figure 25 Period 6: Late 11th to early 13th century refuse disposal in Excavation Area 2. Phase 20, Groups 132-135 319
Figure 26 Period 6: Mid-11th to mid-13th century structures and related activity. Phases 21-23 320
Figure 27 Period 6: Mid-13th to mid-14th century levelling, possible structure and associated features. Phases 24-25 321
Figure 28 Period 7: Mid-13th to mid-14th century build-up in Excavation Area 1. Phases 26-27 322
Figure 29 Period 7: landscaping and refuse disposal in Excavation Area 1. Phases 28-29 323
Figure 30 Period 8: The Augustinian friary. Phases 30-35 324
Figure 31 Period 9: Post-medieval activity. Phases 36-38 325
Figure 32 Period 9: Post-medieval activity. Phases 39- 41 326
Figure 33 Rockworks profile 327
Figure 34 Group 5 mortar fragments 328
Figure 35 Enamelled copper alloy buckle plate SF45 329
Figure 36 Pottery production sources 330
Figure 37 Romano-British animal bone assemblages 331

Abbreviations

AOD	Above Ordnance Datum
AF	Architectural Fragment
BF	Bulk Find
BGL	Below Ground Level
BGS	British Geological Survey
CBM	Ceramic Building Material
CYC	City of York Council
EVES	Estimated Vessel Equivalents
HC	Hand collected
IADB	Integrated Archaeological Database
MNE	Minimum Number of Elements
MNI	Minimum Number of Individuals
MNV	Minimum Number of Valves
MNV	Minimum Number of Vessels
MSM	Musculoskeletal Markers
NISP	Number of Identidied Specimens
OS	Ordnance Survey
RH	Relative Humidity
SF	Small Find
ST	Structural Timber
UPD	Updated Project Design
YAT	York Archaeological Trust

NON-TECHNICAL SUMMARY

Between the 11th May and the 26th November 2020 York Archaeological Trust (YAT) conducted an archaeological excavation at the North Annexe of the City of York Guildhall, YO1 9QN (SE 460070 451930) (Figure 1).

The work was undertaken for City of York Council (CYC) to satisfy the conditions for planning consent linked with application 16/01971/FUL and amendments 19/00806/NONMAT. The archaeological work was completed following a Works Specification produced by City of York Council, a YAT Project Proposal and a revised Written Scheme of Investigation (WSI) produced by YAT. This involved a watching brief on ground reductions for new construction within the North Annexe area of the Guildhall redevelopment.

The area was upgraded to an excavation once it was established that groundworks would affect a significant sequence of archaeological deposition dating from the late 1st century to the modern period.

Activity at the site begins with the remodelling of land dropping down to the north-eastern bank of the River Ouse. By the late 1st century the natural slope was cut back into a series of terraces onto which a succession of domestic buildings were constructed and periodically replaced during the course of the 2nd and 3rd centuries. Very little evidence was forthcoming for continued activity at the site after the 3rd century into the early medieval period beyond a small selection of 4th century artefacts, including pottery and four coins that were largely recovered from later deposits.

Intensive activity on the site was not re-established until the late 11th or 12th century when the last remaining Roman buildings were dismantled to foundation level. The site appears to have remained fairly marginal throughout the 12th and into the early 13th century, with activity largely focused on waste disposal.

The effect, whether deliberate or not, was to raise and consolidate the ground level by the mid-13th century. Documentary sources show that an Augustinian friary was established at the site by AD 1272. Re-occupation of the site in the mid-13th century is reflected by a substantial structure incorporating a large edge-set tile hearth. The appearance of large rubbish disposal pits demonstrates that waste disposal had become a more closely-managed activity by the 14th century. It was also around this time that zonal activity becomes more clearly defined, for example a large stone-built wall bisected the site from north-east to south-west. This was perhaps part of a building that also incorporated a second limestone wall on the same north-east/south-west alignment that was found a short distance to the north-west. A graveyard was established south-east of these structures and appears to have remained in use until the 16th century.

Following the Dissolution, the friary buildings were dismantled, leaving little more than their foundations. Soil accumulation predominated from the late 16th through to the 18th century, presumably relating to gardens at the rear of 10-14 Lendal, a pair of town houses built around 1714 (RCHMY 1981, 155; York Conservation Trust 2016).

Buildings again encroached onto the site from the 19th into the 20th century with the construction of the Guildhall's North Annexe and the Hutments.

KEY PROJECT INFORMATION

Project Name	Archaeological Investigations at the North Annexe, York Guildhall
YAT Project No.	6019
Document Number	YA/2023/277
Type of Project	Excavation and Watching Brief
Client	City of York Council
Planning Application No.	16/01971/FUL , 19/00806/NONMAT
NGR	SE 460070 451930
Museum Accession No.	YORYM: 2023.3
OASIS Identifier	yorkarch3-507201

REPORT INFORMATION

Version	Produced by		Edited by		Approved by	
	Initials	Date	Initials	Date	Initials	Date
Draft 1.0	BS	28.11.23	KS	15.12.23		
Draft 1.8	BS	09.02.24	KS	15.05.24	KS	12.06.24

Copyright Declaration:
York Archaeological Trust give permission for the material presented within this report to be used by the archives/repository with which it is deposited, in perpetuity, although York Archaeological Trust retains the right to be identified as the author of all project documentation and reports, as specified in the Copyright, Designs and Patents Act 1988 (chapter IV, section 79). The permission will allow the repository to reproduce material, including for use by third parties, with the copyright owner suitably acknowledged.

Disclaimer:
This document has been prepared for the commissioning body and titled project (or named part thereof) and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of the author being obtained. York Archaeological Trust accepts no responsibility or liability for the consequences of this document being used for a purpose other than that for which it was commissioned.

1 INTRODUCTION

A wide ranging programme of refurbishment and redevelopment of the Guildhall to create conference rooms, meeting rooms and offices, plus a new extension added onto the north side of the complex was granted planning permission in 2016. The focus of this report is the archaeological excavation at the North Annexe of the City of York Guildhall conducted by York Archaeological Trust (YAT) between the 11th May and the 26th November 2020 (Figure 2).

The archaeological works were undertaken for the City of York Council to satisfy Planning Condition 16 within application 16/01971/FULM:

> *16. A programme of archaeological mitigation, including further evaluation work, excavation, public access & community engagement, post excavation assessment & analysis, publication, and archive deposition is required in connection with this development. The applicant will submit an archaeological project design for archaeological mitigation on this site.*
>
> *The works set out in the project design shall be approved and discharged in the following 3 stages: A) No development shall commence until an archaeological project design including a written scheme of investigation (WSI) describing the archaeological project (excavation, deposit monitoring, public access and engagement, post-excavation assessment and analysis, publication and archive deposition) has been submitted to and approved by the local planning authority in writing. The WSI should conform to standards set by the Chartered Institute for Archaeologists.*
>
> *B) The site investigation, deposit monitoring, post investigation assessment and analysis, report preparation and submission for publication, and archive deposition shall be completed in accordance with the programme set out in the project design and WSI approved under (A). This part (B) of the condition shall not be discharged until these elements have been fulfilled in accordance with the programme set out in the approved project design and WSI and have been approved by the local planning authority in writing.*
>
> *C) A copy of a report or publication of the project shall be deposited with City of York Historic Environment Record to allow public dissemination of results within 12 months of completion of works on site or such other period as may be agreed in writing with the Local Planning Authority. This condition is imposed in accordance with Section 12 of NPPF. Reason: The site is of archaeological interest and lies within an Area of Archaeological Importance and the development may harm important archaeological deposits which must be recorded prior to destruction.*

2 METHODOLOGY

2.1 Site background and archaeological mitigation strategy

The initial phase of ground investigation commissioned by CYC comprised an evaluation undertaken by AOC Archaeology Group in 2014 at the 'Hutments' site which lay immediately to the north-west of the North Annexe. Ultimately this part of the development site would evolve

into Excavation Area 1. Designed from inception as a community engagement project the evaluation saw a reduction in ground level by approximately 1.2m across much of the Hutments site, removing largely late medieval and post-medieval levelling deposits which were found to overlie medieval walls in two 1 x 1m test pits that extended a further 0.8m in depth (AOC 2015; York HER accessed 12/09/23). In 2016 AOC Archaeology also carried out monitoring on ground investigation works, including test pits and boreholes at both the former Hutments site and a corridor of open space between the south-eastern side of the 15th century Guildhall building and the Guildhall's 19th century South Range.

YAT's involvement with the project started in 2018 with an excavation for a lift pit sited in the southern end of the North Annexe, and a watching brief on engineering pits within the same building and adjacent external spaces (Coates *et al*. 2020, iii and 23-6). These works were carried out on the basis of a Project Proposal Submission by YAT issued in 2017 (Milsted and Reeeves 2017), setting out an archaeological mitigation methodology for the site based on a brief supplied by CYC, the key to which was delivering the requirements of planning Condition 16 (16/01971/FULM).

YAT continued as the sole archaeological contractor for the remaining phases of archaeological mitigation. During 2019 and 2020 a watching brief was maintained on a variety of ground and structural investigations, including demolition of part of the North Annexe building, underpinning of the riverside tower, ground reduction and other ancillary works, such as a crane pit (Coates 2020, 1-3).

Whilst monitoring the removal of deep brick foundations of the North Annexe building, three disturbed graves were exposed along the edge of the trench, along with earlier archaeological deposits, which would have been affected by the auger piles and therefore required hand excavation. The remains constituted a possible graveyard which lay approximately 150mm below the maximum construction formation depth and this thickness of cover did not provide an adequate buffer to safely preserve the remains in situ. The risk posed to the now better understood extent and character of archaeological deposits by the proposed piling plan and foundation layout required revision to the archaeological mitigation strategy, and for that reason an update to the Project Proposal Submission and WSI became a necessity (Milsted 2020). Accordingly, provision was to be made to meet five fundamental requirements:

- Excavate human remains
- Three trenches to address specific research questions (see Milsted 2020, 8-9)
- Investigate pile locations for further archaeological impact
- Detailed borehole survey and deposit model
- Ongoing watching brief

After consultation with the City Archaeologist, Claire MacRae, a full excavation was carried out to identify the extent of the cemetery and any other significant archaeology in what was to become Excavation Area 1. The next phase of mitigation began in May 2020 with an ambitious three week programme of excavation intended to meet the first three of these targets in Excavation Area 1.

The fieldwork element of the fourth requirement was met through the monitoring of boreholes and pile excavation during July and August 2020, during which time monitoring of other

elements of foundation excavation and ground reduction associated with the site drainage strategy continued. Where significant archaeological deposits were encountered by the monitoring they were recorded as North Annexe Watching Brief (NA WB) 1-11 (see Figure 3).

A major portion of the ongoing watching brief was concentrated in the north-eastern end of the North Annexe building where new drains and manholes were to be installed close to foundations for a new chimney stack. The depth of excavation required for all of these elements ultimately resulted in a six week programme of excavation through October and November 2020, together becoming Excavation Area 2.

To summarise, the character and quality of the archaeological record present at the Guildhall North Annexe was significantly more intact, complex and closer to the impact zone of the development (the new build elements of the project in particular) than had been suggested by either the evaluation or early phases of mitigation (the lift shaft excavation and crane pit specifically). This is a reflection of limitations inherent in two aspects of the mitigation strategy. Firstly, despite the large area covered by the Hutments site evaluation in 2014 the thickness of late and post-medieval build-up did not allow for more than two small windows to reach the top of medieval horizons where, in both cases, intact masonry walls were encountered. Foundation design at that early stage is unlikely to have been at a sufficiently advanced stage to inform clearly on the depth of impact and the consequent risk presented to the archaeology. Secondly, where deeper excavation was carried out early on, for example the lift pit, the underpinning of the riverside tower and the crane pit, these were concentrated at the south-western end of the site where post-medieval and modern build-up was at it thickest, effectively concealing earlier deposits while building up and extending useable land on the river margin. A false impression as to the extent and distribution of material of little archaeological value appears therefore to have been extrapolated for the north-eastern end of the North Annexe site.

The result appears to be that the risk to archaeological deposits was not fully understood before the construction program was underway. However, it is clear that a requirement for further stages of work or mitigation measures stated in the WSI allowed sufficient scope for the watching brief to be escalated to limited excavation in those areas directly impacted by development works. Unfortunately, this has resulted in a rather frustrating lack of cohesion across the earliest deposits due to small isolated pockets where deeper excavation was a necessity, particularly across the northern part of the site.

2.2 Excavation methodology

The excavation was initially carried out using an 8-tonne rubber-tracked mechanical excavator. Machine excavation ceased when significant archaeological deposits were exposed. Three 3x3m trenches (Trenches 2, 3 and 4) were targeted on specific areas of interest for hand excavation, situated where the piling would have the greatest impact, as agreed with the City Archaeologist. Each trench was 2.4m deep in total, which consisted of a depth of 1.2m for the full 3x3m area, with a further 1.2m depth in the centre over a 1x1m area (Figure 3).

The percentage of disturbance of archaeology affected by the auger piles was below the requirement for planning consent. However, at least three piles would have impacted upon a large magnesian limestone wall exposed across the site. This would have required the mechanical excavation of the wall to an unknown depth, affecting the archaeological deposits

on either side. Where possible, pile locations were moved, and where this was not achievable the harm was mitigated via targeted excavation.

Following the conclusion of archaeological works in Excavation Area 1 a watching brief was maintained on elements of the construction program where archaeological deposits were impacted. This included the targeted reduction of the large magnesian limestone wall running through the centre of the site, additional small-scale hand excavation around pile caps and excavation relating to installation of utilities, for example drains and manholes. In total 11 discrete areas required dedicated archaeological investigation. These have been referenced as North Annexe Watching Brief (NA WB) and assigned identifying numbers 1-11 (Figure 3).

A watching brief was also carried out during the drilling of piles, the results of which were issued in YAT Interim Report 2020/120 (Jackson–Slater and Krawiec 2020). Following the installation of a pile mat 56 piles were sunk, 48 of which were monitored. In addition, six windowless sample boreholes were arranged across the west of the site to provide a profile through the archaeological remains to the top of the naturally-occurring deposits (Figure 3).

Utility works inside the north-eastern end of the former North Annexe building involved the extension and widening of existing drains. Initial watching brief works exposed more burials and the top of what turned out to be a sequence of complex, well-stratified deposits dating to the Roman and medieval periods. This became Excavation Area 2 (Figure 3). Constraints resulting from limited access and a large 19th/20th century drain bisecting the area necessitated excavation in four separate pieces from west to east.

2.3 Recording methodology

The site boundary and notable features were recorded and a 5m site grid aligned to the OS using a Leica Viva GNSS-GS16 unit (accurate to 10mm).

Colour digital photography was used to document archaeological contexts and to capture working shots of the excavation. Additional photographs were taken using a DSLR and a smartphone capturing images at a resolution of no less than 12 megapixels. Each context was assigned a unique four-digit context number, drawn in plan and recorded on a proforma context card. Significant features and deposits were also recorded photogrammetrically.

Finds were retrieved and bagged by individual context number and a judgement sampling policy was followed for the retrieval of environmental samples from suitable contexts.

All site records for this excavation are currently stored with York Archaeological Trust under the project number 6019. The site archive has been digitised and entered into York Archaeological Trust's Integrated Archaeological Database (IADB Project 6019).

YAT Excavation Interim Report 2020/119 (Coates 2020) solely covered Excavation Area 1 and is superseded by this report which draws on the borehole survey covered by YAT Interim Report 2020/120 (Jackson-Slater and Krawiec 2020) and integrates the results of Excavation Areas 1 and 2 with those of the 2020 watching brief work in NA WB 1-11.

3 LOCATION, GEOLOGY & TOPOGRAPHY

The Guildhall lies between Lendal, St Helen's Square and the River Ouse, which it overlooks. The site is a roughly U-shaped plot of land located 0.36km south-west of the Minster. It is bounded

to the south-west by the River Ouse and the York Boat mooring, whilst mainly commercial properties bound the site to the north-west and north-east. An area of open ground currently used as a terrace for adjacent bars lies to the south-east. The site can be accessed from two covered passageways running south-west from Lendal and St Helen's Square. The footprint of the site is roughly 0.3ha.

The site of the Guildhall buildings and their immediate surroundings is roughly level between 10.44m AOD and 11.31m AOD, however the natural ground surface slopes steeply downwards from Lendal to the River Ouse. Therefore, the current structural elements of the site have clearly been built on artificially raised and levelled ground. The ground level on Lendal is about 14.3m AOD and the mean summer river level of the Ouse is 5m AOD.

The underlying solid geology for the site is the Sherwood Sandstone Group. The superficial geology immediately adjacent to the River Ouse is Alluvium whilst further up the slope it consists of clay and silt deposits of the Alne Glaciolacustrine Formation (www.bgs.ac.uk accessed on 18/04/22).

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The chronological sequence of the Guildhall and its later series of ancillary buildings are relatively well understood. In recent years this knowledge has been significantly expanded through a number of documentary and physical investigations into the site itself as well as its immediate surroundings. The following summary is adapted from the YAT project design (Reeves and Milsted 2017/115a).

Roman

The site is located immediately to the south-west of the Roman fortress defences, with the main gatehouse being located in St Helens Square. Evidence of Roman roads have been found along the front of the fortress, along the Lendal/Coney Street/Spurriergate alignment, as well as running towards a former crossing over the Ouse, potentially under the medieval Guildhall.

Anglian/Anglo-Scandinavian

The earliest reference to Coney Street (which previously extended to include Lendal and Spurriergate) dates to the mid-12th century, although it would have been part of the earlier Roman road network and continued in use throughout the Anglian and Anglo-Scandinavian periods. It is possible that structures in the area also continued in use throughout these periods and, therefore, it was thought likely that (at the very least) small pockets of occupation from this period would be present on the site, or in the immediate vicinity.

Medieval

An Augustinian friary was established by AD 1272. The exact position of buildings within the friary precinct is unknown, but the gateway was present on Old Coney Street, now Lendal. The friary would have been responsible for the upkeep of the pavement and were expected not to hinder the course of the river. Several additions were made to the friary in the 14th century, eventually extending across much of the development site, with the Guildhall acting as a boundary to the south-east of the complex (VCHY 1961, 361). The friary was ultimately dissolved in 1538 (Raine 1955, 133), but whilst in use would have comprised numerous individual buildings, structures and a cemetery.

A charter records the transformation in 1256 of a private hall belonging to Gerard and Hugh, sons of Lefwin, into the common civic hall, now the Guildhall (Rees Jones 20113, 203-4), but the current building was not actually built until the mid-15th century. It is unclear if the standing building occupies the same position as the 13th century structure.

Post-medieval

Following the Dissolution of the Monasteries in the 1530s the site was leased for a period of 21 years to Sir George Lawson and was held by Thomas Lawson until his death in 1568 (VCHY, 361).

After the reduction of the Augustinian friary buildings in the North Annexe area and to the north of the Guildhall building, much of the site became open ground. The Guildhall building itself continued to be in use with alterations and adaptation of the building and its surroundings as required.

Construction of the Mansion House started in 1726 and involved the demolition and removal of structures to the north-east, between the Guildhall building and St Helen's Square. The 18th century is also when many of the standing buildings along Lendal were constructed and, more significantly, when the gardens to the rear were landscaped, giving the layout as presented on the first edition Ordnance Survey map of 1852.

At the start of the 19th century additions to the south-west of the Guildhall were built to accommodate council meetings.

Modern

Rapid and large-scale changes took place over the study area in the late 19th and early 20th centuries. New municipal offices were built c.1890 and then the North Annexe was constructed c.1902, with the South Range built c.1904. Further structures were constructed in Common Hall Yard in the early 20th century.

In the second half of the 19th century the boundary to the north-west of the site was altered and the wall rebuilt. The open space between this boundary and the North Annexe was filled by the construction of the 'Hutments' buildings, built c.1945. These were possibly built to accommodate council activities whilst repairs were underway following the April 1942 'Baedeker' bombing raid.

Recent Archaeological Investigations

In 2012 YAT, as part of the York 800 celebrations, excavated two trenches within the Guildhall site, and one trench in the Mansion House cellar (Whyman 2012). One of the trenches was located along the southern wall of Common Hall Lane, a medieval covered lane which led to a water gate and which is located below the Guildhall. Results from this trench showed that the current Guildhall building was constructed on top of an earlier building, potentially the earlier 13th century Guildhall. A second trench, located within Common Hall Yard, found a complicated archaeological sequence starting as early as the 12th century. Open yards were superseded by walls that may have been part of a chapel and/or a *maison dieu* constructed at the same time as the current Guildhall. Following this was a series of further surfaces and floors continuing into the post-medieval period, before demolition linked with the construction of the Mansion House occurred across this part the site. Well-stratified archaeological deposits were revealed within 500mm of the extant yard surface. A further trench in the basement of the Mansion House uncovered natural deposits below the cellar floor level.

During 2014 AOC Archaeology Group (AOC 2015) excavated two trenches on the 'Hutments' site adjacent to the North Annexe buildings. The excavated trenches were between 1m and 1.3m deep with further 1m² test pits at the base. The excavations exposed archaeological remains including possible medieval walls (8.72-9.89m AOD), post-medieval horticultural features (10.29m AOD), a rubble pathway (10.08m AOD) and extensive dumping of material to raise ground levels. In addition to the trenches a series of five boreholes were monitored, all of which were positioned within the trenches excavated. The results of these recorded the presence of earlier alluvial deposits containing preserved organic material in boreholes located closest to the river, at depths between 4.83-6.05m AOD. All five boreholes contained a significant made ground component, the top of which was recorded between 9.28-10.25m AOD, sloping upwards from south to north. The thickness of the made ground also varied, from 4.45m thick at the south-western end of the site, to 2m thick at the north-eastern end. Borehole 1, which was closest to the river, encountered a below-ground obstruction at 7.95m AOD, suggesting built structures are present on the site at depth.

In 2016 AOC Archaeology Group (AOC 2016) conducted further investigations through the method of test pits and boreholes. Adjacent to the North Annexe tower a test pit revealed disturbance linked with its construction, to a depth of 1.4m below the existing ground level. Two test pits excavated against the South Range wall indicated modern disturbance from its construction, also to a depth of around 1.4m below ground level. A borehole located between the South Range and the Guildhall indicated the potential for significant archaeological deposits at depth, in particular an organic-rich deposit containing timber fragments and sherds of Late Saxon pottery which was recorded at 1.3m below the existing ground level. This gives a possible indication of early medieval activity occurring in this part of the site. The boreholes recorded in the western part of the site also revealed waterlogged and organic deposits, probably dating from the medieval periods onwards. The deposits had a thickness of up to 3m and were thought to be an accumulation of material associated with riverside activity and/or settlement. The depth of these deposits sloped down from north to south, from 3.9-5.1m BGL at the northern end of the site, to up to 8m BGL at the southern end. The accumulated material was subsequently overlain by demolition and levelling layers dating to the late medieval to post-medieval periods.

Also in 2016, YAT undertook a watching brief during two phases of underpinning in the Mansion House (Kendall and Savine 2016). Much of what was revealed was linked with the 18th century construction of the building. However, there was evidence for a Roman road surface and a large pit, possibly Anglo-Scandinavian in date.

In 2018 YAT monitored works including engineering pits and excavations for a lift shaft within the North Annexe building and yard areas (Coates *et al*., 2020). Internally, the lift shaft revealed deposits associated with the extant North Annexe building. The engineering pits revealed a substantial mix of yard soil and horticultural soil dated to between the 18th and 19th centuries.

5 CONTEMPORARY EXCAVATIONS IN THE ENVIRONS OF YORK GUILDHALL

The summaries below cover archaeological works undertaken between 2012 and 2022 at York Guildhall and nearby locations that provide significant additional information regarding the

archaeological deposits encountered by YAT in the vicinity of the Guildhall North Annexe during the present works (HER reference EYO8004).

The works included are presented in Table 1 below:

Table 1 Contemporary Excavations in the Environs of the Guildhall

Site Name	Year	Report Details	HER References
Excavations at Guildhall Yard	2012	Whyman, M., 2012. 'York 800: Excavations in Guildhall Yard'. *Northern Archaeology Today: York Archaeological Trust Magazine* **2**, 20–24	EYO6016 SYO2830
The Hutments Site, The Guildhall, York Evaluation	2014	AOC Archaeology, 2015. *The Hutments Site, The Guildhall, York. Interim Archaeological Evaluation Report*. AOC Archaeology Group unpublished report	EYO6255 SYO61856
Guildhall, Lendal (Hutments) Watching Brief	2016	AOC Archaeology, 2016. *Guildhall, York. Groundwork Investigation Archaeological Watching Brief Report*. AOC Archaeology Group unpublished report	EYO625 SYO61856
York Mansion House	2016	Kendal, T. and Savine B., 2016. *Archaeological Investigations at the Mansion House, York*. York Archaeological Trust unpublished report 2016/27	EYO6304 SYO1896
City of York Guildhall Watching Brief and Excavation	2018	Coates, T., Kendal, K., Shaw, A. and Smith, K., 2020. *Archaeological Investigations at the City of York Guildhall*. York Archaeological Trust unpublished report 2020/85	EYO7786 SYO2502
City of York Guildhall Watching Brief	2019-20	Coates, T., 2020. *Archaeological Investigations at the City of York Guildhall*. York Archaeological Trust unpublished report 2019/164	EYO7811 SYO2567
Former Post Office, Lendal	2022	Karwiec, K. and Loffman, G., 2022. *Archaeological Investigations at Former Post Office, 22 Lendal, York*. York Archaeological Trust unpublished report 2022/54	EYO7974 SYO2830

Excavations at Guildhall Yard, YAT 2012. NGR SE 6012 5191. HER reference EYO6016, SYO2830.

Three locations were investigated in and around York's medieval Guildhall by YAT during the summer of 2012 as part of participatory events associated with the celebration of 800 years since the granting of the city's royal charter. Three small trenches were opened with the intention of facilitating public viewing of archaeological works. Trench 1 was located in the Mansion House cellar, Trench 2 to the north of the Guildhall on the southern side of Common Hall Lane, and Trench 3 in Guildhall Yard, between the rear of the Mansion House and the main entrance to the Guildhall. Trench 1 was of interest as it exposed part of what may have been an early cobble surface, perhaps part of either Roman Road 2 or Road 10 as designated by the RCHME (RCHMY 1962, 3), while Trenches 2 and 3 revealed some evidence for the evolution of the Guildhall and the space around it (Whyman 2012, 20-24).

Trench 1, a small 1m² trench excavated through the brick floor of the cellar, exposed naturally-occurring deposits comprising laminations of silt and clay approximately 0.4m below the floor surface. Present above the naturally-occurring deposits was a compacted layer of cobbles set into clay, which at approximately 0.1m thick extended to 11.21m AOD. Next in the sequence were two stony layers directly below the cellar floor which were interpreted as foundation material supporting the cellar wall above. No dating evidence was recovered from Trench 1 (Whyman 2012, 21-2), however, the height of the cobbles is close to that of a probable Roman road exposed during underpinning works carried out at the Mansion House in 2016.

Trench 2 was opened in Common Hall Lane, which originally provided access from Coney Street to a water gate opening onto the River Ouse. Construction of the standing Guildhall building in the mid-15th century appears to have resulted in substantial rebuilding of the lane, now enclosed by a vaulted ceiling under the Guildhall's north aisle (RCHME 1981, 77). The trench was positioned up against the stone wall and pillars supporting the octagonal oak columns of the Guildhall's north aisle at the point where a doorway, now blocked, formerly provided access to a cellar. Trench 2 exposed more than one phase of masonry building. The earliest structural remains pre-date the standing Guildhall and were of notably higher-quality stonework than the coarsely-built footings above it. Those footings support the Common Hall Lane archway, the blocked cellar door and an arcade pier which belong to the 1440's building. The superior quality of the earlier masonry exposed in the lower part of the trench suggests that it stood at a point above the contemporary ground surface, rather than forming a part of a building's foundations (Whyman 2012, 24). The presence of the Guildhall in York is referred to in a royal charter from 1256 (RCYME 1981, 76) and it is possible that the pre-1440's masonry could be part of an earlier Guildhall building (Whyman 2012, 24).

Trench 3, excavated in Guildhall Yard close to the main entrance to the Guildhall, measured 5x1m. The earliest deposits revealed appear to relate to backyard activity, comprising garden soils broadly dated to the 12th/13th century. Soil accumulation was followed by the construction of a building, surviving as two substantial stone-built walls running parallel to the front of the Guildhall. The masonry of the wall farthest from the Guildhall was bonded with mortar and was at a level close to that of the threshold of the Guildhall's main door. It is probable that the walls belong to one of two buildings documented as built in conjunction with the mid-15th century Guildhall: a chapel and a *maison dieu*. By the 17th century the *maison dieu* had been converted

into a public house, and a series of post-medieval external surfaces and possible internal floors may be related to this usage. The buildings in this area had been demolished by 1725 to make way for the Mansion House, and this area became an open cobbled yard, remaining as such until at least the late 19th century (Whyman 2012, 22).

The Hutments Site, the Guildhall, York Evaluation Project, AOC Archaeology Group 2014-15. NGR SE 6012 5191. HER reference EYO5577, SYO1538.

In 2014 AOC Archaeology Group carried out an excavation at the former Hutments site, adjacent to the north-western side of the Guildhall North Annexe, centred at NGR SE 6008 5191. Two trenches were opened and excavated to depths ranging from 1-1.3m with further 1m^2 test pits at the base. The excavations exposed archaeological remains including possible medieval walls at 8.72-9.89m OD, post-medieval horticultural features at 10.29m OD, and a rubble pathway at 10.08m OD with extensive dumping and raising of ground levels at the top of the depositional sequence (AOC 2015).

In addition to the trenches a series of five boreholes were monitored, all of which were located within the trenches. All five boreholes contained a significant depth of archaeological deposition, the top of which was recorded between 9.28-10.25m AOD, sloping down from north-east to south-west. The thickness of archaeological deposits increased on that alignment, from 2m at the north-east to 4.45m to the south-west. Alluvial deposits containing preserved organic material was present in boreholes located closest to the river, at depths of between 4.83-6.05m AOD. Borehole 1, which was closest to the river, encountered a below ground obstruction at 7.95m AOD, suggesting built structures are present on the site at depth (Jackson-Slater and Krawiec 2020, 9).

York Archaeological Trust have incorporated the AOC Archaeology Group borehole survey data into deposit modelling covering the area of the North Annexe and former Hutments (Jackson-Slater and Krawiec 2020).

Guildhall, Lendal (Hutments) Watching Brief, AOC 2016. NGR SE 6008 5191. HER reference EYO6255, SYO61856.

City of York Council commissioned AOC Archaeology Group to carry out monitoring of additional site investigation works at the Guildhall which were undertaken in 2016. The works involved hand excavation of three test pits and the drilling of six boreholes, some in the former Hutments site and others south of the Guildhall in space adjacent to the South Range (AOC 2016). The site was centred on NGR SE 6008 5191.

The test pits were dug to depths ranging from 1.4-1.7m BGL, revealing post-medieval made ground (AOC 2016).

Data gathered from the boreholes in the former Hutments area has again contributed to the deposit modelling produced by York Archaeological Trust (Jackson-Slater and Krawiec 2020). Up to 3m thickness of waterlogged and organic deposits were identified, the accumulation of which was thought to be associated with riverside activity or settlement (AOC 2016, 18). The accumulation material was subsequently overlain by demolition and levelling layers dating from the late medieval to post-medieval periods (Jackson-Slater and Krawiec 2020, 9).

Similar results were seen in the boreholes near the South Range of the Guildhall. Intriguingly several fragments of 10th-11th century pottery were present within a 1.3m thick organic deposit lying 4.1m below ground level (5.12-6.42m OD) within Borehole 1 (AOC 2016, 18). This material was thought to be characteristic of gradual accumulation, implying sustained activity in this part of the river margin at that time.

York Mansion House, YAT 2016. NGR SE 6013 5191. HER reference EYO6304, SYO1896.

Between 15th February-1st March 2016 and 18th-25th of July 2016 a programme of extensive renovation was undertaken by City of York Council at the Mansion House, St. Helen's Square, York (NGR SE 6013 5191). Part of that work involved the underpinning of basement wall foundations in four places, during which York Archaeological Trust carried out a watching brief (Kendal and Savine 2016, 1).

The Mansion House dates to 1725. Below its foundations an early medieval pit and a sequence of Roman road surfaces were identified. The presence of the Roman road goes some way to confirming the route of RCHME designated Road 10 (RCHMY 1962, 3) at a point where the road is projected to run between the *porta praetoria* and the river crossing linking the fortress and the civilian settlement (Addyman 2015, Sheet F).

Combining sections recorded from the underpinning pits (UP 1-3) with that from Trench 1 of the 2012 excavations detailed above (Whyman 2012, 22) allows for a fairly comprehensive, and certainly informative, north-east to south-west aligned profile to be produced displaying the top of naturally-occurring deposits and the material overlying them. Initially the top of natural glacial material falls gently away from north-east to south-west through Trench 1 to UP1 and then UP2. This demonstrates a slope of around 1/25, or 4%, from a high point of 11.12m AOD to 10.83m AOD over a distance of approximately 8m. The incline becomes significantly steeper at the far south-western end of transect, falling to 10.4m OD over a distance of 2m, giving a gradient of close to 1/5, or 20%, across UP2 and UP3. Above the natural sand and clay a sequence of compacted sand, gravel, pebbles, cobbles and mortar was observed, giving an impression of a well-used and maintained road dating to the 1st to 2nd century which had been subject to periodic repair or resurfacing. At the south-western end of the transect three potential road surfaces had been identified: Context 2016 at a height of 10.6m AOD, Context 2013 at 10.82m AOD and Context 2011 at 11.01m AOD. Potential roadside activity was hinted at in UP2 by the presence of a possible floor surface comprising a flat iron pan-rich layer of gravel, measuring up to 95mm thick, over which possible occupation material, a 90mm thick layer of sandy silt, had accumulated. Unfortunately, no dateable artefacts were recovered, so whether that activity is contemporary with the use of the road during the Roman period or later is uncertain, however, a pre-conquest date to their formation is implied by the presence of a deep pit straddling UP2 and UP3 that was cut from a height at or above the level of those deposits. A single large unabraded sherd of 9th/10th century pottery was recovered from the fill of this pit in UP2. Above the pit, and found across Trench 1 and UP1 and UP2, were thick cobble-rich deposits which were much less compact than those found at deeper levels. The large volume of relatively loose sand and cobbles may originally have been road make-up, subjected to disturbance by later activity. The construction of the Mansion House is the likeliest candidate for extensive disturbance at this depth (Kendal and Savine 2016, 5-7).

City of York Guildhall Watching Brief and Excavation, YAT 2018. NGR SE 6005 5193. EYO7786, SYO2502.

The initial stages of renovation work carried out by City of York Council at the Guildhall required a scheme of archaeological excavation and watching brief, in this case undertaken by York Archaeological Trust. The archaeological works commenced in January 2018 with excavation at the proposed location of a lift pit in the North Annexe building. Following completion of that work a watching brief was maintained on the excavation of 13 engineering pits designed to investigate the foundations of the North Annexe building. The site was centered on NGR SE 6005 5193 (Coates *et al*. 2020, 1-2).

Lift pit

The lift pit trench measured 3.84 x 2.36m and was dug to a depth of 1m from the existing ground level, there a height of 11.08m OD. Only post-medieval deposits were encountered, the earliest of which appear likely to be linked with horticultural or garden activities. Overlying these soils was a demolition or levelling deposit that extended up to 10.5m OD (Coates *et al*. 2020, 15), a level that corresponds to a compacted rubble pathway encountered during excavation of the neighboring Hutments site by AOC in 2014 (AOC 2015).

Disarticulated human bone was recovered from Context 1021 near the base of the lift pit. This deposit was thought to relate to landscaping undertaken around the time that the Lendal street frontage was being redeveloped around 1714; indeed, other finds date this deposit to the late 17th or early 18th century. The presence of human bone here, approximately 10m south-east of the nearest in situ medieval burial encountered during work on the North Annexe Excavation Area 2 provides some indication of the extent of landscaping activity across the former friary graveyard (Coates *et al*. 2020, 15-16).

Engineering pits

The engineering pits were positioned across the area being redeveloped, some in the external Hutments area up against the neighboring boatyard buildings to the north and others within the standing North Annexe building. Consequently, they varied greatly in size and depth due to the space available for excavation machinery to operate, but generally ranged from 1-3m long and 0.5-1m wide.

In the former Hutments area little apart from the 19th century boatyard, boathouse walls and post-medieval made ground was observed, which extended to at least 7.75m OD at the south-west end of the site. Inside the North Annexe building the scope for deep investigation was much more limited. A stone layer or footing was found in EP6 at around 9-9.7m OD, but otherwise made ground, equivalent to that observed externally, was all that was encountered (Coates *et al*. 2020, 11 and 16).

City of York Guildhall Watching Brief, YAT 2019–20. NGR SE 6008 5191. EYO7811, SYO2567.

A second stage of archaeological watching brief at the Guildhall undertaken by York Archaeological Trust commenced on 16th September 2019 and continued periodically through to 8th April 2020. The works were wide ranging, including a watching brief on demolition of part of the North Annexe building and ground reduction within it, demolition of other structures on

site, excavation of underpinning pits around the North Annexe Tower, excavation of a crane base pit and other ancillary works across the site (Coates 2020, iii).

Little of archaeological significance was observed during most elements of the works. The vast majority of deposition related to post-medieval landscaping and garden activity, even in the 5 x 5m and 2m deep Crane Pit which was excavated to 8.53m OD. The exception to this was the discovery of metalled surfaces below the South Range (Ibid, 7).

The South Range

Piling works in the South Range exposed what was probably the top of natural glacial deposits, Context 7014, comprising laminated sandy silty clay sloping down north-east to south-west from a height of 9.37m AOD to 9.21m AOD. Above were a series of deposits containing a range of 2nd to 4th century pottery types starting with Context 7013, a 0.36m thick deposit of mid-brownish grey silty clay that served to raise and level off the ground, presumably in preparation for the laying of a compacted sand and cobble surface. The first surface was supported on a thin layer of clay, Context 7012, that acted as bedding for a 75mm thick cobble surface, Context 7011, which extended to 9.66m AOD. Directly above was a 30mm thick layer of sand and gravel, Context 7010, perhaps either trample or even a layer of bedding material for a second cobble surface, Context 7009. The second surface contained a substantial dark grey sandy silt component along with the cobbles, distinguishing it from the more consolidated uniform surface below. It was 0.16m thick, extended to 9.82m AOD, and a silver *denarius* (SF2) dating to AD 119-22 was recovered from it (Ibid, 7-8).

The composition of the cobble surfaces is comparable to those seen in the Mansion House underpinning pits, particularly the two lower surfaces in UP3 which, located approximately 30m north of the South Range surfaces, were also almost exactly 2m higher. The surfaces under the South Range were very close to the speculated junction of RCHME Roads 2, 5 and 10 (RCHMY 1962, 3), as projected by the most recent appraisal of road layout across Roman York in 2015 (Addyman 2015, Sheet F). Both surfaces slope very slightly down to the south-west but are otherwise quite different in terms of their composition. 7011 was much more compact, consistent and of better quality than the thicker 7009 whose relatively high silt content may be the result of prolonged use and abrasion.

Former Post Office, Lendal, YAT 2022. NGR SE 6012 5191. HER reference. EYO7974, SYO2830.

A watching brief on site investigation works in the basement of the former Post Office building at 22 Lendal was undertaken by YA for Egnoil Consulting Ltd between 20th July 2021 and 8th April 2022. The 2021 works involved the excavation of two small core hand pits measuring 0.4m in diameter and 1m deep followed by drilling of one windowless sample borehole, WS02. A single cable percussion borehole, CP01, was drilled in 2022. The site was centered on NGR SE 6012 5191 (Krawiec and Loffman 2020, 1).

Although relatively limited in scope and accuracy the boreholes produced some informative data regarding the heights of solid and superficial geological deposition and overlying anthropogenic material including evidence of a potential timber structure. It should be noted that the heights recorded are estimates based on the ceiling to floor measurements referenced against a known height in the street on Lendal. Furthermore, accurate depth measurements

within the cable percussion borehole were hampered by water strikes at 5.13m and 3.63m OD, while both boreholes generally demonstrated poor recovery throughout the sequence (Ibid, 4).

The underlying bedrock was encountered at approximately -6.37m OD, above which superficial geological deposits of soft mid-orange brown silty sands with gravel extended a further 5m to -0.87m OD. The naturally occurring deposits were overlain by a series of typically silty clays, often containing building materials, including CBM, sandstone and limestone, in CP01 at depths of -0.87 to 3.43m OD, 4.63 to 5.13m OD and 5.68 to 8.63m OD and in WS02 at 3.51 to 4.2m OD and 7 to 7.19m OD. Heartwood timber was also found to be present in several deposits in WS02, -0.4 to 0.83m OD, 1.14 to 1.2m OD, 1.3 to 2.05m OD, 2.19 to 2.6m OD, and 5 to 5.18m OD (Ibid, 4-5).

The results of this borehole exercise are somewhat anomalous in comparison to known structures and deposits in the vicinity. At the former Post Office site the top of naturally-occurring deposits was identified at a depth nearly 9m lower than where it was exposed in Excavation Area 2 of the Guildhall excavation in 2020, the north-eastern end of which was only 20m and 40m west of WS02 and CP01 respectively. The position of CP01 appears likely to have been within the immediate vicinity of substantial Roman masonry walls and a stone-built drain encountered during construction of the Lendal Post Office in 1883 (RCHMY 1962, 61). The top of this structure was recorded at approximately 1.7m below ground level at that time, somewhere in the region of 12.6m OD, assuming that no significant change in the height of the street has occurred since, which now stands at around 14.3m OD. The top of CP01 has been estimated at 11.13m OD, indicating that construction of the Post Office in the 19th century must have removed much, if not all, of the Roman masonry structure observed at that time.

The depths of archaeological deposition exposed within the boreholes are clearly far in excess of broadly corresponding deposits seen locally. It may convincingly be proposed that the boreholes had been drilled into deep intrusive features, almost certainly wells. Water strikes in CP01 confirm an attainable source of ground water, while the presence of well-preserved timber at intervals between 5.18m and -0.4m OD in WS02 hints at a solidly constructed and well-preserved well lining, not dissimilar to a number of Roman wells found elsewhere in York, for example a late 2nd to 3rd century timber lined well excavated at Skeldergate in 1973 (Carver *et al*. 1978, 50).

6 RESEARCH CONTEXT

The Guildhall site is situated at the intersection of Road 5, Road 2 and Road 10 - the continuation of the former bridge - and is only a few metres away from the Legionary Fortress' *Porta Praetoria* (RCHMY 1962; Ottaway 1993). Further detail of the sub-surface Roman archaeology within the immediate environs of the Guildhall sites has primarily been informed by excavations of grain silos on Coney Street (Ottaway 1993; Brinklow *et al.* 1986) and numerous excavations of the Legio IX Hispana Legionary Fortress (RCHMY 1962; Ottaway 1996; Philips and Heywood 1995). Additional data providing an elucidation of contemporary activities is evidenced by the fieldwork conducted on the south-eastern side of the River Ouse, most notably workshops at Rougier Street and Tanner Row (Ottaway *et al.* 2021). The 1st and 2nd century phases of activity at sites on both sides of the river reveal compelling evidence of industrial and commercial usage. Unsurprisingly, the chief driver for the flourishing industry and capacity for warehouse storage

in this district of the city is believed to be military in nature, as clearly evidenced by the proximity of the Legionary Fortress (Ottaway *et al.* 2021). However, in the early 3rd century, settlement to the southeast of the Ouse experienced a shift in its character and composition, which can be summarised as the development *of Colonia*, with domestic dwellings taking the place of the structures for commercial and manufacturing purposes. Contemporary events include the destruction and re-siting of the Road 10 bridge, presumably resulting in a shift in the thoroughfare of residents and perhaps changing the focus of this district of the city. At present, it is unclear how the area immediately surrounding the Guildhall site responded to changes such as the apparent 3rd century gentrification and the migration of the bridge.

Our knowledge of the transition from Imperial governance to Anglian administration in northern England is, at best, fragmentary (Dean 2009). The nature of the transition - whether peaceful or otherwise – and the socio-political and economic ramifications on the city and its occupants in the 5th to 7th centuries, are informed by unreliable documentary evidence produced by Gildas (Rollason 1999). Archaeological investigation has provided glimpses of early medieval life through evidence from the 5th and 6th century Anglian cemetery at the Mount and a possible 7th century cemetery at Castle Yard, but our knowledge of the city in the proximity to modern day Lendal is limited (Tweddle *et al.* 1999). Investigation at the Guildhall site, therefore, presents opportunities to understand how the nature of the occupation within this district of the city changed and identify where changes to the layout and organisation of the city occurred. Identifying early medieval boundaries and trade and travel networks may provide information about the disruption or continuation of political and economic boundaries which may assist with our understanding of the transitional period.

Our knowledge of early medieval York arguably improves from the 8th century onwards, with textual and iconographic sources becoming abundant and excavations at the Queen's Hotel, Micklegate, and St. Helen's on the Wall church providing much-needed detail (Tweddle *et al.* 1999; Rollason 1999). The Anglian and Viking occupation revealed at Hungate and Coppergate have been instrumental in providing large amounts of data regarding daily life throughout the early medieval period (Hall 1986). However, despite the presence of a hall belonging to the Anglo-Scandinavian Earls of Northumbria, the private chapel of which may have been the earliest iteration of St Olaf's Church founded at Galmanho in the mid-10th century, little in the way of archaeological remains attributable to this period have been found immediately west of the legionary fortress (Wilson and Mee 1998, 141). Consequently, this district of the city in the 8th to 11th century remains enigmatic, with tantalising evidence for an enhanced focus on religious houses and possible high-status domestic dwellings. The opportunity to reveal in situ deposits that can elucidate the nature of occupation will prove incredibly valuable.

Post-Conquest, the development of religious houses in the district increased. The churches of St Martin le Grand, the Minster and the Romanesque redevelopment of St Olaf's church, which became St Mary's Abbey, mark this part of the city as having something of a religious focus (Hall 1996; Tillott 1961; Parker 2016). The site of the Guildhall was not immune to this phenomenon, and in AD 1272 an Augustinian Friary was constructed on the site (Knowles and Hadcock 1971; Current Archaeology 2020). However, except for text references, very little is known about the Augustinian friary. The Guildhall excavation presents an opportunity to understand more about this religious house and those who lived and worshipped here.

The results of these excavations and programmes of research indicate that the investigation at Guildhall can provide a detailed insight into the following four site-specific research aims. The four research aims have been kept purposefully wide-ranging in scope, with the dual intent of establishing their efficacy and, where possible, including further details in preparation of the analysis report.

What can we understand about the nature of this district of York and how it has changed since Roman occupation? Evidence from archaeological excavations within the environs of the Guildhall provides inconsistent evidence of occupation along this stretch of the Ouse. Can the Guildhall excavation demonstrate how urban morphology shifted over time and how periods of economic and social prosperity have influenced urban districts and suburban areas alike?

Can we elucidate on industry and trade throughout the Roman, medieval and post-medieval periods?

As detected in other parts of the city, there are apparent shifts in the geographical focus of trade and industry. The Guildhall excavation may provide material culture and/or industrial waste that can inform us of the changing role that this part of the city has played.

Better understand early medieval boundaries and transport networks.

Little is known about transport networks and how the city was culturally and physically partitioned in the early medieval period. The Guildhall excavation could shed light on the Ouse's role and how crossings and bridges may have influenced the development and prosperity of this area of the city.

Are there opportunities to learn about the development and changes to ecclesiastical buildings and associated graveyards throughout the medieval period?

The 13th-century acquisition of the land for the development of the Augustinian friary is likely to have changed this area of medieval York. The Guildhall excavation presents an opportunity to investigate how the development of the Friary changed the urban landscape and what implications this had economically and socially. Associated graveyards could inform us of mortality, demographics, diet and social and religious differences within groups.

7 RESULTS

The structure of the results presented below is based on stratigraphic units, or Contexts, assigned during the excavations. A Context represents an individual event or activity. Closely-related Contexts were then amalgamated into Sets, for example a foundation trench and its fills. Sets associated with related activities were then placed into Groups which were incorporated into Phases on the basis of dating. Phases represent separate and distinct activities or events. Finally, Phases have been attributed to Periods, normally defined by site wide activity and based on broadly chronological periods.

Contexts, Sets, Groups and Phases are referenced in accordance with the following examples: C1000, S1000, G100 and P1 respectively.

Dating was primarily reliant on the spot dates of pottery finds. Pottery spot dates have been calculated from the latest date of the latest pottery type. Where dates are given below they are from pottery unless otherwise stated.

7.1 Period 1 — Naturally-occurring deposits

Glacial deposits were encountered at the north-eastern end of the site in Excavation Area 2 and in all six boreholes.

7.1.1 Phase 1 (P1) – Glacial till (Group 100) – Figure 14

A firm, light red brown clay with light grey horizontal streaks containing small stones (C19117, C19147 and C19157; S1001; G100), was encountered in the north-eastern part of Excavation Area 2. The top of this material was at 9.96m AOD and dropped gradually to 9.67m AOD at the south-west (Figures 4-7 and 14).

Glacial till was also encountered during the course of a borehole survey and piling watching brief carried out in August 2019 (Jackson-Slater and Krawiec 2020, 5). Here naturally occurring deposits were found to slope down towards the River Ouse, from a maximum height of 7.27m AOD at the north-east, to 2.2m AOD at the south-west end of the site (Figure 3).

7.2 Period 1 — Possible re-worked naturally-occurring deposits

Glacial deposits which may have been re-worked were identified in Excavation Area 2.

7.2.1 Phase 2 (P2) – Possible re-worked naturally-occurring deposits (Group 101) – Figure 15

Above the glacial till was a roughly 0.4m thick deposit of firm, mid-orange brown clay containing rounded stones of various sizes (C19017-18; S1002; G101). At their highest point these deposits extended to 10.26m AOD, 0.3m higher than the upper extent of those in P1, but they did not have the same stratified composition as the glacial till. It is not clear whether the disturbed appearance of this deposit was the result of natural processes or anthropogenic re-working, as no finds were recovered. If this material had been re-deposited as a result of human intervention there is a possibility of that activity corresponding to the landscaping or terracing undertaken in the late 1st or 2nd century assigned to Period 2 below.

7.3 Period 2 — Late 1st to 2nd century ground preparation and related activity

Directly above the possible re-worked glacial deposits in Excavation Area 2 was evidence for ground clearance and preparation. Here cutting back of natural deposits on a north-west/south-east axis broadly parallel to the river, created a slope which was then covered with gravel. The earliest deposits found downslope and south-west of the gravel bank were fairly flat, as were those at the base of Trench 2 in Excavation Area 1, hinting at a flat area running along the foot of the bank (Figures 4-7 and 15).

7.3.1 Phase 3 (P3) – Gravel bank (Group 102) – Figure 15

Where natural deposits in P1 and P2 were observed the ground surface had been cut back along the south-western face to an angle of 30.47°. This modification appears to have been carried out in preparation for the laying of a compacted gravel surface across the slope (C19116, C19118, C19146 and C19205; S1003; G102). It may be that Contexts 19017-18 (S1002; G101, P2) were redeposited as part of a landscaping process, perhaps involving terracing in the space between the front of the fortress and the north-eastern bank of the River Ouse.

In Excavation Area 2 the gravel bank was exposed in section, providing a 1.76m long profile of gravel packed directly onto exposed P1 and P2 clays where they sloped down to the south-west. From a maximum height of 10.03m AOD at its north-eastern end, the gravel was consistently around 0.24m thick to the point where it dropped below the limit of excavation at a height of 9.04m AOD (Plate 1).

Some flattening off at the top of the bank was observed, although at varying heights across Excavation Area 2. To the north-west C19118 and C19146 levelled off at 10.32m and 10.25m AOD respectively. Further south-east C19205 covered a flat area approximately 1m^2 reaching around 10.1m AOD (Plate 2), and it is perhaps the case that the lower height observed there was influenced by a later feature cutting into the gravel bank just below.

A single small rim sherd of Roman grey burnished ware was recovered from near the north-western limit of where the bank was exposed (C19116). However, there is a significant chance that this single small pottery sherd could have been intrusive as a large modern drainage trench bisected this part of the site. Present above the gravel in this area was a 20-30mm thick sandy silt deposit (C19145; S1006; G102), either representing foot traffic across the gravel or the beginning of soil formation over the top of it.

Close to the eastern corner of Excavation Area 2 a patch of firm, stony, dark orange brown silty clay (C19155; S1004; G102), was present above the gravel bank. This deposit followed the slope of the bank and represents a repair or a resurfacing event. The two small pottery sherds present in C19155 provide a late 2nd to early 3rd century spot date, although there is a high probability that they are residual as a large quantity (30 sherds) of pottery of the same date range was recovered from a channel (G120 and G187; P13) cutting into C19155. Consequently, the pottery spot date for C19155 provides no more of a reliable date for construction and use of the gravel bank than the single small sherd recovered from C19145. However, it should be noted that later soil accumulation above the gravel surface, only 2.3m to the north-west than the location of C19155, appears to have occurred at some point after the late 1st to early 3rd century (see S1040; G116; P13).

7.3.2 Phase 4 (P4) – Stony surface (Group 103) – Figure 15

The earliest feature exposed in Excavation Area 1 was at the base of Trench 2. Here a surface composed of cobbles within a matrix of mid-green brown silty clay (C3125; S1007; G1003), most likely a surface, sloped gently down to the north-west from 8.14m to 8.02m AOD (Figures 8 and 15). Unfortunately, it was not possible to explore C3125 beyond exposing its upper surface, and no datable material was recovered from it.

If, as seems probable, the landscaped bank extended across to the north-western part of the site, the surface appears to have been laid onto a flat area, possibly a manmade platform or terrace at the foot of the bank. The stony character of the deposit suggests that it was either a surface within a utilitarian building or part of an exterior space.

7.3.3 Phase 5 (P5) – Flat build-up south-west of slope (Groups 104-5) – Figure 16

Above the P4 surface in Trench 2 a 0.3m thick layer of organic grey silty clay (C3132; S1008; G104) had been deposited. This levelling deposit followed the same gentle slope as C3125 and extended to a maximum height of 8.48m AOD. Within it were fragments of charcoal and other organic material. A copper alloy toilet implement (SF43) was recovered along with several small to medium sized fragments of Ebor ware dating to the late 1st to early 2nd century.

Similar flat dark silty levelling deposits (C19200 and C192001; S1012; G105), were found at the south-western end of Excavation Area 2, a short distance downslope from the gravel bank in P3. Both had an organic content, including charcoal and wood fragments. The lowest of these (C19201) was present from 8.56m AOD and produced pottery dating to the late 1st to early 2nd

century. Overlying this was C19200, a thin deposit of similar date, in this case late 1st-2nd century, which extended to 8.62m AOD (Figure 16).

Although separated by a distance of 5m, deposits in G104 and G105 shared some characteristics. All were comparable in composition and occupied a level area, possibly a terrace extending north-west to south-east, downslope of a steep gravel-faced rise in ground level north-east of the River Ouse. The thickness of build-up over the surface in P4 shows a change in the use of that space; the previous activities carried out in that area were superseded by dumping of what appears to be waste materials and/or the establishment of soil formation.

7.4 Period 3 — 2nd to early 3rd century building, use and abandonment

Use of the flat area at the foot of the bank at the north-eastern end of the site continued to develop during the 2nd century. There was evidence for a building in Trench 2 and the dumping of waste at the south-western end of Excavation Area 2 and NA WB 8 (Figure 17). Both were later covered by material derived from demolished buildings.

7.4.1 Phase 6 (P6) – Surface and occupation (Group 106) – Figure 17

The next deposits in Trench 2 were drier and sandier than those preceding them. Two firm mottled silty sand levelling deposits containing large quantities of CBM and 2nd century pottery (C3111-12; S1009; G106) raised the ground level slightly to 8.56m AOD, providing a 0.1-0.16m thick barrier against the damp material below. These dry deposits acted as a sub-base, preparing the ground for a probable floor above (Plate 3).

The floor (C3108; S1009; G106) covered the full extent of the excavation at this level, an area approximately 2m x 0.8m, and was made up of light-yellow brown silty sand up to 0.16m thick, reaching 8.71m AOD.

Overlying the possible floor was C3105 (S1010; G106), an occupation deposit dating to the 2nd century. It comprised firm, mid-grey green silty sand that was 30-90mm thick. Relatively thin and compact, this deposit is likely to have formed during the use of floor C3103.

The probable floor in this phase is very different to the surface in P4 and is more likely to have been internal. However, no other structural elements were apparent in Trench 2 at this depth.

7.4.2 Phase 7 (P7) – Dumping (G107) – Figure 17

Above the G105 deposits (P5) at the south-western end of Excavation Area 2 two mid-brown silty and clayey deposits were present. In contrast to the flat deposits below, both C19198 and C19199 (S1014; G107) tipped down to the south-west and were uneven on top (Figure 17). A small quantity of late 1st to 2nd century pottery was recovered from C19199.

Approximately 1.5m west of the deposits described above was C8076 (S1011; G107), the lowest deposit exposed in NA WB 8 (Section drawing 4, Figure 9). C8076 was very similar to C19198 in composition and has been dated to the late 1st to 2nd century. With a height varying between 8.61-8.67m AOD, only around 0.1m lower than C19198, it may have been a continuation of that deposit.

The deposits in this phase were present at a similar height to those described in P6; it is possible that P6 and P7 were contemporaneous. Both had accumulated on top of deposits assigned to P5 but formed as the result of quite different processes, one almost certainly within a building (P6), the other (P7) more likely in an external setting.

7.4.3 Phase 8 (P8) – Demolition material (Groups 108-9) – Figure 18

Spread across the north-east of the site and present in Trench 2, NA WB 8 and the south-western end of Excavation Area 2 were a series of mid-brown and light to mid-yellow brown clay and silty clays. Many were characterised by a mottled appearance resulting from the presence of building debris, particularly mortar and plaster but also charcoal, grey clay and silt. These deposits sealed both the floor and occupation deposits in P6 and the dumps in P7, together extending over an area measuring around 8m north-west/south-east (Figures 8-9 and 18).

The demolition deposit in Trench 2 (C3103; S1013; G108) measured up to 0.13m thick and contained artefacts, including pottery dated to the 2nd century and a carved bone hairpin (SF22; see Section 8.12.2 and Plate 4). At the south-eastern end of that trench C3103 dipped slightly and was levelled over with a grey pink clay (C3101; S1013; G108) containing a few small sherds of late 1st to early 3rd century pottery. Mortar and plaster fragments present in C3103 included Type 11, an elaborate trellis design with painted striped decoration (see section 8.5.3). Type 9 painted plaster, which lacked decoration, was also found in some quantity in C3103 and C19197 (S1017; G109), a deposit identified at the south-western end of Excavation Area 2. The top of these deposits occupied heights ranging from 8.8-8.95m AOD.

The composition of C8075 (S1013; G109) in NA WB 8, and C19195-6 (S1017-18; G109) in Excavation Area 2 were similar to others described above in this phase. The heights were also comparable, with upper levels being around 8.9-9m AOD. Charcoal was more predominant in some deposits towards the top of the sequence in G109 (Plate 5), particularly C19194 (S1018). No plaster was recovered from any of these deposits, but a large quantity of relatively poor-quality mortar was present (assigned Type 13). Pottery recovered from the S1017-18 deposits covered dates from the late 1st to 2nd century and in the case of C8075 cannot predate AD160.

The quantity of mortar and plaster, many surviving as large fragments, hints at demolition of structures situated close by, perhaps a building associated with the floor in P6. Ornate decoration found on the Type 11 painted plaster hints at well-appointed domestic dwellings, which, given the over-painting seen on some of the plaster, were long-lived enough to have been redecorated internally.

7.4.4 Phase 9 (P9) – Dumped deposits above demolition material (G110-11, G185) – Figure 19

Dumping of waste material followed the demolition and clearance described in P8. While there was some variation in the composition of these deposits, they were present across a broadly comparative height range, and perhaps more significantly contained pottery, providing a late 1st to 2nd century spot date (Figures 6-9 and 19). Typically, the deposits in this phase were dark to mid-brown clayey silts containing a broad range of artefacts, including a substantial volume of pottery.

Above the P8 demolition deposits in Trench 2 was C3100 (S1016; G110), a mid-grey sandy silt containing an extensive range of late 1st to early 2nd century pottery, an earlier date than that of the underlying occupation and demolition deposits in G106 and G108. At up to 0.16m thick it raised the ground level to 9.03m. The date discrepancy with the underlying deposits indicates a possibility of the material being brought in from elsewhere, perhaps to raise ground level across the P6 building following its demolition. It is unclear how closely the P8 demolition material and the P9 imported material correspond in terms of an intent to raise ground level and whether they were together (or in part) an intentional effort to prepare the ground for structures in the

following phases (P10 and P11). If the P8 deposits were a distinct ground preparation activity separate from the P8 demolition there is a case for placing them into Period 4 depite the link to Period 3, which in any case is based on pottery functionality and dating rather than the stratagaphic sequencing. Similar material was present in NA WB 8, situated 2.52m to the south-east of Trench 2. Here C8074 (S1019; G185) comprised friable mid-brown clayey silt measuring up to 0.16m thick extending to 9.1m AOD, then sloping down to 8.93m AOD at the south-western end.

Adjacent to NA WB 8, at the south-western end of Excavation Area 2, were a succession of dark and mid-brown clayey silts containing a large array of domestic refuse, including late 1st to 2nd century pottery (C19192-3; S1020; G111). Extending as far as 8.93m AOD these deposits also tipped gently down to the south-west (Figure 19).

The construction and occupation of buildings in P6 and use of the adjacent area in P7 appears to have taken place in the 2nd century, with dating of the P8 demolition deposits showing that they continued in use until at least AD160, but conceivably had a life span extending into the early part of the 3rd century. The P9 dumping which covered the demolition material has generally returned a late 1st to early 2nd century date suggesting it originated from a different source than the underlying deposits and possible structure and was brought in to prepare for later activity. As described below more occupation-type deposits were apparent in subsequent phases which broadly date to the mid-2nd to early 3rd century.

7.5 Period 4 — Mid to late 2nd – early 3rd century structures and occupation

New buildings appear to have soon replaced the 2nd century structures situated at the foot of the bank at the north-eastern end of the site. A clay floor was found in Trench 2, Excavation Area 1, while a much more ephemeral structure with a mortar floor and evidence for internal partition was encountered at the south-western end of Excavation Area 2. Artefacts recovered from the area indicate that both structures were in use by the mid-2nd or early 3rd century.

7.5.1 Phase 10 (P10) – Surface and associated activity in Trench 2 (G112) – Figure 20

Overlying the P9 dumping in Trench 2 were two flat, friable grey silty sand levelling deposits (C3092; S1023 and C3095; S1021; G112), providing a dry, level bedding for a clay floor laid above (C3086; S1024; G112). Both levelling/bedding deposits were 50-60mm thick, together raising the ground level to 9.12m AOD over an area measuring 3.82m north-west/south-east by 3.05m north-east/south-west (Plate 6, Figures 8 and 20). C3092 contained a large quantity of mainly small pottery sherds spot dated to the 3rd century, conceivably crushed to form a component of the bedding material.

The clay forming the floor (C3086) was light pink brown in colour and covered much the same extent as the bedding material below, except in the eastern corner of Trench 2 where it appeared to have been cut away by an intrusive feature which, unfortunately, could not be investigated due to its position adjacent to a deep section (Plate 7). Some variation in the thickness of the clay was apparent. To the south and east it was rarely much thicker than 0.1m, while to the north and west it gradually rose to a flat upper surface 0.21m thick, giving a maximum height of 9.33m AOD.

Part of the surface had been exposed to heat, producing a scorched area approximately 0.9 x 0.4m aligned north-east/south-west. To the south-east of this the clay was thinner with a more abraded appearance.

No artefacts were recovered from the clay, suggesting this material had been carefully selected for use. Apart from the scorching there was no evidence of use or occupation directly above the floor, posing the possibility that a floor covering had originally been in place.

7.5.2 Phase 11 (P11) – Structure and associated activity at the south-western end of Excavation Area 2 (G113-14) – Figure 20

Evidence for a possible structure was present close to the south-western end of Excavation Area 2. A thin dark brown clayey silt levelling deposit (C19191; S1022; G113) was present immediately below the structure. Pottery has dated this material to the mid-2nd to early 3rd century. C19191 also shares physical characteristics and a similar height to C8073 found in NA WB 8. Unfortunately, no dateable material was recovered from that deposit for comparison.

Above levelling C19191 a single course of rough limestone fragments and cobbles (C19189; S1025; G113) 1.2m long and 0.24m wide had been arranged north-east/south-west. Lapping over and extending 2.46m south-east of C19189 was a layer of coarse white mortar (Plate 8). The mortar (C19177; S1026; G113) maintained a consistent thickness and mostly extended to a height of 9.03–9.08m AOD, except to the north where it rose sharply by 0.17m, to 9.29m AOD (Figures 6-7 and 20). Pottery spot dated to the mid-2nd to early 3rd century was recovered from C19177.

Overlying the mortar floor or abutting the wall footing in G113 were thin clayey layers, probably deriving from use or occupation. South-east of the wall footing were C19176 and C19179 (S1028; G114), within which late 2nd to early 3rd century pottery was present. On the north-western side were C19187 and C19188 (S1027; G114); both contained 2nd century pottery, while an antler toggle (SF239, Plate 9) and a copper alloy military buckle plate of 2nd to 3rd century date (SF213) were also found in C19187 (see Section 8.12.2).

The mortar may have been part of a floor, the line of stones arranged along its north-west edge forming a footing for a lightweight partition with distinct but comparable deposits present either side of it. The sharp rise in the mortar to the north suggests it had been spread up against something, unfortunately no longer present due to later extensive intrusion.

7.5.3 Phase 12 (P12) – Demolition material (G115, G186) – Figure 21

Building demolition material was present in most of the deposits in this phase. Above the structures in P10 and P11 were deposits containing mortar, plaster and painted plaster, probably materials stripped from the interiors of buildings. One context (C3082; S1029; G115) contained nearly 35kg of mortar and plaster, by far the largest volume of these materials recovered from a single context on this site. In contrast, relatively little CBM or stone was present.

On the whole, the P12 deposits were mid-brown silts, often with a green tint and a substantial sandy component, the deposition of which raised ground level to around 9.25-9.31m AOD, except in Trench 2 where they rose sharply from around 9.3 to 9.57m AOD close to the north-east trench edge.

Covering the clay floor (C3086; G112; P10) in Trench 2 was C3082, which was in turn covered by C3026, then C3135 (S1038; G115). The volume of mortar and plaster recovered from C3026 was only a fraction of that from C3082, in spite of both being a similar thickness and covering nearly all of Trench 2, an area approximately 4m north-west/south-east by 3m north-east/south-west (Plate 10; Figures 8 and 21).

Where comparable material was present further to the south-east (Figures 6-8 and 21), in NA WB 8 and at the south-western end of Excavation Area 2 in contexts C8072 (S1030; G186), C19172, C19185 and C19186 (S1031; G186), the mortar and plaster content was much smaller and largely consisted of the poorer-quality Type 13 mortar also seen in G109 (P8).

In addition to building debris domestic refuse including animal bone, marine shells, iron nails, glass and pottery were often present in large quantities. A small number of personal items were recovered, including a stone hone (SF230) from C8072 and a glass stud (SF51) set in a mount (SF53), found in C3026. Both the G115 deposits in Trench 2 and the G186 deposits in Excavation Area 2 contained 2nd to 3rd century pottery.

7.6 Late 2nd to 3rd century dumping

Following clearance of the more recent buildings occupying the space at the base of the P3 bank, large-scale dumping of waste materials occurred, much of it domestic in character, perhaps in an effort to raise the ground level. Large quantities of silty sands and silty clays built up across the slope of the bank and at its foot, including material discharged from the end of a channel cut into the gravel bank itself. Overall the ground level was raised by around 0.5m, the slope of the bank becoming less prominent as a result.

7.6.1 Phase 13 (P13) – Post-demolition ground raising activities (G116-17, G120-23, G187-88) – Figure 22

Evidence of levelling off above the demolition activity in P12 was present across the north-western part of the site in Trench 2 (Figure 22).

A mid-green brown sandy silt containing a relatively large quantity of limestone fragments (C3071, C3133; S1039; G188) dating to the mid-2nd to mid-3rd century and around 0.15m thick was above the G115 (P12) demolition deposits in Trench 2 (Plate 11; Figures 8 and 22). C3071, like C3026 below, was flat across much of the trench except close to the north-eastern edge where it sharply rose, in this case to 9.8m AOD.

Further to the east, at the western end of Excavation Area 2, were a series of late 1st to early 3rd century deposits (C19160-2, C19141-2 and C19148; S1040, C19164, C19170 and C19184; S1035; G116). These covered the lower part of the gravel bank (G103; P3) and demolition material at its foot (G115; P12). The G116 deposits mainly comprised grey silts with an organic content, probably degraded cess (Figures 4-7 and 22). A single stakehole (S1036; G117) was found cutting into C19170, both occupying the flatter ground at the base of the slope, here raised to around 9.5m AOD. No additional stakeholes or other structural elements were encountered.

The ground level was raised further by deposits accumulating across the upper part of the gravel bank (G103; P3) and above those overlying the lower part of the bank (G116).

Near the south-eastern end of Excavation Area 2 a shallow channel (C19150; S1032; G120) had been cut into the top of the gravel bank (Plate 12, Figure 22). This feature ran down the face of the slope on a north-east/south-west axis at an angle of approximately 30°, and measured

1.12m wide and up to 0.29m deep. The channel was filled by mid-grey brown silts (C19138-9; S1033-4; G187) containing pottery dating to as late as the 3rd century.

Material flowing out from the end of the channel was probably represented by C19137 (S1034; G187) and C19151 (S1032; G187). Both deposits were very similar to those filling the channel but reclined at a much shallower 6.5° angle, falling from 9.76m to 9.58m AOD over 1.55m. Pottery recovered was dated to the late 2nd century onwards and a shale ring (SF244, Plate 13) was recovered from C19151 (see Section 8.14.2).

Other material directly overlying the gravel near the top of the bank further north-west in Excavation Area 2 continued to raise the ground level. At the top of the slope they reached a little over 10m AOD and 9.4-9.6m AOD on relatively level ground to the south-west (Figures 4-5 and 22). These 2nd to 3rd century deposits (C19016, C19124, C19140, C19163 and 19165; S1041; G121) were sandier and greyer in colour than those associated with the channel but also covered the upper part of the gravel bank and flattened off further down slope (Figures 4-5).

The last definitively Roman deposits tipping down and levelling off below the slope of the bank were a series of mostly greenish grey sands (C19102, C19121; S1045; G123 and C19122, C19149; S1044; G123), the pottery from which returned broadly 2nd century dates. At the foot of the slope the ground level was raised to around 9.5-9.6m AOD and extended upslope to 10.11m AOD (Figures 4-5).

Although no direct evidence of the bank was exposed in Excavation Area 1, C3071 exhibited a distinct elevation close to the north-east section of Trench 2. This increase in height, from around 9.5m AOD to 9.8m AOD, hints at a continuation of the bank a little further to the north-east, perhaps not far beyond the limit of excavation.

7.7 Period 5 — 3rd century structure

At the foot of the slope in Excavation Area 2, and following the same north-west/south-east alignment, were the remains of a substantial structure (Figures 4-7 and 23).

7.7.1 Phase 14 (P14) - Wall foundation (G124) – Figure 23

Close to the south-western end of Excavation Area 2 a 3.67m long stretch of wall foundation was exposed running north-west/south-east along the foot of the slope created by the P13 deposits covering the P3 gravel bank.

The foundation cut (C19119-20; S1051; G124) survived to a maximum height of 9.52m AOD and was 1.7m wide. The base of the cut lay below the maximum depth of excavation, here at 8.65m AOD, and consequently the full depth beyond 0.97m could not be established (Plate 14).

The wall foundation consisted of medium and large cobbles and limestone fragments, including three fragments of sandstone roofing flag. The stone was supplemented with CBM: largely bricks, but imbrex, tegula and a single piece of box flue were also present. All were bonded with a light red brown clay (C19114-15; S1051; G124). Along the south-western side of the cut the proportion of clay was much greater and the size of stones generally smaller (C19015 and C19190; S1051; G124). The foundation appears to be a single construction event as no stratification within its composition was discernible.

Pottery spot dated to the mid-2nd to 3rd century was recovered from the foundation, a date supported by the presence of stone roofing flags which were increasingly common in York from

the late 2nd century (McComish 2012, 90-1 and 256-8). It is unclear whether the wall foundation was part of a more extensive structure. There is some indication that the wall could have continued further to the south-east as some later deposits appear to dip down along the north-eastern edge of its projected line, perhaps as a result of robbing activity. If the wall had extended that far to the south-east its length could extend to as much as 8m. There was no evidence for continuation further north-west, and in any case its alignment would take it past the north-eastern extent of Trench 2, and no return wall was detected passing on a perpendicular alignment south-west through Excavation Area 1.

If the wall foundation was part of a building it must have been positioned on flat ground extending south-west away from the slope it was built adjacent to. Unfortunately, no surfaces, or indeed any other structural elements above foundation level survive, which may be taken as a good indication that a stone wall had indeed originally rested on the foundation, only later to be removed by robbing activity. The position of the wall foundation poses the possibility that rather than being part of a building it was for a retaining wall intended to support the edge of higher ground to the north-east, superseding the gravel bank which had become obscured by dumping by the late 2nd or 3rd century.

7.8 Period 5 — Cobble surface and stony levelling deposits across north-west of site

The latest Roman deposits in Trench 2 and NA WB 8 occupied a similar height, were fairly flat and very stony. Their comparatively high stone content suggests an intention to consolidate and raise the ground level across this area. Deposits of this sort were notably lacking in Excavation Area 2 further to the south-east.

7.8.1 Phase 15 (P15) - Surface (G118) – Figure 23

Flat stony deposits containing pottery dating to the mid- to late 2nd century formed a surface at 9.43m AOD in NA WB 8 (Section drawing 4, Figure 9 and Figure 23). The upper part was less consolidated suggesting wear from use (C8070-1; G118). Despite containing pottery dating to the mid to late 2nd century the G118 surface was very probably constructed and in use somewhat later; not only does it occupy a comparable physical height to the G124 wall foundation and the G125 levelling deposits, both almost certainly 3rd century in date, but it was also situated between deposits dating to the late 2nd to 3rd century.

7.8.2 Phase 16 (16) – Stony levelling deposits (G119, G125) – Figure 23

Overlying the P13 dumps in Trench 2 were stony levelling deposits (C3053; S1049 and C3067; S1048; G125) which continued to raise and consolidate the ground. Together they covered an area measuring 2.04m north-west/south-east by 1.86m north-east/south-west, usually reaching a height of around 8.65m AOD, but extended as far as 9.83m AOD along the north-eastern side of the trench (Figures 8 and 23). The earliest, C3067, was made up of a stony mix of dark green brown silty sand and mid-red brown clay containing pottery with a mid-3rd century spot date. Next was C3053, comprised of mid-grey brown sandy silt containing a large quantity of pebbles, cobbles, and limestone fragments (Plate 15). A large volume of pottery, dating to the mid-2nd to 3rd century, was present alongside 1st-4th century box flue, imbrex and brick.

In NA WB 8, approximately 3.8m to the south-east of Trench 2 and overlying the P15 cobble surface was C8069 (S1047; G119), here providing a late 2nd to 3rd century pottery spot date. This deposit had comparable physical characteristics and stratigraphic position to C3053 and C3067 (G125). In common with the G125 deposits it contained relatively large amounts of cobbles and

limestone fragments. It was up to 0.31m thick and extended to 9.66m AOD (Section drawing 4, Figures 9 and 23).

It appears likely that the structure supported by the foundation in P14 was contemporaneous with the P16 stony levelling deposits, and possibly even the P15 surface. The height across these was broadly similar and the pottery spot dates were within a mid-2nd to 3rd century date range, and are complimented by the 2nd century date of an enamelled copper alloy buckle plate (SF45: see section 8.14.2 and Plate 16), found in C3053.

7.8.3 Phase 17 (P17) – 4th century activity in Trench 3 (G126) – Figure 23

The earliest deposit encountered in Trench 3 was a dark grey brown silty clay containing large pebbles (C3117; S1052; G126), that reached 7.7m AOD (Section drawing 5; Figure 10). A single calcite gritted jar rim, dating to the 4th century, was recovered but may well be residual.

There are parallels with this deposit and those in P16: they are flat, stony and date to the mid-3rd century or later. However, there is a significant difference in height (almost 2m), and a separation of at least 6.32m (Figure 23). It is conceivable that a lower terrace existed in the area of Trench 3, a possibility supported by the RockWorks profile generated from borehole data gathered on the site (Figure 37), which shows a marked drop off in heights from the north-east to the south west between the locations of BH05b and BH04.

7.9 Period 6 – Late 11th to early 13th century activity

Evidence for activity on the site between the late Roman period and the 11th century was slight. Late 3rd and 4th century pottery was present, as were four 4th century coins, but in both cases almost all were recovered from medieval deposits and features. The structure supported on a clay bonded cobble wall foundation (P14) at the north end of the site in Excavation Area 2 may have been dismantled as early as the late 3rd century, but complete removal seems not to have occurred until the late 11th or 12th century.

The earliest deposits encountered at the south-western end of Excavation Area 1, found at 7.58m AOD in the base of Trench 4, appear to relate to 12th century waste disposal or levelling; any understanding of earlier activity in that area is consequently reliant on borehole cores. Few dateable finds were recovered from the borehole, however, four samples <28>, <38>, <40> and <43> taken from C9633 in BH03 were subject to radiocarbon dating. Three samples produced medieval dates ranging from the mid-11th to late 13th century (see Appendix 5). The fourth, taken from the mid-point of the deposit, returned a 1st to 2nd century date suggesting that re-deposited Roman material formed a component of dumping close to the river bank. More generally it is hoped that comparison of depths with securely dated deposits in Excavation Area 1 can provide a broad impression of when some activities and processes may have taken place.

Boreholes extending through and to the south-west of Excavation Area 1 have produced a profile through archaeological horizons down to the top of naturally-occurring deposits (Figures 3-4, Jackson-Slater and Krawiec 2020), the recovery of pollen and diatoms from samples taken from borehole BH03 allow for an impression of environmental conditions close to the river bank to be developed. The pollen assemblage is dominated by wild grasses and cereals, the cultivation of which is hinted at by the presence of taxa associated with anthropogenic activity. However, the grains were often heavily crumped, hampering any attempt to distinguish between wild and cultivated varieties, and consequently the possibility of cereal cultivation at

the site remains an intriguing but unproven possiblity. Freshwater and fluctuating watertable conditions appear to have been prevalent, as was waste disposal due to an abundance of parasitic worm eggs and microcharcoal in the samples. Overall the picture is of an open landscape subject to intermittent waterlogging, and while tidal or esturine inundation at the site appears unlikely these conditions were probably present nearby as the sediments accumulated (Hill 2022, 102-3).

7.9.1 Phase 18 (P18) – Robbing of 3rd century structure and subsequent dumping activity (G127-28, G131, G189) – Figure 24

Robbing of the wall (C19143-4; S1043; G127) supported by the P14 foundation extended as far as 9.02m AOD and is likely to have included the removal of some of the foundation material (Figures 4-7 and 24). Backfilling of the robber cut appears to have then taken place soon after. Unwanted material originating from or close to the structure was pushed back into the robber cut, including clayey deposits C19013 (S1054; G128) and C19103 (S1057; G128), while other backfilling deposits (C19112 and C19113; S1055; G128), comprising friable mid-greyish brown, sandy silts, were found to contain fragments of clay, mortar, limestone, cobbles and a variety of Roman CBM (Figures 4-7). Pottery spot dates from the robber cut backfills were late 3rd to 4th century. A single sherd of unglazed Stamford ware came from C19113, which if not intrusive would date the robbing activity to no earlier than the 11th century.

At the south-eastern end of Excavation Area 2 were a series of deposits assigned to G189 which shared a similar character to those in G128. A small selection of late 11th to 12th century pottery was present alongside a range of Roman vessel types. The wall foundation (P14) was not exposed that far south-east, however there was a notably distinct north-eastern edge to the G189 deposits where they intersected with those in G187 (P13) below (Plate 17). It is probable that the G189 deposits are a continuation of the robber backfilling seen in G128.

After the wall robber cut (G127) had been backfilled, waste disposal activities including the dumping and digging of small pits continued into the late 12th to early 13th century, bringing the ground level up to a maximum of 10.13m AOD, and to around 9.75m AOD where the ground was fairly flat (Figures 4-7 and 24). The G131 deposits, for example C19098 (S1061) and C19107 (S1063), were mainly dark grey and brown silts containing large quantities of domestic refuse and some building debris. Much of the artefact assemblage was Roman in date, including a coin (SF209), an Antoninianus of Valerian (AD 253-57), demonstrating sustained intrusive activity into the Roman horizons nearby, while other artefacts are more likely to be contemporaneous with the waste disposal, such as a small iron pin (SF177), which dates to the late 11th to 12th century.

7.9.2 Phase 19 (P19) – Dumping and pit digging activity in Trenches 3 and 4 (G129-30) – Figure 24

In Excavation Area 1, Trenches 3 and 4 were sited south-west of Trench 2, placing them incrementally closer to the north-eastern bank of the River Ouse (Figure 3). Some of the earliest activity in these trenches was associated with waste disposal dating to the late 11th and 12th centuries.

Close to the base of Trench 3 were two small pits separated horizontally by a 0.35m thick layer of dark grey brown sandy clay (C3110) containing a selection of domestic waste including animal bone, pottery, oyster shell, slag and antler offcuts. 1st- 4th century CBM, including a tessera and opus signinum, was also present in some quantity. The lower pit (C3118 and C3116; S1059;

G130) was dated to the late 11th- 12th century and more antler processing waste was present in the upper pit in this Group (C3109 and C3113; S1061; G130), the backfill of which extended to 8.07m AOD (Section drawing 5, Figure 10 and Figure 24).

The earliest deposits at the base of Trench 4 dated to the 12th century (C3144-5; S1058; G129). They were similar in character and content to C3110 (G130), but only extended to 7.8m AOD.

7.10 Late 12th - early 13th century refuse disposal in Excavation Area 2

The deposits filling and immediately overlying the P18 robbing cut were relatively soft silts (G128 and G189). The deposition of primarily stony clays hints at a necessity to consolidate what may have been quite soft, uneven ground. What followed was a change in character of land use in this area which may have prompted that effort.

7.10.1 Phase 20 (P20) – Pit digging and levelling in Excavation Area 2 (G132-36) – Figure 25

Overlying the dumping in P18 were a series of mixed silty and clayey levelling deposits, usually with a stony content, for example C19133 (S1069; G132). Covering an area measuring 6.12m north-west/south-east by 4.05m north-east/south-west they continued to flatten out the area, extending to 10.25m AOD at the top of the slope and 9.84m AOD further to the south-west (Plate 18; Figures 4-5 and Figure 25). As found in G131 residual Roman material proliferated alongside small quantities of late 12th to early 13th century pottery.

Refuse pits (G133-34) were found cutting through the consolidated ground in G132. By far the largest pit was C19111 (S1073; G133). It was situated to the north-west of a modern drain cut in Excavation Area 2 and extended below the 9.1m AOD formation depth in this area. The pit was investigated to a depth of 1.22m, and although only excavated to a maximum width of 0.41m was found to measure 1.93m north-east/south-west. Backfilling material appears to have been deposited from the upslope north-eastern side as tip lines fall to the south-west (Figures 6-7). The date of pottery and CBM differed between the lower three fills (C19105, C19109 and C19110), and those above (C19084, C19091, C19094 and C19100). The lower fills contained 1st-4th century CBM along with pottery dating to the late 11th- 12th century, while late 11th to early 13th century CBM and late 12th to early 13th century pottery was recovered from the upper fills. There was no clear differentiation in the composition of the upper and lower fills, which were typically friable, brown, clayey silts containing a variety of domestic refuse including pottery, CBM, animal bone and marine shell.

Immediately south-west of pit C19111 was a second large, but much shallower, pit (C19080; S1075; G133). This feature measured 2.2m north-east/south-west by 1.21m north-west/south-east, but only 0.39m deep (Figure 25). The fills were generally friable dark grey brown silts, dating to the late 12th to early 13th century and containing an array of domestic refuse including a hone stone (SF232).

To the south-east were three more pits (C19062; S1078, C19079; S1077 and C19086; S1076; G134), closer in character to pit C19080 in terms of size and depth than pit C19111 (Figures 4-5). Despite being situated above a part of the wall robbing backfill (C19113; S1055; G128; P18), which contained 11th century pottery, solely Roman artefacts were recovered from the G134 pits, indicating their proximity to Roman deposits and features and suggesting the disturbance of those horizons during or soon after the 11th century. Notably 3rd and 4th century pottery dates were common in this phase, for example the G132 dumps and G133-4 pits, hinting at continuity

of activity into the 4th century at the site despite the absence of intact features definitively in use at that time.

Approximately 1m south-west of the G134 pit was a tightly spaced group of three postholes (G135). The postholes measured between 0.2-0.25m in diameter and up to 0.45m deep, and like the G133-34 pits also cut into the G132 consolidating layers (Figure 25). It was not clear what function the postholes fulfilled and no dating evidence was recovered from them, although they were sealed below deposits in G136 described below.

After the clearance of Roman structural remains at the north of the site there appears to have been a change in emphasis from widespread dumping to a more controlled disposal of refuse into pits.

7.11 Mid-11th to mid-13th century structures and related activity

Overlying the P20 pits in Excavation Area 2 were moderately stony clayey silts sealing off those features and consolidated ground level. Along the south-east of those deposits was a stone wall foundation dating to the late 12th to early 13th century and elements of a second possible structure were detected in Trench 4.

7.11.1 Phase 21 (P21) – 12th-13th century ground consolidation and structure in Excavation Area 2 (G136-37) – Figure 26

The pits and postholes in P20 were sealed below extensive deposits comprising mid to dark grey brown, moderately stony, clayey silts. For example, C8080; S1083, C19012; S1083 and C19063; S1084 (G136). Together they covered an area measuring 6.46m north-west/south-east by 4.4m north-east/south-west across Excavation Area 2 and NA WB 7, situated a little further north-west (Section drawing 7; Figure 9, Figures 4-7 and Figure 26). The G136 deposits raised the ground level to 10.21m AOD, sloping down a little to the south-west, here reaching 9.98m AOD. Slightly lower levels recorded for C8080 (9.81m AOD) are likely to be the result of later truncation in that area. Dating these deposits was a little less straight forward; the pattern of considerable residual Roman material continued but some, presumably intrusive, post-medieval CBM perhaps reflected the proximity of some deposits (C19011-12; S1083; G136) to the top of the surviving depositional sequence in this area. In addition, some 12th-13th century pottery and CBM was also recovered from contexts C19011-12, while to the south-east C19178 (S1084; G136) was truncated by a wall (C19132; S1085; G137) dating to the late 12th to early 13th century.

The wall construction cut (C19132; S1085; G137) was aligned north-east/south-west, measured 3m long, 1m wide, and up to 0.92m deep (Plate 19; Figure 26). The foundation extended to between 10.01m and 10.16m AOD and consisted of roughly-dressed limestone fragments and cobbles, all tightly packed but with no bonding material.

7.11.2 Phase 22 (P22) – Demolition of structure and associated features in Excavation Area 2 (G138-39, G168) – Figure 26

Any structure related to the G137 wall foundation was comprehensively removed, leaving no wall above the contemporary ground level, or any indication of associated structural remains such as floors or surfaces. There was, however, a marked difference between the consistent P21 deposits extending north-west of the wall foundation and a series of small irregular cut features to its south-east (G138). These features were present at around the same height as wall robbing

activity (G139), and it seems probable that they also relate to demolition of that structure. Overlying the small features was a soft, dark brown, stony clayey silt (C19040; S1178; G168) which raised the ground level south-east of the wall foundation (G137) up to the same level seen across much of the G136 (P21) deposits, between 9.96-10.16m AOD (Figure 26).

Neither the late 11th and late 11th-12th century pottery recovered from some of the small G138 features or the 13th-16th century CBM present in the wall robbing backfill (G139) necessarily provide the most complete indication of when that structure was removed. The next activity in this area was levelling in preparation for a surface (see Phase 37 below), activity which did not occur until at least the 16th century, suggesting that the structure could have stood through to around the mid-16th century.

7.11.3 Phase 23 (P23) – Mid-11th to mid-13th century structure (G140) – Figure 26

Near the base of Trench 4 in Excavation Area 1 was a linear feature, aligned north-west/south-east and interpreted as a robbed-out wall (C3097; S1082; G140). It measured 0.85m long by 0.25m wide, although it had been truncated along its entire north-eastern edge by a later intrusion (Figure 26). The backfill extended to 7.78m AOD and contained a single sherd of moderately gritted, oxidised Beverly type ware, dating to the late 11th to early 13th century.

Ground consolidation in the 12th-13th century was followed by the first medieval structures found on the site. Separated by nearly 19m, both structural features were located on fairly level ground, at 10.21m AOD in the north-east and 7.78m AOD to the south-west, suggesting additional terracing at lower levels closer to the river bank.

7.12 Mid-13th to mid-14th century levelling, possible structure and associated features

The deeper parts of Trenches 3 and 4 were approximately 4.2m apart (Figure 3). Above the lowest deposits in both trenches were a series of very similar deposits that raised the ground level in this area in preparation for the construction of a surface (Section drawing 5; Figure 10).

7.12.1 Phase 24 (P24) – Levelling in Trenches 3 and 4 (G141-43, G146 and G190-92) – Figure 27

Brown and grey sand and silty clays were found extending to 8.12m AOD in Trench 3 (C3106; S1217; G190) and to 8.08m AOD at the top of C3140 (S1087; G141) in Trench 4. Deposits in both trenches contained domestic refuse including animal bone and pottery, some dating to the mid-13th to mid-14th century.

In Trench 3 the next deposits comprised friable, dark brown grey sands and silts (C3102; S1090 and C19104; S1218, G191) with an increasing mortar content towards the top at 8.23m AOD. A near identical sequence was observed in Trench 4 (G142), which here extended to 8.12m AOD.

Ground level was then raised to 8.24–8.33m AOD in Trench 3 by C3094 (S1092; G192), a fairly compact mid-brown grey silty sand with fragments of stone and clay. The next deposits in Trench 4 (G142) extended to 8.23m AOD. They had a lighter colour and softer compaction than the G192 deposits, but had been exposed to intense heat, almost certainly from an overlying hearth in G149 (see Phase 27), which would have altered their character.

A possible mortar surface was next in Trench 3, here extending to 8.3–8.36m AOD. A patchy layer of compact mortar (C3091 and C3093; S1104; G146) was present below a thin dark green brown, sandy silt (C3136), perhaps a worn mortar surface on top of which a layer of trampled material had accumulated. Along part of its north-western edge the mortar surface (C3091)

extended up vertically, as though it had originally abutted something solid (Section drawing 5, Figure 10). No dateable material was recovered from the deposits in G146, however mid-13th to mid-15th century pottery was present in G147 directly above.

Similarities in character and content suggest the same formation processes were active across the area covered by Trenches 3 and 4 during or soon after the mid-13th century. Introduction of material forming the upper deposits may account for the 12th and late 11th to early 13th century pottery dates recorded here, which contrasts with the mid-13th to mid-14th century dates of the underlying G141 and G190 deposits. It is possible that this build-up or levelling was intended to prepare the ground for later activities, which in Trench 3 may have been a structure of which the mortar floor was part.

7.12.2 Phase 25 (P25) – Small features in Trench 4 (G144-45) – Figure 27

Present in Trench 3, at a similar level to the G146 deposits in Trench 4, were small shallow features including possible pits (G144) and postholes (G145) which were sealed below a 0.12m thick deposit (C3124; S1103; G145) that extended to 8.28m AOD. Only a small selection of 13th-16th century CBM and 12th century pottery was recovered from these features (Figure 27).

The mid-13th to mid-14th century date of some pottery recovered from from the initial deposits in P24 places them, along with subsequent deposits in P24 and P25, close in time to the founding of the Augustinian friary that occupied the site from at least 1272. However, a closer parallel is evident with the character of P23 activity than with what was to follow in P27, which would prove to be on a significantly greater scale and quality of build. Consequently, phases 24 and 25 have been assigned to Period 6 despite the apparent proximity in date to the early phases of Period 7.

7.13 Period 7 – Mid-13th to mid-14th century build-up in Excavation Area 1

After the P24 mortar surface in Trench 3 fell out of use a significant elevation to the ground level above occurred. That activity extended south-west to the periphery of Trench 4 (Figure 28).

7.13.1 Phase 26 (P26) – Build-up and pit digging at south-west end of Excavation Area 1 (G147-48, G193) – Figure 28

Overlying the trampled material in G146 (P24) and extending to 8.71m AOD were levelling deposits C3081 and C3141 (S1109; G147). These comprised mid-orange brown sandy clays containing frequent cobbles and mortar flecks, dating to the mid-13th to mid-15th century (Plate 20; Section drawing 5, Figure 10).

Running along the full length of the north-western side of Trench 3 and cutting into possible mortar surface C3091 (S1104; G146; P24), was feature cut C3138 (S1110; G147). Only a narrow strip of this feature extended into Trench 3, and consequently it has been difficult to interpret. One possibility is that C3138 was a robber cut that had removed a wall up against which the mortar surface (C3091) had been laid (Section drawing 5, Figure 10).

A considerable rise in ground level then took place across the south-western end of Excavation Area 1, to around 9.15m AOD (Plate 21; Section drawing 5, Figure 10 and Figure 28). Dumps and pits as far up as C3048 (S1113; G193), which contained domestic refuse and CBM, extended across the whole of Trench 3; some had clear equivalences to deposits 1.43m to the south-west, along the edge of Trench 4, for example C3078 (S1220; G148). Pottery recovered from the lower deposits in this sequence dated them to the 13th-15th century, while 12th-13th century pottery

was recovered from stratigraphically later deposits. The latest feature attributed to this phase was a pit in Trench 4 (S1115; G148). The backfill (C3076) contained early 13th to mid-14th century pottery.

Truncating the G148 pit was a probable wall robber cut (C3085; S1116; G150) relating to the demolition of a structure found in Trench 4, described below (see Phase 27). Pottery found in that feature provided a mid-13th to mid-14th century spot date, tightening the date range for the P26 activity to no later than the mid-14th century.

7.14 Period 7 – Mid-13th to mid-14th century edge set tile hearth and associated structural remains

Occupying a large part of Trench 4 was an edge set tile surface, a construction form typical for medieval hearths. Exposure to sustained direct heat was also evident.

7.14.1 Phase 27 (P27) – Hearth construction, use and demolition (G149-50) – Figure 28

The first component of the hearth was limestone fragments bedded into orange pink clay (C3114; S1106; G149), set into a slightly deeper part of the construction cut measuring 1.52m north-west/south-east by 1.04m north-east/south-west. Intense heat appears to have been centred above, fracturing the stone and causing scorching to radiate further out (Plate 22). Fragments of 13th century pottery and 14th-16th century CBM were recovered.

Above the limestone was an edge set tile surface measuring 2.51m north-east/south-west by 2.19m north-west/south-east at a height generally around 8.4m AOD but rising to 8.52m AOD in the eastern corner (Figure 28). The tiles date to the 13th-16th century and a few sherds of mid-13th to mid-14th century pottery were also present. The surface continued beyond the south-western end of the trench, was truncated by a later wall to the north-west and a linear cut to the north-east and was either cut or overlain by a later wall to the south-east. No other structural elements were found, but the layout maintained the same axis established by earlier activity.

Two distinct areas of tiling were identified (Plate 23). To the north-east, directly above the limestone, was C3107 (S1106; G149). Here the tiles were mostly aligned north-east/south-west and scorching was apparent on the surface. Close to the eastern corner was an area, approximately 0.3m^2, where tiles had been set into a square pattern, possibly as part of a repair or a socket designed to hold a component of a surrounding or associated structure. To the south-west the tiles (C3099; S1106; G149) continued at the same height but were arranged perpendicular to those in C3107. Although some burnt debris covered this part of the surface there was no scorching.

The hearth appears to have been well maintained and kept clean; only a thin friable, dark grey black, silty clay containing frequent flecks and fragments of charcoal covered the surfaces. C3098 (S1107; G149) was probably residue from the last use of the hearth.

Little evidence for demolition of the structure around the hearth was present, however, a thin layer of mortar (C3096; S1108; G150), dating to the mid-14th to mid-15th century and perhaps derived from demolition activity, covered C3098, and a possible robber cut situated along the north-eastern edge of the hearth may have removed a wall there. This linear feature (C3085; S1116; G150) extended the full width of Trench 4 on a north-west/south-east alignment and

measured 1.37m across and 0.77m deep (Figure 28). Mid-13th to mid-14th century pottery was recovered from the fill.

The scale of the building that stood in Trench 4 during the 13th and 14th centuries is demonstrated by the size of the hearth and robber cut along its north-eastern edge, while some indication of its setting is provided by the 0.75m step down in height from the ground immediately to the north-east and the comparatively low level the hearth was present at. Construction of the building represents the first large-scale medieval occupational presence on the site. It appears to have been built no earlier than the mid-13th century and to have remained in use up until the mid-14th century, its dates corresponding with the establishment of an Augustinian friary in this area (VCHY 1961, 361).

7.15 Period 7 – Landscaping and refuse disposal in Excavation Area 1

Following demolition of the building in Trench 4 the ground level was raised, bringing it closer to that in Trench 3. Landscaping activity was then followed by the digging of large refuse pits.

7.15.1 Phase 28 (P28) – Dumping and levelling at south-west end of Excavation Area 1 (G151, G194) – Figure 29

At up to 0.4m thick C3070 (S1117; G151) was the most substantial of the levelling deposits in Trench 4 (Figure 29). It comprised friable, light brown, silty sand. No datable material was recovered from C3070 but late 11th to mid-12th century pottery and 13th-16th century CBM was present in subsequent levelling deposits (C3068 and C3074; G151). The levelling activity increased the ground level in Trench 4 by around 0.65m to 9.12m AOD.

Similar friable brown sandy silts were also present across all of Trench 3 (Section drawing 5, Figure 10 and Figure 29). Here C3037 (S1114; G194) extended to 9.3m AOD and some 12th to mid-14th century pottery was recovered from it, together with a large volume of Roman pottery.

Considerable elevation of the ground level across the south-western end of Excavation Area 1 followed the demolition of the P27 building in Trench 4. The friable character of the levelling material suggests that it was deposited fairly rapidly with little regard to compacting it well. In addition, the landscaping activity appears to have been extensive, measuring at least 9.63m north-east/south-west and, given the volume of residual artefacts present, included either material imported or excavated from some depth elsewhere on the site. Digging building foundations could generate large quantities of material, however this kind of activity does not appear to have immediately followed in this part of the friary precinct.

7.15.2 Phase 29 (P29) – Refuse disposal (G152) – Figure 29

Large refuse pits (five in total) were found in each of the trenches in Excavation Area 1, across an area nearly 14m north-east/south-west (Figure 29). Pottery recovered from all of the pits provides a mid-13th to mid-14th century spot date, and was present alongside significant quantities of earlier artefacts, largely Roman pottery but also two Roman coins (SF37 and SF38) and a William I silver penny (SF41) minted at Canterbury in 1080-3 (see Section 8.13), which was found in the primary fill of pit S1118 in Trench 3.

Of particular interest was pit (S1121; G152). This feature measured 1.5m by 1.5m and was at least 0.8m deep, although it was truncated to the north-west and south-west and the base was below the extent of excavation in this part of Trench 2 (Plate 24). The upper backfill (C3052; S1121; G152) contained a vast quantity (774 sherds) of Splashed ware pitcher fragments. Many

were wasters with some displaying glaze over the edges, over-firing, glaze slag and fusing between vessels. An unusually large group of curved and flanged tile, accounting for nearly 21% of the assemblage of this type, was also present in C3052 and included many large sherds.

Splashed wares found in York are known to have been produced from the late 11th - 13th century and the presence of so many wasters strongly suggests the local siting of a kiln. Production of curved and flanged tile encompasses a similar date range of the late 11th to early 13th century, and are a type commonly thought to be associated with high status buildings. The recovery of other pottery types from the G152 pits could push the date for the clearance of redundant structures into the 14th century.

The significance of the waste materials present in C3052 lies not only in their sheer volume but also in what those material types infer about activities on the site during the 13th and 14th centuries compared to subsequent activity. What followed next may have required significant reorganisation and could have been the catalyst for the demolition of structures and raising of the ground level seen in P27-29.

7.16 Period 8 – 14th century land division and associated structures

Following landscaping and pit digging in Excavation Area 1 reorganisation of the site appears to have occurred. A stone wall was constructed through the middle of the site, which for the remainder of the medieval period delineated two very different zones of activity.

7.16.1 Phase 30 (P30) – Possible ditch, wall and associated levelling activity (G154, G156, G158) – Figure 30

A possible linear feature was present at the northern end of Excavation Area 2 (C19005; S1131; G156). Aligned north-west/south-east and measuring 1.40m long, 1.10m wide and 0.97m deep this feature had steep sides and a flat, even base, suggesting a linear form (Figures 6-7 and Figure 30). Backfilling appears to have taken place in the 14th century and seems to have been a rapid process.

Preparation work for the construction of a limestone wall included stabilising the ground around the pits in Trench 2 (S1121; G152; P29) with levelling deposits C3042 and C3049, S1123 in G154 (Section drawing 6, Figure 10 and Figure 30).

The wall ran close to the full length of Excavation Area 1 on a north-east/south-west alignment (Plate 25; Figures 8 and 30). It measured 13.02m long and up to 1.6m wide, although it averaged 1.2m in width. It only survived to foundation level, which at its north-eastern end was at 9.79m AOD, falling to around 9.25m to the south-west, an angle of 2.3°. The foundation (C3088, C8088; S1135; G158) comprised roughly dressed, randomly coursed Magnesian limestone blocks bonded with a soft, crumbly yellow white lime mortar; at the north-eastern end cobbles made up a greater proportion (Plate 26). Trench 3 provided the most extensive profile view; here a relieving arch was present in the eastern corner of the trench and the base of the foundation was observed at around 8.3m AOD, making its height in this area approximately 1m (Plate 27). No dateable artefacts were recovered from the fabric of the wall, however its position in the stratigraphic sequence indicates a date later than the mid-13th to mid-14th century features and deposits in P28-29.

On the south-eastern side of the wall and extending south-west of Trench 2 were mortar-rich stony deposits (C3047 and C3051; S1124; G158). These were perhaps either levelling deposits

preparing the ground prior to wall construction or waste material generated during its construction.

Alterations were later made to the wall (see Phase 33 below), but no part of the structure appears to have survived above foundation level. Consequently, it is not entirely clear whether it was part of a building or a stand-alone feature such as a boundary wall. The date of features and deposits cut by the wall suggest a 14th century or later date, placing it within the life span of an Augustinian friary known to have been established on the site from the late 13th century (VCHY 1961, 361). Construction of the wall and the infilling of the linear feature in the north-east of the site could relate to the consolidation of zones of activity or reorganisation within the friary precinct.

7.17 Period 8 – Medieval graveyard

By the 14th century the northern end of the site, south-west of the wall in P30, was being used as a graveyard. Five possible graves were found adjacent to the wall around Trench 2 and a further 13 burials were found across Excavation Area 2, NA WB 7 and NA WB 9.

7.17.1 Phase 31 (P31) – Graveyard (G160-61) – Figure 30

Situated in an evenly spaced row, close to the north-eastern end of the G158 (P30) wall, were five possible graves, all aligned north-west/south-east (G160). They measured up to 2.36m long, 0.81m wide, and no more than 0.2m deep (Figure 30). No in situ human remains were found in any of the possible grave cuts, however, disarticulated human bone was recovered in sufficient quantity to suggest an inhumation had originally been present within each feature.

More graves were identified in Excavation Area 2 and NA WB 7 (Figure 30): parts of ten inhumations were recovered from 14 possible graves (S1130 and S1144-56; G161). Where in situ remains were encountered these were invariably aligned north-west/south-east, and it was apparent that they had been laid out in an extended supine position. No complete individuals were recovered, either because of modern truncation or because part of a burial lay beyond the limit of excavation, however the general condition of the recovered bone was good.

Two graves were encountered in NA WB 7 (Section drawing 7, Figure 9). In the north-eastern corner was C8084 (S1144); this was only seen retrospectively in section where its cut was observed to extend from 9.82-10.18m AOD. Part of an in-situ inhumation (S1145) was found further to the south-west in grave cut C8059 extending from 9.61-9.84m AOD (Section Drawing 7, Figure 9). It had been severely impacted by modern intrusion, but enough of the pelvis, femora and hands remained to identify an extended, supine burial with the hands placed across the pelvic area.

The burials in Excavation Area 2 again appear to have been arranged in rows, and intercutting of graves was identified in two instances indicating that the graveyard may have been in use for some time (Figures 4-7 and Figure 30).

At the south-western end of the north-western row was SK8, an adult of unspecified sex, in grave S1146. Later truncation had left a grave cut between 0.2 and 0.45m long and 0.8m wide, which extended from 9.58-9.89m AOD. The extent of the later disturbance made it difficult to determine if any of the bone remained in situ, but some did appear to be articulated.

The next feature to the north-east was S1147, which was aligned north-west/south-east and measured 1.04m long, 0.68m wide and up to 0.24m deep, ranging between 9.9-10.14m AOD.

No human remains were present in this feature, however its shape, size and position was similar to graves nearby.

The first definite burial on this row was SK3 in grave S1149. Here the lower legs of an adult of indeterminate sex in an extended and supine position were found in a grave cut that measured 0.58m wide and 0.35m deep, extending from 9.86-10.21m AOD. A modern drain had removed the south-eastern end of the grave and the feet along with it. The north-western end of the grave lay beyond the limit of excavation; however, the distal ends of the femora could be seen in section. Late 12th to early 13th century pottery was recovered from the backfill.

Grave S1148 was 0.58m north-east of S1149 and measured 1.02m long, 0.75m wide and 0.51m deep, ranging from 9.81-10.32m AOD. The north-western end of the grave cut was within the limit of excavation in this area, however the grave had been truncated from above and along its north-eastern side by a later grave (S1150) and to the south-east by a modern cut, both removing much of the burial. What remained intact indicated that the individual was a male, middle adult aged 35-44 (SK2), in an extended and supine position with the arms and hands extending either side of the pelvis. Radiocarbon dating of SK2 has returned date ranges of 1415-1487 (68.3% probability), 1397-1530 (87.4% probability) and 1555–1623 (8% probability) (Appendix 5).

Cutting through S1148 was grave S1150. The cut for this grave extended north-west beyond the limit of excavation. The south-eastern end of the grave was investigated, revealing SK1 which comprised part of the pelvis and both legs and feet of a male, mature adult aged 45+, which was in an extended and supine position. The cut measured 1.5m long, 0.63m wide, and 0.46m deep and extended from 9.86-10.32m AOD. Radiocarbon dating of SK1 has returned date ranges of 1420-1499 (68.3% probability), 1400–1533 (85.1% probability) and 1553-1623 (10.4% probability) (Appendix 5).

The next grave in the alignment was S1156. Situated 0.93m north-east of S1150 this grave was only identified in section but was clearly cut into the backfill of linear feature S1131 (G156; P30). The cut was U-shaped in profile with a flat base, and measured 0.81m wide, 0.53m deep, extending from 9.81-10.34m AOD. Nothing was recovered from this grave, however ribs visible in section suggest an in-situ burial was originally present.

At the south-western end of the south-eastern row of graves was SK5 in grave S1151. Here a skull and mandible of an adult male was encountered in what may have been the north-western end of a grave, the cut of which ranged from 9.87-10.05m AOD. A single small sherd of almost certainly intrusive Pearl ware with a blue ribbed band was present along with a small quantity of Roman pottery.

The next grave (S1152) was 3.25m to the north-east. It had been truncated to the north-east by a later burial (G1153) and a modern drain to the north-west. It was only possible to investigate 0.4m of the grave's length, which here ranged from 9.93-10.22m AOD and contained SK6, part of the torso and right arm of an adult individual in a supine position. Roman and medieval pottery was present in the grave backfill.

Cutting into and removing part of the north-eastern side of grave S1152 was the north-western end of grave S1153. The cut measured 0.63m wide and 0.44m deep, extending from 9.78-

10.22m AOD. Only a 0.35m length of this grave was excavated, but it was found to contain the skull of a male aged 35-44 (SK7) and a quantity of disarticulated human bone.

Grave S1154 was 0.37m to the north-east of S1153. The grave cut ranged from 9.94-10.38m AOD, and was truncated to the north-west and north-east, leaving a width of 0.48m. Only 0.37m of the length could be excavated, the rest extending south-east beyond the limit of excavation. The grave contained SK4, an adolescent individual aged 12-17 years, which had been laid in a supine position with the right arm flexed at the elbow from where the radius and ulna extended towards the pelvis, while what was exposed of the left arm extended straight along the left side of the body. A copper alloy anular brooch (SF196) and a copper alloy belt fitting (SF197) were found positioned just below the ribs on the left side of the torso (Plate 28) and late 14th to early 15th century pottery was recovered from the backfill.

Located furthest to the north-east was SK8 in grave S1155. It had been truncated to the north-west, north-east and south-east, and extended beyond the limit of excavation to the south-west. The base of the grave was at 9.85m AOD. Only the skull, mandible, right scapula and part of the right humerus remained, together suggesting a supine burial, in this case of a probable female aged 18-25 years. A late 4th century copper alloy coin (SF216) was found in the grave backfill, alongside fragments of 14th century pottery.

Disarticulated human bone was also found during excavation around a pile cap in a NA WB 9. Here the south-western side of a cut feature measuring 1.07m x 0.55m and 0.26m deep (C8085-86; S1130; G161) was identified in section and fragments of vertebrae, rib and humerus were recovered from the vicinity. The position, alignment and content of this feature suggests that it was a grave.

With the exception of a possible charnel pit in NA WB 10 (S1138; G159; P34) all deliberately deposited human remains were inhumation burials located south-east of the wall in P30, and with the exception of two graves were south-west of possible linear feature G156. No burials were found south-east of wall G137 (P21). The general impression is of a well-organised and maintained graveyard, although there were two instances of intercutting burials, perhaps indicating grave markers were not necessarily universal or that the graveyard was in use long enough for burial locations to become lost or unclear. The burials and associated features were in perhaps as many as four rows, each arranged along a north-east/south-west axis, an alignment shared by medieval stone-built buildings to the west and the slight fall in ground level down towards the river.

A gentle downward slope in the topography from north-east to south-west may also be reflected by the depths that graves were dug to. The bases of possible graves in G160 adjacent to the P30 wall ranged in height from 9.4-9.6m AOD, while further to the east the height range of graves in G161 was between 9.58m and 9.94m AOD. The two deepest graves in G161 were S1145 and S1146, both located furthest to the south and the west in that area, while the only two above 9.9m AOD (S1152 and S1154) were among those towards the north-eastern end of the site. Seven of the graves where human remains were present had a maximum depth range of between 9.81m and 9.9m AOD (S1144, S1148-51 and S1155-56).

Determining a date for the use of the graveyard generally relies on the dating of the deposits that the graves were cut into. Few largely intact archaeological horizons were present above

the graves, and while artefacts present in grave backfills may be informative there is a significant likelihood of residuality. In the case of the possible graves in Excavation Area 1, three cut into or were very close to 14th century pits in G152 (P29), while the two south-west of Trench 2 cut into deposits in G158 that were related to the construction of the wall in P30 and postdate the G152 pits. The fills of these features had clearly been heavily disturbed in the post-medieval period (see Phase 36 below) which may account for the tendency towards 15th and 16th century pottery spot dates and the presence of a Nuremburg Jetton issued between 1500–25 (see Section 8.13). The graves in Excavation Area 2 cut into 12th-13th century levelling deposits in P21, the 14th century linear feature in G156 (P30), or much earlier Roman deposits at the north-eastern end of the site, while no burials were found at the south-eastern end of the area beyond the G137 (P21) wall, which appears to have been standing until at least the 13th century. As might be expected residual Roman artefacts were regularly present in G161 grave backfills. Medieval artefacts were only recovered from four graves, including pottery ranging in date from the late 12th to the early 15th century, and 13th-16th century CBM. Radiocarbon analysis was carried out on SK1 and SK2 from intercutting graves S1148 and S1150 situated close to the north-eastern end of the site. The results were virtually identical for both burials, giving a 15th or early 16th century date at around 85% probablitity, which would place them comfortably within the anticipated timeframe suggested by dating of adjacent deposits, features and stuctures.

The graveyard was located in what appears to have been the south-eastern periphery of the Augustinian friary, adjacent to land occupied by the Guildhall since at least the 15th century. The available dating evidence broadly establishes a 13th-16th century date for use of the graveyard, complementing the life span of the friary. By the 14th century its north-western side was delineated by a large limestone wall (G158; P30), while to the south-east a smaller structure (G137; P21) dating to the late 12th to early 13th century may still have been standing. In this circumstance any growth to the graveyard might prompt intercutting of burials, as seen between S1148/S1150 and S1152/S1153, or expansion to the north-east and south-west, perhaps resulting in the infilling of the possible linear feature in P30 in the 14th century. Notably graves S1154 and S1155 were close to that feature and were 14th century or later in date.

7.18 Period 8 – Structures in the north-west of the site

From around the 14th century land to the north-west of the wall in P30 was occupied by a substantial stone building.

7.18.1 Phase 32(P32) – 14th century friary building (G162, G164-65) – Figure 30

Extending 2.08m from the north-western side of Excavation Area 1 and up to within 2.39m of the P30 wall foundation was part of a large stone building. Demolition of the building had left only the south-eastern wall foundation and elements of an internal sub-floor structure intact. Parts of this building were encountered in NA WB 1, NA WB 2 and Trench 4 in Excavation Area 2 (Figure 30).

The wall foundation was aligned north-east/south-west, measured 0.86-1.06m wide and was traced from the south-western end of Excavation Area 1 over a distance of 11.66m north-east to the northern corner of Trench 3 (Plate 25). At this point there appeared to be a return to the north-west where CBM rubble extending along the north-western side of the wall foundation petered out (see S1189; G169; P36). However, that part of the foundation lay just outside of

Trench 3 and was not investigated in any detail; consequently, a continuation to the north-east is possible. The wall foundation comprised a rubble core faced along both sides with roughly dressed Magnesian limestone blocks bonded with a soft, creamy white lime mortar (C3090, C8006, C8027; S1137; G164). Trench 4 provided a 3.72m long profile of the south-eastern face of the foundation, there exposing seven courses of stonework rising over the south-western end of a relieving arch which extended down approximately 1.6m from 9.17m AOD (Plate 29). A selection of Roman vessel types, 12th-13th century gritted oxidised wares and 13th-16th century CBM were recovered from the construction cut backfills where they passed through Trenches 3 and 4, but given the depth of the foundation construction cut this probably reflects the date of the underlying features and deposits rather than when the building was constructed.

On the north-western side of the wall foundation structures which may have supported a floor inside the building were exposed in NA WB 1 and NA WB 2 (Figure 30). The earliest deposits were observed at the base of the north-facing section of NA WB 1. Here a flat levelling deposit covered by a thin layer of trampled material dating to late 14th to early 15th century (C8024-25; S1163; G162) extended to 8.98m AOD (Section drawing 8, Figure 11). Above this, and extending north-east in a 1.59m long, 0.36m wide strip were edge-set tiles bedded into soft sand (C8005 and C8022; S1165; G165). The tiles formed the footing for a wall, part of which was observed in the northern section of NA WB 1. More edge set tiles (C8007; S1166; G165) were found adjacent to the G164 limestone wall foundation and also formed the footing of a foundation. Aligned north-west/south-east foundation S1167 (G165) comprised reused limestone blocks and measured 2.62m long and up to 0.51m wide. At its north-western end it continued into the trench section on a line where it almost certainly would have met the S1165 (G165) wall footing. Above the point in section where S1165 and S1167 extended was a brick wall six courses in height, made up of orangey red bricks bonded with a soft orange brown sandy mortar (C8052; S1168; G165).

Abutting the north–eastern face of foundation S1167 were two low brick walls (S1169-70) supported on a flat, hard mid-orange brown surface, possibly made from CBM (C8020; S1162; G162), seen at around 8.8m AOD in a 0.45m x 0.3m sondage positioned 0.72m north-west of the G164 wall foundation. The low brick walls were aligned north-east/south-west and were spaced 0.53m apart with S1169 abutting the north-western side of wall foundation G164. Both walls were constructed from 14th-16th century bricks identical to those in C8052 (S1168) and were neatly faced on their external edges. Both also had a brick rubble core. Wall C8016 (S1170) was six courses high, and the top courses of both walls were at approximately 9.15m AOD.

A brick wall (S1171) identical in construction to S1169, was similarly found to abut the north-western side of wall foundation G164, 3.77m to the north-east in NA WB 2 (Figure 30). At the north-eastern end of S1171 and running perpendicular to it was a limestone-built wall or footing (C8028; S1172; G165). Like the S1167 limestone wall it was aligned north-west/south-east and abutted wall foundation G164 (Plate 30; Section drawing 9; Figure 11).

The relationship between the wall foundations in G158 (P30) and G164 is not entirely clear. It is possible that wall foundation G158 supported a free-standing wall sited along a boundary, on one side of which was a graveyard and the other a building, of which G164 formed the south-eastern side. Extending to the north-west the interior of that building had a suspended floor supported on low brick piers dating to the 14th to 15th century. The wall foundations share some

characteristics, for example the construction techniques and materials employed appear very similar and both were probably constructed in the 14th century. Conceivably they are part of the same structure, the 2.5m spacing between these parallel walls hints at an aisled building extending north-east/south-west through the friary precinct.

7.18.2 Phase 33 (P33) – Alterations and additions to south-east wall foundation (G166) – Figure 30

Alterations to wall foundation G158 (Phase 30) include the addition of buttresses and extension, reinforcement or rebuilding to the south-west. The mortar used to bond the stonework in these additions was identical but different to that used in the original construction. It is unclear when the remedial work took place but it does appear that the north-eastern buttress disrupted two of the medieval burials in Trench 2, one of which contained 15th-16th century pottery.

From a break visible across the upper surface and down the north-western face of wall foundation G158 (P30) the line of the wall continued to the south-west as S1173 (G166). Measuring 1.01-1.2m wide this section of wall extended south-west over a distance of 5.29m, taking it to the end of Excavation Area 1; it was later picked up in NA WB 4 and NA WB 5 (Figure 30). This section of foundation was constructed using roughly dressed Magnesian limestone blocks bonded with very hard, coarse, light grey white lime mortar. Two Magnesian limestone blocks (AFs 10-11), dating to 1066-1540, were recovered from the top course (C8092; S1173; G166). Part of a relieving arch was visible arcing down to the south-west in NA WB 5 (Plate 31; Section drawing 10, Figure 12). The course of stonework above the top of the arch was secured with copious quantities of mortar, which was also visible up the north-western face of the foundation where it was exposed in Trench 4 (Plate 32).

Randomly-coursed limestone rubble had been fixed up against the south-eastern face of S1173 with large quantities of hard, coarse, light grey white mortar. S1174 extended the full length of S1173 and up to 0.52m south-east from it (Figure 30). At the north-eastern end of S1174 and abutting wall foundation G158 was one of three buttresses that had been added to the south-eastern side of that wall. Buttress (S1175) extended 1.19m along the wall and projected 0.8m from it. The next buttress (S1177) was 3.79m to the north-east of S1175 and measured 1.22m north-east/south-west and 1.3m north-west/south-east. The third buttress (S1176) was situated a further 4.05m along the wall foundation. Its position inside Trench 2 allowed for closer inspection. The construction cut measured 1.32m x 1.36m and extended from 9.04-9.7m AOD. All of the buttresses had been coated in massive quantities of the same hard, coarse, light grey white mortar used in the other G166 structural elements, to the point at which, even where the three faces of S1176 were exposed any coursing or structure to the stonework used was not visible (Plate 25).

The slight gap between the G158 (P30) part of the foundation and the foundation in this phase may simply be evidence of extension of the structure to the south-west. Alternatively, and perhaps more likely given the additional thickening of the wall to the south-east and the placement of buttresses (particularly one directly at the point of weakness in the earlier wall), this part of the structure had begun to fail requiring significant repairs and reinforcement. It has not been possible to precisely determine when this work took place as the next clear phase of activity was the demolition of the buildings and the clearance of the site following the Dissolution of the Monasteries and surrender of the friary in 1538 (Raine 1955, 133).

7.19 Period 8 – Probable medieval activity

Determining dates of deposits and features observed in the various watching brief trenches was hampered by infrequent recovery of artefacts during those works. Drawing parallels with securely dated deposits and features of a similar character, and physical and stratigraphic position is possible however, and allows for a broad comparison.

7.19.1 Phase 34 (P34) – Undated dumping and levelling deposits, likely medieval (G153, G155, G159) – Figure 30

In NA WB 7 and 9 deposits typically consisting of soft, mid-pink brown silty sand (C8079 and C8087; S1128; G153) were observed extending to around 10.08m AOD (Section drawing 7, Figure 9 and Figure 30). The north-west facing section of NA WB 7 shows the deposits there were earlier than the possible graves in G161 (P31), although those deposits lacked the consolidated character of the 12th-13th century deposits in G136 (P21), cut by graves in Excavation Area 2.

Across NA WB 3, 9, and 10 was evidence of soil accumulation, usually mid-green or mid-grey brown coarse sandy silts (C8063-64; S1126, C8065-66; S1125 and C8047; S1127; G155) (Section drawings 11-12, Figures 12-13 and Figure 30). The composition and character of these deposits was comparable to mid-13th to mid-14th century deposits seen further to the south-west in Excavation Area 1 (G151 and G194; P28). In addition, C8047 (S1127) predated a probable wall and cobble surface (see G157 and G163; P35 below) which may relate to the building in G164 (P32).

Cutting into the G155 deposits in NA WB 10 was a charnel pit (S1138; G159). This was the only burial feature found to the north-west of the G158 (P30) wall foundation (Section drawing 13, Figure 13).

7.19.2 Phase 35 (35) – Undated structures and related deposits, probable medieval (G157, G163, G195) – Figure 30

Cobbles bedded into dark orange brown clay (C8044-45; S1132; G157) were exposed at the base and in the north-west facing section of NA WB 3 at around 9.45m AOD. This probable surface was situated north and east of a possible wall foundation comprising lime mortar bonded limestone (C8080; S1136; G163), aligned north-east/south-west and measuring 1.6m long and 1m wide (Section drawing 11, Figure 12 and Figure 30). S1136 follows the same line as wall foundation G164 (P32), the established extent of which was 6.08m to the south-west. If S1136 is part of the G164 wall foundation this would provide a 17.41m length.

Extending into NA WB 11 on a north-east/south-west alignment and measuring 1.29 x 0.99m was the south-western end of a mortar-bonded limestone footing (C19036; S1133; G195). This stone footing was located 1.56m north-east of wall foundation G158 (P30) and was offset slightly to the east of it, 2.52m directly north-east of buttress S1176 (G166; P32). The form of construction, in particular the mortar used, was more like that used in the foundation build (G158) than in later alterations (G166). In addition, wall foundation G158 clearly did not extend into NA WB 11 as a cobble surface was present abutting the north-eastern side of the footing (Plate 33; Figure 30). The surface was composed of small cobbles, pebbles and gravel bedded into a gritty clay present at 9.5m AOD (C19037-38; S1134; G195).

The cobble surfaces in NA WB 3 and 11 were both at approximately 9.5m AOD and, while separated by 4.2m east-west their form, character and that of adjacent structural elements suggests a link between them and the P32 friary structures in use from around the 14th century onwards.

7.20 Period 9 – Post-medieval activity

Dismantling of buildings and clearance of the friary site following the Dissolution was represented by extensive deposits of demolition material across Excavation Area 1. Soils then began to accumulate through at least the 16th-18th centuries. In the eastern part of Excavation Area 2 were a series of small features, perhaps relating to backyard or horticultural activity.

7.20.1 Phase 36 (P36) – 16th century demolition activity (G167, G169) – Figure 31

Overlying the remains of a surface and wall foundation in NA WB 3 (G157; P35) were a series of dark, stony silty clays (C8042-43, C8046; S1160; G167) (Section drawing 11, Figure 12 and Figure 31). Above was a mortar rich deposit containing limestone rubble (C8037; S1191; G169), probably derived from the demolition of buildings nearby.

The medieval buildings formerly occupying the friary precinct were dismantled to foundation level. The comprehensive nature of the clearance activity is revealed by damage to five probable graves (G160; P31, Plate 34), truncating them and leaving a maximum depth of 0.2m. In NA WB 1 and NA WB 2 brick and tile rubble covered the sub-floor structures (S1189; G165, Plate 35) north-west of wall foundation G164, while small fragments of limestone, CBM and mortar were found scattered across the rest of Excavation Area 1 (Figure 31). Pottery recovered from the demolition material (G169) dates to the late 16th-17th century.

Some larger architectural fragments (Afs) recovered from the demolition horizon provide an indication of the date and style of the friary buildings. The backfill of one disturbed grave (C3043; S1192; G169) contained two Magnesian limestone mullion fragments dating to 1350+ (AFs 5-6), while other Magnesian limestone blocks were recovered from C3025 (G169), including AF14, a large mid-12th to 13th century walling block with an integral capital at one end (Plate 36).

7.20.2 Phase 37 (P37) – Post-medieval surface in Excavation Area 2 (G170-71) – Figure 31

A series of stony levelling deposits (G170) extended east of the burials, continuing across the medieval structure in G139 (P22). The presence of medieval building debris, including a small fragment of Magnesian limestone window tracery (AF9) dating to 1350+, along with 16th-18th century CBM demonstrates that the levelling was post-medieval in date. A clay bonded cobble surface (C19033; S1180; G171) was then laid on top of the south-eastern part of G170 (Plate 37). The surface measured 2.39m north-east/south-west by 1.76m north-west/south-east, ranged from 10.18-10.22m AOD and was covered by thin layers of sandy and clayey silts (S1181) which are likely to have accumulated during its use. Pottery and CBM from the levelling and surface dates them to the 16th-18th century.

The surface and trampled material that had accumulated on top of it exhibits continuity of use into the post-medieval period for at least part of the site.

7.20.3 Phase 38 (P38) – Small cut features in Excavation Area 2 (G172-74) – Figure 31

A series of small features were later dug into the G170 and G171 (P37) levelling and surface. Three were linear features all aligned north-west/south-east. The two furthest to the south-west were gullies (S1184-85; G173) measuring approximately 1 x 0.2m and 50-60mm deep, that

were set approximately 0.4m apart. A larger linear feature (S1183; G172), measuring 3.95 x 0.57m and up to 0.14m deep, followed the same alignment but extended further to the north-west (Figure 31). Cutting through S1183 was a sub-oval pit (S1182; G174) that measured 1.43 x 0.87m and 0.22m deep.

The few artefacts in these features included CBM dating to the 16th-18th century (C19025; S1185; G173 and C19168; S1186; G174), a Jetton (SF221) dating to 1586–1635 (C19027; S1183; G172) and 17th century pottery (C19168; S1186; G174). In addition, soil accumulation above this contained artefacts dating to the late 16th to early 18th century.

7.20.4 Phase 39 (P39) – Post-medieval soil accumulation and levelling (G175-77) – Figure 32

Soil accumulation continued through the post-medieval period, to which gardens at the rear of new town houses built along the south-western side of Lendal in the early 18th century would have contributed.

Identified above post-medieval demolition deposits (P36) in watching brief interventions NA WB 1, 3 and 11 were dark brown silty clays containing pebbles and stone fragments (C8033 and C8038; S1199, C8051; S1200 and C19035; S1202 in G175). No dating evidence was retrieved from any of the G175 deposits, but they were comparable in character to 16th-18th century soil accumulation assigned to G176 (Section drawing 11, Figure 12 and Figure 32).

Dark and mid-brown coarse sandy silts or silty clays (G176), usually containing pebbles, limestone, mortar and CBM fragments dating to the 16th-18th century were observed across Excavation Areas 1 and 2, NA WB 1, 2 and 7 (Section drawings 8-9, Figure 1 and Figure 32).

Above the G176 deposits in Excavation Area 2 were patches of loose or friable clayey silts containing mortar flecks and small limestone fragments (Figure 32). CBM dating to the 16th-18th century was found in the largest of these (C19019; S1207; G177), which was in a 2.1m long by 0.37m wide by 0.13m deep cut aligned north-east/south-west (C19053; S1207; G177) that had been truncated along its north-western edge by a modern utility trench.

Following clearance of buildings formerly occupying the friary precinct, activity at the site resulted in soil accumulation and a handful of small cut features. It is probable that much of what was seen derives from landscaping within gardens at the rear of properties fronting onto Lendal after 1714.

7.21 Modern Activity

Municipal buildings began to encroach onto the site in the late 19th and early 20th century. Some structural elements and associated utility services were exposed.

7.21.1 Phase 40 (P40) – Boatyard structures (G178) – Figure 32

Along the north-western periphery of the site are structures occupying the neighbouring boatyard, including standing buildings and a boundary wall. Parts of wall construction cuts and backfilling deposits (G178) were exposed along the north-west edges of NA WB 1 and 3 (Figure 32).

7.21.2 Phase 41 (P41) – North Annexe and associated features (G179-183) – Figure 32

The North Annexe building ranged along the south-eastern side of the site. Excavation Area 2 largely occupied the north-eastern end of the North Annexe interior, while NA WB 7, 8 and 9 were positioned immediately outside, to the north-west (Figure 32).

Part of the north-western wall construction cut (G179) of the North Annexe was recorded in NA WB 7 and Excavation Area 2. Foul water drains running north-east/south-west under the building and adjacent to the outside face of the north-west wall (G181) were also encountered. Both drains were deep enough to have impacted on medieval and Roman deposits.

Close to the north-western edge of the site a third 19th or 20th century drain (G180) was observed in NA WB 1 and 3. Above it and extending to the northern corner of the site in NA WB 10, soft dark grey brown sandy silt (G183) had accumulated (Figure 32).

In Excavation Area 1, close to where the Hutments building had formerly been sited, a small cut feature containing the end of a power cable (S1211; G182) was found.

8 THE FINDS

This section details the artefacts, palaeo-environmental data and dating or potential dating evidence recovered during the excavations. Reports on finds and samples that were assessed within the previous assessment report and were deemed not worthy of full assessment are not reproduced here but can be referred to in that report (Savine 2022).

8.1 The Roman Pottery

By Dr David G. Griffiths with contributions from Dr Elizabeth Foulds, MCIfA (Samian stamps and decorated sherds)

8.1.1 Introduction

A total of 2325 sherds of Romano-British period pottery (weighing *c.* 51.7 kg) was recovered during multiple phases of excavations at The North Annexe, York Guildhall, York (Table 5). The complete pottery assemblage includes material dating from the Romano-British, later medieval, post-medieval and modern periods. Only Romano-British material is considered in this section; all later dating material was considered by Jenner and is presented in Section 8.2.

8.1.2 Methodology

The Romano-British pottery was examined visually and sorted into broad ware groups including amphorae, fine (Samian and other fine wares) and coarse wares, and mortaria, based on colour, hardness, fracture, and inclusion composition, as outlined in Tomber and Dore (1998, 6-8). The assemblage was catalogued and analysed in accordance with national guidelines (CIfA 2014; Barclay *et al*. 2016). These ware groups were further refined by ware class and individual fabric level, with supporting descriptions (see Appendix 6 for fabric descriptions). Individual fabrics were physically checked against the type series developed by Monaghan (1997) and held at York Archaeology, York, and his codes are referred to where appropriate. This analysis was undertaken with reference to the Yorkshire Archaeological Research Framework's resource assessment (Roskams and Whyman 2005) and research agenda (Roskams and Whyman 2007), and the archaeological assessment undertaken by York Archaeology (Savine 2023). The Romano-British pottery was previously assessed by Anne Jenner (2022).

All pottery was quantified by count, weight, Estimated Vessel Equivalents (EVEs, based on percentage of rim preserved); Samian pottery was also quantified by maximum number of vessels to compare with other Samian ware assemblages. Local/regional wares, nationally traded products, and international imports were identified (Appendix 5). Pottery sherds with diagnostic features, which aid identification to vessel form, were noted, and many are suitable

for illustration; featured vessels are identified and referred to in this text with their 'ID' code. A full archive record of all material is is available upon request as an Excel spreadsheet, with a catalogue and descriptions of fabrics in Appendix 6.

Analysis of pottery fabrics was undertaken using a low power microscope at X30 magnification with basic classification (e.g., amphorae, mortaria, fine wares and coarse wares); imported Romano-British fabric codes are based on The National Roman Fabric Reference Collection (Tomber and Dore 1998), and reference is made to regional type series (e.g., Monaghan 1997; Leary 2020; 2021) for local/regional products. Reference is also made to Swan's extensive study *The Roman Pottery of Yorkshire in its Wider Context* (2002).

The pottery assemblage was analysed by stratigraphic phase, based on excavations and relationships of features and deposits (Savine 2023). Reference is made to ceramic periods assigned by Monaghan (1997, 835), and his extensive study of pottery from York should be used alongside this report.

Report structure

Each ware class (amphorae, fine wares (including Samian), mortaria, and coarse wares) is considered individually, with key types within each group, and their sources, discussed. Functional analysis follows, with any changes over time for the supply and use of vessel forms identified; comparisons are made with other sites in or close to the city of York. An analysis of wares and their relative proportions over time was undertaken, with comparisons between sites of similar date in the city. Finally, the assemblage is discussed with regards to its local context. All analyses are based on stratigraphic phases identified through archaeological excavation (Romano-British period, Phases 3 to 17; see sections 7.3 to 7.8); material considered residual and out-of-phase (i.e. where items are found mixed with much later dating material) was removed from data sets in order to avoid anomalous spot dating of contexts due to the secondary deposition of these sherds. However, these changes from one phase/period to the next are not always clear on urban archaeological sites and, where appropriate, comment is made on pottery groups which may be transitional, or did not necessarily fit neatly into a single phase/period (i.e. Period 3 to 4).

Even though residual material was removed for the data sets, an overview of residual Romano-British pottery present in later dated deposits is provided, as later Roman pottery of note was present in medieval deposits and phases. Reference is made to Monaghan's (1997) ceramic groups and ceramic periods, as necessary. Due to the relatively small area of the site, no spatial analysis was undertaken.

The chronological supply of Roman pottery in York is well established and is presented and discussed in detail by Monaghan (1997) in his excellent study of the material in the city and its environs. The Roman period pottery recovered from Guildhall broadly follows Monaghan's ceramic periods; however, given the large quantities of securely stratified material recovered from the site, the analysis is presented by phase with groups of phases grouped into broadly chronological periods.

8.1.3 Results

A total of 2325 sherds of Roman period pottery were recovered from multiple features and phases across the site at Guildhall, York (Tables 5 and 6). Table 7 presents all pottery by major

ware group and ware class. The site has been subjected to extensive development and redevelopment, with evidence for almost 2000 years of occupation. Therefore, many of the artefactual remains across the site have been disturbed and redeposited, perhaps on multiple occasions; with regards to the pottery assemblage there was much mixing of Romano-British and medieval (and later) deposits. However, a total of 1157 sherds of Roman period pottery (weighing *c.* 24.8 kgs, 2221.5 EVEs) were recovered from stratigraphically secure deposits dating throughout the Romano-British period; the remaining sherds (1168 sherds weighing *c.* 26.8 kgs) were residual and occurred in later dating features, and in unstratified deposits (noted as context 0) (Table 6). It should be note that, while there were small quantities of medieval pottery in deposits of Romano-British phases, these were considered intrusive and the result of extensive post-depositional disturbance at the site; medieval and later dating pottery is considered in full by Jenner (Section 8.2).

8.1.4 Wares

Amphorae

A total of 121 sherds of amphorae were recovered, forming 5.2% of the overall assemblage by sherd count, 25.6% by weight, and 1.2% by EVEs (Tables 5 and 7). Forty-nine sherds were recovered from securely stratified Roman period deposits, and fifty-nine sherds were residual in medieval and later dating deposits; thirteen sherds were found in unstratified deposits (Table 8). As was common at Romano-British military and urban sites in Britain, amphorae from the southern Spanish province of Baetica, close to the Guadalquivir River and its tributaries between Seville and Córdoba (César Carreras 2014), formed the bulk of the amphorae assemblage, with 58 sherds (47.9% by count, 77.1% by weight, and 100% by EVEs (Table 7). The remains of Baetican amphorae were predominantly body sherds, most likely Dressel 20 types. Three rims were recovered, two Dr.20 (ID1943, AD110 to 150, and ID1988, AD50 to 70), and one Dr.2-4 (a relatively rare type from the province); the remains of two handle fragments were also recovered. All but one of the diagnostic sherds were of Dressel 20 types (or possibly Dressel 23); these types were used to transport olive oil to Britain from the 1st to 3rd centuries AD (Williams 1997, 968-969) and are common on York sites and military and urban sites across the country. The rim sherd (ID1966) of a Dressel 2-4 was of 1st to 2nd century date, a type predominantly used to transport wine (César Carreras 2014). Additional Spanish amphorae were recovered in small quantities, namely two body sherds of possible Cadiz origin (CAD AM, Tomber and Dore 1998, 87), perhaps used to transport fish-based products (possibly Class 17/18, Peacock and Williams 1986, 120-3). One sherd of unidentified origin was also found.

The second greatest component of the assemblage were Gaulish vessels, with forty-seven sherds (38.8% by count, 16.7% by weight). Most of the remains were body sherds, with three bases of flat-based types; no rims were recovered. Gaulish amphorae were predominantly used to transport wine across the empire (e.g. Laubenheimer 2014), and were common in Britain from the 1st to 3rd centuries AD. Four body sherds of Campanian Black sand amphorae (CAM AM, Tomber and Dore 1998, 88) were recovered, forming 3.3% of the assemblage by count, and 0.5% by weight. This vessels or vessels were probably of Dressel 2-4 type, and used to transport wine from Italy to Britain in the 1st century AD. In addition, six body sherds of North African amphorae (NAF AM, Tomber and Dore 1998, 101-102) were recovered, forming 5.0% of the assemblage by count, and 2.6% by weight. Vessels in these fabrics were used to transport a variety of commodities, including olive oil (Bonifay 2014), and perhaps wine and fish-based

products (Bonifay and Keay 2014). A single body sherd weighing 25.3 grams of unidentified amphorae was also recovered.

Of note were the remains of one, possibly two, Kapitän 2/Peacock and Williams 47 amphorae (P&W AM 47, Tomber and Dore 1998, 109). The type dates broadly to the 3rd and 4th century AD, and while rare in Britain, examples have been found in York (Williams 1997, 972). The origin of these types is unknown, but based on their distribution, somewhere in the Aegean has been suggested; the original contents are unknown but wine has been suggested (Williams 2014).

The quantities and range of amphorae recovered from Guildhall is not unusual for York and is broadly characteristic of military and urban settlements. The results indicate continued supply of continental commodities including olive oil, wine, and potentially fish-based products. Fish bones recovered from the site indicate that *salsamenta*, preserved whole or large sections of fish, in this case Atlantic chub/Spanish mackerel, were being imported from the continent, probably from the southern coasts of modern-day Portugal, Spain or France (see section 8.8 Fish Remains).

Fine wares

Samian ware

A total of 341 sherds of Samian ware weighing 3422.6 grams were recovered, forming 14.7% of the overall pottery assemblage by sherd count, 6.6% by weight,15.2% by EVEs and 279 MNV (maximum number of vessels) (Tables 5, 7, and 9). Two-hundred and thirty sherds were recovered from securely stratified Roman period deposits dating from the 1st to 3rd centuries AD (Table 9); 91 sherds were residual medieval and later dating deposits; 20 sherds were found in unstratified deposits. A total of 11 vessels were stamped with a maker's mark, and 71 sherds were decorated; details of maker's stamps and decorated sherds are provided in the full catalogue. There were vessels sourced from production in all three major regions of Gaul (Table 9).

A total of 151 sherds weighing 1158.2 grams of South Gaulish origin were recovered, forming 44.3% of the Samian ware assemblage by count, 33.8% by weight, and 56.9% by EVEs (Table 7). The sherds were generally in good condition, indicating limited post-deposition disturbance. The relative proportion of South Gaulish material in the assemblage indicates the established supply, consumption, and disposal of fine table wares during the 1st and early 2nd centuries AD (Table 9). The source of this pottery was the kiln sites around La Graufesenque (LGF SA, Tomber and Dore 1998, 28); vessel forms included bowls (Dr29, Dr30, Dr35, Dr37, Cu11, and Ritt8), dishes (Dr15/17, Dr18 and Dr18R, Dr18/31 and Dr18/31R, Dr22(?), Dr36, and Dr42, a platter or dish Dr15/17R or 18R, and cups Dr27, Dr33, and Dr35.

A total of 144 sherds weighing 1696.2 grams of Central Gaulish origin were recovered, forming 42.2% of the Samian ware assemblage by count, 49.6% by weight, and 31.3% EVEs (Table 7). The sherds were generally in good condition, indicating limited post-depositional disturbance. Samian ware of Central Gaulish origin formed a similar relative proportion to South Gaulish material, indicating continued supply of fine table wares during the 2nd century AD and perhaps into the early 3rd century AD (Table 9). The sources of this material were the kiln sites of Lezoux (LEZ SA, Tomber and Dore 1998, 31-2) and Les Martres-de-Veyre (LMV SA, Tomber and Dore

1998, 30); vessel forms included bowls (Dr31R, Dr37, Dr38/44, and Cu11, dishes (Dr15/17, Dr18, Dr18/31, Dr36, and Wa79), and cups (Dr27, Dr33, Dr35, Dr46, and OP46).

A total of 46 sherds weighing 568.2 grams of East Gaulish origin were recovered, forming 13.5% of the Samian ware assemblage by count, 16.6% by weight, and 11.8% by EVEs (Table 7). The sherds were generally in very good condition, indicating limited post-deposition disturbance. The quantities of Samian ware of East Gaulish origin were significantly lower than South and Central Gaulish material, indicating a reduction in the supply of these types of continental fine table wares (Table 9). The sources of this material were the kiln sites of Heiligenberg (HGB SA, Tomber and Dore 1998, 37), La Madeleine (MAD SA, Tomber and Dore 1998, 38), Rheinzabern (RHZ SA, Tomber and Dore 1998, 39), Sinzig (SIN SA, Tomber and Dore 1998, 40), and Trier (TRI SA, Tomber and Dore 1998, 41); vessel forms included bowls (Dr31R, Dr37, Dr38, and Dr44), dishes (Dr18/31, Dr31, and LudTg), cups (Dr33), and a beaker.

Form and function

The Samian vessel forms were predominantly cups (39.8% by EVEs and 16.1% by MNV), with bowls forming 25.9% by EVEs (37.6% by MNV) and dishes 34.2% by EVEs (19.4% by MNV); undiagnostic body sherds formed 25.5% by MNV (Table 10). No Samian mortaria were found, which may be chronologically significant, as these specialist vessels began arriving in Britain later in the 2nd century AD (*c.* AD 170 until *c.* 230). In addition, none of the 341 sherds recovered had evidence of repair which, again, may be chronologically significant or, perhaps, indictate that there was a constant supply of Samian and whoever was using these vessels was able to buy new items as pots broke and were discarded.

Assessment of changes over time for the supply and consumption of Samian ware forms part of, and was integrated into, the overall assemblage discussion below, with reference to Webster (2005).

Other fine wares

A total of 71 sherds of other fine table wares weighing 413.9 grams were recovered, forming 3.1% of the overall pottery assemblage by sherd count, 0.8% by weight, and 3.4% by EVEs (Tables 5 and 6). Twenty-two sherds were recovered from securely stratified Roman Period 1 deposits (phases 3 to 17, 1st to 3rd centuries AD (Table 12), and 48 sherds were residual in later Roman, medieval and later dating deposits; one sherd was found in an unstratified deposit (Tables 6, 7, and 12).

The bulk of the non-Samian fine wares consisted of 50 sherds of Lower Nene Valley Colour-coated wares, dating from approximately the middle of the 2nd century AD until the 4th century AD. Most vessels were beakers; however, only three rims (IDs 1445 (*c.* AD150 to 225), 1458 (*c.* AD150 to 280), and 1473 (*c.* AD 150 to 500) were found allowing for identification to type. In addition, the remains of two dishes (IDs 1437 and 1454) were found, both dating from the middle of the 3rd to the 4th century AD. All other fine wares were in small quantities (Table 12) and the remains of beakers in wares included local Ebor wares, mica-dusted ware of unknown source, plain oxidized and reduced wares. Fine wares imported from the continent included two small sherds (2.1 and 1.8 grams each) from beakers produced in Central Gaulish Black-slipped ware (IDs 1452 and 1466, second-half of the 2nd century AD), two black-slipped beakers (IDs 1432 and 1438) and two black-slipped roughcast beakers (IDs 1453 and 1472) in Moselkeramik Black-slipped ware dating from the late 2nd to mid- 3rd century AD.

Mortaria

A total of 34 sherds of mortaria weighing 4817.7 grams were recovered, forming 1.5% of the overall pottery assemblage by sherd count, 9.3% by weight, and 5.1% by EVEs (Tables 5, 7, and 13). Fourteen sherds were found in securely stratified Romano-British deposits, with eighteen sherds residual in medieval and later dating periods, and two were unstratified (Table 12). Due to the relatively small size of the mortaria assemblage, it was not possible to undertake robust statistical analysis. Table 13 presents mortaria by broad period.

The mortaria comprised local and regional products, for example York Ebor ware, Cantley and Catterick vicinity wares. Vessels from further afield include common nationally traded products from the kilns at Mancetter-Hartshill and the Verulamium region. Three sherds of mortaria from northern Gaul were also present. The quantities of products from all sources were relatively small, and there was no clear pattern in the supply over time. Vessel forms included bead and flange types, Class A and B, and a group of early Roman Gillam Types 237 (1968) (*c.* AD60 to 90, see examples from pre-AD70 deposits at Scotch Corner (Griffiths and Hartley 2020,362, fig, 5, 33, no. 325), and similar at Blake Street, York (Hartley 1993, 776-7, fig 288, no. 2821)). Most vessels were produced in Ebor wares, including white slipped, and early Roman oxidized and reduced ware. Later dating forms included a variant of Gillam Type 240 (1968) (AD80 to 150?) produced in northern Gaul (ID1923), fragments of bead-and-flange Mancetter-Hartshill vessels dating from *c.* AD150/170 to 230, and a single sherd of mid-3rd to mid- 4th century AD hammerhead type also produced at Mancetter-Hartshill (ID1927). Products of 3rd to 4th century AD were few, with one vessel (ID1919) produced at Cantley, South Yorkshire, and three vessels (IDs 1920, 1932 and 1976) in fabrics referred to as Cantley/Swanpool/Catterick, where it was not possible to assign to a specific source (Table 11). The early Roman period Gillam Types 237s are of interest, and are considered below, as part of the analysis of the pottery assemblage as a whole. There were no Crambeck products present in the assemblage, perhaps indicating that occupation and/or rubbish disposal was not undertaken at the site in the 4th century AD.

Coarse wares

A total of 1758 sherds of coarse wares weighing *c.* 29.5 kgs grams were recovered, forming 75.6% of the overall pottery assemblage by sherd count, 57.7% by weight, and 75.1% by EVEs (Tables 5, 7 and 14). This assemblage was significantly larger than all other ware groups. A total of 842 sherds weighing *c.* 15.6 kgs were recovered from securely stratified deposits dating to the Romano-British period (phases 3 to 17), with 888 sherds weighing *c.* 13.9 kgs residual in deposits dating from the medieval and later periods; 28 sherds weighing 0.286 kgs were unstratified (Table 14).

Oxidised and reduced wares formed the largest component of the coarse ware assemblage, with 699 and 642 sherds respectively (Table 13); a wide range of forms were identified (Table 11). Most of the oxidized pottery was produced locally in Ebor wares, and possibly at other kiln sites locally and/or in the wider region. Reduced (grey) wares included local and regional products, including Ebor wares and north and east Yorkshire wares such as Norton and Holme-on-Spalding-Moor. White ware products were difficult to source: Monaghan states his P1 fabric code was possibly made in the Mancetter-Hartshill region, however, Leary's (2013) suggestion of a more local/regional source is more likely given the date range of the forms present (mostly flagons and jars, but also beakers, a cup, and a lid). White-slipped wares were common, and

almost all were the remains of flagons, mostly produced locally in the 2nd century AD (e.g. Ebor wares); other vessels included a dish/platter (ID219), dating to first-half of the 2nd century AD, and a tazze/incense burner (ID699), late 1st to 2nd century AD. While many of the reduced ware types were burnished with dark grey and black surfaces, the black burnished wares referred to in Tables 13 and 14 were assigned based on common fabrics of the main sources, e.g. DOR BB1 (South-East Dorset Black-burnished ware, Tomber and Dore 1998, 127) and forms, e.g. BB1 and BB2 types; burnished reduced wares are included in the Reduced ware category. The black-burnished ware forms included jars, bowls, and dishes. Other coarse wares included 38 sherds of calcite-gritted wares, mostly in east Yorkshire Huntcliff-types and Knapton fabrics; only two sherds were recovered from the Romano-British phases, with the remainder residual in medieval and later dating deposits (Table 14). As with the Samian and mortaria assemblages, the absence of later Roman period material was notable. Other coarse wares include Dales-type wares from the Midlands, and a single sherd of shell-tempered ware. Coarse wares from further afield included Verulamium Region White ware (nine sherds) and a single sherd of North Gaulish White ware, possibly a flagon. A single sherd of an Ebor ware roughcast small jar/beaker was also present. Two vessels of African-style forms were recovered, a bowl Hayes Form 183.4 (1972, 202) (ID915, Monaghan 1997, 1000, no 3934, fig 395, 1001; Leary 2021, 121. no 222, fig 9.64, 145), and a shallow dish Hayes Form 181 (1972, 200-1). Specialist Romano-British coarse ware types including a candlestick, six tazze/incense burners, an unguentarium, and a large bowl or dolium were also recovered, many residual in Post-Roman deposits; most of these vessels were produced locally in Ebor wares.

8.1.5 Analysis by phase

Late 1st to 2nd century. Monaghan (1997, 835), ceramic periods CP1 and CP2

Phase 3 (P3) – Gravel bank (Group 102)

This was a small group with a total of three sherds weighing 16.3 grams, recovered from the earliest deposit (Group 102) containing Romano-British pottery. The group contained the remains of a South Gaulish Samian dish (Dr18, AD 45-90) and two coarse ware sherds, one each of Ebor oxidized ware and Ebor reduced ware (a jar).

Phase 5 (P5) – Flat build-up south-west of slope (Groups 104-5)

A total of 96 sherds weighing 3031.6 grams (371 EVEs), were recovered from Phase 5 deposits. While physically 5m apart, the deposits within groups G104 and G105 were similar in composition (Savine 2023, 6.3.3); this was also the case for the pottery recovered. Gaulish wine amphorae was present in both groups, as was Samian ware, predominantly of South Gaulish origin (La Graufesenque) (forms included Dr18 dishes and bowls Dr29 (AD 45 to 90), Dr37 (AD 60 to 110), and a particularly early Ritt18 form dating from AD 40 to 70). An early Central Gaulish (Les Martres-de-Veyre) dish of form Dr15/17 was also recovered. The remains of two early mortaria were recovered, both with unusual fabrics. ID1917 was fully reduced, which is rare for mortaria, and soft. The heavily abraded surface of this vessel also showed evidence for extensive wear through use.

The second, ID1916, was in excellent condition with evidence for only limited use; it has a thick, reduced core and red-brown surfaces. Both vessels were Gillam Types 237 and date from approximately AD 60 to 90. Coarse wares and oxidized wares included carinated bowls, ring-necked flagons, jars, a lid, a tazze, and an unguentarium. Reduced wares included mostly jars

(including Rusticated ware vessels) and fewer bowls. A single oxidised white-slipped flagon was found which Monaghan (1997) dates broadly to the 2nd century AD.

2nd to early 3rd century AD. Monaghan (1997, 835) ceramic periods CP2 to CP3a

Phase 6 (P6) – Surface and occupation (Group 106)
A total of 84 sherds weighing 2445.5 grams (154 EVEs) were recovered from Phase 6 deposits. Amphorae from three sources were recovered, including wine amphorae from Gaul, olive oil amphorae from southern Spain (Baetica), and North Africa, the original contents of which may have been olive oil, or perhaps wine or fish-based products. While Gaulish and Baetican amphorae were imported into Britain from the 1st century AD, vessels from North Africa only arrive from approximately AD 140. The quantity of Samian ware was small (five sherds) and all were of South Gaulish origin; vessel forms present were cups (Dr27), dishes (Dr18 and possibly a Dr22), and a Dr29 decorated bowl. No other fine wares were present. Two sherds of mortaria were recovered, one in Ebor ware and one in a Catterick vicinity fabric dating to the 2nd century AD. Coarse wares were predominantly oxidized and reduced wares, most likely local and/or regional; vessel forms included jars, lids, bowls, and a beaker. Four sherds of white-slipped wares were recovered, likely to be from flagons. A sherd of a white ware lid was also recovered, and a single sherd of a North Gaulish flagon was present. While all of the well-dated Samian ware dates to the late 1st and early 2nd centuries, the presence of North African amphorae indicates a mid- to late 2nd century date for this phase.

Phase 7 (P7) – Dumping (G107)
This was a small group of seven sherds weighing 61.8 grams. The remains of two South Gaulish Samian cups were recovered, forms Dr27 and Dr33, both of late 1st to early 2nd century AD date. Other material present included a reduced ware beaker and oxidized body sherds.

Phase 8 (P8) – Demolition material (Groups 108-9)
A total of 60 sherds weighing 1574.4 grams (200 EVEs) was recovered from Phase 8 deposits (Group 108, 24 sherds, and Group 109, 36 sherds). A single sherd of a Gaulish amphora was recovered. Samian ware was mostly of South Gaulish origin, with vessels including two Dr18 dishes, a Dr29 decorated bowl, and two decorated Dr37 bowls. A single sherd of an East Gaulish Dr31R bowl was recovered (Group 109), dating from AD 160 to 250. Coarse wares included oxidized and reduced ware jars (included Rusticated ware), a reduced ware bowl, a reduced ware beaker/small jar, and flagons in oxidized ware, white-slipped ware, and white ware fabrics. Most fabrics were Ebor and other regional products. However, this was the first appearance of black-burnished ware (from South-East Dorset (DOR BB1, Tomber and Dore 1998, 127).

The presence of the East Gaulish Dr31R indicates a date after AD 160.

Phase 9 (P9) – Dumped deposits above demolition material (G110-11, G185)
A total of 79 sherds weighing 2209.3 grams (EVEs) were recovered from Phase 9 deposits (Group 110, 58 sherds, and Group 111, 21 sherds). Amphorae was only recovered in Group 110 deposits and included Baetican and Gaulish body sherds. Samian ware was all of South Gaulish origin (late 1st to early 2nd century AD) and included Dr18 and Dr42 (AD45 to 120) dishes, three Dr27 cups, Dr29, Dr30, and Dr37 decorated bowls. A large fragment (536.9 grams) of a 1st century AD Gillam Type 237 mortarium was recovered, produced in an unsourced possibly local/regional fabric (AD 60 to 90). Coarse wares were predominantly oxidized and reduced (including

Rusticated wares) wares, with fewer white wares. The fabrics were mostly Ebor wares and other local/regional products; also present were two sherds of Verulamium Region white ware. Vessel forms included jars and bowls. Of note was the African-style bowl (ID915) found in Group 110; these types date from the late 2nd to 3rd centuries AD (Monaghan 1997, 1000, no 3934, fig 395, 1001; Leary 2021, 121. no 222; fig 9.64, 145).

Mid- 2nd to early 3rd century AD. Monaghan (1997, 835) ceramic periods CP2b to CP3a

Phase 10 (P10) – Surface and associated activity in Trench 2 (G112)

A total of 100 sherds weighing 2894.1 grams (253 EVEs) were recovered from Phase 10 deposits (Group 112); a quantity of material in these deposits was residual from earlier phases. Two body sherds of Spanish amphorae (CAD AM, Tomber and Dore 1998, 87), were possibly used to transport fish-based products to Britain during the 1st and 2nd centuries AD (possibly Class 17/18, Peacock and Williams 1986, 120-3). Relatively large quantities of Samian ware were recovered, including 16 residual sherds of South Gaulish material, and the first occurrence of Central Gaulish products from Les Martres-de-Veyre, two sherds including one of a Cu11 bowl (AD 100 to 130). In addition, the earliest occurrence of Lower Nene Valley Colour-coated ware (ID1443, beaker, dating from *c.* AD 140) was during this phase. Three fragments weighing 683 grams of a 1st century AD Gillam Type 237 (ID1933, AD 60 to 90) mortarium was recovered, produced in fully reduced fabric which was unusual; this vessel had been used extensively and probably over a long period, as there was heavy wear on the internal surface and few trituration grits remain. Coarse wares included jars in oxidized, reduced wares (including Rusticated wares) and white wares, with most vessels produced in York and the wider region; a single, black-burnished ware (DOR BB1) jar was also recovered. Bowls included three sherds in a white ware (fabric P1) and a single sherd in a reduced fabric. The remains of two flagons were present, one each in white-slipped (*c.* 2nd century AD) and a white ware. In addition, a lid in Ebor ware was found. Of note were a candlestick (ID616, 3rd to 4th century AD (Monaghan 1997, 1023, no 4123; fig 411, 1023)), and a tazze/incense burner (ID615, late 1st to 2nd century AD (Monaghan 1997, 1020-1)). During this period there was the first appearance of Central Gaulish Samian and Lower Nene Valley Colour-coated wares.

Phase 11 (P11) – Structure and associated activity at the south-western end of Excavation Area 2 (G113-14)

A total of 72 sherds weighing 973 grams (42.5 EVEs) were recovered from Phase 11 deposits (Groups 113 and 114); a quantity of material in these deposits was residual from earlier phases. A single sherd of Campanian Black-sand amphorae was recovered (Group 114); these types were used to transport wine to Britain during the 1st century AD (the sherd was residual in this phase). Six small sherds (2.3 grams average sherd weight) of Central Gaulish (five body sherds, including one from a bowl) and one sherd of an East Gaulish beaker (ID1611, AD 150 to 250) were present. Other fine wares included a single body sherd of a Lower Nene Valley Colour-coated ware roughcast beaker (ID1436, AD150+). A single sherd of an Ebor mortarium (ID1486) was recovered, possibly of 1st century AD date and residual. Coarse wares included jars in oxidized and reduced wares, oxidized ware bowls, including a 3rd century AD type (ID565, Monaghan 1997, 1007, no 3980; fig 399, 1006). At least four flagons were recovered, all in Ebor White-slipped ware dating to the 2nd century AD. A single Ebor oxidized ware lid was also found.

Phase 12 (P12) – Demolition material (G115, G186)

This was a large group, with a total of 283 sherds weighing 5176.7 grams (514.5 EVEs) recovered from Phase 12 deposits (Group 115); a quantity of material in these deposits was residual from earlier phases. Amphorae included body sherds of Baetican (six sherds) and Gaulish (one sherd) vessels. Seventy-seven sherds of Samian ware were recovered, including 25 sherds of residual South Gaulish material, 44 sherds of Central Gaulish wares including Dr18/31 and Dr31 dishes (note: some of the early 2nd century Les Martres-de-Veyre types, e.g. Dr18 dishes, were residual in this phase), plain (Dr31R and Dr38/44) and decorated bowls (Dr37), Dr27, Dr33, and Dr46 (early 2nd century AD) cups. East Gaulish products included Dr31 and LudTg dishes (mid- 2nd to mid- 3rd century AD), Dr37 decorated bowls, and a Dr33 cup (mid- 2nd to mid- 3rd century AD). Small quantities of other fine wares were present, including four sherds of Moselkeramik Black-slipped ware beakers (AD 180 to 250), one sherd of a Central Gaulish Black-slipped ware beaker (AD 150 to 200), and one possibly locally produced roughcast beaker. Two sherds of 2nd century AD Catterick vicinity mortaria were also recovered. Coarse wares included large quantities of reduced and oxidized wares, in a wide range of forms, white-slipped ware flagons (2nd century AD), and small quantities of white ware flagons, a beaker, and a cup. The white ware cup (ID1842) was of note and rare; the form is an imitation of a Samian ware Dr33 cup, and similar examples in reduced (grey) wares have been found at sites in North Yorkshire including Aldborough (Snape 2002, 104, fig. 31, no. 49 and fig. 32, no's 61-2) and Catterick (Leary 2021, 124, no's 318-321, fig. 9.67), and dated to the 3rd century AD. Eighteen black-burnished ware sherds were recovered, mostly in Dorset BB1s, and included 2nd century AD jars (JP3); black-burnished ware 2-types (fabric B6) were present, including a bowl/dish (ID1384) from the first half of the 2nd century AD (Gillam 1976, forms 70-73). A single sherd of Dales-type ware (3rd to 4th century AD) was also recovered.

Four sherds of Crambeck Reduced ware (AD 270 to 400+) and six sherds of medieval pottery were recovered from deposits in this phase but were intrusive due to the heavy levels of post-Roman disturbance at the site.

Late 2nd to early 3rd century AD

Phase 13 (P13) – Post-demolition ground raising activities (G116-17, G120-23, G187-88) This was a large group, with a total of 227 sherds weighing 3825.4 grams (315 EVEs) recovered from Phase 13 deposits (Groups 116, 121, 122, and 123); a quantity of material in these deposits was residual from earlier phases. Amphorae included body sherds of Baetican (seven sherds), Gaulish (three sherds), and Campanian Black-sand vessels (one sherd and residual in this phase). Thirty-four sherds of Samian ware were recovered, including fourteen of residual South Gaulish material, and twelve sherds of Central Gaulish vessels including plain (Dr31R) and decorated bowls (Dr37), dish/bowls (Dr18/31 or 18/31R), and a Dr27. East Gaulish Samian ware included a dish (uncertain form, *c.* AD130 to 250), and decorated bowls (Dr37, AD 150 to 260). Other fine wares included two Lower Nene Valley Colour-coated ware beakers (AD 150 to 400), and an early to mid- 2nd century AD Ebor Roughcast beaker (ID1913). A single sherd of a late 1st to 2nd century AD white slipped mortarium was recovered. Coarse wares included large quantities of reduced and oxidized wares, in a wide range of forms and fabrics: mostly Ebor wares and other regional products, including the first examples of eastern Yorkshire products including 3rd century AD Holme-on-Spalding-Moor wares (HSM RE, Tomber and Dore 1998). Five sherds of black-burnished ware were recovered, both Dorset BB1's and BB2-types. Twenty-nine sherds of

white-slipped ware (Ebor ware, 2nd century AD) flagons were recovered. A small quantity (six sherds) of white wares were present and included three flagons. A single sherd of a Verulamium Region White ware flagon was recovered, dating from the 1st to 2nd century AD. A single body sherd of calcite-gritted ware was recovered, likely to be of East Yorkshire origin and possibly dating from the 3rd century onwards.

3rd century AD. Monaghan (1997, 835) ceramic periods CP3b to CP4

Phase 14 (P14) - Wall foundation (G124)

This was a small group, with a total of 27 sherds weighing 850.3 grams (35.5 EVEs) recovered from Phase 14 deposits (Group 124); a quantity of material in these deposits was residual from earlier phases. Three sherds of amphorae were recovered, including vessels of Baetican, Gaulish, and North African origin. Six sherds of a Central Gaulish Samian cup (Dr33, AD 120 to 200) were recovered. A single sherd of a Lower Nene Valley Colour-coated ware beaker (*c.* AD 150 to 400) was also found. Coarse wares included black-burnished wares, but mostly oxidized and reduced wares. Vessel forms, where identifiable, were jars, including rusticated types.

Phase 15 (P15) - Surface (G118)

This was a small group, with a total of 12 sherds weighing 118.6 grams (9 EVEs) recovered from Phase 15/16 deposits (Group 118). Much of the material was residual in this phase, including mostly Samian wares and an Ebor flagon. Items of contemporary date with the phase of activity were single fragments of a Gaulish amphorae (of 1st to 3rd century AD), and an East Gaulish Samian ware decorated bowl (*c.* AD 150 to 250).

Late Roman +

Phase 16 (16) – Stony levelling deposits (G119, G125)

A total of 107 sherds weighing 1710.1 grams (27 EVEs) was recovered from Phase 16 deposits (Groups 119 and 125). As with Group 118 pottery, much of the pottery was residual from earlier phases (around half). No amphorae of contemporary date were present. Fine wares included East Gaulish Samian bowls and dishes, and Lower Nene Valley Colour-coated ware beakers. Coarse wares included mostly reduced wares (including small quantities of East Yorkshire wares, including Holme-on-Spalding-Moor), a few oxidized products, and a single East Yorkshire calcite-gritted ware sherd (of *c.* AD 200 to 400+ date).

Post-Roman, medieval, and later deposits

More than half (1168 sherds weighing *c.* 26.8 kg) of the Roman pottery was recovered from Post-Roman, medieval, and later period deposits (Table 6). The bulk of the Roman pottery found in these deposits dated from the 1st to 2nd/early 3rd centuries AD. There was limited material dating to the later Roman period, i.e. from later 3rd and 4th centuries AD; material from this period included wares and types common in the region, i.e. Crambeck wares, East Yorkshire Calcite-gritted wares (e.g. Huntcliff-types), and coarse ware flanged bowls, also nationally traded wares for example late Lower Nene Valley fine wares and a single fragment of late Mancetter-Hartshill mortaria. The remains of an amphora of possible Aegean origin (P&W AM 47, *c.* AD 250 to 350) was also recovered. These later Roman vessels were relatively few (possibly approximately 90), with the majority (*c.* 80) residual in post-Roman period deposits. In conclusion, there was certainly later 3rd and 4th century AD activity at or very close to the site; however, it was not possible to assign features or structures, or a secure stratigraphic phase.

8.1.6 Functional Analysis

Functional analysis was undertaken (Table 15) with phase/chronological results compared with sites considered by Monaghan (1997, 855-9). Phase data presented in Table 15 has been condensed into chronological phases to compare with other sites. Residual (i.e. those vessels which were clearly out of production and use during the chronological period (i.e. out of phase) were removed prior to analysis; those sherds considered intrusive in phase were also removed. However, there was a ceramic group which may be considered transitional, between Periods 3 and 4. The assemblage quantification is based on EVEs and the relative proportions of each form (e.g. bowls, flagons etc.) during each period. The amphorae data has been removed due to often limited quantities of rims compared to body sherds of the vessel type, and the vessel's function primarily as transportation for commodities. Where vessels of note were present, but no part of a rim was preserved, they are marked as '0.0%' in Table 15.

Fine tablewares included cups, beakers (and beakers/small jars), bowls, dishes, and platters.

Period 2 (Phases 3 to 5). Late 1st to 2nd century AD

York sites considered by Monaghan (1997, 855-9) of a comparable phase/period to Guildhall Period 2 (Phases 3 to 5) include: Swinegate, Period 2 (Monaghan 1997, 856, table 135); 16-22 Coppergate Period/Phase 1/2 (Monaghan 1997, 858, table 139); and 9 Blake Street Periods 1 and 2 (Monaghan 1993, 696, table 106).

The earliest Romano-British period activity undoubtedly had a strong association with the Roman military and the establishment of a major stronghold and subsequent large civilian urban centre. At Guildhall (based on 363 EVEs, Table 15) jars formed the largest component of the pottery with 31.7%, with flagons and bowls forming 27.5% and 20.4% respectively; other forms included dishes at 3.0%, bowl/lids at 2.1%, and lids forming 1.2%, and tazze forming 3.0%, with a single unguentaria recovered; unfortunately, no part of the rim was preserved. Mortaria formed 11.0%, which was a high proportion during this period. Broadly similar relative proportions of certain vessels were present during Period 3 at Swinegate/Back Swinegate (Monaghan 1997, 856, table 135), with jars forming 42%, flagons 36%, and bowls at 28%. This contrasts with the assemblage recovered from 16-22 Coppergate, Period 1/2 (Monaghan 1997, 858, table 139), where jars formed 62% of the assemblage, with flagons forming 3%, much lower than Guildhall and Swinegate; bowls formed 12%, again, lower than the two other sites. Drinking vessels, i.e., cups and beakers were completely absent at Guildhall, which was unusual; beakers and cups formed 7.5% and 1.8% respectively at Swinegate; however, no cups or beakers were present at Coppergate. Tazze were present at Swinegate, possibly only one (as at Guildhall) but none were found at Coppergate (Period 1/2). The mortaria recovered from Period 2 Guildhall formed 11.0% (two vessels), a relatively high proportion in any period at most sites; at Swinegate they only formed 1% and none were present at Coppergate. The two mortaria vessels (ID's 1916 and 1917) were both Gillam Type 237's, early in date, *c.* AD 60-90, and were likely to have been produced at or close to York. At Blake Street there were similar levels of flagons in Periods 1 and 2 (both late 1st century AD, Period 1 earlier than 2), with 28% and 26% respectively. Jars formed 25% in Period 1 and 46% in Period 2, compared with 31.7% at Guildhall. Table wares at Blake Street had high levels of platters/dishes with 16% in Period 1 with only 2% in Period 2, with table wares combined forming 27% in Period 1 and 19% in Period 2, compared with 23.4% at Guildhall. Mortaria formed 5% in Period 1 and 2% in Period 2, compared with 11% at Guildhall.

Period 3 (Phases 6 to 9). 2nd to early 3rd century AD

York sites considered by Monaghan (1997, 855-9) of a comparable phase/periods to Guildhall Period 2 (Phases 6 to 9) include: 1-9 Micklegate, Period 1 (Monaghan 1997, 856, table 134); Swinegate, Period 4 (Monaghan 1997, 856, table 135), 35-41 Blossom Street, Period 3 (Monaghan 1997, 857, table 136), Peasholme Green (Adams Hydraulics), Period 1 (Monaghan 1997, 857, table 137), 21-33 Aldwark, Period 1 (Monaghan 1997, 857, table 138), and 16-22 Coppergate Period/Phase 1/3 (Monaghan 1997, 858, table 139).

It is clear in the Period 3 assemblages that there was an increase in table wares (cups and beakers, bowls and dishes) and the range of forms present, compared with Period 2 (based on 536.5 EVEs, Table 15). The relative proportion of jars reduced to 22.6% including narrow-necked types (2.3% of the assemblage), with lower levels of flagons at 14.1% (compared with 27% in Period 2). The Period 3 assemblage contains the earliest examples of cups and beakers, and narrow-necked jars. The proportions of bowls and dishes increased to 28.6% and 4.9% respectively, which corresponds with the overall increase in the relative proportions of fine table wares to 53.5% of the whole assemblage, compared with 23.4% in Period 2. Mortaria formed 3.5%, and lids 6.4%. The levels of jars and flagons at Micklegate were greater than at Guildhall, at 35% and 29% respectively, similar to Guildhall Period 2 (Table 15); however, the levels of fine table wares were lower at 36% (however, there were no cups or beakers at Guildhall Period 2). No mortaria were present at Micklegate during this period. At Swinegate Period 4, jars formed 21% and flagons 26% (similar to Guildhall); however, the proportions of table wares were lower, at 34.8%. The proportion of mortaria was less than 1%, compared with 3.5% at Guildhall. At Blossom Street, jars and flagons formed 33% and 16% respectively, with table wares forming 37.4%. Lids formed 7.8% and mortaria 2.4%. The flagon, lid and mortaria assemblages from Blossom Street were broadly comparable with Guildhall; however, the proportions of jars was slightly higher at 33% compared with 22.6%, with table wares lower at 37.4%. At Peasholme Green (Adams Hydraulics), the relative proportions of jars were similar, at 20%, but with more than double the proportions of flagons at 33%. The proportions of fine table wares were lower, at 36.4%. Lids formed 4.3% and mortaria less than 1%. At 21-23 Aldwark Period 1 the range of vessel forms was fewer, likely as a result of the small assemblage size; table wares formed 78.5% (mostly bowls at 72%), with jars at 11%. At 16-22 Coppergate Period 1/3, some of the proportions of vessel forms were not too dissimilar to Guildhall; however, Period 1/3 at the site contains mid- to late 3rd century material. Jars formed 34% (compared with 22.6%), and flagons 15% (14.1% at Guildhall); the proportion of table wares was lower at Coppergate, with 38.9% compared with 53.5%. The proportions of lids and mortaria were comparable, with 9.2% and 3.3% respectively, compared with 6.4% and 3.5% at Guildhall. The relative proportions compare better with Micklegate Period 2, rather the Period 2.

Period 4 (Phases 10 to 13). Mid- to late 2nd to early 3rd century AD

York sites considered by Monaghan (1997, 855-859) of a comparable phase/period to Guildhall Period 4 (Phases 10 to 13) include: 1-9 Micklegate, Period 2 (Monaghan 1997, 856, table 134); and Peasholme Green (Adams Hydraulics), Period 2 (Monaghan 1997, 857, table 137), and 9 Blake Street Period 4a (Monaghan 1993, 696, table 106).

In Period 4 assemblage there was an increase (compared to Period 3) in the levels of jars to 25.9%, and flagons, with 31.1% compared with 14.1% (based on 623 EVEs, Table 15). The relative proportions of table wares reduced to 35.8% from 53.3%, with lids reduced to 3.7% from 6.4%;

the proportions of mortaria stayed the same at 3.5%. The proportions of vessel types at Micklegate Period 2 contrasts with Period 4 at Guildhall; proportions of jars and flagons were lower at Micklegate, at 19% and 15% respectively, with table wares forming 55.9%, compared with 35.8%. There were lower proportions of lids, 1.6% compared with 3.7% at Guildhall, but higher proportions of mortaria, with 5.7% compared with 3.5%. What is notable is the very similar relative proportions of jars (19%), flagons (15%), and table wares (55.9%) in the Micklegate Period 2 assemblage compared with Guildhall Period 2 (above), where jars formed 22.6%, flagons formed 14.1%, and table wares formed 53.3% of the assemblage (Table 15). In addition both Guildhall Periods 3 and 4 and Micklegate Periods 1 and 2 contained material of a similar date range of the 2nd to early 3rd century AD. The assemblage from Peasholme Green Period 2 is considered here with this period at Guildhall (as it was for Period 3, above), as it has a comparable date range. The Peasholme Green assemblage compares closely with this period at Guildhall, with jars forming 20% compared with 25.9% at Guildhall, and flagons forming 33%, compared with 31.1%. The relative proportion of table wares was also similar, with 36.4% at Peasholme Green compared with 35.8% at Guildhall. There were a similar proportion of lids (4.3% compared with 3.7%), but less than 1% mortaria, compared with 3.5% at Guildhall. At Blake Street, jars formed 35% and flagons 15%, compared with 25.9% for jars and 31.1% for flagons at Guildhall. Fine table wares formed 40% at Blake Street, comparable with 35.8% at Guildhall; the proportions of lids (5%) and mortaria (2%) at Blake Street were also comparable with Guildhall (3.7% for lids and 3.5% for mortaria).

Period 5 (Phases 15 to 17). 3rd century AD and later

York sites considered by Monaghan (1997, 855-9) to be of a comparable phase/period to Guildhall Period 5 (Phases 15-17) include: 1-9 Micklegate, Period 3 (Monaghan 1997, 856, table 134); 35-41 Blossom Street, Period 3a (Monaghan 1997, 857, table 136), Peasholme Green (Adams Hydraulics), Periods 2 and 3 (Monaghan 1997, 857, table 137), 21-33 Aldwark, Periods 2 (Monaghan 1997, 857, table 138).

This was the smallest assemblage from any period (Table 15), with 67.5 EVEs, therefore, any conclusions must be considered with regards to a limited sample size. The relative proportion of jars was 26.7%, and there were no flagons. The absence of flagons is likely to be due to the reduction in the production of these vessel types in Ebor wares at the end of the 2nd century, and the assemblage not containing wares common from the later 3rd and 4th centuries AD. Table wares formed 47.5% of the assemblage; again, this relatively large figure is due to the absence of flagons and a limited range of vessel forms contemporary with these later dating phases (however, these types are present/residual in post-Roman deposits, albeit in limit quantities (Table 15). Mortaria formed 25.9% of the assemblage, however, this is again likely to be based on the small sample size (only one fragment of mortaria was contemporary with this phase). At Micklegate, Period 3, jars formed 26% and flagons 3.3%, both figures comparable with Guildhall. Table wares formed 58%, comparable with Guildhall (47.5%). Lids formed 9.9% at Micklegate, but there were none at Guildhall. There was less than 1% mortaria. At Blossom Street Period 3a, jars formed the greatest proportion at 51%, with flagons forming 5.2%; table wares formed 34.1%, with lids at 7.1% and mortaria at 2.7%. The Blossom Street Period 3a assemblage, while of a similar date to Guildhall, was not comparable. At Peasholme Green Periods 2 and 3, jars formed 23% and 29% respectively, broadly comparable with Guildhall; flagons formed 4.8% and 4.6%, however, none were present at Guildhall. Table wares formed 41.2% and 41.4%

respectively, similar to the 47.5% at Guildhall. However, there was a high proportion of lids at 15%, and less than 1% for mortaria, which contrasted with Guildhall. At Aldwark, similar proportions of jars were recovered in Period 2 (28%), with fine table wares slightly more than at Guildhall, 60.1% compared with 47.5%. Lids and mortaria were 5.2% and 2.1% respectively, compared with no lids and 25.9% mortaria.

8.1.7 Supply and consumption

Assemblages from sites in the York *fortress area* considered in this section include 9 Blake Street (Monaghan 1993), Bedern SW (Monaghan 1997, table 186), 1-5 Aldwark (Monaghan 1997 table 188), and 12-18 Swinegate (Monaghan table 129). York *defences* and *colonia* include 35-41 Blossom Street (Monaghan table 214). In the *colonia* bridgehead and waterfront included 1-9 Micklegate (Monaghan table 204) and Wellington Row (Monaghan table 211). York *extramurual* included 21-33 Aldwark (Monaghan table 193), Peasholme Green (Monaghan table 194), 16-22 Coppergate (Monaghan table 196), and 39-41 Coney Street (Monaghan table 197).

Period 2 (Phases 3 to 4). Late 1st to 2nd century AD

It is clear that Ebor coarse wares formed the largest fabric group at 63.8%, a proportion similar to that found at another waterfront site, 39-41 Coney Street (74.2%), but greater than in the fortress at 9 Blake Street's Periods 1 (42.9%) and 2 (42.9%), and much greater than at Bedern SW Phase 1 (defenses) and 16-22 Coppergate Phase 1/2 (extramural): 36.6% and 17.0% respectively. However, when proportions of selected coarse ware fabrics are combined, Ebor (oxidized ware), miscellaneous oxidized, Ebor white slipped ware, grey and grey burnished (both reduced wares), rusticated ware (another reduced/grey ware), and white wares, the results compare closely with figures between c. 70 and 90%, with Phase 2 Blake Street lower at 62% (probably due to the high levels of Samian wares). Fine table wares formed 8.4% of the assemblage at Guildhall, all of which were South Gaulish Samian vessels; most of these were Dr18 dishes, plain Ritt8-type and decorated Dr29 and Dr37 bowls. The proportions of fine wares at Guildhall were lower than Coney Street Period 1 with 25.8%, and Blake Street's Period 1 (15.8%) and 2 (35.1%, which had lower proportions of Samian ware but more Gallo-Belgic and fine grey ware products). The proportions of fine wares at Bedern were similar, with 7.2%, including 4.8% Samian and 2.4% colour-coated wares. The levels at Coppergate Period 1/2 were greater than at Guildhall, with 12.4% SGS and 5.2% of Central Gaulish Les Martres-de-Veyre Samian. The high proportion of mortaria was notable at Guildhall Period 2, at 10.4%, compared with much lower levels at other sites considered here: 2.5% at Blake Street Period 1 and 1.6% in Period 2; no mortaria (by EVEs) were present at Coney Street, Bedern SW, or Coppergate. However, the high relative proportion of mortaria at Guildhall is based on two vessels comprised of large rim fragments; both vessels were early in date (c. AD60 to 90) and comparable with those found in Periods 1 and 2 (Hartley 1993, 729-31).

Period 3 (Phases 6 to 9). 2nd to early 3rd century AD

York sites comparable with Guildhall Phase 3: 39-41 Coney Street Period 3, 9 Blake Street Period 2 (also compared with Period 1), 12-18 Swinegate Period 4, Bedern SW Period 2, 1-5 Aldwark Period 3, Wellington Row Period 1, 16-22 Coppergate Period 1/3, and 35-41 Blossom Street Period 1.

There was a change in the relative proportions of fabrics and ware groups (i.e. fine wares, coarse ware etc.) from Period 2 to Period 3 at Guildhall. Coarse wares reduced from 81.2% to 67.9%;

while this was the case, Ebor wares (oxidized and Ebor white) reduced to a much greater extent, from 63.8% to 38.3%. This reduction does not indicate that there were fewer Ebor wares in circulation but shows increased presence of other coarse wares such as grey burnished (9.5%) and rusticated ware (3.3%). There was a significant increase in fine table wares, from 8.4% in Period 2 to 28.6% in this period, 27.7% South Gaulish and 0.9% of East Gaulish Samian. The relative proportion of mortaria reduces from 10.4% to 3.5%, however, this is likely to be due to the larger sample size of Period 3 material and more statistically robust relative proportions than in Period 2 (as was noted with regards to remains of two mortaria forming 10.4% of the assemblage in the period). The coarse wares at Coney Street were of a similar proportion, with 83.3% (71.4% Ebor ware and 11.9% Grey ware). Fine wares were relatively high at Coney Street at 16.7%, all of which were North Gaulish Grey ware (Monaghan 1997, 889) bowls. There were no mortaria at Coney Street during this period. The proportions of coarse wares at Swinegate were high, forming 90.4% (Ebor oxidized wares at 44.1%), much greater than at Guildhall. Within the coarse wares, white wares formed 6.7% of the overall assemblage, comparable with the 5.5% at Guildhall. Fine wares were few at 3.1%, with SGS at 2.4% and CGS (LMV) at 0.7%; significantly lower than at Guildhall. The Guildhall Period 3 assemblage compares closely with Blake Street Period 2: coarse wares formed 62.2% (38.9% Ebor oxidized ware). Fine wares (almost all South Gaulish Samian) formed 35.1%, a high figure for Roman period sites, similar to the 28.6% at Guildhall. Mortaria formed 1.6% compared with 3.5% at Guildhall. Sites elsewhere in York generally had lower levels of fine wares, for example 1-5 Aldwark (0%), Bedern SW (7.2%) Coppergate (11.2%), and Blossom Street (16.3%). The assemblage from Wellington Row had 22.6% fine wares, however, this figure includes 15.4% of Central Gaulish Les Martres-de-Veyre (mostly early 2nd century AD) and 5.0% other colour-coated wares. The fine wares at Wellington Row and Blossom Street also include Central Gaulish Les Martres-de-Veyre, and are at higher levels than South Gaulish products. The relative proportions of coarse wares from these sites ranged from c. 72% to 100% of their assemblages, with Wellington Row and Coppergate comparable with 72.2% and 77.7% respectively, while Blossom Street, Bedern and Aldwark having 83.1%, 90.2%, and 100.0% respectively. Mortaria at Coppergate was comparable at 3.3%, with slightly more at Wellington Row with 5.0%, and there was 1.4% at Bedern; mortaria were present in small quantities at Aldwark and Blossom Street, but none with rims preserved.

Period 4 (Phases 10 to 13). Mid- to late 2nd to early 3rd century AD

York sites comparable with Guildhall Phase 4: 39-41 Coney Street Period 5, 9 Blake Street Period 4a, 12-18 Swinegate Period 4, Bedern SW Period 3, 21-33 Aldwark Period 1, Micklegate Period 2, Wellington Row Period 2, 16-22 Coppergate Period 4, Peasholme Green (Adams Hydraulics), and 35-41 Blossom Street Period 2.

There was a change in the relative proportions of fabrics and ware groups (i.e. fine wares, coarse ware etc.) from Period 3 to Period 4 at Guildhall. Coarse wares increased to 83% from 67.9%. The levels of the ware groups broadly stayed the same (e.g. Ebor oxidized wares slightly down to 25.1% from 25.9%). However, the level of Ebor white slipped wares, mostly flagons, reduced from 12.4% to 3.5%, potentially indicating lower levels of these types produced and in circulation towards the end of the 2nd century AD. In contrast to the Ebor white slipped wares, white ware products (Monaghan's P fabric codes (1997, 1029), increased from 5.5% to 23.6%; vessel forms in white wares included a beaker, cup, and bowl, jars and flagons. Grey and grey

burnished proportions were similar, however, there was an increase in black burnished wares from 2.3% (BB1) to 6.7% (5.3% for BB1s and 1.4% for BB2s).

A fall in the relative proportions of fine wares is evident, from 28.6% in Period 3 to 13.7% in Period 4; almost all of the fine wares were Samian wares, mostly Central Gaulish but a small quantity of East Gaulish vessels were also present. A small quantity of Lower Nene Valley Colour-coated wares was present (five sherds weighing 17.9 grams), however, no rims were preserved.

The Period 4 assemblage provides evidence for changes in the supply of fine wares to York with reduction in Samian wares and the beginning of the supply of Lower Nene Valley products in the later 2nd to early 3rd century at York. Levels of mortaria in Period 4 were the same as Period 3, at 3.5%. While there were similarities with the other waterfront assemblage considered here, Coney Street, with coarse wares at 83.9% (compared with 83.0% at Guildhall), 49% of these were BB1 (27.3%) and BB2 (21.7%) and grey wares made up 34.9%. At Guildhall proportions of black burnished types were much lower (BB1 5.3% and BB2 1.4%), grey wares were also lower (including grey burnished) at 22.1%. However, Ebor oxisided formed 25.1% where none were present at Coney Street.There were no mortaria at Coney Street. The figures at Blake Street Period 4a include residual material, which makes it difficult to compare fine wares with Guildhall where clearly residual sherds have been removed from the data set for this period. However, broad patterns were comparable with Blake Street, where coarse wares formed 78.4% compared with 83.0%; there were more Ebor oxidized wares (37.0% compared with 25.1% at Guildhall), but fewer white wares, 3.0% compared with 23.6%. Fine ware proportions were higher, 17.4% compared with 13.5%, however, residual material was included in the Blake Street data set. While all fine wares at Guildhall were Samian ware products, Blake Street included products from Germany (Moselkeramik/Trier Black-slipped ware), Northern Gaulish material, and Lower Nene Valley Colour-coated wares. The relative proportion of mortaria was 2%. The proportion of coarse wares was broadly similar at other York sites considered here, 84.6% at Bedern, 85.3% at Peasholme Green, 73.1% at Micklegate, 64.6% at Wellington Row, and 81.6% at Blossom Street.

Within the coarse wares, the proportions of each ware at Guildhall was most comparable with Micklegate, with Ebor oxidized wares at 28.4% compared to 25.1%, and white wares at 13.2% compared to 23.6%; while there is a difference of *c*. 10% for white wares, they were present at only three other sites considered here, with proportions lower than 3%. The proportion of fine wares at Peasholme Green and Blossom Street were similar to Guildhall, at 13.6% and 15.6% respectively, and included mostly Central Gaulish Samian ware. Micklegate and Wellington Row had greater proportions of fine wares, with 20.9% and 31.0% respectively; both these assemblages included colour coated wares from the continent and Lower Nene Valley products. Mortaria at Guildhall formed 3.5%, compared with 2.0% at Blake Street, 6.6% at Bedern, none at Aldwark, 0.2% at Peasholme Green, 5.8% Micklegate, 3.8% at Wellington Row, and 2.3% at Blossom Street. While there were calcite gritted wares (broadly 3rd century onwards and including East Yorkshire and/or Knapton products), there were very small quantities at Blake Street (1.2%), Bedern (0.1%), Peasholme Green (0.8%), Wellington Row (0.6%), and Blossom Street (0.1%).

Period 5 (Phases 14 to 16). 3rd century AD and later

This was a very small group at Guildhall, with only 72 sherds (weighing 1643.1, 73 EVEs) contemporary with the dating of Period 5 (3rd century AD and later), which is too small for robust statistical analysis. The relative proportions are included in Table 15 for completeness.

Post-Roman and later periods

As noted above and in Table 6, approximately half of the Romano-British assemblage was recovered from deposits of medieval and later date. As one can see, there was little later 3rd to 4th century and later material in Period 5 deposits, and there were only small quantities of later Roman material present in Post-Roman deposits. Pottery types whose production definitively dates from the middle or later 3rd and 4th century was limited. While one may assume that there was later 3rd and 4th century activity at the site, and that pottery vessels contemporary with this period are mixed with the extensive mmedieval and later period remains, wares of this date were few. Of note was the possible Aegean amphorae (ID1537 and 2013), which were traded from the mid-3rd to mid-4th centuries AD. Lower Nene Valley products were few, with only two dish fragments (c. AD 250+) recovered, both from Post-Roman deposits. There were relatively small quantities of calcite gritted Huntcliff-type and Knapton vessels. The quantities of Crambeck wares were small, with no mortaria present (common in the 4th century), and while there were Crambeck Reduced ware flanged bowls (late 3rd to 4th century AD), all were in Post-Roman deposits. There was only one example of a Mancetter-Hartshill mortarium (c. mid-3rd to mid-4th century AD).

8.1.8 Discussion

The assemblage was analysed by phase, with multiple phases grouped into broad chronological periods where appropriate. Only deposits and assemblages from those phases/periods which were stratigraphically secure and dated to the Romano-British period were analysed here. Roman pottery from Post-Roman phases and unstratified deposits was excluded but are considered as part of the whole assemblage in various sections.

Period 2 (Phases 3 to 4). Late 1st to 2nd century AD

The assemblage from Period 2 was the smallest recovered from stratified deposits, with 99 sherds, offering only limited potential for statistical analysis. However, the range of wares and types present is informative with regards to supply and consumption, the range of forms, and potentially indicating site status. The pottery dated broadly from the late 1st to 2nd century, with much of the material dating to the early part of the 2nd century. Only two small sherds of amphorae were recovered from Period 2 deposits (11.4 grams and 50.3 grams respectively), both of which were from Gaul. All the fine wares were imported Samian wares from the south of Gaul (La Graufesenque), forming 8.4% (by EVEs) of the stratified assemblage (not including amphorae, Table 12). Vessel forms (including those from Romano-British period and Post-Roman deposits) included plain (Ritt8) and decorated bowls (Dr29, Dr30, Dr37, and Cu11), dishes (Dr15/17, Dr18 and Dr18R, Dr18/31 and Dr18/31R, Dr36, and Dr42), and cups (Dr27, Dr33, and Dr35/6). This wide range of types were common at early Roman military and urban centres. No other fine wares were recovered from Period 2 deposits. The mortaria in this period formed 10.4% of the stratified assemblage and represented two vessels. Both mortaria were Ebor products in early Roman forms, Gillam Type 237 (c. AD 60 to 90), one was in excellent condition and probably not subjected to much use, the other was well worn and had been

heavily used over its lifespan. The coarse wares were predominantly Ebor products, both oxidized and reduced wares, with other coarse wares likely to have been produced in the region. Most coarse ware forms were Legionary-type and other jars, flagons, and carinated bowls. Specialist types present in this phase included a tazze/incense burner (ID692, Monaghan 1997, 1020-1) and the lower-half of an unguentarium (ID2024, Monaghan 1997, 1023); both Ebor wares. Vessel forms were mostly table wares, particularly bowls and dishes mostly of Samian wares, with a small quantity of Ebor carinated bowls (Table 12). There was also a high level of flagons, vessels for storing but also serving drinks. The Period 2 pottery assemblage corresponds closely with Monaghan's Ceramic Periods 1a and 1b (1997, 861-3), and the range of types and forms present is mostly consistent with early Roman military and urban centres; however, the small quantities of imported amphorae was notable.

Period 3 (Phases 6 to 9). 2nd to early 3rd century AD

The assemblage from Period 3 consisted of 230 sherds that were predominantly 2nd century AD in date, with limited quantities dated to the early 3rd century. The range of material and their sources increased during this period for most ware types. While amphorae were present in small quantities (18 sherds), there was evidence for commodities from Gaul (wine), Baetica (wine), and North Africa (wine, oil, or fish-based products). Almost all of the fine wares were South Gaulish: Samian ware (27.5%) and a single sherd (18 grams) of an East Gaulish bowl (Dr31R, AD160 to 250). Vessel forms included plain and decorated bowls (Dr29, Dr30, and Dr37), dishes (Dr18 and Dr42), and cups (Dr27 and Dr33). The relative proportion of fine wares increased from 8.4% in Period 2 to 28.6% in Period 3. While the proportion of mortaria reduced from Period 2 to 3, the Period 3 mortaria assemblage represented three vessels while the Period 2 assemblage represented only two. Sources for Period 3 mortaria were local (two vessels in Ebor fabrics) from the Catterick vicinity, North Yorkshire (one vessel). There was a reduction in the relative proportion of coarse wares due to a corresponding increase in fine wares. However, the range of sources and forms for coarse wares represented increased from the previous period. The fabrics were still dominated by Ebor oxidized wares, and Ebor and other sources of reduced wares; Ebor White-slipped wares (mostly flagons, 2nd century), other reduced and grey burnished types, and black burnished ware (BB1) were also present. The first appearance of rusticated wares occurred during this period (late 1st to 2nd century AD), along with white wares. During this period nationally traded products appear in small quantities: black burnished wares from Dorset, Verulamium (St. Albans, Hertfordshire) region white ware, and wares from Holme-on-Spalding-Moor in the East Riding of Yorkshire. There was a significant increase in the relative proportions of table wares during this period, forming over half of the assemblage. Most of these types were Samian wares, including cups, bowls and dishes, with smaller quantities of other, mostly local, coarse ware bowls and beakers. This was a high proportion of table wares, especially fine Samian wares (see Webster 2005 for discussion of Samian ware and site status), probably due to the proximity of the Guildhall site to the fortress; however, the proportions of table wares at Guildhall were greater than at 9 Blake Street (Monaghan 1993, 696, table 106). This may be indicative of high-status activity at the site, but it may also be that rubbish from the fortress was dumped in the area, and/or used as hard core for levelling deposits.

Period 4 (Phases 10 to 13). Mid- to late 2nd to early 3rd century AD

The assemblage from Period 4 consisted of 682 sherds predominantly mid- to late 2nd to early 3rd century AD. While some sherds were residual from Periods 2 and 3, this was still the largest

assemblage of all stratified deposits. The range of pottery forms and their sources increased again from the previous period. Amphorae included Gaulish and Baetican types; however, other commodities supplied included wine from Campania, southern Italy, and Cadiz, Spain, perhaps used to transport fish-based products (see, Section 8.8). While the proportion of fine wares reduced overall, there was an increase in the range of sources and products; Central Gaulish Samian was the greatest component, but also small quantities of East Gaulish material. Other sourced fine ware fabrics included continental imports: Central Gaulish Black-slipped, Trier/Moselkeramik, as well as a small quantity from the Lower Nene Valley in Cambridgeshire, and two sherds of an Ebor roughcast beaker. Mortaria were still mostly supplied by local potters (Ebor wares), with a small quantity of Catterick vicinity material. As with fine wares, the sources of coarse ware products increased with the presence of pots from the wider region and nationally traded wares such as black-burnished wares (BB1s) and Verulamium region white wares. Ebor products continued to dominate supply but were complimented by reduced wares from elsewhere in Yorkshire (South and East), including Holme-on-Spalding-Moor products and coarser calcite- and shell-tempered wares, such as East Yorkshire Calcite-gritted and Dales-type wares (Yorkshire, Humberside, and Lincolnshire). Some of these 'new' wares are chronologically significant, with the beginnings of some calcite gritted, Dales-types, and Holme-on-Spalding-Moor products dating to the 3rd and 4th centuries AD. The proportions of table wares remained high during this period, forming over one third of the assemblage, with flagons increasing also to around one third. During this period Samian and the finer table wares (e.g. slipped products) still dominate, however, we begin to see the appearance of nationally traded fine wares (Lower Nene Valley products) and other continental imports (Trier/Moselkeramik and Central Gaulish Black-slipped ware) as noted above. Also, relatively large quantities of coarse table wares, predominantly bowls, but also small quantities of beakers and a cup. Other specialist types included a candlestick (Monaghan 1997, 1023, no 4123 and fig 411) and the remains of two tazze/incense burners (Monaghan 1997, 1020-1).

Period 5 (Phases 14 to 16). 3rd century AD and later

The assemblage from Period 5 consisted of 146 sherds predominantly from the later 2nd to 3rd century AD, however, many sherds were residual from previous periods; this was a relatively small assemblage, which must be borne in mind with any statistical analysis. Eight sherds of amphorae were recovered from this period, including Gaulish, Baetican, and North African sherds. Fine wares were mostly East Gaulish Samian wares, but in small quantities; however, there were 27 sherds of Central Gaulish wares considered residual from earlier periods. Other fine wares included two sherds of Trier/Moselkeramik material and eight sherds of Lower Nene Valley Colour-coated ware. Mortaria included a single fragment of Cantley (South Yorkshire) White-slipped ware of uncertain date. The composition of the coarse ware assemblage was similar to the previous phase, with Ebor products and small quantities of calcite-gritted (one sherd) and Holme-on-Spalding Moor ware (two sherds). There were large quantities of 3rd century AD material as residual sherds in Post-Roman deposits. While the contemporary Period 5 assemblage was relatively small, it was difficult to assess how much activity was taking place at the site, during the 3rd century AD.

Medieval and later periods

As stated previously in this report, around half of the Romano-British pottery assemblage (and almost all later 3rd and 4th century AD material) was recovered from medieval and later period

deposits (Table 6). The presence of this material indicates that there was some activity at the site in the later 3rd and 4th centuries, but certainly a limited amount when compared to the later 1st and 2nd centuries.

8.1.9 Conclusion

The study of the Romano-British pottery from Guildhall provides insights into many aspects of daily life during the period in the centre of York. The status of the site may be inferred from the pottery, with a strong military and urban civilian character in the early periods, with high levels of fine table wares, perhaps used within or very close to the fortress. However, the relatively low proportions of amphorae were notable. In later periods there was more pottery, especially coarse wares, with material from a wide range of sources. The location of the site between the fortress and the waterfront was significant, and the assemblage at different periods compares with those from the fortress, such as 9 Blake Street, and other waterfront sites (e.g. Coney Street), extramural (e.g. Coppergate), and *colonia* (e.g. Micklegate) sites. We can understand the nature of pot production and supply locally, nationally and from the Continent, and how this changed during the *c*. 300 years of Roman period activity at the site. We can also start to piece together the city markets – not just the pots that could be bought to prepare, cook, and serve food and drink, but the imported food available, brought from the Continent in amphorae to those who missed the tastes of home or those who had adapted to the changes in diet that the Romans brought to Britain. This demonstrates that there were established trade connections with southern Britain and the continent, by the presence of nationally traded pottery from the Nene Valley and black-burnished wares from southern England, as well as those from Gaul and Germania (e.g. Trier), and food and drink supplied in amphora from Gaul, Spain, Italy, the Aegean, and North Africa, consistent with findings from previous excavations in Roman York (Monaghan 1997). We can also start to visualize the dinner table, the contents of storage vessels on shelves and in cupboards, and people eating and drinking from plates, bowls, and cups. Not only do the pots provide insights into Roman daily life, but they are the chronological indicators that underpin the dating for Roman activity at most archaeological sites of this period, as is the case at Guildhall.

8.2 The Post-Roman Pottery

By Anne Jenner

8.2.1 Introduction

A total of 4255 sherds weighing a total of 86.911kg were retrieved during a series of archaeological interventions at the Guildhall, York (see Tables 17 and 18), of which 36.7% was post-Roman in date (34% medieval, 0.7% Anglo-Scandinavian and 2% post-medieval). Anglian pottery was not present. This reflects the concentrations of activity during these times at the site of the Guildhall and leads to the hypothesis that there was a lack of occupation in the area during the Anglian, Anglo-Scandinavian and early post-medieval periods. There is little abrasion or wear on any of the sherds which implies that they have not moved far from where they were deposited.

Medieval pottery was the second most prolific assemblage retrieved during excavations at the Guildhall. The largest quantity of any medieval ware type was the Splash Glazed spouted

pitchers, resembling Beverley 1 types. Some of these vessels showed signs of being seconds or even wasters as they had glaze over their broken edges. This pottery dates to before the mid-12th century, and the most likely explanation for its presence is association with a hall which was known to be owned by the Lefwin family by the late 12th century. At this point the hall was changed from private ownership to the common hall, and later became the Guildhall.

Initially, it was thought that the vessels may have been made at an as yet undiscovered kiln site, close to the Guildhall, however, further examination points towards their production at as yet undiscovered kilns in Beverley. This is due to their fabric and forms appearing to be similar to those found in assemblages from excavations in Beverley. These include the Beverley wares from excavations at Lurk Lane (Watkins in Armstrong *et al*. 1991), but also those from excavations carried out by YAT at 65-69 Keldgate (Jenner in Reeves, M. 2022) and the former Grovehill Road Depot, Grovehill Road (Jenner in McComish, 2021), as well as excavations carried out by Humber Field Archaeology at Capital Park (CPB 2022; Wastling forthcoming) in Beverley.

This report aims to address questions such as:

- Could Beverley-type wares within the assemblage from excavations at the Guildhall have been made locally using chalk from the Wolds area?
- If they were brought in from a production site at Beverley, how did they arrive at the Guildhall?
- How were they used, and why were they discarded?
- Were they seen as faulty cargo and never used, or were they used for a one-off event and then discarded?
- Did they go out of fashion and get replaced by the slender jugs of the 13th century?

Tentative hypotheses about how they arrived at the Guildhall and why they were discarded are explored below under ‘Discussion’.

8.2.2 Methodology

Visual analysis involved separating fabric and form groups by date and type. The numbers of sherds of each type of pottery are recorded in tabular form (Tables 17, 18 and 19). Decorative schemas, stamps and other significant features are also noted. Assemblages from each relevant period are outlined briefly under ‘Discussion’, below. Interesting Items and assemblages are also considered in the ‘Discussion’ section.

Table 17 is the standard pottery quantification used by YA. It shows the number of sherds of each ware type and the spot date of each context. Table 18 shows the percentage of each ware type from all contexts and Table 19 gives a breakdown of the total weight of pottery from each period.

The spot date method used in this report is the latest date from the latest pottery type, although other archaeological organisations use different methods for calculating this.

Calculation of the date range for the purposes of this report is the earliest date for the currency of the earliest pottery and the latest date from the latest pottery within each context. This is determined from previous published research into the various ware types found in York. When there are two different date ranges, these will be included in the text and tables, e.g. Roman and medieval. Sherds that can be identified as intrusive or residual will be noted (Barclay, *et al*.

2016, Appendix 1). Abrasion is also noted as this, along with the sherd size, helps to determine residuality.

Sherd sizes are based on the following range of sizes and are measured across the widest dimension of the sherd. Small is anything less than 50mm, medium is anything above 50mm and below 100mm. Large is above 100mm. Sometimes very small (<10mm) and very large (>200mm) are used. These measurements are taken when there is no time to use weight as a corroborative measure.

Estimated vessel equivalents (EVES) are only given for the Splashed wares (see Tables 20 and 21). This is a method of calculating the amount of the rims and bases that are present within the assemblage. A radius chart is used to estimate the radius of the sherd and percentage of the whole vessel that it came from. The percentages of the rims and bases of each pottery type can then be estimated – 100% representing a complete rim or base, even when the rest of the vessel is missing from the archaeological record. Where a percentage in excess of 100% is given this presents an estimation of more than one vessel, this method oof calculation is also applied to the minimum number of vessels (see below). As with many measurements used by the pottery specialist, this is, and can only ever be, a best guess as to what might have been present when the vessels were disposed of.

The minimum number of vessels (MNV) is an estimate of how many vessels might have been present when discarded. This is calculated simply by putting together sherds that appear to be from the same vessel due to their characteristics such as colouration, joins, type of glaze, decoration and form. Each group counts as one vessel. This measurement has only been taken for the Splashed wares from the pit (Context 3052).

8.2.3 The Wares

The various pottery wares are described below (Table 18) and the number of sherds and percentage of the total number of sherds can be seen in Table 19. Table 19 outlines the number and weight of sherds from each period: Anglo-Scandinavian, medieval and post-medieval.

Post-Roman and Anglo-Scandinavian

A very small proportion of the wares are from this period, suggesting that there was very little activity in the vicinity of the Guildhall immediately after the Roman abandonment of the fortress

Anglo-Scandinavian

A small amount of Anglo-Scandinavian pottery was present: a total of 35 sherds weighing 375g (see Table 20), less than 2% of the total number of sherds (see Table 19). They included small, abraded sherds of York ware, Shelly, 'd' ware and Stamford ware.

York ware — 9th to 11th century

Fabrics vary in hardness, colour and size of the inclusions used to temper the clay body. Surfaces are often rough to the touch, as many of the grits are angular. Large fragments of sandstone can be seen by eye but smaller grains of quartz sand, feldspars and muscovite, occasional oxides, siltstones and calcite can be seen using x20 magnification (Mainman 1990, 406). Forms are nearly always flat-bottomed unglazed 'cooking pots' (ibid., 402), often covered with dark soot.

The colour of these vessels varies from patchy reddish brown to buff or grey and the core varies from buff to red. These differences may be because they were made by different potters and

workshops, or may be due to the fairly uncontrollable conditions within the bonfire kilns that they were fired in. They are thought to have been in circulation from the 9th to 11th centuries.

Thirty-four sherds of this ware contributed to 0.8% of the total pottery sherd count from the Guildhall assemblage. They were all small sherds, probably from jars.

'd' ware — 9th to 11th century

This grey ware occurs in small quantities in York, Beverley and Lincolnshire. Although no kiln has been found, its distribution suggests that it was made in the vicinity of York and was in circulation at the same time as York ware. This ware has angular and sub-angular quartz inclusions but is not as sandy as Torksey ware (Mainman 1990, 411).

Only five sherds were present within the assemblage from the Guildhall, providing only 0.1% of the total number of wares. Sherds were small and it was not clear what forms they derived from.

Shelly ware — Roman to medieval

Shelly wares vary enormously as a group, made from the Roman to the late medieval period. Shell types may include those from fresh or salt water, and some vessels are wheel thrown while others are handmade. Their fabrics vary from red to a blackish colour and from soapy to sandy, according to the manufacturing and firing techniques used to produce them. They also vary in the amounts of the shell temper used which can be sparse, moderate or abundant.

Many of the shelly wares found on excavations in York were made in Lincolnshire, though some may have come from Yorkshire, London, and more rarely Oxfordshire.

Only nine sherds of Shelly ware were present in the Guildhall assemblage (0.2% of the total), a quantity insufficient for further analysis. The few small sherds of this ware are, however, probably medieval types from Lincolnshire.

Stamford ware — late 9th to 11th century

This type is a very fine, wheel thrown whitish grey ware which has few visible inclusions. It was in circulation from the 9th to the late 11th centuries in York, though it can easily be mistaken for a Roman Grey ware due to its fine fabric. The kiln site where it gets its name from is in Stamford (Kilmurry, 1980), but products from Stamford are very similar to those made at a kiln site in West Yorkshire (Roberts and Cumberpatch, 2009).

The most common forms were jars with everted lid-seated rims. They are generally unglazed with white to light grey surfaces. Later forms have a shiny, watery yellow or light green glaze. 13th century 'developed Stamford ware' jugs tend to have a darker green glaze.

Twenty-two sherds amounted to 0.5% of the total number of sherds within the Guildhall assemblage. These were mainly unglazed jars.

Torksey ware and Torksey -type Grey ware – late 9th to 11th century

This ware type is a predominantly grey coloured, sandy ware. It has a pimply surface texture and frequently has a reddish-brown core. This is thought to be due to letting the air circulate during the beginning of the firing and then reducing the flow of oxygen towards the end. Some forms are wheel thrown while others are handmade. The most common forms are jars, although large storage jars and spouted bowls occur less frequently. Vessels are mainly quite plain, but some are decorated with applied thumbed strips. These wares occur in small numbers in the

late 9th century, but peak in quantity around AD1000 and only begin to decrease in the second half of the 11th century.

Only two small sherds of Torksey ware and one Torksey-type ware were present amongst the Guildhall assemblage, each ware making up less than 0.1% of the total.

The Torksey-type is a Grey ware pitcher with a short, square-shaped tubular spout and a dark grey fabric and burnished vertical lines on the external surface. Alternatively it could be a medieval Grey ware, perhaps with a foreign provenance. Further analysis may shed light on this.

Medieval

Medieval wares are the second most common pottery types after Roman wares. They amount to 1448 sherds, weighing 28.054kg (see Table 19). The majority of these are Splashed wares amounting to 1061 sherds (see Table 18) of which the largest number of sherds are from pitchers. Splashed wares amount to 24.9% of all wares from the Guildhall assemblage (Table 18).

Other pottery wares included Gritty wares (119), York Glazed wares, Brandsby wares (44), Sandy Red (2), Yorkshire Red (2), Beverley (43), Humber (11), Reduced Green Glazed (28), Walmgate (2) and Yorkshire Red wares.

The following text describes each ware type in more detail as well as the quantity found within the Guildhall assemblage. The wares are arranged in order of the date that they were thought to be made and in circulation.

Splashed Wares (also known as Splash Glazed wares) – late 11th to mid-13th century

Background
Splashed wares occur across England from the late 11th century and were in circulation until the mid-13th century. They were in circulation concurrently with York Glazed wares which took over as the predominant ware type in the late 12th and early 13th centuries. Splashed wares are thought to have begun production during a mass experimental period when potters were trying to glaze the vessels they had made, perhaps after seeing glazed French imports.

A mixture of lead galena and other ground up minerals were applied to the still damp, leather hard vessel, either by hand or by brushing it on before firing. There is some evidence to suggest that a flour and water or seaweed paste was first applied to the pot to help the lead mixture adhere to the surface (Newell 1995, 77-88). After firing, the effect was one of spots and patches, often with small pit-marks or holes in them. Often the surface appears quite rough which is quite different from the smoother surfaces of later suspension glazed wares. Suspension glazes consist of a finely ground lead mixture, sometimes with copper added, which is applied as a liquid, rather than a rough powder.

Splashed wares totalled 1061 sherds, accounting for 24.9% of the Guildhall assemblage. ‘Beverley’ ware may also include some Splashed wares, but the majority of the 43 sherds of this type (1% of the total assemblage) are later fully glazed Beverley wares.

Fabric
The three main types of Splashed ware within assemblages from York are oxidised, reduced and white firing wares which date from the late 11th to mid-13th century (ibid., 1185). These are sub-divided into finely, moderately or coarsely gritted wares.

The largest proportion of pottery from the Guildhall site were fine oxidised Splashed wares with chalk inclusions, with the majority of those originating from a single context (C3052).

Splashed wares from the Guildhall assemblage have an oxidised fabric with added chalk inclusions (Plate 38). This type of pottery was almost certainly made in Beverley, unless chalk was used to temper a locally sourced red-firing, iron-rich clay. Similar pitchers are noted within the assemblage from Lurk Lane (Watkins, 1991), though illustrations of spouted pitchers are not included in Watkin's publication. Also, there is no evidence of two handled spouted pitchers from that source as yet. In the Lurk Lane sequence, pitchers with splashed glaze are a late 11th to mid-12th century phenomenon.

A smaller number of reduced sherds, which could have been over-fired, also exist within the Guildhall assemblage. In one case, an over-fired rim sherd joins an underfired one (Plate 39). This implies that the over-fired sherd suffered some considerable heat after it had broken away from the underfired sherd.

Although finely oxidised splashed wares have been noted in York, there have previously been no noted occurrences of Beverley splashed glazed wares with chalk inclusion in York.

Forms
Forms include pitchers, jugs, jars and candlesticks.

Most of the Splashed ware forms from the Guildhall site are pitchers; only very few jugs and jars are represented. There were two candlesticks (Plates 40 and 41) retrieved from C3050 and C3052 at Guildhall, of a white firing Splashed glazed fabric; t is thought that this fabric was made in the Howardian Hills. There was limited glaze on these, but the glaze was of quite good quality, perhaps indicating the change between splashed glaze and the later suspension York Glazed ware which is now thought to have been made in that area.

The majority of the pitcher rims were collared (cf Mainman and Jenner 2013, 1187, fig. 446, 4178), and a small number of rims were rounded (ibid., 4174) or square (ibid., 4172). The jar rims were squared and occasionally had a thin incised line along their outer edge (bifid rimmed). Presumably this was to fit a string into to secure a lid. Rarely, pitchers can also have a short tubular spout attached just below the rim (ibid., 4178).

Pitchers generally have a wide mouth (approximately 90mm radius), a high shoulder and a sagging base. The shape of this form shares elements with the contemporaneous Buff Gritty ware jar, but with a strap handle added. Some have a handle that is twisted to the left at the lower end (Plate 42). This possibly suggests that the potter was left handed. Handles are normally wide and fairly thin with a central depression. There is evidence for two and possibly three handles on at least one of the pitchers from the Guildhall (Plate 43). This is the first occurrence of this type to be noted in York.

Many of the pitchers within the Guildhall assemblage probably had short, rounded and wide spouts for use in pouring liquids, though only parts of seven spouts have been recognised. This is close to the base EVEs of just over 780% and therefore represents just under eight vessels (see Table 20). Rim EVES are substantially more (see Table 21). Why this should be is not clear. This type of spout was often found on Anglo-Scandinavian wares, such as Torksey and Stamford types. It has also been noted on the fairly rare Buff Gritty ware bowls.

Several Splashed ware sherds were found in other contexts and one in particular was over-fired with the handle emanating from the top of the rim (C3080). This is the only example of this type. All of the other pitchers have a handle coming from just below the rim (Plate 44).

The earliest Splash glazed pitchers with handles emanating from the top of the rim are thought to be late 11th century types. During the mid-12th century, suspension glazes began to be used at Lurk Lane (Watkins 1991). That assemblage is seen as the type-series for the Beverley wares in general and is particularly relevant for our understanding of the sequence of Splashed wares manufactured in Beverley.

The pitchers from pit (C3052) at the Guildhall have strap handles emanating from a little further down from the rim. As they still have splashed glaze this puts them typologically into the early 12th century and perhaps not much later than the mid-12th century.

The minimum number (MNV) of Splashed ware pitchers from pit fill C3052 was calculated as 12 (MNV) and 712% or eight vessels by rims (see Table 21). These calculations carried out on the bases were 15 (MNV) and 934.5% or 10 vessels (EVES). This suggests that anywhere between eight and 15 pitchers may have been present in the pit.

Splashed ware jugs from pit fill C3052 could be estimated as anywhere between one and five as the MNV was 2 and 69% EVES by base, but there were no jug rims by either measure. There were no Splashed ware jars by base and 100% EVES and five MNV by rim.

Splashed ware jars from C3052 amounted to 100% EVES and five MNV by rim and no bases were present. An estimate of the number of Splashed ware jars could then be calculated as anywhere between one and five.

The data not only shows the limitations of these calculations but also shows that different parts of these vessels survived at different rates. This conclusion is confirmed by the weights of the body sherds which outstrip the weights of the rims and bases. Body sherds weigh 12.354kg, rims 2.653kg and bases 6.035kg (see Tables 20 and 21).

Guildhall assemblage

Most of the Splashed wares were oxidised, finely gritted pitchers and spouted pitchers. Many sherds were large and unabraded, joining other sherds within the same context. This suggests that they were smashed nearby before being dumped in the pit.

A small number of the Splashed ware sherds from the Guildhall were fused with glaze and some had glaze over their broken edges (Plate 45). These were mostly from pit fill C3052 and were either wasters or seconds. A few pieces of over-fired kiln material and a possible kiln prop were also found amongst the material from the pit. A piece of tile with part of a sherd of pottery adhering to it and surrounded by glaze was found in context C3102. One reconstructed pitcher rim shows a burnt, over-fired sherd joining a standard oxidised sherd. This suggests that the over-fired sherd was heated after it had been fired in the kiln. Why two such differently treated sherds should join so perfectly is not clear, but it does suggest that after breakage, the reduced sherd was heated to some considerable degree, perhaps in a fire on or near the Guildhall, before being discarded into the pit.

The few wasters/seconds and odd items that may have been used in a kiln are not sufficient to call this a kiln dump. When a number of wasters and seconds exist, it is easy to suggest that the

pottery has not travelled far from the kiln site where it was made. This is not necessarily the case for the Splashed wares from the pit; there may be many other reasons for its presence at the Guildhall. It may have been bought cheaper due to its inferior quality or could have been brought onto site as ballast. Sharp traders could have hidden the inferior wares underneath a 'good' lot to make up the weight required by the purchaser. Equally, fashion for jugs as opposed to pitchers may have caused their demise. There are two jug bases amongst the pit assemblage indicating that this form was coming into circulation at this time.

Comparanda

A number of different Splashed wares occur in assemblages from York, though few of them have ever been assigned to particular production centres (Mainman and Jenner 2013, 1186). Despite this, the white Splashed wares are thought to have been made in the vicinity of the Howardian Hills due to their similar chemical make-up to the later York Glazed wares from that area (ibid., 1193). The red firing wares may have been made locally or come from other centres producing red-firing wares from across Yorkshire, including Beverley (ibid., 1190). However, the distinctive feature of the pitchers from Guildhall and Beverley is the inclusion of a chalk temper, suggesting the latter as the source of these vessels.

Beverley splashed ware pitchers were noted within the pottery assemblage from phase 5B at excavations at Lurk Lane, Beverley (Watkins 1991, 70, fig. 55). Phase 5B was given a date range of early/mid-11th century (ibid., 19). As it is in a context with mid-12th century pottery at the Guildhall, it could either be residual or have a date range of early-mid 11th to mid-12th century. However, the evidence from Lurk Lane is limited only to a few sherds, only one of which is from a splashed Beverley 1 ware (ibid., 65).

Gritty wares – late 11th/ mid- 13th century

Gritty wares were in currency during the same period as Splashed wares (Mainman and Jenner 2013, 1178-9), and were the main cooking vessel fabric at this time. Similarly to the Splashed wares, Gritty wares vary considerably in fabric, both in colour and the size and quantity of grits, though the majority found in York are buff coloured. Typical forms included shouldered and rounded jars, though spouted bowls occur very infrequently. White Gritty wares form a thin horizon in York's ceramic timeline in the late 11th and early 12th centuries. Buff Gritty wares then became dominant in York in the 12th century.

Gritty ware sherds were the second most common medieval ware type (119 sherds formed 2.8% of the total assemblage). Most were buff coloured shouldered jars similar to those most commonly found in York (Plate 46). Sherds from a White Gritty ware jar were the only other ware found in the same context as the majority of the Splashed wares (C3052).

While the Splashed ware pitchers do not generally show signs of heating, the White Gritty ware jar is heavily sooted (Plate 47), suggesting that it was used for heating food or liquids. Its existence along with the Splashed wares suggests that they were discarded together and possibly used in conjunction with each other.

York Glazed Ware – mid-12th / mid-13th century

From the mid-12th to mid-13th century York Glazed wares appeared in York and were produced from pale or white-firing clays (Mainman and Jenner 2013, 1203). The assemblage of these wares is dominated by jugs, with a distinct straight-sided neck and thickened, flat topped or

collared rim. Pouring was achieved through either tubular spouts in the early periods or pinched pouring lips in later periods.

York Glazed ware was the third most dominant pottery type of this period (54 sherds/1.3%), though the sherd size was predominantly small and abraded compared to the Splashed wares. Any large surviving sherds of this type were tubular spouts or rod handles, though a small sherd of decorated jug body was also recovered, with a vertical comb and dot decoration. Tubular spouts were longer and thinner than those of the Splashed wares and had a bridge of clay attaching them to the body of the vessel (Plate 48).

Brandsby-Type – mid-13th / mid-14th century

The ceramics of the mid-13th to mid-14th centuries were dominated by Brandsby-type wares, which succeeded, with some overlapping, the York Glazed wares. Due to this overlapping, vessels produced in the early years of Brandsby –type production are difficult to distinguish from York Glazed wares (ibid., 1230).

There was a small to moderate amount of Brandsby-type pottery in the Guildhall assemblage, and most of them were small sherds. 44 sherds amounting to 1% of the total number of sherds were found within the assemblage from the Guildhall. Again, similarly to the York Glazed wares, the handles were the sherds that survived most intact, with a small number of joining sherds. Forms were mostly jugs with rod handles, though a few bowl sherds were also represented.

Beverley-type 2 – mid-13th / mid-14th century

A moderate number of finely to moderately gritted, oxidised wares both unglazed and glazed were attributed to Beverley-type wares in this assemblage (44 sherds; 1%). Most of the sherds were small to medium body and base sherds; consequently, the forms could not be determined, though they are thought likely to be jugs, jars and pitchers.

Humber ware – late 13th to late 15th century

This ware type forms part of a tradition of fine sandy mostly oxidised ware which is made across the Humber, North Yorkshire and East Yorkshire regions. Kiln sites have been noted at West Cowick, Holme-on-Spalding Moor and a number of other sites in East Yorkshire. Two production sites have also been noted in York itself: Museum Gardens and Blue Bridge Lane (Mainman and Jenner 2013, 1275-8).

Sometimes the cores of this ware type are found to be reduced, while inclusions are not generally visible to the naked eye. Glazes change from green in the earlier years of production, to a greenish-brown with amber edges in the 14th and 15th centuries. Later vessels can have a more vitrified purplish glaze, though none are present amongst the assemblage from the Guildhall.

The Humber ware from the Guildhall totals 11 sherds which are mostly from jugs, though too small to be certain of their form.

Walmgate ware – late 13th to late 15th century

The clay body of this ware type is oxidised and rather like the Humber wares, though it has a sandier body. Vessels consist mainly of jugs, in particular drinking jugs. Excavations at Walmgate revealed several wasters of these vessels which were discoloured and blown out of shape (ibid., 1259, fig. 524).

A Walmgate jug handle dating to the mid-14th to late 15th century was present amongst the assemblage from the Guildhall and may have come from a drinking jug. There was only one other sherd. This ware type represented less than 0.1% of the total number of sherds.

Sandy Red ware – late 13th to late 14th century
This ware has been described elsewhere (ibid., 1246). It is, as the name suggests, a sandy red ware. It often has a rather metallic but dull green-brown glaze and may simply be a slightly over-fired version of another red-firing ware. In York it was never a dominant type, and this is also the case with the Guildhall assemblage where there are only two sherds, forming less than 0.1% of the total number of sherds.

Yorkshire Red ware – late 13th/early 14th century
This is a fine red coloured, oxidised ware with a mid-green glaze (ibid., 1249). Part of a Yorkshire Red ware jug with rilled neck and green glaze was present at the Guildhall. Only one other sherd was present. These sherds amounted to less than 1% of the total number of sherds.

Reduced Green Glazed ware – late 12th to late 14th century
This term has been used to describe pottery from the Castle Ditch, Newcastle (Ellison, 1981). The ware group includes four medieval wares; RGG1, 2, 3 and 4. They vary in coarseness from RGG1 which has a very coarse temper and dark fabric to RGG 4 which has a denser, finer fabric. Almost all of the Reduced Green Glazed ware found within the assemblage from the Guildhall is of types 1 to 3, fitting with a currency during the late 12th to late 13th century. They consist of 28 sherds making up 0.7% of the total within the Guildhall assemblage.

Hambleton ware – late 14th to early 15th century
Hambleton ware is so named as it is thought to have been made in and around the Hambleton Hills of North Yorkshire (Mainman and Jenner, 2013, 1283-4). It is a white-firing ware which has two distinct fabrics. The most common fabric reflects the York Glazed wares in its openness and lightly reduced core, though it follows on from the late 13th/early 14th century Brandsby wares in the sequence of white wares from North Yorkshire.

Forms are mainly cisterns and jars with two handles. The second fabric is denser and finer and is used to make smaller items such as dishes and bowls. The latter forms resemble those of the Tudor Green industry which is based in the Surrey Hampshire Borders (cf Pearce, 1992).

Both ware types usually have a poorly fitting glaze which has often flaked off, leaving spalded patches. Where still attached the glaze often has areas of tiny bubbles in it.

The six sherds of Hambleton ware from the Guildhall account for 0.1% of the assemblage.

Other medieval wares include Red coloured and Oxidised wares that have not been allocated to a specific ware type. This is usually due to their size and abrasion which has made it difficult to be sure of their type.

Post-medieval wares

For the purposes of pottery analysis the post-medieval period starts after the battle of Bosworth in 1485. This is an arbitrary date as pottery does not always correspond with historic events.

The post-medieval pottery from the Guildhall comprised 83 sherds weighing 2.546kg. Wares include English Stoneware, Post-medieval Earthenwares, Frechen, Pearl, Purple Glazed, Ryedale, Terracotta, Yellow Glazed, Cistercian, Tin Glazed and Slipware.

Cistercian ware – late 15th to late 16th century

The term 'Cistercian' ware was coined when it was thought to have been made by the Cistercian monks at or in the Granges owned by them. This idea was later dismissed but more recently it has borne some credibility in North Yorkshire and in particular in York itself. In this area it is hypothesised that it was made outside York and brought in for use at monastic and secular sites alike for religious festivals. Recent research points towards Cistercian wares being more common on Augustinian and Benedictine sites in York, rather than Cistercian (Jenner and Bradshaw, forthcoming). This hypothesis does, however, need further research in order to validate it.

The ware is usually a dark red firing ware with a dark coloured glaze. Some vessels known as 'Reversed Cistercian' ware have a white firing body. They are sometimes decorated with the opposite colour clay to the body of the vessel. Almost all vessels are in the form of cups, beakers and mugs for table use and in particular for drinking (Brears 1971, 19-23). It has been suggested that the motifs used to decorate them have hidden symbolism and represent icons of the Catholic faith (Spavold 2009). Their demise in the 16th century is thought to have occurred in direct relation to the dissolution.

Twenty sherds of Cistercian ware were present amongst the Guildhall assemblage, making a total of 0.5% of the assemblage. These Cistercian wares may have been used by Augustinian friars to celebrate religious festivals, as the excavation incorporated the footprint of the Augustinian friary, built in 1272.

Yellow Glazed – late 16th to late 17th century

Yellow glazed white ware is a less frequent type of post-medieval pottery. It has a fairly fine sandy fabric, often lightly oxidised. The source for this type is unknown. Seven sherds of this type were present within the Guildhall assemblage, forming 0.2% of the total. Their size was insufficient to determine their form.

Purple Glazed ware – late 14th to 16th century

Purple glazes start to appear on green glazed pottery towards the end of the 14th century. This may be due to a desire to emulate German Stonewares or metal objects. It suggests that pyrotechnology was becoming more sophisticated and that higher kiln temperatures were therefore possible. Forms mainly include jugs and jars. There are a number of sources for this type of ware in the Humber region and South Yorkshire.

Four sherds were retrieved from the Guildhall, amounting to only 1% of the total number of sherds.

Ryedale ware – late 16th to early 18th century

Ryedale wares follow on from the late medieval Hambleton wares in the sequence of pottery made in North Yorkshire. Known and probable kilns have been identified in the Ryedale area (Wilson ed. 1988, 135, Appendix 10). They include the famous kiln site at Yearsley that was run by the predecessors of Josiah Wedgwood (Jenner forthcoming).

Ryedale wares are made from a red or buff firing clay and include a wider range of forms than their medieval predecessors. Jugs, jars, platters, pipkins, dishes, bowls and baskets are amongst the Ryedale potters' repertoire.

Fifteen sherds of Ryedale ware amounts to 0.4% of the total number of Guildhall sherds.

Post-medieval Earthenwares – late 16th to 19th century
All the wares described so far are, strictly speaking, earthenwares. This means that they have been fired to temperatures around 800 degrees centigrade. The relatively low temperatures cause them to have a more open, less dense and fused fabric than Stonewares (see below).

Post-medieval Earthenwares can be white, grey or red-firing and glazes vary from green to browns and black colours. This fabric was often used to make vessels used for storing and preparing foodstuffs and not necessarily for fine dining at table.

Thirteen sherds of this type were retrieved from the Guildhall site. They amounted to 0.3% of the total number of sherds.

Stonewares
Stonewares were first brought into England via trade with Germany and the Low Countries. They are fired to temperatures of over 1000 degrees centigrade, making them more brittle but harder and more durable than earthenwares and consequently they are ideally suited to holding liquids. Forms include vessels for drinking in the main, though they are also used for drainage and sanitation.

German Stonewares – Raeren – late 15th to late 16th century
Raeren Stoneware is a grey bodied ware with brown glaze. Drinking vessels often have an applied thumbed roll of clay around the base. They are also ribbed, possibly made by holding a cow's metatarsal to the surface of the pot as it turned on the wheel (cf Jenner 1985, 130-4).

Only one sherd of this type was found amongst the Guildhall assemblage. This amounts to less than 0.1% of the assemblage.

Frechen Stoneware – late 15th to mid-16th century
This ware type has a mottled 'orange peel' look to its glaze. Frechen wares have been associated with Cardinal Bellarmine due to the assumption that his face was often used to decorate the neck of the jugs known as 'Bellarmines'.

Only four pieces of this ware were present within the Guildhall assemblage and only one has a face on it. They amounted to 0.1% of the total number of sherds.

Tin Glazed ware – late 17th to early 18th century
The method of glazing using tin was first seen in England in the late 16th century with the introduction of Dutch imports. English factories producing Tin Glazed wares did not come into fruition until much later. These were located along the banks of the Thames in London, but also in places such as Bristol and Liverpool.

Forms include decorated dishes and alborelli in the main. Cobalt was used to make the blue coloured hand-painted strokes commonly decorating these forms. Other colours included yellows and reds, but these were much less common.

Only one sherd of this type was present within the Guildhall assemblage.

Other late post-medieval wares included Pearl ware (3), Terracotta (1) and Slipware (2). These and other later wares are of little significance to the interpretation of the site.

8.2.4 Discussion

The wares from excavations at the North Annexe, York Guildhall are evidence of considerable activity during the Roman and medieval periods in particular, though small amounts of Anglo-Scandinavian and post-medieval pottery demonstrates that activity continued at the site from the Roman period to the present day.

There was some residuality within the medieval deposits, with some Roman material present in contexts dating to the 12th and 13th centuries. A small amount of intrusive 11th and 12th century material was also found in Roman contexts.

Immediate post-Roman, Anglian and Anglo-Scandinavian period

Evidence for Anglian activity in York – or *Eoforwic* – is derived from documentary and archaeological sources appertaining to the post-Roman period dated from the 5th to the 9th century (what is commonly referred to as the Early- and Mid- Anglo-Saxon period elsewhere in England (Mainman 2019, 3-4)). The 5th/6th centuries tend towards rural activity with "little evidence for residence in York" (Mainman 2019, 5). The activity perhaps then focuses within York in the 7th/8th centuries, with the establishing of ecclesiastical locations. The location of several Anglian churches has been noted (Tweddle *et al*. 1999). For example, the 7th century St Peter's in the Minster gardens (Mainman 2019, 4), and many existing churches stand on the probable location of many more Anglian structures. Despite a large area of possible and sporadic activity located on the 6th to 9th century Historic Towns Map by Addyman (2015), structural remains of these buildings are scant (Mainman 2019, 5).

Evidence for occupation is also fairly insubstantial, particularly for the earlier period of 5th and 6th century, where cemeteries such as those of Heworth provide insights into this early Anglian/Saxon period (York Archaeological Trust 1999, 8).

Occupation sites generally appear to be represented by few finds and pottery sherds but this may be because they are considered to be from the Anglo-Scandinavian period of 9th to late 11th century. The current pottery evidence from York in the 5th to 9th century is "patchy, incomplete and open to different interpretations" (Mainman 2019, 1).

There were no sherds of Anglian pottery or other finds dated to this period from the Guildhall.

There was a small amount of Anglo-Scandinavian pottery (the Late Saxon period elsewhere) recovered from the Guildhall site, all locally or regionally made– including from Yorkshire and Lincolnshire, or unknown local sources. In this period, York continued to be an important international trading hub, evidenced by finds from sites such as Fishergate and Coppergate, as well as the establishment of the ecclesiastical centres mentioned earlier.

The limited evidence of the Anglian and Anglo-Scandinavian periods suggests that the Guildhall excavation site was an area of reduced activity during this time, possibly only of people traversing through the area to the aforementioned sites.

One explanation for the lack of Anglian and Anglo-Scandinavian pottery is that the Roman bridge linking the river to the south-west Gateway into the fort had been destroyed and replaced by a crossing near the present Ouse Bridge (Rees Jones, 2013, 95). However, evidence of activity across the river at Rougier Street and Tanner Row throws doubt on this theory (Mainman 2019, 10).

The lack of evidence for activity during these periods could just be due to poor preservation and destruction by subsequent medieval and post-medieval activity.

Medieval

Medieval pottery from the site was the second largest group in the assemblage, after the Roman material. The largest quantity of medieval sherds appears to span the early 12th century. Splashed wares were the predominant fabric type in this assemblage from the medieval period. The most common form was the pitcher which was often spouted. The majority of these originated from a single context (C3052), the upper fill of a large pit close to the northern edge of the site. Their fabric, form and glaze are suggestive of a pre-mid-12th century date for their production and use. The assumption is based on evidence from excavations at Lurk Lane that revealed that there was a change from pitchers to jugs and from splashed to suspension glazes in the mid-12th century (Watkins, 1991, 81).

The pottery from context C3052 was unabraded with fresh breaks, and therefore was likely to be a primary deposit. Evidence of glaze over edges, over-firing, glaze slag and a fusing of two vessels show that there were also wasters from a kiln or a severe heating event after firing.

The composition of the clay bodies and chalk temper of these pitchers suggest a source near Beverley. Added to this, their forms are remarkably similar to those from Lurk Lane (Watkins 1991, 82, fig 66), though no spouted vessels are illustrated there. It is, however, just possible that local red-firing clays were used and the chalk imported from the Wolds to temper a local product. Trade between Beverley and York has been noted since the Archbishop of York was the sole Lord of Beverley from the mid-11th century (Armstrong *et al*. 1991, 1).

It is reported that a private hall, owned by the wealthy and powerful Gerard and Hugh Lefwin (VCHY, 37 and 45) was transformed into the civic common hall at the end of the 12th century. This became the Guildhall in the 13th century (Rees Jones, 1994, 203-4). It was suggested that it might have been taken from Hugh's family and rebuilt as a town hall to 'assert common good over private ownership' (ibid.). It was apparently not uncommon at this time for wealthy property owners to give a hall that they owned to be used for civic purposes (ibid.). It is therefore likely that the Splashed ware pitchers were discarded when a private house was converted into the Civic building of the Common Hall and Guildhall. This was also at the time that jugs started to become more fashionable than pitchers. This would be particularly relevant if the pitchers were used for storage in a private home, whereas later jugs, metal and glass wares may have been preferred for use in the Civic buildings for events at a table. As glass and metal were often collected, sold and re-used, this may explain the sparsity of these wares at the Guildhall site.

Additionally, the site of this excavation was the location of an Augustinian Friary, which had been established on the site by 1272. Again, this dates to after the pre/mid-12th century spot date for the Splashed glaze wares.

The Splashed wares could have been brought onto the Guildhall excavation site via the river landings and common lanes off Coney Street, onto which the Guildhall and friary would have fronted. This route runs parallel to the River Ouse in front of the south-west side of the Roman fortress, following the same line as the RCHME Road 5 (RCHME fig. 3, 1961). It is first referenced in a charter dating to 1150-61 where it is named *Cunigstrete* (Raine 1955, 145-6).

Chalk in the Splashed ware fabric suggests import onto the site, either as finished vessels or as materials used by local potters in their work (see the Splashed glazed discussion above). The presence of wasters within this group of pottery also suggests this, as they could have been imported from Beverley as ballast in a vessel or included – unwanted – in a delivery and hence immediately been discarded. However, the presence of wasters, seconds and kiln props on the site suggests there may have been a kiln in the vicinity of the area of the Guildhall excavation during this period. No structural evidence for a kiln was found during this excavation. The source of this material will remain enigmatic until mineral analysis on this material is completed or a kiln is found.

The Splashed wares seen on this site are also of note because this ware type has not been seen previously in York in combination with the specific pitcher form of a sagging base, wide mouth, short tubular spout and 2/3 strap handles. This form does, however, match examples from Lurk Lane Phase 5B, again perhaps pointing to a Beverley origin (Watkins 1991, 65), although the evidence at that site is even more limited.

The pitchers may have been brought into the site of the Guildhall excavation for a one-off event and then discarded, or continued in use for some time before they were discarded. An argument against this, however, is that few of the Splash glazed pitchers from the Guildhall show any signs of sooting or wear that might be caused during their use. Only one vessel had small patches of sooting inside the base and lower walls, but this may not have been related to its use for heating.

Of course, it can be argued that pitchers were probably used for ale or cider and as such weren't used to heat contents, or in a kitchen or scullery environment rather than as tablewares. However, it would be expected to see scratches or abrasion on their bases if they had been used a lot. It has always been assumed that the sagging base on these and other contemporaneous vessels was consciously produced so that they could be sat on a dirt floor. Use of this fashion would surely have left scratches and other wear marks.

Certainly, fashion and forms changed in the late 12th/early 13th century and slimmer jugs, such as those seen in the York Glazed wares came into use, which were made to stand on the table. However, there are far less of these within the assemblage. It may be that the pottery from C3025 was discarded with the changing fashion alongside the update of the hall. In the early 13th century, aumbries were updated to storerooms in many halls, such as within the King's Hall at Scarborough Castle (Brears 2008, 381).

Further reasons for the demise of the pitcher at the Guildhall could have been that the pitchers were part of a faulty batch, quickly discarded into the pit without ever coming into use. But in this case, it is unclear why the pitchers would have been discarded alongside White Gritty wares that were clearly used for cooking (as they were covered in soot).

Another suggestion is that the pitchers and jars formed, along with the candlesticks, a discrete group of vessels which were intended to be used during some sort of repast or other domestic function as a unit, despite their faulty nature. The author is unaware of any other groups of this type of pottery being used together in this way in the 12th century, though the presence of a candlestick suggests that either these items were used at night, or that they were used at different times of the day and merely thrown out together.

The candlesticks, unlike the pitchers, have a reduced core and very few chalk inclusions. Perhaps these were from a separate batch or a different, as yet undiscovered kiln.

We may never know the exact reasons for the Splashed wares' existence at the Guildhall or why they were discarded. However, thin section and mineral analysis may help to clarify whether they were made in Beverley or whether potters close to the Guildhall used the local red firing clays and imported the chalk temper from Beverley or another location in the Wolds.

8.2.5 Conclusion

Excavation at the North Annexe, York Guildhall has revealed that occupation, as denoted by quantities of pottery, was at its height in the Roman period. This is perhaps due to the proximity of the Fortress to the north and the evidence for a Roman road along what is now Lendal, Coney Street and Spurriergate. Added to this, it is likely that pottery may have been used and discarded due to activity around the Roman bridge which is thought to have existed somewhere between the Guildhall and the present Lendal Bridge.

The sparsity of pottery from the end of the period of Roman occupation through the Anglo-Scandinavian period can be explained by the demise of the Roman Fortress, river crossing and road in the area of the Guildhall. Instead, activity was focused further down the river towards the pre-existing crossing where the current Ouse Bridge stands.

The quantity of medieval pottery, in particular that of the pre mid-12th century Splash Glazed pitchers from the pit fill (C3052), can be put down to an increase in activity on the site at this time.

Although an Augustinian friary was established on the site by 1272, the Beverley two or three handled pitchers must have been used by an earlier occupant, as they predate the establishment of the friary. A possible explanation may be that the pottery was used by the Lefwins – the occupants of a neighbouring private hall that became the common hall at the end of the 12th century.

Later medieval wares of 13th, 14th and 15th century date were relatively sparse, and quantities of pottery do not reach the levels found in Roman and 12th century contexts. Documentary and archaeological evidence shows that the Guildhall excavation site was in use during the whole of the medieval and post-medieval periods and in fact up to the present day.

The reasons for the sparsity of pottery from the medieval period to the present day are not clear, perhaps metal and glass objects were used in preference to pottery, and these were then recycled off site. This might have reflected a change in the fortunes of the Guilds using the hall as metal and glass may have been more expensive items. This may also have been the case in the post-medieval period. Equally, it may be that conditions on site were such that the later medieval and post-medieval periods were not recovered.

8.3 The Ceramic Building Material

By J. M. McComish

8.3.1 Introduction

A total of 300.809kg (2050 sherds) of CBM was recovered from the archaeological investigations at the Guildhall, including by hand during the excavation process, from the observation of boreholes and piling cores, and from the analysis of soil samples. The CBM ranged in date from Roman to modern, though the majority of the collection was of medieval date.

8.3.2 Methodology

The collection was recorded to a standard YAT methodology (McComish 2020b) whereby each sherd is individually recorded on a pro-forma sheet which details the project code, the context number, the weight in grams, the fabric type, the surviving complete dimensions (length, breadth, thickness, flange height), evidence of re-use, evidence of over-firing and any other relevant information (surface marks, glazes, unusual features etc.). A question mark is placed after the form name if the identification is uncertain, for example 'Imbrex?', while the form of non-standardised sherds is listed as 'Other'. The fabric is determined by comparing the sherd to a York fabric reference collection held at YAT. The data is stored on YATs internal computer system (which is backed up daily to prevent data loss) under the project code 6019.

In the text below an overall summary of the material from each period is given, followed by descriptions of each form present and of the fabrics present. The CBM is summarised by historical period in Table 22, while a summary by context is given in Table 23. The features present on the Roman CBM are summarised in Table 24, the Roman fabrics in Table 25, the features present on the medieval CBM in Table 26 and the medieval CBM fabrics in Table 27.

8.3.3 Results

Roman

The Roman CBM accounted for 26% of the total volume of CBM from the site. All the forms of Roman CBM at the Guildhall site have been noted in York before, namely a circular bessalis, box flue tiles from hypocausts, tegulae and imbrices from roofing, a tessera and numerous fragments of indeterminate form which are classed as Roman brick.

Roman tiles and bricks were made using sanded moulds on a sanded workbench and consequently the sides and basal surfaces are coated with fine sand. If a tile stuck to the workbench a wire (similar to a cheese-wire) would be used to separate the tile from the bench resulting in parallel lines on the base of the tile. Such lines were seen on a sherd of tegula and on three Romans brick sherds from the present site. Following moulding the tiles were air-dried to a leather hard stage before being fired. Roman CBM is usually well-fired and of consistently high quality; some sherds have reduced cores, caused by the exclusion of oxygen during part of the firing process, or oxidised cores, caused by an increase in the level of oxygen during firing.

Tegulae and imbrices are always the commonest form of identifiable Roman CBM in York, and this is the case at the Guildhall site. The box flue tiles at the site show that some of the material originated from a hypocaust while the presence of a CBM tessera (in conjunction with the presence of stone tesserae at the site) suggests that a tessellated pavement was present somewhere in the vicinity. Small numbers of sherds in non-standard forms are known from sites across York (McComish 2012, 184-90) and there were two such unusual sherds at the Guildhall

site. The first of these was a sherd with a vent cut out of the side of the tile, which may be part of a kiln floor although the Guildhall is a long way from the known location of the legionary kilns (580m away as the crow flies but 734m if you went round the outside of the legionary fortress). The second sherd had a small notch cut into the edge presumably to house a metal nail or clamp.

The Roman CBM was fragmented and the only sherd with complete surviving original dimensions was a tessera at 16mm x 17mm x12mm in size. For the remaining sherds with identifiable forms the only surviving original dimensions were thicknesses and flange heights. The box flues fitted into the previously recorded range of thicknesses for York (McComish 2012, 157) while the tegulae, imbrices and bessalis conformed to previously recorded thickness for York, although one tegula had a flange 53mm wide which is larger than usual (McComish 2012, 143, 169, 221).

The range of surface features relating to manufacture on the Roman CBM is summarised in Table 25. All of these features have been noted on Roman CBM before, both in York and nationally. These included evidence of smoothing the upper surface of roofing tiles to improve surface tension and water resistance; the majority of the smoothing was done with a cloth lengthways along the tile, but there were also instances where the tile had been smoothed lengthways then widthways at the end (1 sherd), or widthways at the end (1 sherd). There was also one example of finger smoothing, while some tegulae had grooves by the flange caused when the flange was hand smoothed. A small number of sherds had evidence of knife trimming or being separated from the work bench with a wire.

As would be expected lower and upper cutaways were present on the tegulae, and in the case of the lower cutaways these were in forms A26 and B6 (following Warry's classification of 2006, 61). The single example in form A26 represents the first time this form has been recorded in York (McComish 2012, 83). Where keying existed on the box flues it was combed, which was the dominant type of keying in Roman York (McComish 2012, 162). Though some vents were present on the box flues these were all were partial survivals, so their original size is unknown. Grip marks for the tile being lifted when wet were present, as was an indented border where the tile mould was used to tamp down the edges of a tile once it was removed from the mould. A single brick was pierced by a firing hole, a feature occasionally seen on Roman bricks in York (McComish 2012, 418).

Two legionary stamps are present: one from the 9th legion and one from the 6th legion, the first of which could be matched to the national catalogue (stamp 2642.7; Collingwood and Wright 1993, 170) but the second was too badly preserved to enable identification. The 6th legion stamp has to date to after c. AD 120 but before the later 3rd century when the practice of stamping had ceased (McComish 2012, 38); it was recovered from a context in Phase 14, which was dated by pottery to the mid-2nd to 3rd century so could have been up to 150 years old when deposited. The 9th legion tile was even older when deposited; it must date to c. AD 70-120 when the legion was based in York, but it was recovered from Phase 16 which also dated to the mid-2nd to 3rd century, making the tile at least 200 years old when deposited.

Where they were complete enough to identify the form, the signature marks present matched examples previously seen in York (Types 1-3; Betts 1985, 194).

Rain and hob nail marks indicated that some tiles at least were laid on the ground to dry prior to firing. Some tiles were reduced or oxidised due to variations in oxygen in the kiln during firing and a small number were overfired. In general, the Roman CBM is well made, with few overfired sherds, which fits the pattern seen elsewhere in York (McComish 2012, 111).

A small number of sherds had features relating to use with either mortar or *opus signinum* on the upper surface, or soot on the reverse surface. In addition, a few sherds had evidence of re-use in the form of soot or mortar on broken surfaces, which must have occurred prior to deposition.

Tegulae

Tegulae are flat tiles rectangular tiles with a flange along the upper surface of each longer side and they were laid in columns on a roof. Tegulae have an upper cut-away on the upper surface of the flange at the top end of the tile and a lower cut-away on the basal surface of the lower end of the flange. The cut-aways of adjacent tegulae were designed to interlock enabling the tiles to lie flat when placed on the roof.

The tegulae at the present site ranged from 15-35mm in thickness (32 examples) with flanges typically double the thickness of the tile at 34-67mm thick (19 examples). No other complete original dimensions survived. Tegulae show considerable variation in thickness nationally, usually ranging from 20-50mm thick, though a small number of examples are known, including in York, that are 9-19mm thick (Brodribb 1987, 13; Betts 1985, 170; McComish 2012, 222) and flanges are usually double the thickness of the tegula (Brodribb 1987, 13). The tegulae at the present site therefore lie within the ranges previously recorded, though one flange was 52mm wide which is wider than average.

Tegulae (and imbrices) were smoothed with a cloth after moulding to increase surface tension thereby making the tiles more water resistant. Smoothing lines parallel to the flange were present on four tegulae from the site. One sherd had been smoothed using the fingers parallel to the flange. Five sherds of tegulae had a pronounced thumb groove next to the flange caused by running the thumb along the side of the flange to smooth it, while one tegula had two finger grooves next to the flange and one tile had three finger grooves parallel to the flange. One tegula had a knife trimmed base, one a wire trimmed base, and three had been trimmed along an arris.

Nine lower cut aways were present which were in forms A26 (one example) and B6 (six examples), following the classification by Warry (2006, 61), while two were too badly preserved to determine the original form. Type B6 has been recorded in York previously, but not type A26 (McComish 2012, 83). Part of a single upper cutaway was present.

Five of the Tegulae had reduced cores caused by a reduction in the quantity of oxygen during firing. One tegula had a sooted base resultant from use, while another sherd was sooted all over, including on the broken surfaces, indicative of re-use.

Imbrices

Imbrices are half cylindrical tiles which taper slightly in width from bottom to top; these were laid over the joints between the columns of tegulae and mortared into place, with the narrow end of one imbrex slotting beneath the wider end of the imbrex above. The imbrices at the present site ranged in thickness from 13-27mm (54 examples), but no complete breadths or

lengths were preserved. Nationally imbrices range from 14-30mm in thickness (Brodribb 1987, 26) so the imbrices from the present site fall within this range.

Smoothing lines parallel to the long edge were present on 24 imbrices, while one example had smoothing parallel to the long and then the short edge and one sherd had smoothing parallel to the short end of the tile. Two of the imbrices had partially preserved legionary stamps. The first had the letters HISP and was type 2642.7 (Collingwood and Wright 1993, 170) which has previously been recorded in York. This relates to the 9th legion and therefore dates to c. AD 70-120. A second Imbrex had a stamp had the letters GVI relating to the 6th legion, but it was too faint to match to Collingwood and Wright's typology; this has to date to after c. AD 120 but before the later 3rd century when the practice of stamping had ceased (McComish 2012, 38). Ten sherds were reduced, one was oxidised and one vitrified. One sherd was covered in mortar suggesting re-use. Two sherds had sooted backs, again relating to use, while one had sooted broken surfaces relating to re-use.

Flue tiles

Box flue tiles are hollow rectangular or square cross-sectioned tiles, with sanded interior surfaces. They have vents in two opposing sides, while the other two sides are usually keyed. The keying can be incised, finger drawn, combed or relief-patterned. Box flues were made by wrapping a slab of clay around a sanded former then joining the edges of the clay together with a single seam, and the vents were cut out after the tile was removed from the former (Rudling *et al*. 1986, 204). Box flues were usually positioned in vertical columns around the sides of a hypocausted room to provide a lining, with the keyed surfaces facing towards the walling and the interior elevation of the room, and the vents abutting one another, thereby allowing air to circulate through the wall. The box-flues from the present site ranged in thickness from 13-21mm (16 examples), but no complete breadths or lengths were preserved. The previously recorded range of thicknesses for York is 11-36mm (McComish 2012, 157), so the Guildhall box flues fit within this range.

There were three keyed surfaces, all of which were combed. The surviving vents were circular (one example) and square (four examples) in shape, but no complete vent sizes were preserved. Two of the box flues were reduced and three had sooted interior surfaces resulting from use in conjunction with a heating system.

Tessera

Tesserae were used Roman mosaic flooring tiles which varied in size. The largest (10-15mm^2) was used for tessellated pavements and for the borders of complex mosaic floors, while smaller tesserae (3-10mm^2) were used for more detailed mosaic (*opus musivium*) floor designs, and the finest tesserae of all (2-8mm^2) were used for the most elaborate mosaics and for *emblemata*, such flooring being termed *opus vermiculatum* (Adam 2007, 233-4). A single tessera cut from a sherd of CBM was present at the Guildhall; this was 16 x 17 x 12mm in size, indicating that it would have originated from a tessellated pavement.

Bessales

The remaining material recovered from the present site was too fragmented to determine the original form (such sherds are termed Roman brick). The brick sherds ranged from 14-67mm in thickness (160 sherds). No breadths or lengths survived.

Two of these brick sherds were in a fabric very like R11 but with a paler buff colour. Three sherds had a knife trimmed arris, while three had wire marks on the base. One sherd was pierced by a firing-hole 14mm in diameter. Two sherds were smoothed on the upper surface parallel to the edge of the tile and one of these had an indented border where the tile mould had been used to tamp down the edge after the brick was removed from the mould. Two sherds had combed keying on the upper surface, while three had finger drawn keying lines on the upper surface. One sherd had grip marks on the upper and basal surfaces from being lifted while wet. Seven sherds had signature marks on the upper surface, one a Betts type 1, two a Betts type 2 and two a Betts type 3 (Betts 1985, 194), while a further two signatures were insufficiently preserved to determine their original form. One sherd had rain marks on the upper surface from being dried outdoors. One sherd had a hob-nail boot impression on the upper surface from having been stood on while drying. The Roman brick sherds exhibited features relating to firing; 61 sherds had reduced cores, one sherd had an oxidised core, seven sherds were vitrified through over firing and one sherd had blown through over firing.

Some brick sherds showed features relating to their use, with two sherds having a sooted base, one having *opus signinum* adhering to the upper surface suggesting use in a floor, and one having mortar on the upper surface representing the attachment point for an adjacent brick. Two sherds had fragments of iron adhering to the upper surface which had occurred after the brick was deposited within the ground. Three sherds had sooted breaks indicative of reuse, and 18 sherds had mortar on broken surfaces, again indicative of re-use. Four sherds were abraded from post-depositional damage.

Non-standard forms

Two Roman sherds were in non-standard forms termed 'Other'. The first of these was 21mm thick and had a semi-circular vent at the edge of the tile; the original function of this tile is uncertain, but the closest match for this in terms of form is a floor tile from a kiln at Holt (Brodribb 1987, 96) where the vent allowed hot air to circulate within the kiln. The second sherd termed 'Other' was 49mm thick and had a deliberate small notch cut out of the edge of the tile. The most logical explanation for this is that it was designed to house a nail or metal clamp used to fix the brick into place. At 49mm thick this is would seem to be from a floor surface rather than a wall, but floors were not usually held by clamps so the precise function of this sherd is unclear.

Fabrics

The Roman CBM fabrics recorded (R1-R2, possibly R5, R9, R10-12 and R18; Table 25) had all been seen in York before with the exception of two sherds in a variant of R11 which were a pale buff colour (unlike the usual light orange colour). The bulk of the CBM was in fabric R11, followed by R9 and R10; these are the most commonly occurring fabrics in York but in the city as whole R11 accounts for 12.5% of the total volume of CBM while R10 and R11 each account for just over 24% of the total volume of CBM (McComish 2012, 288). The far higher than normal volume of R11 at the present site may imply that much of the CBM originated from a single major building constructed from CBM in fabric R11. The remaining fabrics R1, R2, R5, R12 and R18 collectively accounted for just 4% of the total volume of CBM at the site; these fabrics are typically minor components of the excavated CBM from sites (McComish 2012, 288).

Medieval

Medieval CBM accounted for 64% of the total volume of CBM from the site. The medieval CBM can be split into three broad categories on the basis of date, the first being curved and flanged roofing tiles of late 11th/early 13th century date, the second being roofing tiles of 13-16th century date (peg, plain, crested ridge and ridge), and the third being bricks and floor tiles of 14-16th century date. The features present relating to manufacture and use on the various roofing tiles are summarised in Table 26, and as many of these features have already been explained with regards to the Roman material (such as smoothing lines) the explanations are not repeated here.

Medieval tiles were made using a similar process to the Roman tiles, i.e. sanded moulds on a sanded workbench, followed by smoothing, then drying to a leather hard stage and finally firing. The exception was floor tiles which were cut from a flat slab of clay with a knife, they therefore have knife-cut sides and sanded bases. The upper surfaces of roof tiles and bricks were usually smoothed with a cloth, creating fine smoothing lines on the upper surface, but in some instances the fingers were used to smooth the upper surface. Tiles could be either laid on the ground or placed in open sided sheds to dry to a leather-hard stage prior to firing.

The Guildhall assemblage contained a larger than normal volume of curved and flanged tiles, and given that such tiles are widely thought have been associated with high status buildings the implication is that such a building was located nearby. The examples at the present site could have originated from the first Guildhall, which is mentioned in in a charter of 1256 (RCHMY 5, 76) and is of exactly the right date to have had such a roof.

It is difficult to know how typical the dimensions of curved and flanged tiles were, as very few examples of such tiles with complete surviving lengths/breadths have been excavated in York. A search of the YAT database on 22/08/2022 showed that 24 curved tiles had breadths of 92-184mm, while two flanged tiles had breadths of 211mm and 220mm respectively. This would make the curved tiles at the present site typical for York, but the flanged tiles are noticeably wider. One of the flanged tiles with a complete breadth had parallel sides, while the second had sides that tapered inwards. Again, a lack of excavated complete examples makes it difficult to assess if this is a commonly occurring feature of such tiles. The only other features of note were that one of the curved tiles had a blind nail hole (i.e. it did not fully pierce the tile) which was clearly a manufacturing error. Glaze was sometimes applied to the lower two thirds of such tiles, as the upper portion would be hidden by the tiles above. A search of the YAT database on 12/9/2022 showed that 66 glazed curved/flanged tiles have been found on 17 sites across York. The Guildhall site added another seven examples with clear glaze to that total. Two of the glazed curved tiles showed that the tile in question was stood on the upper end to dry to the leather hard stage, allowing the glaze to dribble down the unglazed portion towards the peg hole on the tile.

With regards to the later medieval roofing tiles the features of note were that three peg tiles must have had two peg-holes originally as the surviving peg-hole was close to the surviving corner of the tile. There were 71 square peg-holes, 21 circular peg-holes and five diamond shaped peg-holes, thereby conforming to the pattern for York as a whole, as indicated by a search of the YAT database on 22/08/2022. Four of the peg holes were blind. Three of the peg tiles had marks close to the peg-hole which are thought to possibly represent tally marks. Some of these tiles were glazed (with clear glaze or dark green glaze) and the pattern of glaze on some

of the tiles again showed that the tile was stood on the upper end to dry to the leather hard stage, allowing the glaze to dribble down the unglazed portion towards the peg hole on the tile. Small numbers of glazed tiles are routinely found on excavations in York as confirmed by a search of the YAT database on 12/9/2022 which showed that 572 glazed 13-16th century roof tile sherds have been recovered from 83 sites across the city; the Guildhall site has added another 39 sherds to that total. Some of the roof tiles had clearly been dried on the ground as opposed to in a shed as they had dog paw prints on the upper surface caused by a dog walking over the tiles while it was still wet.

A document from 1327 shows that tiles in York were more expensive than other parts of England, and Salzman (1997, 230) suggested that this may reflect the use of larger than average tiles in York. A statute of 1477 aimed at standardising tile sizes stated that tiles should be 6¼" wide i.e. 160mm (ibid., 231). The four peg/plain tiles at this site with surviving breadths at the Guildhall were broader than the size indicated in the statute, which would seem to confirm Salzman's conclusions regarding the size of tile in York (this greater width has been noticed on other excavations in York, including Hungate).

The crested ridge tiles were very badly preserved, but three with an inverse trapezoid design and one with a trapezoid with concave ends in profile were present, and designs of this type have been seen in York before (YAT database search 19/8/2020). The remainder were too badly preserved to determine the original form. Two of the crests were made by adding a strip of clay to the top of the tile and one by pinching up clay from the top of the tile. The crests were 70-71mm high (two examples, the height includes the thickness of the tiles) and 80-97mm in length. One of the crested ridge tile sherds was glazed with dark green glaze. The pattern within the glaze showed that it had been stacked on the shorter end to dry to the leather hard stage prior to firing.

Bricks of 14-16th century date were made in sanded moulds resulting in a sanded base and edges (Betts 1985, 387). The medieval bricks at the Guildhall ranged in length from 240-264mm (7 examples), 104-129mm in breadth (12 examples) and from 27-52mm in thickness (21 examples). The range of sizes previously recorded for York is 34-51mm in thickness, 114-142mm in breadth and 247-292mm in length (Betts 1985, 454-7). The bricks at the present site therefore largely conform to the previously recorded measurements, though one is marginally thinner at 27mm and one is narrower at 104mm. Two bricks had rain marks on the upper surface indicating that they had been dried on the ground (as opposed to in a shed) prior to firing.

A small number of fragments of decorated floor tiles and plain-glazed floor tiles were present at the site. Floors of this type were of high status and largely confined to churches, with a few examples being known from secular sites (Stopford 2005. 193, 227 and 236). It is possible that the sherds at the site originated either from the Guildhall or from the adjacent Augustinian friary. Two were Huby-Percy type tiles dating to c. 1500, one was a Trans-Pennine type of late 15th century date, and one was a Nottinghamshire tile dating to 1325-1365, though the majority of production was after 1340 (Stopford 2005, 236, 241, 227-229; Eames 1980 Volume 1, 230; Eames 1980 Volume 2, Two-Colour Designs 1509-1517). These tiles are of little help in dating the contexts concerned as three occurred residually in contexts of post-medieval or modern date and the fourth was intrusive into a deposit of late 11th to 13th century date.

Curved and flanged tiles

Curved and flanged tiles of late 11th to early 13th century date imitate Roman tegulae and imbrices but are smaller and thinner. Unlike the Roman roofing tiles, they were always nailed to the roof with a single nail hole present centrally near the top of the tile.

In terms of dimensions curved tiles in York range from 9-24mm thick, 105-137mm wide and 324-369mm long, while flanged tiles range from 12-29mm thick, 211-220mm wide and 348-357mm long, with flanges 16-56mm high (YAT database searched 4/3/2020).

The flanged tiles at the present site ranged from 10-30mm in thickness (123 examples) with an average thickness of 18mm. The breadths were 276-232mm (two examples), but no lengths survived, while the flanges were 20-43mm high (124 examples). The flanges varied considerably in breadth ranging from 9-35mm (88 examples). One of the flange tiles at 10mm thick was slightly thinner than examples previously recorded in York and one at 25mm thick was marginally thicker, but the remaining sherds corresponded to the dimensions previously recorded in York. One of the examples with a complete breadth had parallel sides, while the second had sides that tapered inwards.

The curved tiles were 12-22mm thick (36 examples) and one was 116mm wide with a complete profile surviving, but no other dimensions survived. It should be noted that one of the thickest examples was overfired and blown, hence its greater thickness. The profile of one of the sherds suggested it was from the upper end of the tile (which is narrower than the basal end). The dimensions seen on the curved tiles conform to those previously recorded for York.

Both the curved and flanged tiles were smoothed lengthways (15 and 71 examples respectively). There were also two examples from the basal end of the curved tile showing that the tiles were smoothed lengthways first and then widthways at the ends of the tile. Two flanged tiles were smoothed parallel to the flange and then the upper edge, while one was smoothed parallel to the flange with occasional diagonal smoothing lines above. In addition, one flanged tile had finger drawn smoothing lines parallel to the flange, while three had a finger groove by the flange resultant from smoothing the tile.

The nail holes from the present site (11 curved and six flanged) were 8-14mm in diameter. Fourteen of these holes were circular in shape and one was square, while too little of the remaining hole was preserved to determine the original shape. One of the nail holes on a curved tile was blind (i.e. it did not fully pierce the tile). Seven of the flanged tiles had been trimmed on the arris or base following removal from the mould.

Occasionally the lower two thirds of such tiles were glazed (glaze was not placed on the upper portion as this would not be visible when laid on a roof). Glazing is known both within York and at other sites. For example, the fireback in the Norman keep of Scarborough castle is made from flanged tiles with a deep green glaze on the upper surface. Five examples of curved and two of flanged tiles at the present site had clear glaze on the upper surface. In the case of two curved tiles it was clear from the pattern of dribbles within the glaze that the tile was stood on the upper end to dry to the leather hard stage, allowing the glaze to dribble down towards the peg hole on the tile.

Some of the curved and flanged tiles exhibited features relating to the firing process. Nine of the curved tiles and 46 of the flanged tiles had reduced cores; one curved tile was possibly a

waster as it was slightly distorted along its length, while one had been overfired resulting in it blowing in places to 33mm in thickness. One sherd of curved tile had a clay lump on the reverse which had accidentally adhered during firing. Two sherds of curved tile and 7 sherds of flanged tile had either mortar or soot on broken surfaces indicative of re-use.

Peg tiles

Later medieval roofing tiles of 13-16th century date were flat rectangles which could be fixed to the roof either by a projecting nib which hooked over the laths of the roof (nib tiles) or by a wooden peg or nail (peg tiles). Where the method of fixing is unclear due to the fragmentary nature of the material in question the tiles are termed plain tiles. These tiles were laid in overlapping courses on a roof in a pattern similar to that of 'stretcher bond' in brickwork, i.e. with the joints between individual tiles aligned with the centre of the tiles in the rows above and below.

The peg tiles examined ranged from 10-21mm in thickness (101 examples) and 195-202mm in breadth (3 examples), but no lengths survived. In three cases there must have been two peg holes originally as the surviving hole was located close to the corner of the tile.

In the case of York peg-holes were usually square in shape, but circular and diamond shapes are also common. The present site had 71 square peg-holes, 21 circular peg-holes and five diamond shaped peg-holes, thereby conforming to the pattern for York as a whole. The peg holes ranged from 8-16mm in size, which is typical for York. The three examples with complete breadths and peg holes showed that one had the peg hole central to the tile (sometimes in York the peg holes can be decidedly off-centre; Garside Neville 1996, 296). Two of the circular peg holes, one of the square peg holes and one of the diamond peg holes were blind. In one case there was an accidental mark around the peg hole from the hole-punch handle.

Smoothing lines parallel to the long edge of the tile were present on 35 sherds, while a further 19 examples were smoothed parallel to the long then the top edge, five had smoothing lines parallel to the upper edge, one example had random smoothing lines and one had smoothing parallel to the long edge and then on a diagonal. In some cases, following removal from the mould the edges of the tile would be tamped down using the side of the mould, resulting in indented borders (eight examples). Grip marks (where the tile had been lifted while wet) were present on four examples, with a thumb print visible on a further sherd. Three sherds had a diagonal line drawn adjacent to the peg-hole while the tile was wet; it is thought such marks could be tally marks. One sherd had accidental marks on the upper surface. A single sherd had knife trimming at the edge and one had an accidental indentation from the heel of the tiler's hand. A dog's paw print was present on one sherd, showing that this tile at least had been laid on the ground to dry prior to firing, as opposed to being dried in an open sided shed. A single sherd had splashes of clear glaze on the upper surface; small numbers of glazed sherds are often found in medieval deposits within York. Eight of the peg tile sherds had reduced cores and four sherds were overfired: one had slightly blown, one had a cracked upper surface and one was vitrified. Three peg tiles had a sooted top which must have resulted from re-use, and a further two had sooted broken surfaces again indicative of re-use. Seven peg tiles had mortar on broken surfaces indicative of re-use.

Plain tiles

Plain tiles are sherds of roofing tile which are too fragmented to determine the original method by which they were fixed to a roof; these could be portions of either nib or peg tiles. Given that there were no nib tiles at the Guildhall site the plain tile sherds probably originated from peg tiles.

The plain tiles examined ranged from 9-25mm in thickness (424 examples), but the thickest tile at 25mm thick had blown during firing and three of the tiles at 21mm thick were waters which accounts for their larger than average thickness. The only other dimension surviving was a single breadth of 200mm. Smoothing lines parallel to the edge of the tile were present on 141 plain tile sherds, while a further 18 examples had smoothing lines parallel to both edges, three examples had random smoothing lines, one had lines parallel to the edge then on a diagonal and one example had smoothing lines from both a cloth and the fingers. Two sherds had a finger drawn groove close to the edge of the tile and there were two tiles with accidental grooves on the upper surface caused by grit being dragged over the tile during smoothing. One sherd had an accidental indentation on the upper surface.

Indented borders were present on 17 sherds, grip marks were present on six examples, and a thumb print was visible on a further sherd. Dog footprints were visible on four sherds (showing that the tiles were laid on the ground to dry prior to firing). Eleven sherds had clear glaze on the upper surface and eight sherds had green glaze on the upper surface. The pattern of the dribbles of glaze on one of these sherds showed that it was stacked on the unglazed upper end after it was glazed and prior to firing. Sixty-one of the plain tile sherds had reduced cores. Seventeen of the plain tiles were overfired, of which five were blown, five were warped and five were vitrified. Seven sherds were wasters of which one comprised a pot and tile fused together and covered in glaze, two had splashes of glaze on the upper surface, two had glaze on the broken surfaces indicating re-use and one was covered in some form of industrial residue and vitrified. Three tiles had kiln scars on the upper surface. A single tile had an iron nail adhering to the surface. Thirty-nine of the plain tiles were reused, being covered on the broken surfaces with either soot or mortar, while three sherds had a sooted edge resulting from use in a hearth.

Ridge

Ridge tiles were used along the apex of the roof, and in some cases these had ornamental crests running along the ridge line (crested tiles). In the case of the present site the ridge tiles were 12-24mm thick (94 examples), there was one surviving breadth at 136mm wide, but no lengths survived. There was evidence of smoothing on the upper surface parallel to the ridge line on 37 examples and one was smoothed parallel to the shorter end. Ten of the sherds had clear glaze, three had black-brown glaze and five had green glaze on surfaces; the glaze was usually on the upper surface but in one case was accidental splashes on the reverse side. One sherd had fingerprints on the upper surface and one had an accidental groove from when the tile was smoothed. Thirty-three of the ridge tiles had reduced cores and one an oxidised core. There were also eight sherds which were over fired, of which seven were blown and one was vitrified. One of these was a waster with kiln scars on one surface.

The examples of crested ridge tiles were 14-17mm thick (six examples) but no other dimensions survived. There was evidence of smoothing on the upper surface parallel to the ridge line on three examples, while a fourth had smoothing lines in multiple directions. The various designs

of crest included three with an inverse trapezoid design and one with a trapezoid with concave ends in profile, and designs of this type have been seen in York before (YAT's computerised database searched on 19/8/2020). The other crests were too damaged to determine the original design. Two of the crests were made by adding a strip of clay to the top of the tile and one by pinching up clay from the top of the tile. The crests were 70-71mm high (two examples; height includes the thickness of the tiles) and 80-97mm in length. One of the crested ridge tile sherds was glazed with dark green glaze. The pattern within the glaze showed that it had been stacked on the shorter end to dry to the leather hard stage prior to firing.

Floor tiles

Medieval floor tiles have knife cut edges which taper from top to base, so that the tiles could be laid edge to edge with no mortar visible between the tiles (as opposed to the modern preference for clear lines of grouting to be visible between tiles). There are many forms of such tiles, including plain mosaic, inlaid and plain-glazed (for definitions and descriptions of the methods of manufacture see Stopford 2005).

Four sherds of decorated floor tile were present at this site. The first two were line impressed of the same design, one was 113mm wide and 33mm thick with cream slip and a clear glaze on the top, while the second was 31mm thick (no other dimensions survived and had green glaze on the surface. The design matches Stopford's 24.33 (2005, 241), namely a Huby-Percy design which dates to c. 1500; other examples of this type have been found at York Minster and elsewhere in York (Stopford 2005, 236). The design comprised three lines crossing the tile on both diagonals, with half of a flower in each of the resultant triangular fields. The third decorated floor tile was a Trans-Pennine type tile of late 15th century date, which was 111mm wide and 27mm thick, in design 23.19 (Stopford 2005, 227-9); this has not previously been recorded in York. The fourth decorated floor tile is of Eames design 1512 (Eames 1980 Volume 2, Two-Colour Designs 1509-1517). This was a Nottinghamshire tile and production largely post-dated 1340 (Eames 1980 Volume 1, 230). Examples of the design have been found across the Midlands, for example at Dale Abbey, Lenton Priory and Beauvale Abbey (Eames 1980, 310 and 343), but it has not been previously recorded in York. The design comprises a shield within which are three couchant lions, and in the corners of the tile there are leaf and flower designs; heraldic designs were particularly popular on the Nottinghamshire tiles (Eames 1980, 232).

There were also six sherds of plain glazed floor tile present which range in date from the 14-16th century (Stopford 2005, 213). These ranged in thickness from 20-30mm (six examples) and the two surviving breadths were 118mm and 120mm respectively. Two of the tiles were coated with a thin cream slip and then a clear glaze giving rise to a cream-yellow colour, two had dark green glaze, while the glaze on the remaining two sherds had completely worn away. Four of the tiles had a steep bevel and two a slight bevel. Two of the tiles were reduced. Tiles of this type and size have previously been recorded in York (Stopford 2005, 215).

Brick

Bricks of 14-16th century date were made in sanded moulds resulting in a sanded base and edges. The coarseness of the sand used could vary and at the present site there were examples with fine (13 examples), medium (five examples) and coarse sand (three examples). These bricks ranged in length from 240-264mm (7 examples), 104-129mm in breadth (12 examples) and in from 27-52mm in thickness (21 examples). The range of sizes previously recorded for York is 34-

51mm in thickness, 114-142mm in breadth and 247-292mm in length (Betts 1985, 454-7). The bricks at the present site therefore largely conform to the previously recorded measurements, though one is marginally thinner at 27mm, one marginally thicker at 52mm, and one marginally narrower at 104mm. Two bricks had rain marks on the upper surface indicating that they had been dried on the ground (as opposed to in a shed) prior to firing. One of the sherds had a burnt stretcher which indicates proximity to a fire at some stage and another had soot all over indicative or re-use.

Non-standard forms

Three medieval sherds were of unusual forms, termed as 'Other'. The first has either accidental grip marks or an attempt at a pie crust decoration along the edge; the former seems the most likely explanation. The second sherd had tapered edges and a circular nail hole 10mm in diameter close to one side. The hole is clearly in the wrong place for a conventional roof tile, so the function of this sherd is unclear. The third sherd had a rebated edge, and again the original function is unclear.

Medieval fabrics

The medieval CBM fabrics recorded (Table 27) had all been seen in York before, with the exception of the floor tile of Eames design. The medieval fabric collection has been devised by observation using a x10 hand lens; it has not been subjected to thin-section analysis, and it is perfectly possible that many of the fabrics may simply represent minor variations of one another (for example by the inclusion of additional sand as an aggregate). In addition, there has never been any analysis of the fabrics on a city-wide basis (which is in contrast to the Roman fabrics that were analysed by McComish in 2012). Without such city-wide research it is impossible to know how typical the Guildhall fabrics are for the city as a whole. That said the dominant fabrics by far at the site were M1, M15 and M4 at 30%, 15% and 10% of the total volume of medieval CBM respectively. M1 and M4 are usually by far the commonest fabrics for medieval roofing tile, and the higher than usual proportion of M69 is a reflection of the many curved and flanged tiles at the site which were in this fabric.

The Nottingham floor tile was in Fabric F13, which exactly matches the fabrics of other Nottinghamshire tiles in the YAT database, while the Huby-Percy tiles were in Fabric F11, which again matches other Huby-Percy tiles recorded by YAT. This helps confirm the identification of the tiles in question.

Post-medieval

Relatively few fragments of post-medieval building material were excavated at the site, representing just 6% of the total volume. The only CBM was a sherd of pan tile of 17th century or later date, 22 sherds of slop-moulded brick of 16-18th century date and two pavers. While the pan tile and brick are forms commonly excavated in York the pavers are more unusual. Only 44 other pavers have been excavated by YAT in York (database search of IADB undertaken on 18/08/2022) which range from 120-295mm in breadth/length (and where both dimensions survived they were clearly more or less square in shape) and between 23-66mm thick. The two examples from the Guildhall measuring 231mm wide and 53mm thick, and 256mm x 260mm x 47mm in size fit comfortably within this range. There are too few examples known from York to be entirely sure of the date range, but a 17-18th century date seems the most likely.

Brick

Bricks of 16-18th century date were made in wetted moulds, a technique termed slop-moulding. There were 22 such sherds present. The examples at the site were 43-62mm in thickness (18 examples), 102-144mm in breadth (11 examples), and 235mm long (one example). Previously recorded examples in York range from 43-63mm thick, 98-143mm wide and 212-238mm long (Betts 1985, 539, 543). The present site therefore conforms to the pattern seen elsewhere in the city. Three of the sherds had a turning mark on the base, a feature commonly seen on post-medieval bricks in York. One sherd had rain marks on the upper surface, while a second sherd had worm marks on the base and rain marks on the top resulting from being dried on the ground. In heavy rain worms come to the surface and imprints of worms are occasionally seen on the underside of bricks laid out on wet ground to dry. One sherd was distorted by overfiring and was almost vitrified. Four of the sherds had been reused having mortar on broken surfaces.

Pan tile

A single sherd of pan tile 14mm thick was present. Pan tiles have a shallow S shaped profile and a nib on the reverse for attaching the tile to a roof. These tiles were introduced into eastern Britain from the Netherlands and came into widespread use from the 17th century (Van Lemmen 2013, 8) largely replacing the earlier flat roof tiles.

Pavers

Pavers are post-medieval floor tiles. These are comparatively rare finds on most excavations within York with only 47 examples known (YAT database search 4/3/2020) which were 17-66mm thick, 109-256mm wide and 130-230mm long. These were slop moulded and they were all almost square in shape, the difference between the length and breadth being a maximum of a couple of mm. The precise date range for such sherds is not currently known. Two sherds of pavers were present at the Guildhall. The first was 231mm wide and 53mm thick while the second was 256mm x 260mm x 47mm in size.

Modern

The modern material accounted for 3% of the total volume of CBM from the site. A single sherd of brick may represent a portion of a mid-18th-mid-19th century brick. Bricks of this period were made in the same way as post-medieval bricks, by slop moulding, but they were larger. This was as a response to the Brick Taxes of 1784-1850 which were initially levied per 1000 bricks, encouraging an increase in brick size to avoid the tax (Brunskill 1997, 38). The sherd in question lacked an original surviving thickness, but it was in excess of 57mm thick. Given that post-medieval bricks are up to 62mm in thickness this sherd could be either a post-medieval or a modern brick. There were two machine made bricks of mid-19th century or later date. No maker's marks were present to identify the manufacturer or refine the date.

Unknown

A total of 1% of the CBM was small unidentifiable fragments which came either from soil samples or from boreholes. Most of these sherds weighed less than 5 grams and they had no surviving surfaces to enable identification. The fabric was therefore recorded as '0' and the form as 'unknown'. Any of these which occur in Phases 2-17 must represent Roman material, while those from medieval deposits could be either residual Roman sherds or medieval sherds, those in post-medieval deposits could be Roman, medieval or post-medieval in date, and any in the

modern deposits at the site could be of any date from Roman to the present day. These items have little if anything to contribute to the understanding of the use of CBM at the site.

8.3.4 Retention/ discard

For excavations within York, YAT routinely adopts a record and discard policy, whereby only a representative selection of CBM from each site is retained. This typically means that around 20% of the volume of CBM from any given site is retained. In the case of the Guildhall 158 sherds were retained (61.795g) representing 16.6% of the total volume of CBM from the site.

8.4 Stone Building Materials

By J. M. McComish

8.4.1 Introduction

This assessment relates to a variety of stone building materials recovered from archaeological investigations at the Guildhall, York, including fragments that probably originated from stone roofing flags, tesserae, architectural fragments and a number of smaller stone items which did not merit recording as architectural fragments.

Within this text the term 'flag' is used for stone roofing and flooring, thereby avoiding any confusion created by the use of the word *tile*, which could imply the item is ceramic as opposed to being of stone.

8.4.2 Stone Roofing and Flooring

A total of 5.27kg of Roman stone roofing and flooring fragments were examined (40 fragments). The forms present included tesserae and stone fragments which probably originated from stone roofing flags. The forms present are summarised in relation to context on Table 28.

8.4.3 Methodology

The stone roof and floor flags are recorded to a standard YAT methodology (McComish 2020b) whereby each fragment is individually recorded on a pro-forma sheet which details the project code, the context number, the weight in grams, the stone type, the surviving complete dimensions (length, width, thickness) and any other relevant information (e.g. peg-hole size). A question mark is placed after the form name if the identification is uncertain, for example 'stone peg?'. It should be noted that the term 'stone peg' is used for all roofing flags of limestone and sandstone, while the term 'slate' is only used for roofing items of metamorphic rock (i.e. mid-19th century or later roofing material). The data is on an Excel table stored at YAT under the project code 6019.

8.4.4 Results

Tesserae were used for Roman mosaic flooring. Fourteen Roman tesserae were recovered from the present site, which ranged from 15 x 14 x 13mm to 37 x 23 x 22mm in size, suggesting that they would have originally been from tessellated pavements (Adam 2007, 233-4). Four were micaceous sandstone sourced from Elland near Leeds, one was oolitic limestone sourced near Malton and the remaining nine were of magnesian limestone from the Wetherby/Tadcaster/Knaresborough area (Gaunt and Buckland 2002, 135-6, 141). These stones have been used for tesserae elsewhere in York. The use of magnesian limestone, oolitic limestone and micaceous sandstone, coupled with a ceramic tessera, indicate a colour palette

of cream-white, grey and red for the original pavement. The tesserae at the site could have originated from underlying Roman structures or could have been dumped at the site from elsewhere.

One fragment of a stone roof tile 19mm thick with a circular peg hole was present, and there were also 35 fragments of micaceous sandstone up to 23mm thick which probably originated from roof flags. Micaceous sandstone roof flags were widely used in Roman York, being sourced from the Elland area near Leeds (Buckland 1976, 36). The use of this stone for roofing became increasingly common in York from the late 2nd century onwards (McComish 2012, 90-1 and 256-8) and some idea of the scale of production is indicated by the widespread nature of such finds, with roofing flags of this type being recovered from Roman sites at Rudston and Harpham in East Yorkshire and Hibaldstow in North Lincolnshire (Buckland 1978, 41). The stone roof flags from the Guildhall were from Phase 12 and Phase 16 which were of mid-2nd/mid-3rd century and mid-3rd century date respectively. The items from Phase 12 are therefore at the earlier end of the date range normally expected for stone roofing in York.

It should be noted that in general ancient ceramic tiled roofs are assumed to have had a pitch of about 20°, which is the angle recommended by the architect Vitruvius in the 1st century BC (writing in the reign of Augustus, 27 BC to AD 14); this angle is seen on surviving Roman roofs at Herculaneum, the Maison Carré, the portico of the Pantheon and the Portico of Octavia (Rook 1979, 295). Roman stone roofs may have had a far steeper pitch. For example, at Meonstoke there was a stone flagged roof with a pitch of 47.5° (Warry 2006, 102). It is possible that the increasing use of stone roofing in later Roman York may have been in response to the British climate, the steeper pitch being better suited to shedding rainwater.

8.4.5 Architectural Fragments (AFS)

Fourteen architectural fragments (AFs) were recovered from the site, which are catalogued in Table 29. They were all very badly damaged and none occurred in situ, having either been dumped or re-used in later buildings. Thirteen were of medieval date and one was probably Victorian.

8.4.6 Methodology

The collection was recorded to a standard YAT methodology (McComish 2020a) whereby the fragments are numbered in a sequence for the site, starting at 1. The numbered AFs are recorded on individual pro-forma record sheets which detail the project code, the context number, AF number, the stone type, a simple keyword identifying the form (such as jamb or voussoir), the surviving dimensions (height, width and thickness), a free text description, a sketch (with any relevant measurements noted on the sketch) and any other relevant information. Rubbings of tool marks or 1:1 tracings of the profile are taken where necessary. The written data is transferred onto YATs internal computer system, and the paper records are stored in the site archive under the project code 6019.

8.4.7 Results

All of the medieval AFs were carved from magnesian limestone, the building stone used in medieval York. One (AF14) was a walling block with integral capital with a water leaf design (Plate 49). Waterleafs were used in late Norman and Early English architecture giving a date range of the 12th-13th century.

AF13 was in the Early English style giving a date of the 13th century and comprised a springer with part of a blind arcade. Two fragments of ashlar (AF1 and AF12) and a small fragment of indeterminate form (AF3) had claw tooling which in York came into use c. 1200 (Stocker 1999, 347); these three AFs could therefore be of any date from this point to the Dissolution of the Monasteries in the 1540s. A further two fragments, a plinth (AF11) and a voussoir (AF10), could be of any date from 1066 to the 1540s. Six of the AFs were in the perpendicular style dating to 1350-1540. These comprised four window mullions (AF4-6 and AF8), a fragment of tracery (AF9) and a springer (AF2).

Part of a very badly damaged sandstone architectural fragment (AF7) was part of a corbel or springer originally. Sandstone was not used for building purposes in medieval York, suggesting that this was a Victorian piece. This could have been discarded following WWII damage at the site.

8.4.8 Other Building Stone

In addition to the architectural fragments, a small number of chips and fragments of magnesian limestone were recovered from the site, many from within boreholes and piling cores. These were too fragmentary to determine the original form and they did not merit the allocation of AF numbers; these are summarised in Table 30.

8.4.9 Methodology

This collection was recorded a pro-forma sheet detailing the project code, the context number, form, the weight in grams, the stone type, the surviving dimensions and any other relevant information (details of surviving surfaces etc.). This was types into an excel table which is stored on the YAT computer system under project code 6019. Only the retained fragments (one of tufa and one of oolitic limestone) were added to the YAT's computerised database IADB as they were the only stone items to require a finds number for artefact management purposes.

8.4.10 Results

Collectively the small fragments of stone weighed 6.2kg, the largest single fragment being 1335g in weight (though this item comprised two adjoining fragments).

Some of these were clearly of Roman date on the basis of their geology (one of coarse grained sandstone, one of chalk, one of micaceous sandstone, eleven of oolitic limestone and two tufa fragments). The Romans used three principal buildings stones in York, namely coarse-grained sandstone, largely sourced from West Yorkshire (RCHMY1 1961, xcv), oolitic limestone from the Whitwell/Malton area north-east of York and Magnesian limestone from the Wetherby/Tadcaster/Knaresborough area (Gaunt and Buckland 2002, 135, 138 and 141). In addition, Elland flag (micaceous sandstone) was widely used for roof and floor flags (Gaunt and Buckland 2002, 135), while tufa was also used for vaulting (Gaunt and Buckland 2002, 141). Chalk was occasionally brought to York from the Yorkshire Wolds, and although it is harder than the chalk of Southern England it is still insufficiently resistant to be of much use for external walling; it was, however, easy to carve which made it useful for artefacts such as tesserae (Gaunt and Buckland 2002, 141). Other finer grained sandstones were also occasionally used in Roman York with outcrops known in the Vale of York (Gaunt and Buckland 2002, 138).

Some of the remaining magnesian limestone fragments could be dated as medieval on the basis of either their form or the tooling marks present: one from Context 3062 having claw tooling

present which dates to sometime after 1200 (Stocker 1999, 347), while the second from Context 3110 probably represents a fragment of a moulded block of medieval date. Three fragments (two of which were adjoining) from Context 9652 were fragments of medieval column shafts 92mm in diameter, but these were too damaged to determine if they had originally been attached to the adjacent walling or not. Columns of this type were used throughout the medieval period as decorative features around windows and doorways. Three other fragments of limestone occurred in medieval contexts (19126 and 19107) and a context of probable medieval date (8054); these fragments could represent either residual Roman fragments or medieval fragments. The final limestone fragment occurred residually in a 19th century context (19020) and again could be either Roman or medieval in date.

8.4.11 Retention/ discard

For excavations with the City of York, YAT routinely adopts a record and discard policy, whereby wall facing stones are recorded and discarded, as are any AFs that are non-diagnostic, or AFs which are too badly preserved to merit retention. In the case of this site AFs all but two of the AFs, all of the roofing flags and all but two of the building stone fragments were discarded as they were too badly preserved to merit retention.

8.5 Mortar, Plaster and Painted Plaster

By J. M. McComish

8.5.1 Introduction

Numerous fragments of mortar, plaster and painted plaster were recovered from the Guildhall site (2658 fragments collectively weighing 56.741kg) which could be split into four broad categories:

- 32.567kg (2266 fragments) of mortar. 9.8kg of this was from environmental samples across the site and 220g was recovered from boreholes, all of which comprised very small fragments, the average weight of which was 5g.
- 19.420kg (351 fragments) with a combination of mortar backing and a thin layer of plaster on the original elevation surface. This includes three pieces of moulded plaster.
- 4.604lk (38 fragments) with a mortar backing and a thin layer of painted plaster on the original elevation surface.
- Three fragments of thicker plaster weighing 150g.

Several types of mortar were present and given that any given type of mortar could have examples of fragments with no plaster, fragments with plaster and fragments with painted plaster it was clearly sensible to consider the mortar, plaster and painted plaster as a whole, rather than splitting the material in question into the separate categories of plaster, mortar, mortar with plaster and mortar with painted plaster.

8.5.2 Methodology

The individual fragments were weighed and details entered on a pro-forma sheet detailing the project code, context number, find number, material type, weight in grams, dimensions, the original thickness where this survived, and any other relevant information in a comments section (e.g. details of keying marks). Also included is information as to whether the fragment

was retained or discarded. The fragments were allocated to various types at the time of the initial assessment based on the type of mortar present. The types were allocated in the order in which they were recorded and did not imply any form of chronological development.

Traditionally within YAT mortar and plaster are recorded as bulk finds (BFs) while painted plaster is recorded as small finds (SFs). Any given BF or SF number can contain multiple fragments. In the case of this site there are several SFs which include both painted plaster and plain white plaster which is clearly related (this was to avoid bagging related items in two separate places; the plain plaster as a BF and the painted plaster as a SF). Three items of moulded mortar/plaster were collectively bagged as BF309.

The recorded data was typed into a Microsoft Excel table, which is stored in the YAT intranet under the project code 6019. Records were also created on the YAT database (IADB) under the project code 6019.

For this analysis report some additional tasks were undertaken. Firstly, the mortars were named A-L and described in more detail (see Table 31). The overwhelming bulk of the mortar and plaster was clearly of Roman date (Mortars A-D and F), on the basis of both the forms seen and in relation to the site stratigraphy. The fragments in Mortars G-J were in medieval contexts and are probably of medieval date as they do not seem to be related to any of the Roman mortars present, while Mortar K was probably post-medieval, and Mortars E and L were clearly modern.

Secondly, the types allocated in the original assessment report were sub-divided (for example, Type 1 was split into Type 1a, Type 1b and Type 1c), and in some cases revised to take into account not just the composition of the mortar but also the shape of the original surfaces (whether they were flat or were keyed), whether plaster was present, whether or not the plaster was painted, and whether or not two clearly superimposed schemes of rendering were present. The original records were also enhanced with more detailed measurements of the thicknesses of the various layers of mortar and plaster seen. The revised types are listed in section 8.5.3-8.5.8 below and they are summarised on Table 32.

As some of the Roman types of mortar/plaster were clearly closely related they were allocated to Groups, which are described in section 8.5.3 below. This section starts with an overall summary, followed by a description of each group and then the types within that group. The mortar/plaster is summarised by context in Table 33, the groups are summarised in Table 34, and the painted plaster is summarised in Table 35.

The post-Roman material is simply dealt with by period as there is very little material of this date to discuss.

8.5.3 Roman mortar/plaster

The use of mortar, plaster and paint to decorate rooms is widespread within the Roman Empire, both in military and civilian contexts. Interior mortar/plaster surfaces could be used on buildings constructed of wattle and daub, timber, brick or stone; and on all types of buildings from the relatively humble those of the highest status (Ling 1985, 5).

Roman interior wall renders were applied as a series of layers, each finer than the one before, with the final surface being of plaster which could be painted in the fresco technique. The Roman author Vitruvius recommended the use of three layers of mortar followed by three of finer mortar mixed with marble dust (Book 7, Chapter III). The final coat of exceptionally thin

white plaster, known as the *intonaco*, is essential for fresco painting (the method used in Roman times) as the plaster was painted while it was still wet allowing the pigments to penetrate the plaster (Hostetter and Noble-Howe 1997, 197). In practice such an elaborate number of layers of superimposed mortar and plaster were rarely used in Roman Britain where the norm was to have two coats of mortar (a thick levelling coat followed by a finer surface coat) with the finishing coat being a mere skim (Davey and Ling 1982, 55). In the case of the Guildhall there were examples of exactly this type, but also of a single backing layer of mortar with a thicker layer of plaster above. There is no evidence at the site for superimposed layers of plaster.

Mortars were made using a mixture of lime and aggregate, usually sand, though no specific recommendations survive in ancient literature for the proportion of each to be used (Davey and Ling 1982, 54). Vitruvius recommended the use of quarried sand rather than sea sand as the latter would leach salt (Davey and Ling, 1982, 53). The aggregate in some of the mortars at the Guildhall site was very coarse comprising tiny pebbles, and there was clear variation in the volume of sand used, with Mortar F being particularly crumbly due to the high sand content. Plaster was obtained by slaking lime, and there are many suitable sources of limestone within easy reach of York (as noted above in section 7.4.2).

There was clearly some variation in the surface treatment of the mortars at the Guildhall. The majority of the fragments had two opposing flat surfaces, while others had one flat surface and one keyed surface, creating an almost corrugated appearance. It is known that sometimes the interior elevation surface of a backing-layer of mortar was deliberately keyed by the plasterer to aid the adhesion of the next mortar layer. The second layer of mortar was applied while the first was still wet to aid adhesion. The keying could be done by creating a herring-bone relief pattern of grooves or by scoring random grooves within the mortar (Adam 2007, 218 and Figure 512-3). Alternatively, the interior elevation of the render could be pecked with a hammer to provide adhesion (Davey and Ling 1982, 55). The herring-bone pattern is present at the Guildhall site. Most of the keyed fragments from the Guildhall have parallel grooves of keying, but these fragments are so small they could easily have been part of a larger herring-bone shaped keying pattern originally.

The Guildhall fragments often show a pattern of keying lines on the reverse side i.e. the side closest to the wall of the room in question (Plate 50). That they are the reverse side is clear from the presence of plaster or painted plaster on the opposing flat surface, which must therefore represent the interior room elevation. The keying lines on the reverse surfaces of these fragments must represent the mortar filling the grooves of the underlying keyed surface, thereby creating a mirror image of the underlying keying.

The reverse of a single fragment at the Guildhall had an impression of the underlying keyed surface on one portion, while the remainder was flat indicating the underlying mortar was not keyed. This suggests that any given wall could have underlying mortar that was only keyed in certain sections. Again, this practice of only keying a portion of the wall has been seen within the legionary fortress at York (Plate 51). It is also known that Roman rooms could be re-decorated. Plasterers usually did not bother to remove the previous decoration, simply applying an additional layer above (Davey and Ling 1982, 56). Evidence for this was present at the Guildhall site.

There were fragments from the Guildhall that had two clearly superimposed schemes of decoration surviving (Plate 52). Other sites in Britain, such as Catterick, have shown that the interior elevation of the first scheme of decoration was deliberately pecked to aid the adhesion of the replacement mortar/plaster (Davey and Ling 1982, 56). Similar interior elevation keying marks are known from other sites in York, a good example being shown on Plate 53; this fragment was far larger than any of the fragments from the Guildhall site and shows that the entire surface had been keyed in preparation for a new scheme of decoration (this fragment probably originated from within the Multangular Tower of the legionary fortress which was excavated as YAT project 0834). A similar triangular keying mark on the interior elevation surface was present at the Guildhall (Plate 54) indicating that a replacement layer was placed above, though this second layer did not survive.

It is clear that most of the plaster surfaces at the Guildhall were simply whitewashed, though a small proportion of the plaster was painted, with just 38 fragments of Roman painted plaster present, compared to 351 fragments of plain white plaster.

In Roman architecture wall-paintings usually consisted of three areas with a lower dado, above which was a central panel roughly three times the height of the dado, while at the top of the wall there was a frieze (Ling 1985, 16). The dado was typically a single colour (most commonly red) divided into fields by thin vertical lines, sometimes with lozenge shapes within the fields marked by the thin lines (Ling 1985, 22; Davey and Ling 1982, 35). The central panel could be decorated in a variety of ways: some were painted in a variety of colours to mimic stone veneers (Toynbee 1962, Plate 201), others had panels of white surrounded by coloured borders with decorative motifs inside the panels (Ling 1985, Figures 6-7), some were painted with architectural motifs designed to give the illusion of depth as if looking out onto a vista beyond (Ling 1985, Figure 10) and others had figurative scenes (Toynbee 1962, Plate 204). The commonest form of decoration seen throughout Britain is simple two-dimensional panels of colour, which is the only style known in Britain prior to the mid-2nd century, with more complex central panel designs appearing from the mid-second century onwards (Ling 1985, 21-2). The frieze was typically of simple stripes (Ling 1985, 22).

Plaster is fragile and often found in a badly fragmented form, making reconstruction of the original decoration schemes impossible. This was the case at the Guildhall, where the painted plaster fragments were too small to determine the overall design. That said, the earlier of the Group 1 schemes had a red stripe with a patch of grey above the stripe, and areas of grey and cream-ochre. This was replaced by a scheme with areas of red paint, cream/ochre paint, and a fragment with two splashes of green that could be portions of leaf designs. The largest fragment from Group 1 had a stripe of red paint in excess of 51mm wide, then a stripe of slightly pink paint 5mm wide above the straight edge of the red stripe. The area above the white stripe had an ochre background above which was a second red stripe, parallel to and 92mm away from the main area of red. The Group 2 scheme included areas of red and grey paint, a red stripe and a trellis and leaf design. Group 5 comprised a mixture of stripes in red and black, all of differing widths, areas of white with small splashes or patches of red above, and areas of red paint.

In all cases at the Guildhall the stripes could have been from the upper edge of the dado, from the frieze or from borders around plain white fields on the main panel. The solid blocks of colour averaged 55mm x 43mm in area, with the two largest being 210 x 95mm and 250 x 110 x 80mm

in area; with such small fragments it is difficult to know if they represent panels of a single colour as typically seen in a dado, or portions of wide stripes. The splashed effect may represent an attempt to imitate stone veneer. The leaf and trellis designs were presumably from the central portion of the decoration, which may have been designed to give the illusion of looking into a garden. This design is dated by the site stratigraphic sequence as 2nd century.

The colours used (white, black, red, ochre, green and grey) are all typical for Roman wall paintings, with black coming from charcoal, white from lime or chalk, and red and ochre from sandstones, while green could be derived from verdigris (a product of the corrosion of copper).

Quite how the various groups of mortar/plaster related to any buildings at the site is unclear. Groups 2 and 3 may be related as the mortars are broadly similar, while the plaster of Group 6 may relate to Group 5 as they were both from a single phase of activity at the site. It seems probable that Groups 1, 2/3, 4, 5/6 and 7 represent differing schemes of decoration on the basis of the mortars used. The groups are discussed in relation to the site phasing in Section 8.5.5 below.

Group 1 Superimposed layers of Mortar C, painted plaster, Mortar C then painted plaster

Group 1 comprised fragments of sandy mortar with a flat back above which was a layer of painted plaster 3-7mm thick; this had then been replaced by a second scheme of decoration comprising a thinner layer of sandy mortar beneath painted plaster 0.5mm thick (Type 10; Plate 51). These layers had sometimes sheared apart during demolition. The thickness of the plaster on the surviving fragments with two superimposed layers suggests that Type 9a fragments were originally from the basal layer of render, while the Type 9b were from the second layer of render/painted plaster as this had far thinner plaster. Details of the paint are given in the Type descriptions below. Examples of the paint are given in Plates 55-61.

Type 9a. There were 10 fragments which had thick backing of Mortar C topped by a layer of off white plaster 3-7mm thick. Five of the fragments had paint above the plaster, which in two cases was grey, one was ochre in colour, one had a cream background and a black stripe 23mm wide and one had a red surface with a small patch of grey. Where it survived, all of these fragments had a flat back.

Type 9b. There were 6 fragments which had thin backing of Mortar C topped by a layer of off-white plaster 0.5mm thick. All these fragments had paint above the plaster, which in two cases were red, one was red with a grey stripe above and three cases were ochre in colour. Where it survived all of these fragments had a flat back.

Type 10. The 11 fragments had a layer of Mortar C with plaster 3-4.5mm thick above, then a second layer of Mortar C typically 9mm thick above topped by a 0.5mm thick layer of plaster and painted decoration. The painted fragments comprised one with a red surface (Plate 56), one red with a small patch of green above (Plate 57) one with two small areas of bright green possibly representing leaves (Plate 58), one with a 4mm wide red stripe (Plate 59), one with a 19mm wide red strip and a group of five adjoining fragments with an area of red paint in excess of 51mm wide, then a stripe of slightly pink paint 5mm. The area above the white stripe had an ochre background above which was a second red stripe, parallel to and 92mm away from the main area of red. (Plate 60).

Group 2 Mortar D with painted plaster

Group 2 comprised a single type of mortar/plaster (Type 11) with painted plaster above. The 13 fragments ranged from 15-24mm thick and four were painted. One fragment had a red stripe 3mm wide and two had an area of grey paint. The fourth fragment had an elaborate painted trellis design comprising a border strip of red 4mm wide to one side of which was a fret pattern of stripes 2-4mm wide. Above each junction of a stripe was a small black dot. This fragment was presumably from a central panel with architectural detailing, possibly designed to create the illusion of depth, with the viewer looking through the trellis to the vista beyond.

The Type 11 mortar/plaster is not an exact match for either Type 9a or 9b in Group 1, but they were all from Phase 8 which may suggest that they were related. It is difficult to be certain whether this group is in fact a variant of Group 1. The mortars are not quite the same (though different batches of mortar on a single wall could easily be slightly different if prepared by different plasterers). The underlying Group 2 mortar is of a similar thickness to that of Group 1 Type 9a, but the plaster above is 0.5mm thick as compared with the 3-7mm thick layer of plaster of Type 9a. Neither do the Group 2 fragments match Group 1 Type 9b for the mortar is far thicker, though the plaster is of a similar thickness. The possibility that the Group 1 and Group 2 fragments represent minor variations from within a single room should be noted.

Type 11. This had a slightly pink mortar with painted plaster above. The 13 fragments ranged from 15-24mm thick and four were painted. One fragment had a red stripe 3mm wide and two had an area of grey paint. The fourth fragment had an elaborate painted trellis design comprising a border strip of red 4mm wide to one side of which was a fret pattern of stripes 2-4mm wide (Plate 61). Above each junction of a stripe was a small black dot. This fragment was presumably from a central panel with architectural detailing, possibly designed to create the illusion of depth, with the viewer looking through the trellis to the vista beyond.

Group 3 Moulded plaster items

This group comprised four plaster fragments, three of which were moulded, which were recovered from the same phase as Groups 1-2, suggesting that they originated from the same building. The mortar in all cases was closest in composition to Mortar D and whiter in colour, though a little finer, suggesting that they related to the Group 2 scheme of decoration.

The first fragment weighing 100g had three original surfaces present, one of which was rebated, the rebate being 10mm deep. The rebated surface was coated with a layer of plaster 3mm thick (Plate 62).

There was also a second fragment weighing 220g which comprised a plaster layer 2mm thick with part of a hollow curve on the surface (Plate 63).

The third item weighed 10g and had a layer of mortar 24mm thick beneath plaster 1.3mm thick with a hollow curve on the upper surface. This probably relates to the preceding fragment (Plate 64).

There was also a lump of plaster (Type 6) 49mm x 36mm x 26mm in size, with two opposing flat surfaces, which was recovered from an early phase at the site. This was too thick to have been a surface coating and must represent part of what was once a moulded fragment.

Group 4 Poor quality Mortar F

This group comprised 28 fragments Mortar F, 33 of which had a layer of plaster up to 1mm thick on the external surface. Mortar F was notably crumblier and of poorer quality than the other mortars at the site. The fragments ranged from 12-40mm in thickness. The back surfaces were flat. All but one fragments had a plaster surface, but none were painted. The poor quality of the mortar suggests it may have been from a utilitarian room or structure.

It should be noted that Mortar F was divided into types 13a and 13b at the analysis stage, and that these types are in Groups 4 and 7 respectively. Type 13a usually had plaster on the upper surface, while Type 13b did not. In addition, the Type 13b fragments were even crumblier than those of Type 13a. When assessing the fragments in relation to the site stratigraphy it because clear that the Type 13a fragments were from an earlier phase than the Type 13b fragments, hence they were placed in separate groups.

Type 13a. This group comprised 27 fragments Mortar F, 26 of which had a layer of plaster up to 1mm thick on the external surface. None were painted. Mortar F was crumblier and of poorer quality than the other mortars at the site (with the exception of Type 13b which was even softer). The fragments ranged from 12-40mm in thickness. The back surfaces were flat (in two cases the back did not survive).

Group 5 Mortar A with Mortar B and plaster (occasionally painted) above

This group comprises two types of mortar: Mortar A and B. Mortar A was thicker and slightly coarser than Mortar B. Mortar A was never plastered; in contrast Mortar B sometimes had surviving plaster, with a few fragments that had painted plaster. Where they occurred in combination Mortar A was clearly the backing-layer for Mortar B. In the majority of cases the various layers had sheared apart during demolition and subsequent dumping, leading to a variety of different combinations of mortar and plaster.

While most of the fragments of Mortar A had a flat interior elevation (Type 1a) there were some which were keyed (Type 1b). The reverse elevations of the Mortar B fragments with surviving plaster above were either flat (Type 2a) or carried an imprint of the keying from the underlying mortar (Type 2b). Three fragments of Mortar B had an irregular reverse surface. Sometimes the uppermost Mortar B layer survived without any plaster attached and these fragments could have opposing flat surfaces (Type 3a) while others had one surface which carried an imprint of the keying from the underlying mortar (Type 3b). There were also fragments of both Mortar A and Mortar B with no surviving thickness where it was impossible to know if they had ever been keyed (Types 1c and 2c respectively).

A small number of fragments had basal layers of Mortar A, then Mortar B and finally plaster above. Again there were several combinations, with Type 4a having flat surfaces on the reverse of both Mortar A and B, while Type 4b had a impressions of keying on the reverse of Mortar A (implying there had been another layer of mortar beneath originally), Type 4c had a layer of plaster, then of Mortar B, then plaster again indicating two successive schemes of decoration, Type 4d had a layer of Mortar A, then Mortar B with impressions of the underlying keying on the reverse of the Mortar B layer, and Type 4e had Mortar A beneath Mortar B but no surviving plaster. A small number of painted fragments were present of which Type 7a was Mortar B with a flat back, Type 7b was Mortar B with impressions of keying on the reverse surface and Type 7c was Mortar A beneath Mortar B beneath painted plaster.

There were also three fragments which had a coating of earth on the reverse surface. Two of these had a layer of mortar with plaster above (Type 5a) while the third lacked plaster (Type 5b). The earth presumably adhered accidentally post-deposition.

There are many possible combinations of the various types listed and it is unclear how many buildings or rooms are represented. They have been grouped together on the basis of the similarity in the mortars used on both the keyed and non-keyed fragments. The small number of fragments of Types 4b, 4c and one fragment of Type 7b are suggestive of two superimposed schemes of decoration, but the remaining fragments could all have originated from a single scheme of decoration. Two of the Type 1a fragments clearly came from the corner of a room as they are L shaped in cross-section. The three fragments with earth adhering (Type 5) are probably the result of post-depositional changes.

Type 1a. The majority of the fragments (245 examples) were Mortar A with two opposing original flat surfaces. The majority ranged from 9-25mm in thickness with just 21 examples being thicker, the thickest two fragments being 41mm and 45mm thick respectively. Among the Type 1a mortar fragments were two had a roughly L shaped cross-sectional shape, with two original elevation surfaces present at right angles to one another, indicating that they originally covered the corner of a room. Six of the Type 1a fragments had a ridge on the reverse surface where the mortar had adhered into the cracks between the brickwork/masonry of the underlying structure.

Type 1b. There were twenty-five fragments of Mortar A which were 13-30mm thick with one smooth elevation while there were distinct keying ridges on the opposing internal elevation surface giving an almost corrugated appearance. The keying ridges were all in the region of 7-10mm wide and the hollows 7-11mm wide. Most of these consisted of parallel linear ridges, but in two cases there was a herring-bone pattern present, with a central ridge then parallel ridges to either side on opposing diagonals (Plate 65).

Type 1c. Twenty-seven fragments were similar to Mortar A but the original thickness did not survive. It is therefore impossible to determine whether the surviving flat surface adhered to the wall or represented the internal elevation.

Type 2a. There were 190 fragments of Mortar B which had two opposing surfaces both of which were smooth. These fragments were between 9 and 35mm thick. Smoothing lines were clearly visible within the plaster on 2 fragments, the plaster on a third was streaky. One fragment had faint grooves in the plaster, possibly keying lines.

Type 2b. Forty-four fragments of Mortar B between 8 and 27mm thick had a smooth exterior surface and there were impressions of the underlying keying ridges on the reverse surface giving an almost corrugated appearance. The ridges were all in the region of 7-10mm wide and the hollows 7-11mm wide. Most of these consisted of parallel linear ridges, but in one case there was a herringbone pattern. The plaster was streaky on five fragments, while smoothing lines were present within the plaster on a further two fragments.

Type 2c. Thirty-seven fragments of Mortar B had only one original surface with plaster present so the original thickness of the mortar is unknown. It is impossible to determine if these originally had a flat reverse surface or whether they carried the impression of underlying keying.

Type 2d. This comprised three fragments of Mortar B with one flat and one opposing irregular surface. They ranged in thickness from 12 to 23mm. The plaster on one fragment was streaky.

Type 3a. There were 15 fragments of Mortar B with a flat back, which lacked any surviving plaster. They ranged from 11 to34mm in thickness.

Type 3b. Three fragments of Mortar B were 15-19m thick with impressions of the underlying keying on the reverse; these lacked any surviving plaster on the internal elevation.

Type 4a. Three of the fragments had a basal layer of Mortar A from 17-25mm thick with a flat back, then a layer of Mortar B from 7-14mm thick above. Usually a layer of plaster 0.5mm thick was present, though in two cases the plaster was missing, while on the third fragment the uppermost layer of mortar together with the plaster was flaking off, and this fragment had faint impressions of keying lines on the reverse.

Type 4b. In one case there was a basal layer of Mortar A 42mm thick with impressions of the underlying keying ridges on the reverse surface and flat upper surface, beneath a layer of Mortar B 7mm thick with plaster 0.5mm thick above.

Type 4c. One fragment had a layer of plaster up to 1mm thick, which was beneath a layer of Mortar B 7mm thick, topped by plaster 0.5mm thick.

Type 4d. These had fragmentary remains of Mortar A often in the form of ridges, then a layer of Mortar B with impressions of the underlying keying ridges on the reverse surface, and a layer of plaster 0.5mm thick on the internal elevation.

Type 4e. These had a layer of Mortar A with a flat back, then a layer of Mortar B but no surviving plaster.

Type 5. Three fragments of Mortar B, two with a layer of plaster above, and one without. What distinguished these from the other Mortar B fragments was that the reverse surface was coated with a thin layer of earth. The earth would seem to have adhered accidentally post-deposition.

Type 7a. Eight of the fragments had a backing of Mortar B with painted plaster above, and these ranged from 12 to 30mm in thickness. The painted fragments comprised: a fragment with a red surface, one with streaky red paint, one with a red stripe in excess of 45mm wide, one with a small area of red paint, one with a thin black stripe and two areas of black (possibly a stripe originally), one with a splash of red paint, one with a broad stripe of faded red and one with a red strip and adjacent splashes of red paint (Plate 66).

Type 7b. Six of the fragments, which ranged from 13 to 20mm, were of Mortar B with impressions of the underlying keying ridges on the reverse surfaces, which in two cases were in a herringbone pattern. The interior elevation had painted plaster. One fragment had a ridge in the underlying Mortar A on the reverse and a deep triangular keying mark on the upper surface to facilitate the adherence of a further coat of mortar.

Type 7c. These had fragments of mortar A beneath Mortar B with a corrugated back, topped with white plaster with a thin red stripe.

8.5.4 Group 6 Plaster probably associated with Group 5

A single fragment of plaster 75 x 55 x 34mm in size was recovered from a Phase 12 context (the same phase as Group 5). This had one smooth surface but the remaining surfaces were irregular or broken. It may originally have been a fragment of moulded plaster, or simply waste.

8.5.5 Group 7 Poor quality Mortar F

This group comprised 23 fragments Mortar F, none of which had plaster. The mortar was even crumblier than that of Group 4, being of such poor quality that 11 fragments had no surviving original thickness. Where both original surfaces survived they were flat with no evidence for keying. The poor quality of the mortar suggests it may have been from a utilitarian room or structure.

Type 13b. This group comprised 23 fragments of Mortar F, 3 of which had a layer of plaster up to 1mm thick on the external surface. Eleven items were too fragmentary for the original thickness to survive, but the remaining fragments ranged from 10-40mm in thickness. The back surfaces were flat.

8.5.6 Medieval mortar

A few fragments of mortar were recovered from medieval contexts which were clearly different in composition to the Roman mortars already described, which suggests that they were of medieval date, rather than representing residual Roman fragments. In addition, there was a lump of plaster in a medieval context 69mm x 57mm x 6mm in size with one original surface present, the other sides being broken off. This could represent either residual Roman plaster or medieval plaster.

Type 8. There was one fragment with a backing layer of Mortar I 17mm thick beneath a layer of plaster 0.5mm thick, then a layer of Mortar J 3mm thick and finally plaster 1mm thick with patchy red paint above.

Type 14. Two fragments of Mortar G were in excess of 53mm and 60mm thick respectively, but the original thicknesses did not survive.

Type 15. Four fragments of Mortar H of which three were irregular lumps in excess of 45mm, 52mm and 60mm thick respectively, while the fourth fragment was 60mm thick.

8.5.7 Post-medieval mortar

A single fragment which occurred in a post-medieval deposit was unlike the Roman mortars from the site. It is interpreted as being of post-medieval date.

Type 16. There was a single fragment of Mortar K backing 12mm thick with a 4mm thick mortar above topped with white plaster.

8.5.8 Modern mortar

Two fragments were present in modern contexts with mortar that was so fine it was suggestive of mechanised production, i.e. a modern date.

Type 12. A fragment of very fine lime based mortar (Mortar E) with whitewash on external surface, then a layer of fine render 1mm thick then a second layer of limewash less than 1mm thick. The mortar was far finer than any of the Roman mortars at the site and is suggestive of mechanised production, i.e. a modern date.

Type 17. This single fragment from a modern context was of Mortar L with a thin layer of white plaster painted blue-green (Plate 67).

8.5.9 Undated fragments

A total of 9.8kg of mortar was recovered from environmental samples with an additional 220g (106 fragments) being recovered from boreholes at the site. The average weight of the fragments was 5g and they were too small to match to the categories listed above. These fragments were recorded on the relevant excel table in relation to the context and sample from which they came, e.g. BF858 comprised all of the fragments from Sample 46 in Context 19122, while BF898 was all the mortar from Borehole 1c, Sample 191, Context 9607.

8.5.10 Retention/discard

Detailed discussions were held between J. McComish and M. Felter (YAT conservation department) with regards to retention. It was agreed to keep a selection of each type of undecorated mortar and mortar with plain plaster adhering, as this material has limited potential for further research. In contrast, all of the painted plaster was retained as this offered the greatest potential for further research. A total of 16.589kg was retained (127 items), representing 27.9% of the total volume.

8.6 Daub and opus signinum

By J. M. McComish

8.6.1 Introduction

A small quantity of daub and *opus signinum* was recovered from the Guildhall site.

8.6.2 Methodology

This collection was recorded as Bulk Finds by context. As each Bulk Find can contain multiple fragments, the individual fragments were weighed and details entered on a pro-forma sheet detailing the project code, the context number, material type, the weight in grams, the dimensions and any other relevant information (details of surviving surfaces etc.). This data was typed into a Microsoft Excel table then transferred into the YAT database (IADB) under the relevant project code. Entries for each BF number allocated were placed on the YAT computer database (the IADB).

8.6.3 Results

Daub

A total of 700g of daub was present (67 fragments), much of which was small fragments with an average weight of 8g per fragment that was recovered from samples (taken from contexts 7012, 7013, 9195, 19075, 19134, 19136, 19200 and 19201) or in one case from Borehole 3 Context 9628. Two larger fragments were recovered by hand during the excavation process: the first in Context 3052 weighed 100g while the second in Context 19104 weighed 100g. The impression of a wattle 12mm in diameter was present on the fragment from Context 3052.

Wattle and daub panels were used during the Roman period and throughout the medieval period. Nine fragments were from contexts of Roman date, and there were 44 fragments from contexts of medieval date which could represent either residual Roman daub or medieval daub. The remaining fragments occurred residually in contexts of modern date.

Opus signinum

Opus signinum is a Roman building material comprising a mixture of mortar and crushed ceramics. This material had impervious properties and was used in structures requiring waterproofing such as coverings of cisterns and in the suspended floors of baths, though it could also be used in any floor, even those which did not require its waterproof properties (Malacrino 2010, 71-2).

There were 31 small fragments of o*pus signinum* at the Guildhall which collectively weighed 1.238kg. These came from contexts 3031, 3057, 3094, 3110 (three fragments), 3116 (5 fragments), 3142, 19001, 19054, 19061, 19093, 19096, 19112 (5 fragments), 19115, 19133 (3 fragments), 19139, 19151, 19155 and 19172. Two different colours were present with two fragments being very dark pink in colour and the remainder being pale pink. Most fragments were badly damaged and only nine fragments had one original surviving surface, while two of the pale pink fragments had a complete thickness surviving which were 11mm and 16mm thick respectively.

8.6.4 Retention/ discard

None of this material was retained as it was too badly fragmented.

8.6.5 Building material overall discussion

Not a single item of building material recovered from the Guildhall was in its original in situ position within a building; everything was material resulting from the dumping of demolition-derived waste. Logically there would be a time-lag between the use of an item of building material within a building and its disposal following the demolition or repair of the building in question. It is usually impossible to determine how long the original building was in use before it was renovated or demolished, with the resulting debris being dumped or re-used; the dating of demolition derived material can therefore be problematic.

The interpretation of the Roman buildings at the Guildhall was particularly problematic for several reasons. Firstly, the small size of the area of excavated Roman deposits meant that no complete building ground-plan or even room-plan was present within the excavated area. It was not even possible to determine whether structural remains in Excavation Areas 1 and 2 were parts of a single building or not. Secondly, it was difficult to determine where the demolition material dumped in the Roman period had originated: logically it was probably derived from nearby buildings, but it could represent dumping from further afield, notably from within the legionary fortress. Medieval robbing had undoubtedly also caused great damage to any surviving Roman structures and may explain why no Roman stonework was present at the site.

That said, the 2nd to early 3rd century (Phases 6-8) at the Guildhall site saw the construction of at least one building, which was in use for a sufficient period of time that it was re-plastered internally prior to its demolition. A second phase of building at the site was also relatively short-lived, with construction, use and then demolition all occurring between the mid-2nd to early 3rd centuries (Phases 10-12). That the buildings at the site seem to have been relatively short-lived may say something of their status or function; the implication is that these were not major public buildings designed to stand the test of time. The poor quality of the mortar of Groups 4 and 7 is also probably an indication of utilitarian buildings or rooms.

The painted decoration on the Phase 6-8 plaster fragments was more elaborate than that on the Phase 10-12 fragments, but the number of painted fragments was low suggesting that any buildings in the vicinity, irrespective of the period of construction were usually internally decorated with whitewash.

In the case of the medieval period the building materials at the Guildhall mainly comprised roof tile fragments and a few discarded architectural fragments. The late 11th to early 13th century roof tile is of particular interest as it suggests that the earliest version of the Guildhall had a tiled roof. Roof tile was relatively rare in this period and is often interpreted as having only been used on buildings of the highest status; its presence at the Guildhall (a high status building) offers some confirmation of this interpretation. The AFs at the site include a couple of items that may relate to the early Guildhall, but insufficient pieces are present to speculate as to the overall design; these AFs suggest that that there was a blind arcade and a wall with integral capitals, but it should be noted that these AFs could equally have originated from the adjacent Augustinian friary. The same could be said for the very small number of medieval floor tiles; they could have come from either the Guildhall or the friary.

With regards to the 15th century rebuild of the Guildhall there are several architectural fragments that could relate to the structure (AFs 2, 4-6 and 8-9) which include a springer and five fragments from a window with mullions and tracery. There are too few fragments to make any detailed assessment of the form of the 15th century Guildhall, and again, it must be remembered that the fragments concerned (which occurred residually in context of post-medieval date) could have originated from the adjoining friary.

So little post-medieval and modern building material was present at the site it is of little use for interpretative purposes.

8.6.6 Building materials by Period/Phase

A summary of the building materials by Phase is given in Table 36.

8.6.7 Roman, Phases 3-17

The building materials from the Roman phases at the site are listed in Table 36; this material was recovered from the excavations in the North Annexe (Contexts 3000s, 8000s and 19000s), together with Trench 7 (Contexts in the 7000s) and Trench 8 (Contexts in the 8000s). None of the building materials were found in situ within a building, they all occurred as dumped material.

The pottery dating suggests that the earliest activity at the site consisted of late 1st to 2nd century ground preparation deposits (Phases 3-5) which included a stony surface. The quantity of building materials recovered from these phases is very small, comprising a single fragment of *opus signinum* in Phase 3, while in Phase 5 there were two fragments of daub, two fragments of mortar and 15 sherds of CBM including a bessalis, roofing tiles and fragments of indeterminate form. The quantity is too small to be suggestive of the construction or demolition of buildings in the immediate vicinity at this stage, indeed there is no evidence at the site for structures at this time. The most likely origin for the building materials in these phases is the general dumping of waste from within the fortress. The bessalis was probably from a hypocaust, which suggests a baths was present at a very early stage within the fortress.

Above these were the remains of a 2nd century building (Phase 6) comprising levelling deposits and a floor surface (no related walls or structures were present within the excavated area). Eight

sherds of discarded CBM were present within the levelling (one imbrex and seven Roman brick) but no building materials were present within the floor. The lack of building materials present is probably simply a reflection of the time lag between the construction and use of the building and its subsequent demolition; only during demolition would the materials used in the building be discarded.

Phase 7 was also of 2nd century date and represents dumping located to the south-east of the Phase 6 building. Just three small fragments of brick, a fragment of mortar and one of plaster were present within these dumps. This may again simply represent the disposal of waste from within the fortress.

Directly above the Phase 6 floor were a group of dumps of demolition-derived material, so clearly this building had been demolished at this stage; similar dumps located to the south-east were interpreted as being related (Phase 8). These were sealed by further dumps that included demolition waste (Phase 9). There were 148 sherds of CBM from Phases 8-9, but the majority of these were tiny fragments recovered from soil samples or were fragments of indeterminate form. The only identifiable sherds comprised five sherds of roof tile, a single sherd of box flue from a hypocaust and a sherd of unusual form which had a deliberate notch cut into the edge, possibly to accommodate a nail or clamp.

Mortar from Groups 1-5 was also present in Phases 8-9. Virtually all of the Phase 8 mortar and plaster was recovered from Context 3103, which was located directly above the Phase 6 clay floor. It seems logical to assume that the Context 3013 plaster was derived from the demolition of this building. The plaster concerned was primarily of Groups 1-3, but there were five fragments of Group 5 Mortar B. The remaining Phase 8 and Phase 9 contexts were from Excavation Area 2 and the mortar/plaster from this area was primarily of Group 4, with a single fragment of Group 1 and Group 5. The Group 4 mortar/plaster was very poor quality mortar with plain whitewash. The six fragments of Group 5 Mortar B from these phases may represent a small quantity of material from another room/building in the vicinity, or residual material from the general area. It is notable that there is no Mortar A in Phases 8-9, which indicates that it is of a later date.

What do the building materials tell us about the Phase 6 buildings?

As the area of excavation was very small, and the remains were seen in two totally separate trenches the remains are difficult to interpret. The ground plan of the Phase 6 building is unknown as no walls were uncovered within the excavated area; indeed the only structural remains were a clay floor. It is difficult to determine how any walls relating to the Phase 6 floor were constructed. There is no building stone and almost no brick within the Phase 8 demolition dumps which could suggest that the buildings in question had organic walls (timber and wattle and daub), however, brick and stone were routinely re-cycled so their absence may not be significant. That so little ceramic roofing material was present may indicate that the Phase 6 building was roofed with organic materials such as straw or thatch; logically there would have been more broken roof tiles present within these demolition dumps had the Phase 6 building been roofed with CBM, but again, tiles could be recycled. The mortar /plaster suggests that there were two rooms in the Phase 6 building, one decorated with Group 1 mortar/painted plaster, which had two superimposed schemes of painted decoration, and a second room with Group 2/3 mortar, painted plaster and moulded plaster which probably originated from the

cornice. In contrast, the Group 4 mortar from Excavation Area 2 was of poorer quality suggesting that it originated from a more utilitarian building or room within the Phase 6 building. All of this is highly speculative given the small area which was excavated.

Phase 10 was mid-2nd-early 3rd century in date and comprised thick levelling deposits; the only building materials within these were seven sherds of discarded CBM which could have been dumped from anywhere within the vicinity. Above these was a clay floor from a building. No CBM was recovered from the floor. The site narrative states that pottery had been crushed up for inclusion in this floor; this would perhaps be better interpreted as crushed ceramics as both pottery and CBM were routinely crushed in the Roman period for use in flooring (most notably in *opus signinum* floors). Again, this floor was only seen in a limited area, and none of the surviving walling lay within the excavated area. Any building materials from this structure would be found in the layers relating to its demolition (see Phase 12 below).

To the south-east was a second structure, Phase 11, which was also of late 2nd-early 3rd century date. This comprised a limestone footing and associated mortar surface above which were thin occupation derived deposits that yielded a small volume of discarded CBM including a box flue tile which must have originated from a hypocaust, two sherds of tegulae and nine of brick (5 of which were tiny fragments recovered from a sample). These occupation deposits contained two residual Group 1 mortar fragments, but most of the mortar/plaster comprised Group 5 fragments, including fragments of Mortar A. This is the first time Mortar A was present at the site, which suggests that it originated from a different building to that seen in Phases 7-9 (which lacked Mortar A). The presence of wall renders within deposits interpreted as relating to the occupation of the Phase 11 building implies either that some disposal of waste was taking place within the building, or that the deposits concerned represent the abandonment of the building.

Phase 12, which was 2nd to 3rd century in date, saw the dumping of demolition material above both the Phase 10 and Phase 11 structures, indicating that they had both been demolished by this stage, and were the likely source of the building materials dumped in Phase 12. A small quantity of CBM was recovered (which included three intrusive sherds of medieval roof tile), together with a single fragment that probably originated from a stone roofing flag, a fragment of *opus signinum* and five small fragments of discarded building stone (three of oolitic limestone and two of tufa). Tufa weighs less than most stones and as such was of value in the construction of vaulted roofing which could imply that a vaulted roof was present in the vicinity. *Opus signinum* was often used in baths, so this may imply a bath was located nearby, but this is highly speculative given that just a single fragment is present. .As noted above, the use of this stone for roofing became increasingly common in York from the late 2nd century onwards (McComish 2012, 90-1 and 256-8) so the Phase 12 stone roofing is at the earlier end of the date range normally expected for such items in York.

Abundant discarded mortar and plaster was present within Phase 12; indeed 71% of all the mortar/plaster from the site was from this phase, with over 60% coming from a single context (3082). The mortar/plaster from Context 3082 was mainly of Group 5 and this was probably related to a fragment of plaster (Group 6) which was probably originally from some sort of moulding. The Group 5 mortar/plaster is a complex group: due to fragmentation there are numerous different combinations of surfaces (keyed and un-keyed), mortar, plaster and painted plaster. A single fragment had the impressions of keying lines on the reverse of the basal Mortar

A layer, then a layer of Mortar B implying that there must have been three backing layers of mortar originally. A single fragment had a layer of plaster beneath a thin layer of Mortar B then a second layer of plaster above indicating that a second scheme of decoration was originally present. A single fragment had evidence for both keyed and non-keyed areas of backing mortar, which suggests that the keying was intermittent. The quantity of painted plaster present was very small, suggesting that the bulk of the walling was painted white. The various types of Group 5 mortar fragments are shown on Figure 34. The Context 3082 mortar and plaster probably originated from the Phase 10 building.

The remaining Phase 12 mortar and plaster came from contexts 8072 and 19172, which were located above, and therefore presumably originated from the Phase 11 building. These contexts yielded some Group 5 fragments, which may simply represent material spread from Context 3082, but most of the fragments were Group 7 mortar/plaster. As the Group 7 mortar was of poor quality this could imply that the Phase 11 building or room had a utilitarian function or was of lower status than that of Phase 10.

The next phase (Phase 13), which was also dated as late 2nd- 3rd century date, saw the deliberate raising of the ground level and the various deposits concerned included discarded CBM roofing and brick sherds, a single fragment of fine grained sandstone and two fragments of *opus signinum,* together with a small quantity of minute mortar fragments recovered from soil samples. All of this material could have been residual from earlier Roman phases. No further mortar was present in the Roman phases, which suggests that no further building in the area had internal renders.

In the 3rd century a structure was built at the site (Phase 14) comprising a wall foundation of clay and cobbles which also incorporated 60 sherds of re-used CBM including roof tiles, sherds of brick of indeterminate form and two sherds of box flue from a hypocaust, together with a fragment of *opus signinum*. The CBM included an imbrex with a 6th legion stamp dating to between c. AD 120 (when this legion arrived in York) and the mid-3rd century when the practice of stamping tiles declined (McComish 2012, 38). The imbrex in question could, therefore, have been up to 100 years old at the time of deposition. This tile also shows that military produced tiles were present outside the fortress, though whether this implies military control of the area between the fortress and the River Ouse, or simply represents the disposal of waste from the fortress is impossible to determine. No mortar, plaster or painted plaster was recovered from this phase.

Phases 15-17 comprise a cobble surface and stony levelling deposits that have been dated by pottery to the mid-2nd-4th century, but no building materials (CBM, building stone, mortar/plaster, *opus signinum* or daub) were recovered from these phases. Phase 16 comprised stony levelling deposits which incorporated 10 sherds of re-used CBM including a box flue tile, imbrices and sherds of brick of indeterminate form and a fragment of stone which probably originated from a roof flag. A 9th legion stamped imbrex dating to before c. AD 120 (when the legion left York), was clearly residual within this phase. Phase 17 represents activity in Trench 3, but no building materials were recovered from this phase.

In addition to the closely phased items above there were a small number of other items that are clearly of Roman date, but cannot be phased; these were mainly from boreholes and soil samples.

8.6.8 Phases 18-23 of late 11th to mid-13th century date

The phases post-dating the Norman Conquest up to the mid-13th century are considered together for the following reasons

- They almost exactly match the Norman and Early English architectural styles in terms of date (1066-c. 1170 and c. 1170-1270 respectively)
- This encompasses the period of use for the earliest form of ceramic roofing, namely curved and flanged tiles (which were in use from the late 11th to the early 13th centuries).
- The phases predate the introduction of both medieval brick and ceramic floor tiles
- During this period the use of ceramics in architecture was relatively limited. Most domestic roofing was of thatch, and any tiled roofs would have been restricted to higher status buildings.

Phases 18-23 fall into this date range, but no building materials were recovered from Phase 23. The dominant roofing tile form throughout this time was curved and flanged tiles, with flatpegged roof tiles only coming into use in the 13th century. Taking the phases in turn:

Robbing of the earlier Roman structures at the site occurred sometime between the late 11th-early 13th centuries (Phase 18) and unsurprisingly most of the building materials from this phase were residual Roman material. There was a single ridge tile sherd and a single peg tile sherd which were contemporaneous with the date of the phase. As the date range for peg tiles is 13-16th century, the Phase 18 example would represent an early example of this form.

Phase 19 was characterised by dumping which contained CBM and two fragments of magnesian limestone. The overwhelming bulk of the CBM from this phase was residual Roman material, with just three fragments of flanged tile, one of peg tile and five of plain tile that were contemporaneous with the date of the phase. With regards to the residual material a group of Roman stone tesserae were present; no stone tesserae were present in the Roman contexts at the site, so it is unclear if these represent material that originated from a Roman building in the immediate vicinity or were dumped here from further afield. Curved and flanged tiles are thought to be associated with high status buildings; it is possible that the Guildhall mentioned in a charter of 1256 (RCHMY 5, 76) was the source of these tiles, though equally the sherds in question could have been brought from elsewhere in York for dumping. The two small fragments of limestone could represent either residual Roman material or medieval building waste.

The next phase in the sequence comprised pit digging (Phase 20) and again the bulk of the building materials recovered were residual Roman items, presumably moved from earlier levels disturbed when the pits were excavated. The daub in this phase could be residual Roman material or medieval in date. Just four plain tile sherds were present that were contemporaneous with the dating of the phase. Phase 21 represented a period of ground consolidation, and all of the building materials present were residual Roman items.

Above this were demolition deposits (Phase 22) which contained CBM and AFs. In addition, there was a small fragment of limestone which could be of either Roman or medieval date. The CBM comprised a mixture of residual sherds, 40 roofing tile sherds contemporaneous with the pottery dating for the phase (one curved tile, two flange tiles, 10 peg tiles and 25 plain), and three intrusive sherds (one decorated floor tile, one post-med brick and one medieval brick).

Clearly roofs of both curved/flanged tiles and flat roof tiles were present in the vicinity at this stage. Within Phase 22 there were three discarded AFs (AFs 12-14). The Guildhall is first mentioned in a charter of 1256 (RCHMY 5, 76); AFs 13-14 are of the right date to relate to this building, and presumably originated from it; they show that there was a blind arcade and a wall with integral capitals.

8.6.9 Phases 24-33 of mid-13th to 15th/mid-16th century date

The remaining medieval phases roughly correspond to the periods of Decorated and Perpendicular architecture, ending with the Reformation and the Dissolution of the Monasteries. By this stage any curved or flanged roof tiles were residual, as this style of roof had been replaced with flat pegged roof tiles. This period also saw the introduction of brick, though it was still relatively rare and prestigious as a building material, largely being used for ecclesiastical buildings or the houses of the rich (see Brunskill's survey of medieval and Tudor brickwork; 1997, 114-139). In addition, brick was used in hearths/chimney stacks due to its fire-resistant qualities. The 14th century also saw the introduction of both inlaid and plain glazed floor tiles. These were also high status materials largely confined to churches, but occasionally used on the houses of the wealthy such as Epworth Manor in North Lincolnshire or Barley Hall in York (Stopford 2005, Figs. 4.3 and 5.4).

Levelling deposits were dumped at the site (Phase 24) which contained some residual building material (two imbrex, two Roman brick sherds, two Roman roof flag fragments, two fragments of *opus signinum*, a sliver of micaceous sandstone of Roman date, 14 sherds of curved and flanged tiles). The building materials contemporaneous with the pottery dating for the phase were 41 sherds of later medieval roofing tiles (plain/peg/ridge tiles) and one sherd of an unusual form which is probably an excessive grip-mark from lifting the tile while wet, i.e. a manufacturing error . Given the date of the phase, the curved and flanged tile present may have originated from the first Guildhall building. Phase 24 was truncated by a cut (Phase 25) which contained just two sherds, one of residual Roman brick and one of plain tile.

Phase 26 comprised levelling deposits within which were 13 sherds of residual Roman CBM, one fragment of residual Roman mortar, one of *opus signinum* and 29 sherds of residual curved and flanged tiles which probably originated form the first scheme of roofing at the Guildhall. The remaining CBM in this phase was roof tiles of 13th -16th century date. The presence of two plain glazed floor tiles may indicate that the Guildhall had a tiled floor in the 14th century. The use of plain glazed tiles on the prestigious Guildhall would be consistent with the use of such tiles on other sites in York which include York Minster's Consistory Court and the Crypt, St Mary's Abbey, St Mary Bishophill Senior church, St Mary's Hospital in the Horsefair, and at Barley Hall, which was the house of a wealthy citizen (Stopford 2005, 213-4). Both of the Guildhall tiles were so worn that the colour of the original glaze is unknown. A single fragment of mortar/plaster was present which was of a type unrelated to the earlier Roman mortars and was therefore interpreted as being of medieval date. It comprised a layer of mortar topped by plaster, then a second superimposed layer of mortar topped by plaster.

Phase 27 comprised a hearth and associated features. All the CBM from this phase (brick, peg and plain tiles) was contemporaneous with the dating for the phase. The use of roofing tiles in hearths is common in the medieval period; the fire-proof qualities of both roofing tile and brick made it highly suitable for such a purpose.

A period of dumping and levelling (Phase 28) contained some residual Roman material (a sherd of Roman brick and some Roman mortar/plaster) and one plain tile sherd contemporaneous with the pottery dating for the phase.

This was followed by a phase of refuse disposal (Phase 29), from which abundant building materials were recovered which included residual Roman material and residual curved and flanged tiles. One context in particular, Context 3052, produced a very large volume of CBM (59.874kg) accounting for 19% of all of the CBM excavated at the site. This included an exceptionally large group of curved and flanged tile, with many large sherds present. This would seem to suggest that a roof of this type was being demolished nearby in the 14th century. The most obvious suggestion is that the 13th century Guildhall was roofed with curved and flanged tiles, and that in the 14th century these were disposed of when the Guildhall was demolished and rebuilt. Context 3052 also contained abundant 13th-16th century roof tile fragments, so clearly a peg tile roof was also being disposed of at this time. A second context, (3062) produced 13.395g of CBM accounting for 4.5% of the total volume excavated at the site, but this contained only one curved tile with all the other material being of 13th-16th century date with the exception of one brick fragment of 14-16th century date. A single AF was also present (AF3) which occurred residually in a pit backfill deposit that was dated by pottery to the mid-13th/14th century.

None of the remaining medieval phases contained anything like the volume of building materials seen in Phase 29. Phase 30 comprised features interpreted as relating to land division and associated structures. Few building materials were associated with the phase, there being two residual CBM sherds and eight sherds of 13th-16th century plain roof tile. The medieval graveyard deposits of Phase 31 contained some residual Roman CBM, a small fragment of Roman building stone, a fragment of plaster and 19 roof tile sherds of 13th-16th century date.

The friary buildings of Phase 32 comprised a wall foundation and part of a sub-floor structure; these contexts yielded just 19 sherds of CBM: three were residual and three were medieval brick of 14th-16th century date, while the remainder were roofing tiles of 13th-16th century date.

Later alterations to the friary building (Phase 33) had just 9 sherds of CBM, including seven roof tile sherds of 13th-16th century date and one of post-medieval brick which could be contemporaneous with the dating of the phase, but only if the contexts in question (8016-7) had occurred in the first half of the 16th century. There was also an intrusive sherd of modern brick. Two of the AFs (AF10-11) represent material re-used within a wall foundation, indeed both these AFs showed clear signs of re-use (it was common in the medieval period for stonework discarded during alterations or demolition to be recycled in this way).

Although none of the phases listed above are dated later than the 14th century it should be noted that the early 15th century saw the rebuilding of the Guildhall. It is possible the decision to rebuild the Guildhall was taken as early as 1433/4, and elections for the Mayor in 1445 and 1448 were held in the Franciscan Friary which may imply that the Guildhall was not useable. Thomas Carr left money in his will of 1444 towards the fabric of the new Guildhall (RCHMY 5, 77). In 1445 the Mayor and Commonality of York agreed to build a new Guildhall in Coney Street with a cellar under the east end, and other buildings were to include a pantry and buttery; building works began in 1446 and extensive accounts relating to the works survive for 1449, such as providing food and drink for the men who were driving in the wooden piles for the foundations, and the straw used to thatch the mason's lodge (VCH 1961, online version 542-44).

Work on the building structure was sufficiently complete for a council meeting to be held there in May 1459, but the internal works had not been finished in 1503 when the council was seeking wainscots to line the walls (VCH 1961, online version 542-4). Most of the AFs from the site (recovered in post-medieval contexts) are of a date that would fit with this rebuilding (AFs 2, 4-6 and 8-9) and include a springer and five fragments from a window with mullions and tracery.

In addition to the phases described above there were some building materials that could only be assigned to the medieval period; these were small fragments of CBM and mortar from bore-holes and soil samples.

8.6.10 Post-medieval Phases 36-39

These phases are not discussed in any detail because the overwhelming bulk of the building materials present were clearly residually occurring, including AF5-6 and AF 8-9. These were recovered from 16th-17th and 16th-18th build-up, levelling or demolition deposits, but all of these were of a style in keeping with the rebuilt 15th century Guildhall, and probably originated from it. The only post-medieval material was nine sherds of post-medieval brick, two pavers (the precise date range for this form is unclear but they are clearly post-medieval) and a fragment of mortar interpreted as being of post-medieval date.

8.6.11 Modern Phases 40-41 and Unstratified

Virtually everything from Phases 40-41 represented residual material, as summarised in Table 36. The only material that was contemporaneous with the date of the phase was a fragment of machine made brick, a single sherd of pan tile that could be of any date after the 17th century (including the modern period) and two fragments of mortar. The AFs within this phase probably represent material discarded from the Guildhall (AF1-2 and AF4) but there was also one Victorian fragment.

8.6.12 Residuality

While some of the building materials recovered cannot be closely dated (such as daub), or occurred in such low quantities that discussions of residuality would be meaningless (the architectural fragments and stone tesserae), other forms present can be assessed in terms of the levels of residuality, namely the Roman CBM, Roman mortar/plaster, Roman stone fragments, Roman stone roofing, *opus signinum*, curved and flanged tiles of late 11th-early 13th century date, 13th-16th century roof tiles, 14th-16th century bricks and post-medieval brick. Tables 37 and 38 summarise the residual material present by weight and as a percentage of the total volume of these selected forms in relation to the various historical periods at the site. It is clear from these tables that the volume of residual material varies considerably among differing material types.

The Roman mortar and plaster largely occur within the Roman contexts at the site, with relatively little occurring residually. This is largely because the mortar rich deposits occurred within the Roman period and they were sealed by later Roman deposits. Just 2% of the Roman stone roofing flags were in contexts of Roman date, comprising just two fragments of roofing stone. There were only 24 fragments of Roman stone roofing in the post-Roman contexts at the site. Given that stone roofing became increasingly common from the late 2nd century onwards this may indicate that there were no major buildings in the area in the later Roman period and that the few fragments present were dumped at the site from elsewhere.

Both the Roman stone fragments and opus signinum occur in roughly similar amounts in contexts of Roman date (25.5% and 27.5% respectively). Again, more of these items were present in the contexts of late 11th to mid-13th century date (45.5% and 62.6% respectively) which included deposits resulting from the robbing of Roman buildings. In the case of the Roman CBM while 49% occurred within deposits of Roman date, 24.4% came from deposits of late 11th to mid-13th century date, again resulting from the disposal of robbed out materials.

That some of the curved and flanged tile was in contexts of late 11th to mid-13th century date helps to confirm the date at which such tiles were introduced. The overwhelming bulk of the curved and flanged tiles (93.5% of the total) occur in contexts of mid-13th to 16th century date, which reflects the time lag between its use on a building, and their disposal once the roof was demolished.

The bulk of both the 13th -16th century roof tile and 14th-16th century brick was in contexts of mid-13th to 16th century date, while the bulk of the post-medieval brick was in contexts of that date.

8.7 Mammal and Bird Bone

By Kris Poole

8.7.1 Introduction

This report covers the final analysis of the mammal and bird remains recovery during excavations at York Guildhall. The earlier assessment bone report (Poole 2022) recommended that only bones from Romano-British (Phases 3, 5, 7-14 and 16) be subject to final analysis, as material from later contexts was particularly subject to issues of residuality and reworking. A total of 431 fragments of animal bone recovered by hand collection and 4,956 retrieved from environmental residues (the vast majority of which were tiny, unidentified fragments) were recorded for this final report. This excludes fish remains, which have been studied by Hannah Russ and are discussed elsewhere in the site report (see section 8.8). Although the stratigraphic phasing is referred to in this report, due to the small size of the assemblage material is also grouped into the four periods set out by the pottery report (David Griffiths, section 8.1): Period 2 (Phases 3 – 5), Period 3 (Phases 6 – 9), Period 4 (Phases 10 -13) and Period 5 (Phases 14 – 16). The largest quantity of bone belongs to Period 4, dating to the mid-2nd to early 3rd century AD, with smaller amounts of bone from all of the other broad periods.

8.7.2 Methods

Levels of preservation were recorded using Behrensmeyer's (1978) standards, with burning and gnawing also recorded. Butchery was recorded in detail, noting the butchery mark type (chop, cut, saw, shave) and its location on the bone. Attempts were made to identify all bone fragments to element and species, with some exceptions. Mammal ribs, vertebrae, skull fragments and long bone fragments not identifiable to species were classed as large-, medium-, or small-sized mammal (except for atlas and axis vertebrae, and the more durable/diagnostic parts of the cranium, namely the zygomatic, occipital, maxilla and horn core, which were identified to species). Ribs were only counted when the rib head was present. Apart from the calcanei and astragali, carpals and tarsals were not recorded. Similarly, for birds, all elements were identified,

where possible, to species, apart from vertebrae and ribs, which were classed simply as 'chicken size' or 'goose size'.

Morphological criteria of Boessneck (1969), Payne (1985), Prummel and Frisch (1986) and Halstead *et al*. (2002) were utilised to attempt to distinguish between sheep (Ovis) and goat (Capra). Red deer was distinguished from cattle using Prummel (1988). Presence or absence of a pneumatised proximal foramen of the femur and the continuation of the medial calcaneal ridge on the tarsometatarsus were used to distinguish chicken/guinea fowl from pheasant bones (Cohen and Serjeantson 1996, 63, 79). Geese lack suitable morphological criteria on which to differentiate between individual species, and there is also considerable size overlap between species (Barnes *et al*. 2000, 91). The domestication status of geese and ducks in the Roman period is also unclear. Accordingly, goose bones were recorded as *Anser*/*Branta* (although they were compatible in size with domestic goose), whilst the single duck bone was recorded as 'mallard-size'.

All identified fragments were recorded as individual specimens, with the exception of fresh breaks which were refitted where possible and counted as one element. Partial or complete skeletons were recorded as one specimen, with details of the elements present, completeness and measurements noted.

The zoning systems set out by Serjeantson (1996) for mammals and Cohen and Serjeantson (1996) for birds was used to record elements. These were used to work out the Minimum Number of Elements (MNE) for cattle, sheep and pigs.

Grant's methods (1982) were used for recording tooth wear in cattle, sheep and pigs, with age categories assigned following O'Connor (2003, 158—165), to enable comparison with other York assemblages. Epiphyses were recorded as 'foetal', 'neonatal', 'unfused', 'fusing' or 'fused'. Bone fusion data for sheep/goat, cattle and pigs were grouped into 'early', 'intermediate' or 'late' fusing epiphyses, following O'Connor (e.g. O'Connor 2003, 166). As bird bones lack epiphyses, elements were recorded as 'fused' or 'unfused.'

Morphological and metrical traits of the pelvis and horn cores were used to sex sheep/goat (Hatting 1995; Greenfield 2006), although no suitable landmarks were present to enable sexing of cattle or pigs. Presence or absence of tarsometatarsi cockspurs and the presence of medullary bone was used to differentiate between male and female chickens (Driver 1982).

Measurements were taken following von den Driesch (1976) for mammals and Cohen and Serjeantson (1996) for birds. Withers (shoulder) heights were calculated using von den Dresich and Boessneck 1974), except for cattle astragali, for which Tsalkin (1970) was used.

8.7.3 Results

Taphonomy

All of the remains derived from a series of layers and deposits associated with demolition and dumping of material on the site, with the exception of Phase 10 and 11 (surfaces and associated deposits) and 14 (wall foundation cut). As such, it can be adjudged that most of the material accumulated elsewhere, perhaps in midden deposits, before being dumped on the site, in part to raise the ground level. Each of these deposits were, however, variable in the species/elements they contained, some containing bones from across the body, with others

comprising more head and/or foot elements, whilst species proportions varied (see butchery and body-part patterns below).

Bone condition was only assessed for hand-collected remains (due to the often-small size of the bones from residues), and the vast majority of the bones were determined to be in fair condition, with smaller numbers in good condition. Despite the potential accumulation of this waste prior to dumping, levels of gnawing on the hand-collected bones were relatively low, with an overall average of 5.8% (Table 39). None of the Period 2 bones were gnawed and only one of the Period 3 bones had gnawing, but the sample sizes for those contexts were the smallest of any period. The material was not unduly fragmented, with proportions of loose teeth for the hand-collected bone at just 0.03% of the assemblage. Only a single bone, a cattle radius, had traces of burning amongst the hand-collected material. Burning was more in evidence in the bones from residues, although still made up only approximately 5% of the bones.

Species identified

As would be expected of a Romano-British urban context, domestic species and particularly the three main domesticates (cattle, sheep/goat and pig) dominated the assemblage as a whole. When suitable landmarks were present on bones of sheep/goat, a small number could be identified specifically as sheep, with none being determined to derive from goats (Tables 40 and 41). Accordingly, from hereon, the term 'sheep' is used to cover all ovicaprid remains. Notably, although cattle are the most frequently represented species in the hand-collected bone, pig was the second-best represented species, followed by sheep. This holds for the assemblage as a whole and Period 4 material, but not the other periods, although sample size may be a factor.

Differences in the proportion of larger mammals (cattle) as opposed to medium-sized mammals (i.e. sheep, pigs) is evident between the hand-collected and residue assemblages, with cattle bones overall being proportionately more frequent in the former (Cattle 38%, Sheep 29.6%, Pig 32.4%) than the latter (Cattle 21.5%, Sheep 44.3%, Pig 34.1%). The same broad pattern holds when considering Period 4 bones alone, although the relative proportions of sheep against pig are different in the residues (Hand collected: Cattle 38.1%, Sheep 25.7%, Pig 36.2%; Residues: Cattle 17.1%, Sheep 44.3%, Pig 34.1%). This difference between cattle proportions by recovery technique is a relatively common phenomenon for archaeological bone assemblages, with hand collection tending to over-represent larger species such as cattle and under-represent smaller species. Nonetheless, under both recovery techniques, sheep and pig bones together are more common than those of cattle. The other domestic species in the assemblage, dog and horse, were represented only by single bones.

Wild mammals were present in the form of a single red deer radius from a Phase 16 context, (C8069), as well as small mammal bones, frequently as partial skeletons, in the residues. Most of the smaller mammal bones lacked diagnostic elements, although the presence of house mouse was established for Phase 16 (Period 5) context (C19161), and other bones were from either mouse or vole.

In common with the hand-collected assemblage, most bird remains were from domestic species. Bones of Galliformes (chicken/pheasant/guinea fowl) were the more frequently represented bird remains. Although feasibly some of these remains could derive from pheasants or guinea fowl, no evidence of guinea fowl has to date been identified for Roman Britain, and for pheasants, few positive identifications have been made (Poole 2010). It is assumed for the

remainder of the report that all of the galliform bones are from chickens, but the possibility of other species, even if small, needs to be borne in mind. The few instances of goose and duck bones were consistent with domestic species, although the domestic status of these species in the Roman period is uncertain (Albarella 2005).

Of the four wild bird bones, corvids were represented by three bones, one from a raven and two from crow/rook (all from Phase 12 in Period 4). The fourth bone was particularly interesting, coming from a common crane (*Grus grus*). This was recovered from a sample from context (C19122) in Phase 13, the earliest record of this species from within York (see Discussion).

Ageing and Sexing

The mandibular ageing data showed an interesting contrast between mandibles of cattle with those of sheep and pigs (Table 42). Three cattle mandibles could be aged, from three different periods. All were from adult individuals, and judging by the advanced wear of the lower third molar of some these individuals, possibly at quite an advanced age. By contrast, irrespective of period, none of the sheep or pig mandibles were from adult individuals, with sheep mandibles being either immature or subadults and pigs being juvenile, immature or subadult in age. Even so, it must be acknowledged that the numbers of mandibles are very low.

Epiphyseal fusion data were calculated only for Period 4 bones. The numbers indicate that, for cattle, a majority of adults were present in the assemblage, although they do also suggest the presence of some immature animals, at the intermediate and late fusing stages. In contrast to the mandibular ageing data, epiphyseal fusion does also indicate that at least some sheep in the assemblage made it to maturity. However, in line with the dental ageing, none of the pig epiphyses were from animals which had reached maturity, with only some of the earliest fusing elements having fused, suggesting that no pigs in the assemblage were adult at death.

Sexing information for mammals was limited to two sheep pelves and a horn core, which were all from males.

All of the bird bones in the assemblage had fused. Sexing information was limited, with no complete tarsometatarsi, meaning that the presence or absence of cock spurs could not be assessed. Where bones could be assessed for the presence of medullary bone (indicating hens in lay), this was not present. However, this may simply indicate birds being killed when not in lay, rather than the presence of males in the assemblage. Similarly, none of the three goose bones in the assemblage contained medullary bone.

Butchery and Body-Part Patterns

Table 43 sets out the Minimum Number of Elements (MNE) for cattle, sheep and pigs, based on Period 4 contexts. For all of these species, it can be seen that all parts of the body are represented to some degree, with head (horn core, maxilla, mandible), upper limb (scapula, humerus, pelvis, femur), lower limb (radius, ulna, tibia) and feet (metacarpals, metatarsals, phalanges). This does not mean that all elements were found in the same contexts. The largest deposit in terms of bones recovered was (C3026) from Phase 13; for this context, the pattern was similar to that for the Period 4 contexts as a whole (Table 43). Other contexts contained a much smaller number of bones, such as (C19137), and so are harder to interpret (Table 44). In this context, most bones were from cattle and included head, upper limbs and foot elements, suggesting a mixture of some primary and secondary butchery waste, but sheep was only

represented by two bones and pig by one bone. What (C3026) and (C19137) have in common, however, is the presence of bird remains. Processing of bird carcasses is typically a kitchen or table activity, so direct consumption waste appears to be present in each case. Of the 19 contexts from Period 4, all contained at least one bone from birds typically eaten in the Roman period, suggesting that consumption waste was present throughout these deposits.

A total of 34 bones had signs of butchery, of which 15 were from cattle, 7 from large mammals (probably cattle), 4 from sheep, 3 from pigs, 2 from medium mammals, 1 from red deer, and 1 from chicken, making up *c*. 6% of bone recovered by hand collection. The types of butchery consisted of 14 chop marks (using a cleaver or similar tool), 17 cut marks (from knives) and 3 bones with shaving marks.

Metrics

Withers (shoulder) heights were calculated for a cattle metacarpal (105cm) and two astragali (102cm, 115.7cm), falling either side of the average heights for cattle in the 24 – 30 Tanner Row assemblage (O'Connor 1988) and 3rd century deposits from Lincoln (Dobney *et al*. 1996). Most of the limited number of cattle measurements were width and depth measurements, and these fit within the range seen at Tanner Row and Lincoln. Sheep withers heights were: 57.2cm and 57.4cm (calculated from astragali), 104.4cm and 115cm (based on metacarpals) and 113.5cm (a metatarsal). In general, sheep measurements from this site tend to be lower than for other sites in York and in Lincoln. A single pig astragalus gave a withers height value of 58cm.

8.7.4 Discussion

As discussed above, the material brought onto the site is likely to represent material that accumulated elsewhere in the town, perhaps as middens, before being dumped. Given the proximity of the site to the Legionary fortress, it is possible that at least some of the deposits derived from within the fortress itself, or the extra-mural settlement that formed around its perimeter. Support for this is perhaps provided by the pottery recovered from these contexts, which included high proportions of finewares (Griffiths, Section 8.1.9). The exact sources of the material deposited at Guildhall cannot be definitively traced, but analysis of the bones suggests that a range of different carcass processing events are represented in the assemblage as a whole, but also within single contexts. These differences should not be overstated, given the low numbers of bones, but do hint at a diversity of origins for the material ultimately dumped at the Guildhall site.

Taking the assemblage as a whole, what is perhaps most notable is the lack of large dumps of cattle bones, or intensively butchered bones, which would represent similar systematic butchery of cattle carcasses as seen at other sites in York, such as at 24—30 Tanner Row (O'Connor 1988), and which are also common at other Roman urban centres, including Lincoln and Exeter (Dobney *et al*. 1996; Maltby 1979, 2007). This is perhaps one factor that has led to pig bones being almost as frequent as cattle bones in the hand-collected component, and that together, sheep and pig bones outnumber those of cattle. This is even more marked when bones from residues are considered, and compares with the large assemblage from 24 – 30 Tanner Row (O'Connor 1988), and smaller assemblage from Queen Street (Poole 2023), both within the *colonia*, and a small assemblage from Hungate (Rainsford n.d.), which were cattle dominated. More widely, cattle are typically the most commonly represented species on military sites and large towns (Maltby 2014).

The high proportion of pigs in the Guildhall assemblage is also noteworthy, being the second most commonly represented species in the hand collected remains (after cattle) and in the residues (after sheep). In most Romano-British bone assemblages, pigs are third behind cattle and sheep, although they are generally found in higher proportions within major towns, military sites and some villas than in small towns and other rural settlements (Maltby 2014, 797). Pigs are also frequently better represented in assemblages recovered from sites more centrally placed within Roman towns, near the forum and basilica, than in their suburbs (Maltby 2014, 797). The Guildhall assemblage would fit with this pattern. This distinction may reflect dietary differences, with high demand for pork amongst those of higher status in towns (high percentages of pigs often being found at high status sites). It may also reflect cattle carcasses being processed away from the central areas of towns, and thus the waste from such activities did not inflate cattle bone frequencies in assemblages from more central locations.

A number of bird bones were recovered from the site, with chicken being most commonly recovered. At 11.6% of the hand collected assemblage (compared to cattle, sheep and pigs), this proportion is higher than the average (5.6%) for major Roman towns, which themselves typically exhibit the greater proportions of chicken remains than other Roman site types (Maltby *et al*. 2018). When comparing only sheep and chicken bones, the proportion of the latter is 30.7%, also higher than for major towns generally (at 19.2%). Presence of chicken remains in all Period 3 contexts suggests they may have been a relatively frequent dietary component.

In addition to the chicken remains, four bones were from definitely wild species (as noted above, the geese and duck bones could potentially be domestic or wild). A diverse range of wild bird species have been recovered from Roman Britain, although their remains generally only make up a very small proportion of bone assemblages (Serjeantson 2023, 173-4; Yalden and Albarella 2009, 108), and that is the case for the Guildhall assemblage.

Of these species, corvids (crow family) are one of the most commonly found wild bird species identified in Roman assemblages (Serjeantson 2023, 21; Yalden and Albarella 2009, 108). Whilst corvids are known to have symbolic importance in the Roman world, the incorporation of raven and crow/rook remains with the other remains at the Guildhall site probably has a more prosaic explanation. As broad-spectrum omnivores, and known scavengers, ravens and crows/rooks would have exploited the concentration of food and waste provided within an urban setting (O'Connor 1993). Corvids have been identified in bone assemblages from York from the Roman period onwards and are the most regularly encountered species after domestic ducks, geese and chickens (O'Connor 2013, 114).

In contrast to corvids, bones of the common crane are less commonly found on Romano-British sites. Surveys of bird remains from archaeological sites indicate that bones of the common crane have been found from approximately 10-14% of bone assemblages dating to the Roman period (Allen 2011; Serjeantson 2023; Yalden and Albarella 2009). They are found on a range of different site types, including urban and military, but also some lower-status rural settlements. Evidence from other sites (such as Fishbourne, Carlisle and Caerleon), in the form of cut marks, indicates that crane was eaten and may have been prized – butchery on a crane skull from Caerleon was comparable with preparation techniques recommended by Roman writers (Yalden and Albarella 2009, 111). How applicable such texts are to attitudes towards cranes across Roman Britain are, however, uncertain. What is clearer is that the crane bone from the

Guildhall site represents the earliest known example of this species from York (another example was found in 4th century deposits at 24—30 Tanner Row (O'Connor 1988), whilst a number of examples are known from Anglo-Scandinavian and later medieval deposits (Bond and O'Connor 1999; Claire Rainsford, pers comm.). There is no certain evidence of falconry being practiced in Roman Britain (Poole 2018), indicating that this individual would have been caught by other wildfowling methods, such as nets or snares; such methods are recorded as being used by officers at Vindolanda to catch thrushes, ducks and swans (Serjeantson 2023, 5).

The single red deer bone in 4th century context provides some limited evidence of hunting, and the cut marks on this bone indicate that it represents consumption waste. Deer remains are only ever present in very low numbers on Romano-British sites, with red and roe deer generally constituting less than 1% of food mammals on urban sites (Maltby 2014, 799). Deer hunting was potentially a status marker during this period (Allen 2014), although deer bones can appear on a range of site types.

8.7.5 Conclusion

The Guildhall assemblage has provided useful information regarding diet and activity within central York during the Roman period. The bones represent the remains of a mixture of primary and secondary butchery, as well as kitchen and table waste. Despite the presence of some butchery waste, the assemblage did not indicate the large-scale processing of cattle carcasses seen elsewhere in York. Species frequencies indicate a high proportion of pigs, perhaps suggestive of status-based dietary patterns, perhaps due to the proximity of the fortress and wealthier households in this central area. Bones from crane and red deer could also reflect status markers, linking with the pottery assemblage in its high number of finewares. All of these interpretations need to be treated with some caution, given the small size of the assemblage, but should further bone assemblages of Romano-British date be recovered from this area of the town, it will be possible to refine the suggestions outlined here.

8.8 Fish Remains

By Dr Hannah Russ FSA MCIfA

8.8.1 Introduction

Fish remains (147 fragments) were recovered from bulk environmental samples taken during archaeological excavations at the Guildhall, York.

8.8.2 Methods

The fish remains were identified to element, side and to as low a taxonomic level as possible using the Author's reference collection and identification guides (Archaeological Fish Resource; Camphuysen and Henderson 2017; Nabone Fish; Osteobase; Wheeler and Jones 1989). Quantification used the diagnostic zone method as presented by Barrett (2001) and Harland *et al.* (2003). Remains of cod order fish (Gadiformes) were allocated to size categories as described by Cerón-Carrasco (2004). Where possible other fish remains were allocated to the same size categories based on comparison with reference specimens of known total length.

A taphonomic assessment of each fragment was undertaken, recording the presence and absence of cut (knife) and chop marks, burning and calcination, any evidence for animal activity

(canid or rodent gnawing), pathology and surface preservation; any other surface modifications of note were also recorded. Fragments of bones that could be identified to element but not any specific species were grouped as far as possible using size and class or order categories. Results were recorded in an electronic proforma in Microsoft Excel.

This analysis has been undertaken in line with current standards and guidelines (CIfA 2014; Baker and Worley 2019).

8.8.3 Results

Fish remains (n=147) were recovered from bulk environmental samples from 13 contexts across the site, from features and deposits associated with activity Phases 5 to 20, and Boreholes 3 and 4 (Table 45).

The fish bone assemblage included the remains of marine (n=30) migratory (n=32) and freshwater (n=32) species and was recovered from Roman period deposits and features dating from the late 1st to 3rd centuries AD and medieval deposits and features dating to between the late 11th and early 13th centuries AD, Table 45. It is suggested that some fish remains from the medieval deposits are residual from Roman activity at the site based on the presence of Atlantic chub/Spanish mackerel being present in medieval deposits, this being a Roman import into the city that would not be expected in the medieval period.

8.8.4 Roman period: Late 1st to 3rd century CE (Phases 5 to 13)

Fifty-nine fish bones were recovered from ten Roman period contexts across the site (Phases 5 to 13), Table 45. All of the specimens were recovered from bulk environmental samples, without which evidence for fish consumption at the site would have been absent. Most of the Roman period fish remains came from Phase 11 deposits (n=34) representing a structure and associated activity located at the south-western end of Excavation Area 2 dating to the mid-2nd to early 3rd century CE. Small numbers of fish remains were recovered from Roman Phases 5 (n=6), 7 (n=1), 9 (n=6) and 13 (n=12) (Table 45).

The Roman period assemblage is dominated by the remains of small and tiny fish (up to 30cm total length but mostly 15-20cm) of the carp family (Cyprinidae), forming 52.9% of the identified fish remains (n=27). It is very difficult/unreliable to attempt species identification for cyprinid fish based on comparative skeletal morphology for most elements; pharyngeal bones are an exception to this and two pharyngeals from context C19188 were identified as European chub (*Squalius cephalus*). The only other freshwater species recorded was a single vertebra from a small pike from context C19176. The next most frequently occurring species was the migratory European eel (*Anguilla anguilla*), which formed 27.5% of the identified portion of the fish remains from Roman period contexts. Marine fish were rare but included two clupeid species, Atlantic herring (*Clupea harengus*) and European Sprat (*Sprattus sprattus*) as well as three vertebrae from Atlantic chub/Spanish mackerel (*Scomber colias*). The species recorded at Guildhall are consistent with those seen elsewhere in York (O'Connor 1988; Jones 1988; Enghoff 2000) and across Britain (Locker 2007), with the dominance of cyprinids followed by eel also seen in the assemblage from Roman (Period 3-7) deposits at Tanner Row in York (O'Connor 1988, 114). Elsewhere in Britain, cyprinids are less frequently recovered, with eel, herring and plaice/flounder most often forming the three most abundant species (Locker 2007, 146). The

abundance of cyprinids at York is likely a result of its location close to the River Ouse where these freshwater fishes could be caught.

Of note were vertebra from Atlantic chub/Spanish mackerel (*Scomber colias* Gmelin 1789) from Phases 5 and 11, as well as one from medieval Phase 19, which is considered to be residual in that deposit from earlier (Roman period) activity at the site. The Spanish mackerel is not native to the seas around Britain, but, amongst other areas, lives in the Atlantic Ocean around the coast of Spain and in the Mediterranean Sea. Historically, in the archaeological literature this species has been referred to as *Scomber japonicus* Houttuyn 1782, a name now used to describe the Indo-Pacific mackerel (Harland 2018, 427; van Neer *et al.* 2010). The species has been recorded in small numbers at other Roman sites in Britain, including at Vine Street (Nicholson 2009; Browning *et al.* 2021) and Waterside (Russ and Chorro-Giner 2022) in Leicester, Chester Amphitheatre (Harland 2018, 427) and 25 Bridge Street, Chester (Jaques *et al*. 2004), Gorhambury villa, near St. Albans (Locker 1990), Great Holts Farm, Boreham, Essex (Murphy *et al.* 2000) and London, Winchester Palace (Locker 2007; Yule 1989; 2005). There has also been a single find in a Late Iron Age context at the *oppidum* at Skeleton Green, Stevenage (Wheeler 1981). These bones represent the remains of preserved whole or sections of fish, a product known as *salsamenta*, which was primarily made from mackerel, tuna and/or scad (Harland 2018, 428) and transported from the Mediterranean across the Roman Empire in amphorae (van Neer *et al*. 2010). The Guildhall finds from Phase 11, along with the Leicester Vine Street and Waterside examples are of a later date (2nd – 3rd century AD) than most British finds, which tend to date towards the end of the 1st century AD (Harland 2018, 429; van Neer *et al.* 2010, 168).

8.8.5 Medieval period: Late 11th to early 13th centuries (Phases 18-20)

Eighty-one fish bones were recovered from medieval phases of activity at the site dating between the late 11th and early 13th centuries AD (Table 45). Eel (n=16) and herring (n=12) were the most frequently identified species. The fish remains from these deposits are unusual for those recovered from contemporary deposits in Britain; the species represented are similar to those seen in the Roman period, and with the presence of Atlantic chub/Spanish mackerel, which represents a Roman import into York, it is suggested that many of the fish remains recovered from medieval features and deposits are residual from Roman activity at the site. Possible exceptions might include the gurnard (Triglidae) and ray (Rajidae) bones from context C19075 which, while not unheard of in Roman period assemblages, are more common in those associated with medieval activity.

Whether the fish remains from medieval features are residual or not, they are still inconsistent for what would be expected at a medieval city such as York. During the 12th to mid-13th century fish, especially marine fish, start to play an increasing role in the diet of people in Britain (Serjeantson and Woolgar 2006, 111), with Atlantic herring being the most frequently recovered species, probably arriving in towns and cities salted or pickled in barrels as this species spoils quickly unless preserved in some way. The availability of preserved herring increased through the medieval period such that by the later medieval they were a widely available and cheap source of nourishment available to all but the very poorest of society (e.g. Barrett and Orton 2016; Serjeantson and Woolgar 2006, 116), packed in barrels in their millions and distributed from the coasts throughout England. From the 11th century in Britain, stockfish became a

popular and widely available resource, favored for their long-term preservation (Locker 2000; Barrett *et al*. 2004; 2008; 2011; Serjeantson and Woolgar 2006; Orton *et al*. 2011). Stockfish was often produced from large Atlantic cod, but ling and conger eel were also used. Freshwater fish were also increasingly consumed during the medieval period (Locker 2018; Hammond 2005, 22). The eel, a migratory fish, was also an important food species as well as serving as a form of currency in England, used/required until the 17th century (Greenlee 2020). Eels were so popular in the medieval period that their popularity and demand for them saw them being imported to England from Belgium (Woolgar 2000, 36). While the technological advances in fishing and fish preservation no doubt increased the availability of fish, Christianity also played a role in increasing fish consumption through the enforcement of 'fasting' days where meat consumption was prohibited (e.g., Kurlansky 1999; Woolgar 2000; Fagan 2006).

So, it would be expected that fish remains would be more abundant in medieval deposits, and include more marine species, especially Atlantic cod and other cod species. Therefore, the absence of these remains suggests that the excavation areas did not include features that were used for the discard of food waste, though this suggestion is not supported by the mammal and bird bone data and marine mollusc data (Poole, Section 8.9; Russ, Section 8.10). The only remaining explanation is that, for reasons unknown, the increased consumption of fish that is evidenced across Britain at this time did not occur at or in the vicinity of the Guildhall.

8.8.6 Conclusion

The small Roman period assemblage demonstrates that marine fish caught in inshore coastal or estuarine areas as well as preserved fish brought from the Mediterranean region played a small role in the diet of those living in and visiting the site at Guildhall during the early to mid-Roman period (1st to 3rd century AD). The recovery of remains from fish caught off the coast around Britain demonstrates the presence of an established trade network that could deliver fish to inland locations before they spoiled. However, it was freshwater fish of the carp family and the migratory European eel that were more important. With the exception of the Spanish mackerel bones, which represented larger fish, all of the bones were from tiny to small-sized fish and could represent remains of fish products made locally in the Mediterranean style used for producing garum and other fish sauces.

The Spanish mackerel bone contributes to the small but growing volume of evidence for the importation of *salsamenta* into Britain during the Roman period, and together with the vertebra from Waterside (Russ and Chorro Giner 2022) and Vine Street in Leicester (Nicholson 1999: Browning *et al.* 2021), and remains from Great Holt Farm, Boreham, Essex (Murphy *et al.* 2000), suggest that this trade was not a practice only seen in the 1st century AD, but one that continued into the later Roman period.

The remains recovered from medieval deposits seem to be, at least partly, residual from Roman activity. Either way, it is clear that while there is medieval activity at the site, fish remains consistent with medieval fish consumption practices were not disposed of in the areas excavated at Guildhall.

8.9 Avian Eggshell

By Dr Hannah Russ FSA MCIfA

8.9.1 Introduction

Fragmentary remains of birds' eggs weighing 1.7g were recovered from three bulk environmental samples taken during archaeological excavation at the Guildhall, York (6019). The excavation uncovered evidence for human activity spanning the Roman to post-medieval periods, with eggshell remains recovered from Roman period deposits. This report includes quantification of the assemblage, and discussion of the findings in the context previous work on bird eggshell identification; methods for identifying species are also discussed.

8.9.2 Methodology

The remains were counted and weighed by context to the nearest 0.1g. Results were recorded in an electronic proforma in Microsoft Excel.

This work has been undertaken in line with published standards and guidelines (CIfA 2014, Campbell *et al.* 2011), with reference to the Yorkshire Archaeological Research Framework (Roskams and Whyman 2005, 2007).

8.9.3 Results

Eggshell was recovered from three samples from three contexts during excavations at the Guildhall, York (Table 46). The small assemblage was recovered from the 2-4mm or 2-8 mm fractions of the heavy residues/retent from bulk environmental samples 65, 68 and 69. Two contexts, C19176 and C19188, were occupation deposits overlying a Period 4 floor surface, dated by pottery to the late 2nd- early 3rd century. The third, context C19181, was part of a Period 6 levelling depoit containing late 12th-early 13th century pottery, however a large quantity of residual Roman material was also present.

8.9.4 Discussion

It is not possible to identify bird species from eggshell without the use of scanning electron microscopy (Kippax 1981; Sidell 1993), ZooMS (Stewart *et al.* 2013; 2014) or other protein peptide analyses (Presslee *et al.* 2018). Bird remains at the site might point towards chicken, goose and/or duck (Poole 2022). While fragments of eggshell have been recovered from Roman period sites in Britain, perhaps most famous is the complete chicken egg from Berryfields, Buckinghamshire (Biddulph *et al.* 2020). Eggshell fragments were recovered from 4th century Roman deposits at Little Chester, Derby and Icklingham, Suffolk, but no conclusive identification of bird species could be made (Kippax 1981). In Roman Britain, a range of domestic and wild birds were kept, including domestic fowl (chicken), goose, pigeon, peacock, duck and pheasant, from some of which it is assumed eggs were eaten (Zeuner 1963). It is also possible that wild bird eggs were collected for consumption. Though later in date than those recovered at the Guildhall, analysis of eggshell recovered from early medieval contexts at Coppergate and Hungate in York identified most remains as chicken eggshell, with a small contribution from goose and duck (Stewart *et al.* 2014).

In addition to a role as a dietary resource, the egg was also used and/or considered in Roman belief systems as a symbol of fertility and life and even the beginning of all things; eggs were honored, worshipped, used in religious rites (Simoons 1994, 156).

There has been very little scientific analysis of eggshell recovered from Roman period sites in Britain, and none that has used ZooMS or other protein peptide analyses, as such, the assemblage is an important resource for future research in eggshell identification and Roman period diet and subsistence strategies York.

The quantities of eggshell recovered suggests that eggs played at least some role in the diet and/or belief systems of those living at or in the vicinity of the Guildhall during the 2nd or early 3rd century.

8.9.5 Recommendations

This report and associated data should be integrated into any site-wide grey literature or publication reporting and retained within the site archive. The assemblage should be retained in the site archive; the material would be suitable for analysis using the scientific methods discussed in this report.

8.10 Mollusc Remains

By Dr Hannah Russ FSA MCIfA, with assistance from Emma Tong

8.10.1 Introduction

Mollusc remains (624 fragments weighing 5.37kg) were recovered via hand collection and from bulk environmental samples during archaeological excavations at the Guildhall, York. The mollusc assemblage included the remains of marine (n=616) and terrestrial (n=8) species and was recovered from deposits and features dating between the 2nd century AD to modern periods.

8.10.2 Methodology

The mollusc remains were identified to side and to as low a taxonomic level as possible using the Author's reference collection and published and online identification guides (Hayward and Ryland 1995). Quantification used a diagnostic zone method, measurements were taken according to Claassen (1998, 109-10) with European flat oysters (*Ostrea edulis*) recorded according to Winder (2011).

The remains were identified to side and to as low a taxonomic level as possible using the Author's reference collection and published and online identification guides (Hayward and Ryland 1995; Marine Bivalve Shells of the British Isles (online resource, accessed January 2021); Kerney and Cameron 1979; Pfleger 2000; Cameron 2003; Naggs *et al.* 2014). Quantification used a diagnostic zone method and specimens that were measurable measured according to Claassen (1998, 109-10) were noted. Oyster size was estimated for near-complete specimens that did not qualify for measurement using a scale from very small to very large (Appendix 7). A taphonomic assessment of each fragment was undertaken, recording the presence and absence of any infestations and evidence for tool marks or burning; any other surface modifications of note were also recorded. Results were recorded in an electronic proforma in Microsoft Excel.

This work has been undertaken in line with published standards and guidelines (CIfA 2014; Campbell *et al.* 2011; Campbell 2015; 2017; Winder 2011),

This analysis has been undertaken in line with published standards and guidelines (Campbell *et al.* 2011; Baker and Worley 2019; Campbell 2015; 2017; CIfA 2014) and with reference to the Yorkshire Archaeological Research Framework (Roskams and Whyman 2005; 2007).

8.10.3 Results

Terrestrial Molluscs

Terrestrial mollusc remains were recovered in very small numbers from seven contexts (Table 47). The identified remains included the common garden snail (*Cornu aspersum*) and members of the glass snail family, Oxychilidae. In some cases, the remains of terrestrial snails can inform on the nature of past environmental conditions at a given location. However, the snails identified provide limited information in this regard. Many of the glass snail species are considered 'shade-loving' (Evans 1972), but none of the remains were identified to species so while their presence gives a broad indication of possible past environments, the absence of a species identification and their rare occurrence precludes any definitive or specific comments. The common garden snail is considered a catholic species (Evans 1972), occurring in such a wide range of habitats that it is not useful in indicating any specific past environmental conditions. The small assemblage is also too small to provide any meaningful information; it spans a period of over 1000 years, reducing the sample size to just a few specimens per chronological period, Table 47.

Marine Molluscs

The remains of marine molluscs (616 fragments weighing 5.37kg) were recovered from 102 contexts during the excavations (Table 48). The remains were recovered from features and deposits dating from the 2nd century AD (Roman period) to the modern period (20th century). The marine mollusc assemblage was dominated by the European flat oyster (*Ostrea edulis*), with mussels (*Mytilus* sp.) well represented, albeit by small fragments. Common cockle (*Cerastoderma edule*) and common limpet (*Patella vulgata*) were present in small numbers (Table 48).

8.10.4 Taphonomic assessment

Surface preservation varied between 'good' and 'poor' (categories 2-4 on a scale of 1 to 5), with most surviving in 'poor' condition (65.4% by count, n=403). Burnt shell included four fragments of oyster and one fragment of cockle, all recovered from mid-Roman period deposits. Sixty-nine oyster specimens had 'notched' edge damage consistent with shucking, with an additional 74 identified as having possible evidence for shucking.

Evidence for surface modification caused by a range of marine invertebrates was recorded on oyster shells in 244 instances, and included sponge (cf. *Cliona celata*), annelid worm (*Pomatoceros triqueter*), spionid worm (*Polydora ciliata*), bryozoa, and/or barnacle (Cirripedia). Oysters with infestations comprised 35% of the assemblage; in some cases, single specimens were infested by up to four species (Table 49).

8.10.5 Measurements

Many oyster specimens had flaked or fragmented edges that precluded measurement for size reconstruction analysis, beyond estimation of size using a diameter chart (see Appendix 7). In total, 924 oyster valves were suitable for size estimation by the diameter chart method (Table 50). The valves represented specimens ranging in size from very small to very large, with small

and medium specimens forming 75.5% of the measurable oyster valves (n=194, minimum number of valves (MNV)).

8.10.6 Quantification

While fragment count (Table 48) provides an overview of the marine mollusc remains at the site, variation in fragmentation between the species recorded means that the data is not representative of the frequency of the different taxa, and therefore may not be indicative of the importance of different shellfish resources at the site. Site-wide quantification using minimum number of valves (MNV) and minimum number of individuals (MNI) for bivalves based on umbo presence, and minimum number of individuals for gastropods based on apex presence, is presented in Table 51. Quantification by minimum number of individuals suggests that the oyster was the most frequently consumed shellfish species at the site, while mussel, cockle, and limpet formed rare additions to the diet (Table 51). These data will be considered below by phase of occupation at the site.

8.10.7 Phased results

The marine mollusc remains derive from human activity at the site from the Roman to Modern periods, 2nd century AD (Phase %) to 20th century (Phase 41). These are presented by chronological period, below. Marine mollusc remains from modern (Phase 41) and unphased deposits are not discussed further.

Roman period (Phases 5 to 16)

Marine mollusc remains were recovered from Roman deposits and features dating to the 2nd and 3rd centuries AD, Table 48. The Roman period assemblage was dominated by mussel fragments (n=155) and edible oyster (n=118), though as discussed above (Table 51) the fragmentary nature of the mussel remains has exaggerated the level of their consumption at the site. Four fragments of edible cockle and a single limpet were also recovered from Roman period contexts, Table 48.

Medieval period (Phases 18 to 34)

Medieval period deposits and features also contained abundant marine mollusc remains, though the focus at this time was on the edible oyster (n=237), which formed 94.8% of the medieval period marine mollsc remains by count (Table 48). Twelve fragments of mussel shell and one limpet were the only other marine shellfish represented in medieval phases of activity.

Post-medieval period (Phases 36 to 39)

Marine mollusc remains from post-medieval phases of activity continued to be dominated by edible oyster (n=40), which formed 88.9% of the post-medieval period marine mollusc assemblage, Table 48. The only other marine shellfish remains from post-medieval contexts were five fragments of edible cockle shell.

8.10.8 Discussion

The terrestrial shell (Table 47) does not contribute to our understanding of human activity or the natural environment at the site, being a very small assemblage comprising ubiquitous species. No further comment is made on these remains.

The marine shell evidence from the Guildhall indicates that the European/edible oyster was the most frequently consumed shellfish at the site from the Roman to Modern period, with peaks in its abundance at the site in the medieval period between the 11th and 14th centuries. The

oysters were generally small to medium in size (c. 4.6 to 7.5cm in diameter, Table 50), with many baring evidence for shucking and infestation by multiple parasites (Table 49). Other shellfish, including mussel, cockle and limpet formed an extremely small part of the overall assemblage, demonstrating that they were likely eaten very rarely at the site.

The European/edible oyster was a valued food resource in Britain in the Roman period (e.g., Cool 2006), and fluctuates in popularity, availability and status from that point onwards to the present day (e.g., Thomas *et al.* 2020). While the assemblage is of reasonable size overall, if the period over which the remains accumulated is considered, possibly up to 1000 years, the shells represent only very occasional consumption of oyster, with this occurring consistently during the periods of activity at the Site. This may be explained in part by the distance from the coast where oysters were harvested to the inland city of York (c. 35km), though the River Ouse was navigable from the East Coast/Humber Estuary to York for transportation of goods. However, as discussed by Winder (2015, and references within), the recycling of oyster shells for a wide variety of uses, including for mortar, making lime, poultry grit, shell-tempered pottery, medicines and cosmetics, and their use as fertilizer for calcium neutralising acid soils, all cause the shells to delaminate and disintegrate or move the shells away from the consumption site. In considering these potential uses for oyster shell it might be expected that shells would be collected in one location in great numbers, or that they were broken down or subjected to processes that would cause their fragmentation, disintegration and eventual loss. While the evidence from Guildhall cannot prove nor disprove that any of these activities took place, it is important to note that the importance of this dietary resource may be underrepresented by the remains recovered.

The detailed study of oysters from Roman and medieval sites has focused on the midlands and southern Britain (see Winder 2015; Thomas *et al.* 2020). For York, and many sites in northern England, there has yet to be a detailed synthesis of oyster and other shellfish remains for any period, a study which is much needed to further our understanding of human diet and trade networks with coastal towns.

8.10.9 Recommendations for future analysis and dissemination

This report and associated data should be integrated into any site-wide grey literature or publication reporting and retained within the site archive. The assemblage should be retained, if possible, for future study.

8.11 The Human Bone

By Carina Summerfield-Hill

8.11.1 Introduction

Excavations at the site of The North Annexe, York Guildhall revealed the medieval articulated remains of ten individuals and 1,017 fragments of disarticulated bone associated with a former Augustinian friary that was established on the site by 1272 and existed until the Dissolution of Monasteries c. 1530s.

Osteological analysis was undertaken to determine where possible: condition of bone present, completeness of the skeleton, estimation of age and sex, stature, potential for non-metric trait analysis, and assessment of dental and skeletal pathology. This analysis also includes a

concordance of the disarticulated remains in order to identify the minimum number of individuals (MNI), along with (where possible) demographic attributes, metrics, and pathology.

8.11.2 Methodology

The condition of skeletal material was assessed macroscopically and recorded according to guidelines set out by BABAO and Mitchell and Brickley (2017). Preservation was recorded as "grades" that were simplified into Good (grades 0-2), Fair (3-4) and Poor (5-6). Completeness was categorised as 5-10%, 11-30%, 31-50%, 51-75%, 76-100%. Bone fragmentation was categorised as low, moderate, and high and bone surface condition grades 0-4. In instances where soil acidity, drainage, or burial type affected the overall preservation these were recorded as post-depositional or taphonomic change.

The sex and age estimations were achieved following methods recommended by Buikstra and Ubelaker (1994) & Mitchell and Brickley (2017). The age of the individuals was based on epiphyseal fusion of the long bones (Schwartz 1995, 185-222, Schaefer, Black and Scheuer 2009, Ubelaker 1989), bone measurements for non-adults (Schaefer, Black and Scheuer 2009), dental development and attrition (Ubelaker 1978, Buikstra and Ubelaker 1994, Brothwell 1981) and, where possible, the auricular surface (Lovejoy *et al.* 1985) and pubic symphysis (Brooks and Suchey 1990, Todd 1921 a and b). Composite methods for refinement of adult age range were used where possible. The remains were assessed visually for macroscopic assessment of sex based, where possible, on the morphological characteristics of the skull and pelvic regions (Schwartz 1995, 280-1; Buikstra and Ubelaker 1994, Buikstra and Mielke 1985, Phenice 1969, Milner 1992, Acsadi and Nemeskeri 1970), and metric data (Stewart 1979).

Stature was calculated from long bone measurements using the method devised by Trotter and Gleser (1952, 1958), Trotter (1970) and Jantz *et al*. (1994).

Assessing whether non-metric traits could be scored was followed by methods recommended by Buikstra and Ubelaker (1994), along with musculoskeletal markers. General disease classifications follow Waldron (2009), Brothwell (1963) and Ortner (1981).

The disarticulated remains were examined by context and described under the following headings: total bag weight, bag fragment count, element, side, area, sex, age, measurements, and pathology. The MNI (minimal number of individuals) was calculated by determining the most frequently represented skeletal element for each age/sex class (Buikstra and Ubelaker 1994).

This assessment report has been compiled in line with CIfA standards (Mitchell and Brickley 2017), and Historic England guidance (Mays 2018).

8.11.3 Results

Skeletal Preservation

The overall skeletal preservation of the articulated assemblage comprised two individuals with poor bone preservation (SK 5 and 8), four with fair (SK 1, 6, 9 and 10), and four with good preservation (SK 2, 3, 4 and 7). The majority of the individuals were assigned to the 11-30% completeness category (SK 1, 2, 3, 5, 6, 7, 9 and 10), with one individual assigned to 31-50% completeness (SK 4) and one individual assigned to 5-10% completeness (SK 8). The bone fragmentation ranged from low to high with four individuals in the low category (SK 1, 2, 3 and 7), three with moderate fragmentation (SK 4, 6 and 10) and three with high fragmentation (SK

5, 8 and 9). Surface bone condition was good with eight individuals assigned to grade 1 (SK 1-3, 5-8 and 10) and two assigned to grade 2 (SK 4 and 9) (Chart 1-4, Table 52).

Demographic Attributes

Sex

The assemblage consisted of four males (SK 1, 2, 5 and 7), one probable female (SK 9), and four sex undetermined individuals (SK 3, 6, 8 and 10). Sex estimation was not attempted on adolescent (SK 4) due to a lack of sexual dimorphic traits (Chart 5, Table 53).

Age

The assemblage consisted of one adolescent (SK 4), one young adult (18-25 years) (SK 9), one young/prime adult (18-25/26-34) (SK 8), one prime adult (26-34 years) (SK 7), one middle adult (35-44 years) (SK 2), one mature adult (45+ years) (SK 1), one mature/older adult (45+/60+ years) (SK 10), and three adult unspecified (18+ years) (SK 3, 5, 6) (Chart 6, Table 53).

Metric Data and Non-Metric Traits

Stature

The stature for five individuals (SK 1, 2, 3, 6 and 10) was calculated based on long bone measurements of the femur, humerus, tibia and radius, which varied based on individual element preservation. SK 1 (male) had a stature of 176.508 ±3.27cm (femur) and SK 2 (male) was 169.934 ± 4.05cm (humerus). Regarding SK 3, 6, 10 these individuals were sex undetermined, thus should SK 3 be a male they would have a height of 165.502 ± 3.37cm whereas if they were a female their height would be 162.48 ± 3.66cm (tibia). If SK 6 was a male, they would have a height of 159.524 ± 4.32cm whereas if they were a female their height would be 155.892 ± 4.24cm (radius) and if SK 10 were a male they would have a height of 170.864 ± 4.32cm or if they were a female a height of 170.112 ± 4.24cm (radius) (Table 53).

Cranio-Facial Traits

Only one individual (SK 7, prime adult male) was sufficiently preserved to allow for morphological assessment of cranio-facial traits for their potential to elucidate the possibility of non-local origin. These scores were consistent with European cranio-facial traits.

Non-Metric Traits

Non-metric traits are variations in the morphological characteristics of the skeleton. They may comprise additional or unusual bony processes, canals, nodules, facets, or sutures. The significance of such traits in contemporary studies is based on the knowledge that such variations show familial inheritance in humans, though some are more commonly attributed with mechanical stressors or environmental factors.

SK 1 (mature adult male) displayed an inferior double articular facet on the left talus and bilateral peroneal tubercles present on the calcanei. SK 7 (prime adult male) displayed on the cranium a lambdoid ossicle on the right and left sides, and an accessory infraorbital foramen on the left side. SK 9 (young adult probable female) had a congenital absence of the right and left lower third molars, whilst the upper third molars had fully erupted.

Musculoskeletal Markers

Traits which are more aligned with continuous mechanical stressors, such as habitual squatting, can be useful in elucidating more about the lived experience of a buried individual. In the

assemblage several musculoskeletal markers (MSM) could be definitively scored in addition to probable heritable non-metric traits discussed above.

SK 3 (adult undetermined sex) displayed more pronounced muscle attachments on the right and left proximal and distal anterior surfaces of the fibula. SK 10 (mature/older adult sex undetermined) had pronounced muscle attachments on the right radius along the oblique line and the interosseous crest.

The development of more pronounced muscle attachments in the leg bones and the pelvic area points to activities such as squatting, walking, and lifting, whilst in the arms points to twisting/lifting type activities. In this instance, age may also be a contributing factor as SK 10 was a mature/older adult.

8.11.4 Pathology

Analysis of the bones and teeth for the presence of abnormalities attributed to developmental conditions and dental and bone pathologies was carried out and demonstrated that five individuals displayed signs of pathology (SK 1, 5, 7-10) (Table 53).

Skeleton 1: Mature Adult (45+) Male
This individual displayed an exostosis, a slight bony spur, on the proximal anterior surface of the right fibula that was likely to be due to muscle traumaor degenerative joint disease. The latter is associated with gradual bone deterioration commonly associated with advancing age or physical lifestyle with the presence of osteophytic new bone around joint or body margins (Roberts and Manchester 2005, 132-63).

Skeleton 5: Adult Unspecified (18+) Male
Dental pathologies in the form of opacity and enamel hypoplasia consisting of grooved defects were observed which are caused by prolonged periods of arrested secretion of the enamel matrix during childhood, which occur as a result of a prolonged illness or malnutrition (Roberts and Manchester 2005, 75-76; White and Folkens 2005, 329).

It is also of note that during analysis two small fragments of cremated bone were also found alongside SK 5 that are possibly animal bone.

Skeleton 7: Middle Adult (35-44) Male
Ectocranial porosity was observed on the frontal and parietal bones of the skull that was characterised by an ‘orange peel-like’ porosity that may be interpreted as a non-specific bone infection (Plate 68). However, the individual also displayed cribra orbitalia on their orbital roofs consisting of pinpoint and coalesced porosity (type 3) suggesting a resolved lesion (Plate 69). This condition is a metabolic disorder that is associated with the skeletal changes related to anaemia (iron deficiency). The orbital roofs are affected bilaterally, whereby ‘holes’ form (orbital lesions). It may be that the ectocranial ‘orange-peel’ porosity may be linked to anaemia also (Stuart- Macadam 1989a; Robert and Manchester 2005, 229-30). An alternative is that we may be looking at a case of scurvy, also a metabolic disease resulting in vitamin C deficiency and that the ectocranial ‘orange-peel like’ porosity along with the resolved lesions on the orbital roofs may be linked to such a metabolic disorder (Snoddy *et al*. 2018).

Dental pathologies present on the individual (Plate 70) consisted of:

- dental supragingival calculus - mineralized plaque, in this case found above the gum,

- periodontal disease - a consequence of gingivitis, an inflammation of the gums that is often caused by an excess of calculus, resulting in resorption of the alveolar bone and loss of the periodontal ligament supporting the teeth which can ultimately lead to ante-mortem tooth loss (Robert and Manchester 2005, 73-4; White and Folkens 2005, 330).
- Dental caries - an infectious and transmissible disease that is caused by the fermentation of food by bacteria that is present on the teeth in the form of plaque. Dental caries occur as small opaque spots on the teeth or cavities (Roberts and Manchester 2005, 65-71; Hillson 1986, 287; White and Folkens 2005, 329),
- Enamel Hypoplasia - present in the form of faint horizontal grooves around the crown (Hilson 1996, 165-6).
- Ante-mortem tooth loss (AMTL) - the loss of a tooth during life that can be linked to age, diet, and oral hygiene of the individual (Roberts and Manchester 2005, 73-4).

Skeleton 8: Young/Prime Adult (18-25/26-34) Sex Not Recordable
Despite the poor preservation of this individual as only rib fragments were recovered, hints of the metabolic disorder rickets was found, with a 'flute' shaped flaring of a sternal rib end. Rickets is a vitamin D deficiency during the growing period (Roberts and Manchester 2005: 237).

Skeleton 9: Young Adult (18-25) Probable Female
Dental pathologies in the form of AMTL, supragingival calculus, fissures and dental caries. A possible developmental defect was also observed on the lower 3rd molars which were unerupted, whilst the upper 3rd molars were fully erupted.

Skeleton 10: Mature/Older Adult (45+/60+) Sex Undetermined
Degenerative joint disease was present on this individual in the form of severe osteophytes a single vertebral body, along with bony spurs occurring on the right radial tuberosity with advancing age being a contributing factor (Plates 71).

Myositis ossificans of new bone growth was observed adjacent to the linea aspera on the right and left femur, being more severe on the left femur. This is attributed to the ossification of the biceps femoris or gluteus maxima muscles due to trauma. This condition was also observed on the right radius along the interosseous crest attributed to the ossification of muscles such as the supinator or flexor pollicis longus and on the right and left pelvis around the ischial tuberosity, attributed to the ossification of muscles such as gemellus inferior, obturator externus and quadratus femoris (Plate 72-4).

A decrease in bone density and the presence of bone porosity on the pelvis and sacrum is indicative of osteoporosis, a metabolic disease associated with age, diet, and activity (Roberts and Manchester 2005, 242-7).

8.11.5 Radiocarbon Dates and Isotopic Calibration

Two samples for radiocarbon dating were obtained from samples of human bone recovered from SK 1 (mature adult male) and SK 2 (middle adult male) and submitted to SUERC laboratories for analysis (presented below and in Appendix 5). Calibrations have been undertaken in OxCal v4.3.2 (Bronk, Ramsey and Lee 2013) using a mix of the IntCal13 and Marine13 calibration curves (*Reimer et al*. 2013). The ranges in plain type in the radiocarbon tables have been calculated according to the maximum intercept method (Stuiver and Reimer 1986) and have the end points rounded outwards to 10 years in line with common practice where the errors are 25 years or

more. All other ranges are derived from the probability method (Stuiver and Reimer 1993). Human bone collagen with a $\delta^{13}C$ value above -20‰, accompanied by a raised $\delta^{15}N$ value, is taken to indicate a marine component in the diet. The percentage contribution of this marine component is calculated using end-members of -21.0‰ (fully terrestrial) and -12.5‰ (fully marine) with an uncertainty of 10% applied.

The radiocarbon dating results indicate a date for the remains of the 15th-16th century, indicating that they relate to the former Augustinian Friary dating between 1272 to c.1530. The marine component identified within the samples is of particular interest within this sample group. Recent carbon stable isotope research suggests that consumption of marine or seafood within monastic settings accounted for almost one-third of the dietary protein consumed by these individuals where different monastic ordinances required the substitution of meat dishes with fish (Mays 2006, 183).

8.11.6 Disarticulated Remains

A total of 1,017 fragments of disarticulated human bone weighing 12.248kg was recovered from 26 contexts (Table 54).

The assemblage mainly consisted of adult material with six fragments of juvenile bone. Calculation of a minimum number of individuals (MNI) allowing for a better understanding of paleodemography and the wider context of the site was carried out. The left femur was the most common element, and was used to calculate an MNI of 8, whilst the juvenile remains had a MNI of 1 as no repeat elements were recovered. Pathologies were observed on remains from the majority of the contexts.

Degenerative joint disease (DJD, also known as arthritis) was found on the patellar surface of a left femur, accompanied by osteophytes around the margin of its lateral epicondyle. DJD is the erosion of a joint surface caused by the breakdown of the joint cartilage. This leads to bone exposure, which in turn leads to the bone becoming hardened (sclerosis) and polished (eburnation). Spinal osteoarthritis was also recorded, with the presence of osteophytes around the oval articulation for the dens on a 1st cervical vertebra, and also on a number of further cervical, thoracic, and lumbar vertebrae (Roberts and Manchester 2005, 132-63).

Schmorl's nodes were observed on a number of vertebrae which are formed when the intervertebral discs become herniated under stress and exert pressure on the adjacent vertebral bodies. It is most common in the thoracic and lumbar regions of the spine and can affect both the superior and/or inferior surfaces of the vertebral bodies. Aetiology of Schmorl's nodes is debatable. Past studies have suggested that the presence of Schmorl's nodes can be associated with degenerative changes or an isolated traumatic episode but can also be attributed to specific disorders such as Scheuermann's disease, metabolic and neoplastic diseases; however, more recent studies have shown that the occurrence is probably associated with the vertebral development process during an individual's early growth (Dar *et al*., 2010).

A number of metabolic diseases were also observed with osteoporosis being found on a tibia and thoracic vertebral body with decreased bone density and an increase in bone porosity associated with age, diet, and activity. A case of cribra orbitalia was observed on the orbital roof of a skull fragment, which is attributed to skeletal changes associated with anaemia (iron

deficiency). A case of rickets (vitamin D deficiency) was also identified with the bowing of a right femur.

Trauma was also observed on an isolated 1st metacarpal which displayed a transverse fracture with evidence of healing (Plate 75). A compression fracture on a lumbar vertebra was also found.

Dental pathologies observed consisted of calculus, caries, periapical lesion(s), periodontal disease, enamel hypoplasia and AMTL.

8.11.7 Conclusion

A total of ten articulated medieval skeletons along with 1,017 fragments of disarticulated bone were macroscopically analysed from the site at Guildhall, York. Regarding the articulated remains the assemblage as a whole was lacking skeletal completeness, with the majority falling into the 11-30% category, however, despite this the majority showed good bone preservation with low fragmentation and good bone surface condition.

The articulated individuals consisted of mainly adult individuals with a single adolescent. The adult individuals that could be accurately sexed indicate that the male gender was of the higher prevalence amounting to four individuals with one possible female, whilst the remaining four adults were sex undetermined due to preservation. There was also a range of age at death: three individuals were adult unspecified (18+), and the remaining individuals amounted to one young adult (18-25), one young/prime adult (18-25/26-34), one prime adult (26-34), one middle adult (35-44), one mature adult (45+) and one mature/older adult (45+/60+).

The health of the articulated individuals appears to show both skeletal and dental pathologies. The skeletal pathologies observed were degenerative joint disease with the presence of osteophytic new bone. Metabolic disorders with a case of anaemia (iron deficiency) or possibly even scurvy (vitamin C deficiency), and osteoporosis, and also muscle trauma with myositis ossificans. Dental pathologies point to signs of poor oral health with calculus, caries, AMTL and periodontal disease all being present within the assemblage. There were also cases of enamel hypoplasia and opacity that are signs of prolonged illness or malnutrition, which reflect the health status and diet of the individual. Such events occur in the early stages of life when teeth are developing and remain on the teeth. A possible dental developmental defect was also observed with unerupted lower 3rd molars whilst the upper 3rd molars on the same individual were fully erupted.

The disarticulated remains primarily consisted of adult material with limited evidence of juvenile remains. An MNI of 9 was calculated and pathologies observed consisted of degenerative joint disease, spinal osteoarthritis, Schmorl's nodes forming due to a herniated intervertebral discs, trauma with a fractured metacarpal, compression fracture of the vertebra, signs of the metabolic disease rickets (vitamin D deficiency) and anaemia (iron deficiency), and osteoporosis and also comparable dental pathologies as seen in the articulated individuals.

The assemblage as a whole clearly shows signs that metabolic diseases were present within the population with, as discussed above, evidence of enamel hypoplasia, anaemia or possibly scurvy, and rickets. The extent of such prevalence unfortunately cannot be expanded upon from such a small sample size but does provide hints of a population being subjected to dietary deficiencies.

The radiocarbon dating and, in particular the isotopic calibration, has also provided some interesting results. The remains have been dated to the medieval period between the 15th-16th century forming part of the former Augustinian friary. Interestingly the isotopic calibration has identified a marine component to the samples which ties into recent research identifying that the consumption of marine or seafood within monastic settings accounts for almost one-third of the dietary protein (Mays 2006, 183).

8.11.8 Research questions

Can the osteological analysis of the remains at the site aid in understanding physical activities that were being undertaken? For instance, by looking at musculoskeletal markers? Pathology?

The osteological analysis has identified pronounced musculoskeletal markers to SK 3 in the lower leg region and SK 10 in the lower arm. The development of more pronounced muscle attachments in the leg bones and the pelvic area points to activities such as squatting, walking, and lifting, whilst in the arms points to twisting/lifting type activities. In this instance, age may also be a contributing factor as SK 10 was a mature/older adult. Myositis ossificans was also observed on SK 10 on the femora, radius and pelvis pointing to ossification of muscles due to trauma. SK 1 also displayed exostoses, a slight bony spur, on their fibula they may possibly be related to muscle trauma also. Such factors such as well-developed musculoskeletal markers and muscle trauma provide hints of an active lifestyle for the people inhabiting the former Augustinian friary.

Can cranio-facial traits of the skull, where preservation allows, be explored to assess for the potential of non-local originating inhabitants?

Preservation allowed for the investigation of the cranio-facial traits of the skull for SK 7 (prime adult male) for the possibility of non-local origin. The scores were consistent with European cranio-facial traits so in this instance there is no current evidence to suggest non-local originating inhabitants at the former Augustinian Friary.

Can the analysis of non-metric traits indicate any patterns of familial inheritance within the population?

Individuals SK 1 (mature adult male), SK 7 (prime adult male) and SK 9 (young adult probable female) displayed non-metric traits. However, given the small sample size and all the traits being different on each individual no pattern could be established.

Can the stature of individuals provide any indicators of the health of the population?

The stature of five individuals was calculated (SK 1-3, 6, 10). Stature averages by period have previously been determined by a study carried out by Roberts and Cox 2003, 396. The male mean stature for the early/late medieval period is 172/171cm and the female mean stature is 161/159cm.

When comparing such data to the individuals at the Guildhall we see SK 1 (male) had a stature of 176.508 ±3.27cm and SK 2 (male) had a stature of 169.934 ± 4.05cm indicating that SK 1 was well above the mean stature for the period whilst SK 2 was below. SK 3 had a stature of 165.502 ± 3.37cm (male)/162.48 ± 3.66cm (female) which if male would be below the mean stature but if female would be above the mean stature. SK 6 had a stature of 159.524 ± 4.32cm (male)/155.892 ± 4.24cm (female) which if male or female they would be below the mean

stature and finally SK 10 had a stature of 170.864 ± 4.32cm (male)/170.112 ± 4.24cm (female), which if male would be below the mean stature and if female would be above the mean stature. Overall, the stature results are fairly mixed providing both evidence for above and below mean stature for the medieval period. It is difficult to ascertain precisely why we see these differences as there are many variables to consider such as genetic make-up, nutrition, environment and disease, but there are hints of better health with SK 1 being well above the mean stature for the medieval period (Roberts and Manchester 2005, 40-1).

Is the prevalence of observed metabolic diseases (such as vitamin A, C & D deficiency) similar to comparably dated monastic sites, and can its presence be an indicator of economic or social status?

The assemblage clearly shows signs of metabolic diseases being present within the assemblage with evidence of enamel hypoplasia, anaemia or possibly even scurvy and rickets hinting at a population that has been subjected to dietary deficiencies, which could be linked to economic and social status.

8.12 The Small Finds

By Ian Riddler

8.12.1 Introduction

A little over 300 objects of copper alloy, iron, jet or shale, bone and lead alloy are considered in this report. This total excludes the iron hobnails, which have not been counted individually, but does include the iron nails, which represent just under half of the total. The small finds include a small quantity of Roman objects and a series of medieval to early post-medieval objects. In general, the Roman finds are stratified in Roman deposits and the medieval finds in deposits spanning the medieval period, with a few residual Roman items occurring in contexts of a later date. Almost all of the objects are stratified. Small find numbers are provided here in brackets and a summary table of all of the finds is attached to the end of the report (Table 55).

8.12.2 Roman Small Finds

The copper alloy objects generally survive in quite poor condition and are often fragmentary, but a number of pieces can be identified. Dress accessories include a copper alloy buckle plate and a glass stud set in a mount, possibly part of a ring, now distorted in shape (SF51 and SF53). The same context also produced part of a copper alloy chain and a large, hollow-domed stud (SF50). A rectangular copper alloy buckle plate (SF213) is more elaborate and includes cast decoration, and a jet or shale finger ring (SF244) is complete and survives in good condition. A bone pin (SF22) is also complete and is a comparatively rare type, showing a hand in profile, set above a series of mouldings. There are no brooches of copper alloy, but a possible iron bow brooch (SF73) came from a stratified context of Roman date. A hooked suspension mount (SF215) came from a stratified context and may originally have been attached to a belt. A silver coin (SF 221) provides useful dating evidence for this period.

Beyond dress accessories, fragments of a mirror (SF68) were associated with a vessel. A copper alloy earscoop (SF43) is complete and survives in reasonable condition. It is possible to recognise a small cast key (SF65) and the fragment of the end of a handle (SF195) from a second key, whilst

a copper alloy object (SF61) appears to be a vessel repair for a pot. A fragment of copper alloy (SF62) is oval in shape with the remains of a loop at one end and may be part of a seal-box lid.

The iron objects consist largely of nails, amounting to just under 40 examples altogether, alongside several clench bolts (SF71 and SF72) that may, however, be of a later date, given that they are not normally recovered from Roman contexts. A large, fragmentary piece of iron (SF100) includes a perpendicular stem at the tapered end and it could be part of a shovel (Humphreys 2021, pl 55). A small tool (SF162) is probably a punch, whilst a fragmentary object (SF194) could be the front part of a knife blade. A series of hobnails (SF179, SF180, SF182, SF187, SF191, SF284, SF286, SF289, SF290, SF291, SF292, SF299, SF306, SF307 and SF308) were recovered from thirteen contexts, eight of Roman date and five of medieval date. The hobnails from medieval contexts can be assumed to be residual. Most of them are complete, although some of the heads are now separate from the shafts. In several cases groups of hobnails are accreted together.

Two copper alloy coins (SF209 and SF216) are likely to be of Roman date, their size suggesting that they may belong to the earlier part of the period.

Two of the most important objects from the site belong to a period that is not well-represented in York. A cast copper alloy buckle plate (SF45) is rectangular in shape with square lugs on the inner edge and two loops for the buckle, which is now missing. The upper surface consists of a series of triangular, square and rectangular cells that have been infilled with yellow, blue and red enamel (Plate 16; Figure 35). Enamelled buckle plates are a particular feature of northern Britain. Bateson separated them into three groups on the basis of the shape of the buckle plate and this example belongs to Group 1, where blunt integral tangs are present on the reverse and the enamel covers most of the upper surface (Bateson 1981, 54-5). Dating evidence for the group is sparse but 2nd century examples are known from Caerleon; this example came from a 3rd century context. There are strong associations with military sites for all three of the buckle groups. This dating was echoed by Hoss, who developed Bateson's typology and placed enamelled rectangular buckle plates into several groups, with this example belonging to her type B6 (Hoss 2015, 125 and taf 42). The type is defined by the presence of enamel in geometric patterns, spanning three or more horizontal rows. Buckles with this decoration occur in Britain and are distributed along the Rhine and Danube. A second copper alloy buckle plate (SF213) is a 2nd to 3rd century Roman military buckle plate.

A segment of antler of oval section with lightly curved sides (SF239) falls into the broad category of 'toggles', which have been studied for over a century. Four examples from Glastonbury Lake Village were described as 'toggle-like fasteners' and they have retained that name to the present day (Bulleid and Gray 1917, 460-3; Hunter *et al*. 2013, 295-6). They occur from the Late Bronze Age onwards, with the latest examples coming from Roman contexts, largely of the 1st and 2nd centuries AD (Greep 1983, 471). Their distribution is focused on sites lying to the north of the Thames and they are well-represented in northern England. Most of them have rectangular slots at the centre, although some of them veer towards the oval shape seen here. Greep followed Dobiat's suggestion that they may have been used witha horse harness, the slot accommodating a leather strap that was looped over, sometimes resulting in wear traces in that area, particularly on one side of the object (Greep 1983, 467; Dobiat 1979). Recent authors have been less convinced by this suggestion, noting that where they occur in burials it is not in association

with any horse harness and referring to them instead as 'toggles, strap- or belt-fasteners' (Hunter *et al*. 2013, 295).

A fragmentary segment of bone (SF23) includes parts of two sides of an object that was originally square or rectangular in shape. One side includes a raised longitudinal moulding whilst the other side has two incised lines. The object has been neatly sawn at both ends and has been cut at one end to reduce its width. Its shape is similar to several handles from Avenches, including one that is similarly waisted at one end (Schenk 2008, 46 and fig 109.391-3). A close parallel is provided by a fragmentary bone handle from Castleford, as well as an earlier discovery of a handle from York (Greep 1998, fig 121.148; Cool *et al*. 1995, fig 756.6423). These handles belong to small knives of early Roman date.

8.12.3 Medieval Small Finds

The medieval small finds generally survive in slightly better condition than many of the Roman finds.

Note that these include a few post-medieval objects.

Antler Waste

Eighteen fragments of red deer antler waste, weighing just over 4.5kg, were recovered from eleven medieval contexts and two contexts of post-medieval date (Table 55). At least two working episodes can be identified, the first spanning six contexts assigned to phases 19-22 and the second based on five contexts largely from Phase 29. The two post-medieval pieces are likely to be residual finds, stemming from these earlier production episodes.

The waste includes three antler burrs, all of which are naturally-shed. They are small burrs, perhaps shed by young animals. They can be compared for their sizes with a large sample of contemporary burrs from the High Street at medieval Dublin, as well as a smaller group from 11th to 12th century contexts at Ipswich (Table 55). Comparisons can be made with circumference measurements and with a measurement taken across the coronet of each burr. With both measurements Ipswich provides the largest material, Dublin is second and York is third. The small sample of four burrs from late Saxon Southampton also has larger burr circumferences than this assemblage (Riddler and Trzaska-Nartowski 2003, 67).

Given that the size of deer increases in archaeological samples eastwards across Europe, the Ipswich, Southampton and Dublin measurements are ranked as expected, whilst the York averages should really be larger, suggesting that the red deer antler that was worked was relatively small. The sample itself is a small one but it is consistent for both measurements.

Beyond the burrs, the antler includes six segments of tines, three beam/tine junctions, three surface segments from tine or beam, one fragment from a crown and several pieces that allow finished objects to be identified. This material can be grouped by manufacturing stage for each assemblage. The three burrs can be placed in the initial stage of working, where the antler is sawn into its constituent parts and the burr, beam, crown and tines are separated from each other (Riddler *et al*. 2023). In the second stage the tines are further worked, with their ends sawn away and usually discarded. The crown was treated in a similar way, with some of the tines removed and the remainder of the upper part of the antler discarded. Just two offcuts (SF27 and SF121) can be assigned to this stage and most of the waste has been further worked.

The third stage of working is the point at which it is sometimes possible to see what the finished objects might have been and there are several clues within the assemblage. Twelve of the eighteen offcuts can be assigned to this stage, including the six sections of tine, sawn at their ends and split along their length, as well as three pieces of surface tissue, which may stem from the beam or from tines. The three beam/tine junctions (SF31, SF228 and SF229) can also be placed in this stage. In each case they show a combination of sawing of the antler at one end and fracturing the antler with a blade at the other end. It is not clear why each piece was not cleanly sawn throughout and the two methods of dismemberment are not necessarily contemporary: the material may have been sawn roughly to size, and then further worked subsequently with a blade, rather than a saw.

Amidst the tines, a lightly curved segment (SF25) has been sawn at both ends and partially hollowed, and it represents waste from the manufacture of handles. In producing whittle tang handles a section of antler tine would first be hollowed and then sawn to the requisite length. The resulting offcuts, like this example, were discarded at this point and are often partially hollowed. A small fragment of waste (SF30) has been sawn at one end and roughly faceted to shape. The opposite end was worked more carefully to a circular section and the offcut can be identified as waste from the production of antler pegs. A number of pegs could be cut from a single strip of antler. They had two main functions, serving either as rivets for composite combs or as pegs to secure bone or antler plates to wooden caskets. It is interesting to note that both of these object types, the composite comb and the casket decorated with bone or antler strips, were going out of use in the early 13th century. Comb manufacture is also attested by a fragment of waste (SF28) sawn away during the manufacture of a tooth segment for a composite comb.

Although this is only a small assemblage of red deer antler, representing several production episodes, it is significant because it belongs to the period at which the working of red deer antler was coming to an end in medieval England. Increased restrictions on the availability of the raw material led to the adoption of alternative materials at a time when craft workers were joining guilds and specialising in object manufacture, rather than working with specific raw materials. Equally, ivory was being worked in some quantity at a number of European centres, and particularly in Paris, and this also affected the demand for red deer antler, accelerating the shift towards the working of other materials.

Dress Accessories

The dress accessories are all made of copper alloy. A small, thin finger ring of D-shaped section (SF47) consists merely of a narrow band, a simple form that occurs sporadically across the medieval period, particularly in the eleventh and twelfth centuries (Legros 2015, 169-71). Two copper alloy sheet metal lace tags (SF52) taper lightly to one end with a seam along their length. They belong to Margeson's type 2; a common form previously considered to be largely confined to the post-medieval period (Margeson 1993, 22). Its origins, however, may go back to the late medieval period (Riddler 2001, 274) and this pair of tags came from a medieval context. Three fragments of copper alloy (SF60) belong to a finger ring, which survives in poor condition but could be reconstructed.

Amongst other dress accessories are a good example of a complete annular brooch (SF196) and a crescentic belt fitting (SF197), both found in the same medieval grave, while a mount with a fleur-de-lys terminal (SF198), possibly from a strap-end, was recovered from a 12th to 13th

century deposit into which graves had been cut. A small iron pin (SF177) is contemporary with the series of bone pins that span the late 11th to 12th century, and it appears to be of similar dimensions, with a swollen lower shaft. There are also two bone pin or needle shafts (SF24 and SF238) from medieval contexts.

Three copper alloy pins came from two contexts of early post-medieval date. The longest example (SF49) lacks its head, whilst the pair of smaller pins from context 3043 (SF48) include one with a globular head and another with a crimped wire-wound head. Small wire pins of this type are very common in late medieval and early post-medieval contexts and hundreds of examples have been found on sites in York (Ottaway and Rogers 2002, 2915). They are at their most common in 15th to 16th century contexts, as is the case here. Two principal head forms have been identified for pins of this type from contemporary sites, which are either solid and globular in shape, or formed of wound wire (Biddle 1990, 560-71; Egan and Pritchard 1991, 297-304; Rogers 2004, 39-42). Pins with wire-wound heads outnumber other types at York (Rogers 2004, 40).

Personal Possessions

The only object that can be placed in this functional category is an incomplete cast copper alloy chape (SF46), which has been cast to an openwork form with a fleur-de-lys design at the centre on one side, rising up from the flattened knop at the base. It belongs to the earlier form defined by Ward Perkins (1954, 280) for London and, as a cast example, it is more elaborate than the later series of sheet metal chapes from York (Ottaway and Rogers 2002, 2904).

Craftworking Implements

Very few medieval tools were found on the site, but a tapering bar of rectangular section (SF84) appears to be part of a cold chisel, with a burred apex. The lower part of the chisel has fractured away. Its small size suggests that it was a blacksmith's chisel, rather than an implement of a stonemason or carpenter (Goodall 2011, 9). Several chisels have come from previous excavations in York and most of them are larger than this implement (Ottaway and Rogers 2002, 2723).

A small assemblage of copper alloy sewing pins with wound wire heads (48, 200-2, 210 and 212) were retrieved from five separate contexts. Most of them are complete and they can be identified to type. They have been recovered in large numbers from sites in York and extend in date from the 13th century to the 16th century (Ottaway and Rogers 2002, 2915-6).

Household Equipment

Items that can be associated with the household include both structural materials and possessions. The former are represented here by a copper alloy ring and an iron wall hook, whilst the latter consists of a fragment of a stone mortar.

A small copper alloy ring (SF44) has an uneven circumference, probably the consequence of considerable use. It retains organic material in one area, which has been identified as textile. This suggests that it may either have been worn on a textile belt as a simple suspension device, or it was used to suspend textiles (and drapes in particular) within a medieval household, as suggested for London (Egan 1998, 62).

A small iron wall hook (SF108) is rectangular in section and tapers to a point. It has fractured at the junction with its lower shank, which originally projected beyond the curve of the hook and would have allowed it to be hammered into a wall (Ottaway and Rogers 2002, 2836).

A fragmentary iron auger or spoon bit (SF175) lacks the upper part of its tang. It could be of medieval date and can be compared with similar objects from York from that period (Ottaway and Rogers 2002, 2756-7); it came from a medieval context, C19075.

The front part of a knife blade (SF171) can be identified as an example of Ottaway's type A (Ottaway 1992, 561-4). The type is not well-dated, unfortunately. It occurs in late Roman contexts and was extensively used from the later 6th century onwards. The latest examples are found in contexts of 13th century date, which is probably the more relevant date here, although this fragment was recovered from a post-medieval context. A second knife blade (SF182) lacks the front end and is not readily identifiable to type. A rectangular binding strip of iron (SF155) may have been associated with a chest and retains part of its hinge.

A fragment of a stone mortar (SF128) has been cut and shaped from Permian Lower Magnesian limestone, in common with most of the medieval mortars from York (Ottaway and Rogers 2002, 2800). It includes a flat rim, from which a simple lug with a runnel projects outwards. Tool marks are visible on the outer surface. Medieval mortars were produced locally for York from the 13th century onwards in a variety of shapes and sizes, usually with two lugs and two handles projecting from the rim. This mortar includes a solid lug, the lower part bevelled inwards with traces of a triangular projection at the base. The presence of lime mortar on the inner surface suggests that after it fractured and was no longer used, it was adapted as building material. Dunning (1977, 336-44) produced a useful typology of the stone mortars from Kings Lynn but it relies on the presence of the handles, as well as the lugs, and insufficient survives of this fragment to assign it to a specific type.

Literacy

A complete cast copper alloy stylus (SF42) represents a rare and unusual find, recovered from late alterations to the medieval friary (Context 3150, Set 1174, Phase 33). From the late medieval period onwards the common form of stylus was made from lathe-turned bone, with a metal point and, on occasion, embellishment with a silver collar or point (Riddler 1998; Egan 2005, 123). This stylus is of similar dimensions to the bone series and follows the same design, with a rounded knop at the apex. The shaft, however, is hexagonal in section. Late medieval to early post-medieval styli tend to be shorter than medieval examples, which are occasionally made of copper alloy, as with an example from Winchester (Biddle 1990, fig 211.2283).

Structural Ironwork

Just over 80 iron nails were recovered from contexts of medieval date. The majority of them have tapering shafts of square section and flat, or near-flat, discoidal heads. Complete shafts vary in length from 48mm to 85mm, a similar range to that established for plated nails from medieval contexts elsewhere in York (Ottaway and Rogers 2002, 2828). They would have been hammered into thicker segments of wood than the clench bolts from the site, which are described below, although in one case (SF93) the shaft of a nail had been bent over after passing through wood 21mm in thickness.

Eighteen iron clench bolts were found in ten separate contexts of medieval date; one example was unstratified. A small number of clench bolts were also found in Roman contexts. Post-Roman clench bolts consist of a shaft, usually of square or circular section, cast integrally with a discoidal head at one end, with a lozengiform rove added to the opposite end and secured by clenching the shaft. Brooks has suggested that early and Middle Anglo-Saxon clench bolts tend to have circular shafts, whilst those of late Saxon date are square (Brooks 2007, 9). The shafts of clench bolts from Coppergate at York were rectangular or rounded rectangular in section, and where the shafts could be examined for the Guildhall assemblage they are square to rectangular in section, suggesting that medieval examples have shafts of a similar section to those of late Saxon date (Ottaway 1992, 615).

The clench bolts from the Guildhall vary in overall length from 53mm to 63.5mm and clenched either one or two pieces of wood between 31mm and 39mm in thickness. Most of the Late Saxon clench bolts from Coppergate in York were 27mm to 45mm in length and the medieval examples appear to have been more substantial than these earlier examples. This is reflected also in the spacing between the head and the rove, which was 26mm to 36mm at Coppergate but 31mm to 39mm here (Ottaway 1992, 616). The range was wider, at 20mm to 50mm for clench bolts from Fishergate, some of which came from Middle Saxon contexts, whilst others were Late Saxon (Rogers 1993, 1410-2). For early Anglo-Saxon clench bolts recovered from burials, which may represent fragments of boats, the spacing is narrower still, at 22mm to 25mm (Brooks 2007, 10). The wider spacing seen here strongly suggests that timbers were clenched in a simple constructional technique and there is no obvious connection with re-used boat timbers. A similar argument has been made for the extensive collection of clench bolts from medieval Townwall Street at Dover, where over 300 clench bolts secured wood between 15mm and 44mm in thickness. A series of clench bolts appeared to have been utilised there on a porch at the front of one structure (Riddler 2006, 309).

Clench bolts are familiar, in particular from Sutton Hoo Mound 1, where they formed practically all that remained of the ship in that burial, but they are also present in contemporary and later settlements. Brooks (2007) has argued that clench bolts found in early Anglo-Saxon graves represent parts of boats, buried either to contain the deceased or as grave goods in their own right. Those from the contemporary settlement site at Yeavering clenched two thicknesses of wood, up to 45mm and around 70mm (Hope-Taylor 1977, 193). Thus, in terms of the Guildhall and Anglo-Saxon and medieval York, there is no particular requirement to view them either as stemming from sections of boats, or as showing any Scandinavian influence. They have been found in both Middle and Late Saxon contexts in York, where it was noted that their principal use lay in securing overlapping timbers together (Ottaway 1992, 615-8).

8.12.4 Roman Frit Objects

By H.E.M. Cool

Frit melon beads were a very common artefact type being made and used in quantity in the 1st century to mid-2nd centuries. They were especially popular on military sites where they are frequently found in large numbers. They are regular finds on sites excavated in York (see for example Cool *et al*. 1995, 1661 nos. 6254-9, 1669 nos. 6472-9, 1672 no. 6524). The recovery of two from the Guildhall excavations is thus to be expected. The complete example SF21 had

clearly seen considerable use before it was incorporated into levelling deposit C3092 below the late 2nd-early 3rd century Phase 10 clay floor in Trench 2 (Table 56).

8.12.5 Roman Vessel Glass

By H.E.M. Cool

The excavations on the site produced a small assemblage of Roman vessel glass weighing 122g. Of this just under half (54g) was found residually. The range of forms that can be identified belong to the 1st to 2nd centuries and to the 4th century. Diagnostic forms of the later 2nd and 3rd centuries, which are normally common on sites in York, are absent. As the assemblage is so small, this is probably not significant, though the virtual absence of colourless glass amongst body fragments tells the same story. They accounted for less than 1g of the total weight as opposed to the 112g of blue/green glass (Table 57).

One find (SF16) is of especial interest. It is mould blown and hitherto the range of mould blown glass in use from the Claudian to Flavian periods (Price 1991) has been a rare find in York. Ribbed cups of the earlier part of the production are known from Blake Street (Cool *et al*. 1995, 1651 no. 5894, fig. 736) and St Mary's Abbey (Cool 1998, 304, no. 4, fig. 2). A fragment from a Flavian beaker retaining part of a meander pattern came from the excavations at the Minster (Price 1995, 355 no. 13, fig. 142). There are also two items in the Yorkshire Museum which are without provenance but which are probably antiquarian finds from within the city. One is a fragment from a chariot cup, a form commonest in the Neronian period, and the other is a fragment from a Flavian almond knob beaker (Harden 1962, 136 fig. 88 nos. HG 273 and a). The scarcity of mould blown glass from York has always been a slightly unusual phenomenon given its occupation date, so the recovery of SF16 is a useful addition to the *corpus* known.

The fragments were found in a build-up layer associated with the late second century demolition of Phase 12 where they were clearly residual. The very small size makes reconstruction of the pattern difficult, especially as they clearly do not come from one of the commoner patterns of mould blown glass. Both have small narrow pellets resembling rice grains. They are smaller than the oval bosses seen on almond knob beakers and were clearly not regularly set out in quincunx as is the custom on those vessels. Trios of similar pellets set out in a radiating pattern were present on a cylindrical beaker from Kingsholm, Gloucester (Price and Cool 1985, 46 no. 16, fig. 18). That beaker is unusual within the *corpus* of first century mould blown vessels but seems to fall within the broader family of conical beakers that includes the almond knob variety. Some of those combine meander, boss, pelta and other designs (see for example Price 1991, Pls. XVIII b-c, XIX c-d). The fragment from the Guildhall excavations would have come from a beaker of this sort. The juxtaposition of motifs of different shapes would allow for the range of differently-shaped motifs hinted at by the broken edges on the fragments that make up SF16. If this is correct then the beaker they came from would have been made during the late Neronian and Flavian period and would probably have been in use originally in the later 1st century.

The other fragments call for little detailed comment as they are all common forms that have frequently been found in York before. All, for example, can be paralleled within the large assemblage from 9, Blake Street (Cool *et al*. 1995, 1559-88).

The earliest fragment is the deep blue base fragment (SF13). It would have come from either a jug or jar belonging to the range which was very common from the mid-1st to mid-2nd centuries (Isings Forms 52, 55 and 67c; Price and Cottam 1998, 137-8, 150-57). In the case of SF13, the strong colour points to a 1st century date. The other fragments which are probably from the same range of vessels (SF11 and SF259) cannot be closely dated within the overall date range.

Square and prismatic bottle fragments dominate the assemblage by weight (73g) as they normally do for any 1st to 3rd century assemblage (Isings Form 50; Price and Cottam 1998, 194-200). The rim fragment SF17 would have come from a bottle of this type. The rest of the bottle assemblage consists of body fragments, and neither the rim nor the body fragments can be more closely dated within the later 1st to 3rd century period.

Fourth century glass is represented by SF254 and SF255 and one other body fragment. All were found residually. Hemispherical cups like SF254 and conical beakers like SF255 were the commonest vessels forms in use at that time (Isings Forms 96 and 106; Price and Cottam 1998, 117-23).

The base ring fragment SF17 is of some interest as the side has been deliberately grozed, so this vessel would have had a second life as a disc after it was broken. The colour indicates that the vessel would have been made during the 1st to 3rd centuries. Making glass bases into discs was a common form of re-use within the Roman period so, though it was found in a Phase 24 levelling deposit of 13th-14th century, the modification had probably been made much earlier.

8.12.6 Roman Window Glass

By H.E.M. Cool

Both of the Roman window glass fragments were found residually in C19034. They are of the type conventionally known as cast matt/glossy which was the dominant type in use during the first to third centuries (Table 58).

8.13 The Coins

By Steve Malone

The Roman coins are common site finds for Roman sites in Britain. All were residual in medieval and later contexts (Table 59). The Nuremburg jettons are likewise relatively common finds, here in 16th century demolition and post-medieval deposits.

The silver penny of William I is less common, this example minted by the moneyer Wilfred at the mint at Canterbury in 1080–83 (Plate 75). Recovered from the primary fill of mid-13th to mid-14th century refuse pit, context C3029, it is also clearly residual.

8.14 The Worked Stone

By Lindsay Banfield

8.14.1 Introduction

In total, six worked stone objects were recovered from the Guildhall site. Of these, five can be categorised as hone stones, with one spindle whorl. All objects were well-preserved.

8.14.2 Methodology

Each worked stone object was examined using a hand lens with 20x magnification and tested for the presence of carbonates using dilute hydrochloric acid. Geological descriptions for each stone object were produced based on these observations and identifications given where possible. Measurements relevant to the use and wear of the stone objects were taken and each item was subsequently weighed. The hones were described and categorised using the methodology applied in Allen's (2014) study of the hones from Silchester, and Banfield's (forthcoming) analysis of the hones from Roman London. The spindle whorl has been described and classified using the methods outlined by Alberti (2017).

8.14.3 Results

The hones

SF233, (C19178) - A portable bar-shaped hone of pale grey fine-grained slightly micaceous laminated sandstone with calcite cement. Identified macroscopically as possible Weald Clay Formation Sandstone. There is no remaining evidence that the hone was manufactured, though the surviving dimensions correlate with the size of Roman period manufactured bar-shaped hones. The two sides and the upper surface are smooth, while the lower surface has broken off along the bedding plane. Both ends of the stone are also broken, and these are irregularly shaped. The stone measures 62mm in length, 29mm in width, 11mm in thickness and weighs 45g. The upper surface of the stone is slightly concave, giving an indication of wear.

SF116, (C3142) - A portable bar-shaped hone comprised of a quartz mica schist, identified as Norwegian Ragstone. The stone measures 35mm in length, 38mm in width, 17mm in thickness, and weighs 49g. The sides and the upper surface of the hone are intact, while part of the lower surface has split and broken off. Both ends have also been broken. The smoothed sides and upper surface show signs of wear.

SF230, (C8072) - A semi-portable block-shaped hone comprised of pale grey fine-grained slightly micaceous laminated sandstone. The stone appears to have been roughly shaped with some possible evidence that chiselling was used. However, subsequent wear on the surfaces has removed any means of confirming the presence of tool marks. The stone measures 120mm in length, 43mm in width, 36mm in thickness and weighs 372g. Both ends are broken and irregular, with one end being slightly smoothed from wear. The side edges are roughly shaped, also with some smoothing, while both upper and lower surfaces showing the most significant signs of wear. The thickness of the stone narrows towards one end and was likely used more prominently in this area.

SF234, (C19197) - A portable bar-shaped hone of medium-grained laminated ferruginous quartz sandstone with occasional mica and silica cement. The dimensions of the stone suggest that it could be a reused floor or roof tile re-shaped from its original tabular form. The stone is 91.6mm long, 25mm wide and 25mm thick. It weighs 114g. The sides and ends of the stone are irregularly

shaped with some signs of smooth wear on each of the ends. The lower surface of the stone is uneven, with a very flat and smooth upper surface.

SF232, (C19070) - A portable rod-shaped hone that may have originally been a bar shape and worn into a more rounded shape. The sides are all convex, but there is a sub-square profile to the shape that does not correspond fully with the fully rounded profile of a rod-shaped hone. The stone is formed from a fine-grained grey-brown laminated glauconitic sandstone with occasional mica and carbonate cement. The stone has been identified macroscopically as probable Weald Clay Formation Sandstone. The stone is 96mm long, 29mm wide, 30mm thick and weighs 189.3g.

The spindle whorl

SF231, (C19004) - A domed spindle whorl made from a pale grey fine-grained carbonate sandstone. The exterior surface if the whorl has been worked to produce a very smooth rounded surface. The thickness of the object is 22mm, while the diameter at the widest point is 31mm. The central hole appears to have been drilled/worked from both sides and is 11mm in diameter. One side of the whorl is domed and rounded, while the other side is flattened. The flattened side has been worn smooth. The whorl weighs 21.4g.

8.14.4 Discussion

The worked stone assemblage from the site at Guildhall provides some insight into the possible craft and domestic activities that may have taken place there over the period of its occupation. The hone assemblage comprises three bar, one block, and one rod-shaped hone. The latter may have begun life as a bar-shaped hone and become rounded through wear as it does not resemble those deliberately fashioned to be of this form (see examples in Thiébaux, *et al*. 2016, 576-9). A range of different stone types were present across the hone group, with one sandstone being of a considerably coarser grain than the others. The variety in form and fabric across the assemblage suggests that different sharpening activities took place at the site and that these may have involved different types of blades. The block-shaped hone could be indicative of craft activity related to metal working, while the fine-grained sandstone hones and the Norwegian Ragstone may have been used for a variety of purposes, including domestic everyday sharpening.

Hone stones are difficult to date, though the stone type used to make them can sometimes be indicative of their first date of use if exploitation of specific stone types is known to have commenced/peaked during a certain period. However, as potentially long-lived objects, a wide date range is probable, while building stone or other stone objects reused for sharpening can further complicate dating attempts. The Guildhall assemblage has yielded one identifiable stone type, with two other probable identifications. The hone identified as Norwegian Ragstone (SF116) can be dated to the medieval period or later as this stone type is not known to exist in British contexts predating this period. Both SF233 and 232 have been identified macroscopically as probable Weald Clay Formation Sandstone. This was a common stone type used to manufacture predominantly bar-shaped hones during the Roman period (Allen 2014; 2017). Hones made from this stone type were very popular in the Roman period and were widely distributed. Analysis of the hones from Roman London suggests that the Weald Clay Formation Sandstone hones are likely to have been redistributed from London, and possibly even manufactured there (Banfield, forthcoming). Examples have also been identified from Roman

period Belgic-Gaul, indicating that these were exported as utilitarian stone objects (Reniere *et al.* 2016). It is not surprising to find this hone type in York as the city would have been well-connected to London via multiple exchange routes. Further to this, the Roman population of York would have experienced similar issues to their counterparts in London, in that there was a dearth of locally available stone sources that could be used for sharpening or processing activities (Pearson 2006, 120-8).

This lack of local stone sources for sharpening is also a factor in the presence of a possible reused floor or roof tile as a hone (234). The occurrence of stone being reused for processing or sharpening activities is very common in areas where a lack of suitable stone was an issue. The Roman period hone assemblages from London (Banfield forthcoming) and Silchester (Allen 2014) have shown the scale of this reuse in the Roman period, but such reuse continued throughout other periods and is common in urban contexts.

The spindle whorl is also an indicator of craft or domestic activity being carried out at the site. It is difficult to date spindle whorls, as a wide variety of materials and forms are known, and none are specific to a particular period. Whorls made of stone were common in the Iron Age, but in the Roman period they occur less frequently than the ceramic versions that appear to have been more popular. In the medieval and later periods, stone whorls occur synonymously with those of other material types. The diameter of the perforation is large when compared to most Roman and Iron Age examples, as these tend to measure in the range of c. 4-8mm. Although this is not definitive, larger perforations tend to manifest on examples dating to the early medieval period onwards (Walton Rogers 2007, 23-4). The use of sandstone for SF231 is common for stone whorls, as it is a material that is relatively light in weight compared with other stone types. The weight is important when it comes to spinning as this helps give the spindle momentum in the twisting, or spinning, of fibres into yarn. With a weight of 21g, it is likely that this whorl was used to spin wool or another moderately heavy material (Margeson 1993, 184).

8.14.5 Conclusion

Overall, the worked stone assemblage from Guildhall provides an interesting view of the possible craft activities that took place there. Whetting, honing and spinning may have occurred at the site or close by, though the portability of all the stone objects means that deposition and redeposition away from craft activity areas is likely. The hones are of varying coarseness and the presence of a block-shaped example suggests that sharpening may have included a more varied range of blades and stages of sharpening than might be expected from everyday domestic activities. However, there is little evidence to suggest commercial or large-scale craft pursuits. The reuse of a possible stone tile as a hone is a regular occurrence in urban contexts and shows how disused building material could be strategically exploited to broach the deficit in suitable local stone sources. Few of the objects can be precisely dated and the period of their primary use cannot be identified. A hone from a stone source that is known to have been exploited solely in the Roman period has been tentatively identified (SF233), while hone SF116 would have been used from the medieval period onwards. The spindle whorl is likely to date from the early medieval period onwards.

8.15 The Bulk Environmental Samples (First Phase of Excavation)

By Stacey Adams

Plant Macrofossils and Charcoal

8.15.1 Introduction

Following the assessment of 23 bulk environmental samples and 28 sub-samples from boreholes from York Guildhall (Adams 2021) a number were selected for analysis of the charred, mineralised and waterlogged plant macrofossils and wood charcoal. The material derives from Roman and medieval activity from a range of pits and dumps and varying depths of three boreholes. The following report discusses the preservation of the charred, mineralised and waterlogged plant macrofossils and wood charcoal and their ability to inform on the diet, arable economy and local environment of the site as well as fuel selection and use.

8.15.2 Methodology

The bulk environmental samples, ranging from 0.2 to 40L in volume, were processed by flotation using a 500µm mesh for the heavy residue and a 250µm mesh for the retention of the flot before being air dried. The flots of samples recognised as waterlogged during flotation were retained wet. The flots were sorted under a stereozoom microscope at 7-45x magnifications. Identification of the charred, mineralised and waterlogged plant remains was based on observations of gross morphology and surface cell structure and, where necessary, relevant reference manuals (Cappers *et al.* 2006; Jacomet 2006) were consulted. Quantification was based on minimum number of individuals and nomenclature follows Stace (1997) for wild plants and Zohary and Hopf (1994) for cereals. Results for the charred and mineralised plant macrofossil analysis are recorded in Table 60 and waterlogged in Table 61.

The charcoal fragments were sectioned by hand along three planes (transverse, radial and tangential) according to standardised procedures (Gale and Cutler 2000; Hather 2000). Specimens were viewed under a stereozoom microscope for initial grouping and an incident light microscope at magnifications up to 500x was used to further identify the charcoal. Taxonomic identifications were assigned by comparing suites of anatomical characteristics visible with those documented in reference atlases (Schoch *et al*. 2004; Hather 2000; Schweingruber 1990). One hundred fragments were identified from each sample based on the minimum number of fragments principle for temperate regions proposed by Asouti & Austin (2005). Quantification and taxonomic identifications of charcoal are recorded in Table 62 and nomenclature follows Stace (1997).

8.15.3 Results

Charred Plant Macrofossils: Late 11th to Early 13th Century

The charred plant macrofossils were frequent in the late 11th to early 13th century deposits with good preservation in pit C19095 and moderate in dump C19136. Pit C19095 predominately contained cereal caryopses whilst dump C19136 contained similar quantities of cereals and weed seeds. The cereals caryopses in pit C19095 were largely of hulled barley (*Hordeum vulgare*) accompanied by small quantities of oat (*Avena* sp.) and a single rye (*Secale cereale*) caryopsis whilst dump C19136 was predominantly of oat followed by hulled barley then wheat (*Triticum* sp.). The late 12th to early 13th century pit fill C19075 contained abundant plant

macrofossils mostly of hulled barley caryopses, 7% of which had germinated. Oat accompanied the barley along with one or two wheat and rye caryopses.

Charred hazelnut (*Corylus avellana*) shell fragments were identified within all the analysed features at Guildhall along with fruits of common plum (*Prunus domestica*) and hawthorn (*Crataegus monogyna*) in dump C19136. A potential cultivar of cabbage/ mustard (*Brassica/ Sinapis*) was recorded in the dump whilst pit fill C19075 contained a cultivated sweetpea/ pea (*Lathyrus/ Pisum*) seed.

Weed seeds were occasional within the flots from the analysed Guildhall samples and consisted of wild grasses (Poaceae), including bromes (*Bromus* sp.) and fescues (*Festuca* sp.), and legumes (Fabaceae) including vetches (*Vicia* sp.). Weeds associated with sandy acidic soils were present in the form of sheep's sorrel (*Rumex acetosella*), corn spurrey (*Spergula arvensis*) and knotgrass (*Polygonum aviculare*). A number of plant taxa associated with damp or wet conditions were identified: pale persicaria (*Persicaria lapathifolia*), curled dock (*Rumex crispus*) and sedges (*Carex* spp.), including glacous sedge (*Carex flacca*). Meadow buttercup (*Ranunculus acris*) and common spike-rush (*Eleocharis palustris*) are also indicative of wet conditions and are associated with seasonal flooding or waterlogging of arable land.

Mineralised Plant Macrofossils: 2nd Century, Late 2nd to Early 3rd Century and Late 11th to Early 13th Century

Mineralised plant macrofossils were identified in a small number of samples from Guildhall. Mineralisation is the replacement of biological tissue with calcium phosphate and is generally biased towards preserving the soft tissue of fruits and herbs (Carruthers and Smith 2020). Roman dumps C19151 and C19201 both contained mineralised bristle-club rush (*Isolepis setacea*) seeds. Dump C19151 also contained mineralised flax (*Linum usitatissimum*) and fruit seeds of elder (*Sambucus nigra*), apple/ pear (Malus/ Pyrus) and an indeterminate fruit. Mineralised wild taxa of common-spike rush and bristle club-rush (*Eleocharis palustris*) were also identified within the deposit. The 2nd century Roman dump C19201 contained mineralised wild taxa of spike-rushes (*Eleocharis* sp.), bristle club-rush and dioecious sedge (*Carex dioica*). Mineralised plant macrofossils were recorded in the medieval deposits and consisted of an indeterminate cereal caryopsis and wild seed in pit fill C19075. Late 11th to early 13th century dump C19136 contained a number of apple/ pear seeds along with elder and black mustard (*Brassica nigra*) as well as wild taxa of common hemp-nettle (*Galeopsis tetrahit*), spike-rushes, including common spike-rush, bristle club-rush and a wild grass caryopsis.

Waterlogged Plant Macrofossils: 11th to 13th Century and 16th to 17th Century

Waterlogged plant macrofossils were identified in the samples from boreholes BH2, BH3 and BH4 with preservation ranging from moderate to good. There was little discrepancy between the taxa identified within the varying 11th to 13th century boreholes and the 16th to 17th century borehole sample suggesting similar activity and environments.

Edible fruits were identified in all the boreholes of elder (*Sambucus nigra*) and bramble (*Rubus fruticosas*). Strawberry (*Fragaria vesca*) seeds were present in context C9622 in borehole BH2 and a common plum (*Prunus domestica*) drupe in context C9634 in borehole BH3. Exotic fig (*Ficus carica*) was recorded in all fills of borehole BH2 and contexts C9632 and C9631 in borehole BH3. Economic taxa identified at Guildhall also included edible fruits, nuts and herbs. Hazelnut shell fragments were present in the majority of the borehole samples, except context C9632 in

borehole BH3 and context C9642 in borehole BH4. Turnip (*Brassica rapa*) seeds were similarly common and only not recorded in contexts C9632, C9628 and C9634 in borehole BH3. Herbs of dill (*Anethum graveolens*), in context C9633, and onion (*Allium* sp.), in context C9634 were present in borehole BH3 along with carrot (*Daucus carota*) in context C9628. The oil/ fibre plant of flax (*Linum usitatissimum*) was recorded in context C9634of borehole BH3.

Wild plant macrofossils associated with arable/ ruderal ground were the most common amongst the waterlogged assemblage and included lesser stitchwort (*Stellaria graminae*), corn spurrey (*Spergula arvensis*), corncockle (*Agrostemma githago*), black-bindweed (*Fallopia convolvulus*), violets (*Viola* sp.), cinquefoils (*Potentilla* sp.), agrimony (*Agrimonia eupatoria*), fool's parsley (*Aethusa cynapium*), red hemp-nettle (*Galeopsis angustifolia*), common hemp-nettle (*Galeopsis tetrahit*), bellflower (*Campanula* sp.), narrow-fruited cornsalad (*Valerianella dentata*), lesser burdock (*Arctium minus*), lamb's succory (*Arnoseris minima*), smooth sow-thistle (*Sonchus oleraceus*), rough hawk's-beard (*Crepis biennis*), cornflower (*Centaurea cyanus*), ploughman's-spineyard (*Inula conyzae*), stinking mayweed (*Anthemis cotula*), corn chamomile (*Anthemis arvensis*) and corn marigold (*Chrysanthemum segetum*). Wild plants associated with wet or waterlogged environs were present in significant numbers in the borehole BH3 contexts including meadow buttercup (*Ranunculus acris*), waterblinks (*Montia fontana*), pale persicaria (*Persicaria lapathifolia*), knotgrass (*Polygonum aviculare*), common sorrel (*Rumex acetosa*), curled dock (*Rumex crispus*), gypsywort (*Lycopus europaeus*), common marsh-bedstraw (*Galium palustre*), water-plantain (*Alisma plantago-aquatica*) and sedges (*Carex* spp.), includingdioecious sedge (*Carex dioica*), hairy sedge (*Carex hirta*), glaucous sedge (*Carex flacca*), club sedge (*Carex buxbaumii*) and distant sedge-type (*Carex distans*-type). Wet-loving taxa were infrequent within context C9642 in borehole BH4. Woodland taxa was present in all the borehole BH3 samples consisting of small nettle (*Urtica urens*), red campion (*Silene dioica*), bittersweet (*Solanum dulcamara*) and grey sedge (*Carex divulsa*).

A number of the wild taxa identified within the borehole samples from Guildhall have useful traits that may have been exploited by the population. The leaves of common mallow (*Malva sylvestris*), common nettle (*Urtica dioica*), fat hen (*Chenopodium album*), common chickweed (*Stellaria media*), bladder campion (*Silene vulgaris*) and white dead-nettle (*Lamium album*) are all edible and can be consumed as a salad leaf or cooked like that of spinach (Mabey 1972, 90-2, 94, 100; Dickson 1987; Svanberg 2012, 320). The seeds of opium poppy (Papaver somniferum) are also edible and the plant has medicinal properties for pain relief (Zohary and Hopf 1994, 128). Henbane (*Hyoscyamus niger*) and selfheal (*Prunella vulgaris*) were also used as medicine in the past, the former for an anesthetic and the latter as an anti-inflammatory (Monckton 2000, 3; Salisbury 1961, 219). Common chickweed, fat hen, small nettle and black horehound (*Ballota nigra*) are indicative of nitrophilous soils and the presence of high organic content (Carruthers 1995, 6; Salisbury 1961, 294; Robinson and Griffiths 2008, 64).

Charcoal: 1st to 2nd Century, 2nd to 3rd Century and Late 12th to Early 13th Century

The charcoal from Guildhall was mostly excellently preserved with the majority of the fragments identifiable to genus or species-level. The charcoal in Late 2nd to 3rd century dump C19124 was less well-preserved with a number of the fragments distorted, thereby making identification difficult. Distortion was present in the form of radial cracks and vitrification as well as general distortion caused by thermal degradation during the charring process. Radial cracks were common within the fragments, appearing as blown-up ray cells causing cracks of missing or

exploded tissue and possibly reflecting the burning of fresh wood (Fiorentino and D'Oronzo 2010). Vitrification gives the charcoal a glassy appearance and is often attributed to high temperatures and prolonged burning times (Gale and Cutler 2000; Prior and Alvin 1983), although recent experiments claim that it is not induced by such factors and that the cause is still unknown (McParland *et al*. 2010). A small number of fragments were affected by post-depositional sediment likely associated with fluctuations in the water table during burial.

Oak (*Quercus* sp.) was the dominant taxon in all the analysed features, predominately deriving from large branch or trunk wood. It is this taxa that was mostly affected by radial cracks. Alder (*Alnus* sp.) and hazel were frequent within the 1st to 3rd century charcoal assemblages as well as that of the late 12th to early 13th century, as was wood of the apple sub-family (Maloideae). The apple sub-family includes the taxa of apple, pear, hawthorn, whitebeam and rowan. Poplar/ willow (*Populus/ Salix*) was present in late 2nd to 3rd century build-ups C19151 and C19162 and late 12th to early 13th century pit C19075. Ash (*Fraxinus excelsior*) and plum-type (*Prunus* sp.) charcoal was recorded in 1st to 2nd century dump C19201 as well as a small number of the 2nd to 3rd century features. Birch (*Betula* sp.) was identified in build-ups C19191 and C19162 whilst field maple was present in dump C19124, build-up C19151 and late 12th to early 13th century pit C19075 and elm (*Ulmus* sp.) was present in dump C19140. Coniferous wood of Scot's pine (*Pinus sylvestris*) and yew (*Taxus baccata*) were recorded in build-up C19176 with Scot's pine also present in dump C19140. The majority of the wood at Guildhall derived from large branch or trunk with less than 3% of the assemblage belonging to that of small branch or twig wood.

8.15.4 Discussion and Interpretation

Charred and Mineralised Plant Macrofossils

The mineralised plant macrofossils from the 2nd to the early 3rd century indicate that flax was potentially cultivated as an oil or fibre crop. Fruits of common plum, apple/ pear, hawthorn and elder likely formed part of the Roman diet in *Eboracum* with that of common plum and apple/ pear potentially cultivated in orchards as horticulture was well-established in this period (Van der Veen *et al.* 2007, 204). The remaining mineralised 2nd to early 3rd century plant macrofossils were indicative of wet/ waterlogged environs and would have been freely growing on the banks of the River Ouse.

The charred plant macrofossils from the late 11th to early 13th century features indicate that hulled barley was the preferred crop at the site with oat possibly cultivated alongside the cereal as a 'dredge' crop (Banham and Faith 2014: 35). Oat and barley were often cultivated as fodder crops in medieval England (Giorgi 2006, 128; Pelling 2011, 150). The sporadic wheat and rye caryopses were probably contaminants of the main mixed crop. Edible fruits and nuts appear to have formed part of the diet at Guildhall with elder and hazelnut likely collected from the wild. The apple/ pear may have been grown in local orchards whilst herbs and vegetables of cabbage/ mustard and black mustard are likely to have been cultivated in gardens. The weed assemblage indicates that the arable fields were potentially seasonally waterlogged with the presence of sedges, meadow buttercup and mineralised common spike-rush (Pelling 2000, 326) with the latter suggesting cultivation on damp meadows (Carruthers 2004, 113), probably along the banks of the River Ouse. Corn spurrey, sheep's sorrel and knotgrass are associated with the cultivation of poor sandy acidic soils (Carruthers 2002, 203; Giorgi 2006, 128) whilst fat hen is

indicative of nitrophilous soils and may indicate the addition of organic material to this poor soil in the form of manure (Streeter *et al.* 2009, 34; Stace 1997, 140).

Waterlogged Plant Macrofossils

The waterlogged assemblage suggests the edible fruits of strawberry and common plum were likely to have been cultivated in gardens or orchards whilst bramble, elder and hazelnut would have been collected from the wild (Greig 1996, 215). Turnip, dill, carrot and onion would have been grown as a garden crop (Harvey 1981, 89; Livarda and Van der Veen 2008) to add flavour and to bulk out the cereal diet. Flax and opium poppy were potentially cultivated for their oil properties with flax also possessing fibre properties and opium poppy medicinal qualities (Zohary and Hopf 2000). Fig would have been imported as an exotic foodstuff as it was widely brought over from the continent in the medieval period (Moffett 1991, 14; Parkinson, 1656). Fig was similarly identified at Coppergate (Carrott *et al*. 1996) and St. Saviourgate (Carrott *et al*. 1998).

The environment signified by the waterlogged assemblage suggests ruderal grassland on wet or seasonally waterlogged ground with high organic content indicated by common chickweed, fat hen, black horehound and small nettle (Streeter *et al*. 2009, 34; Stevens 2015, 197; Robinson and Griffiths 2008, 64). A number of the wild plants are edible and may have been consumed alongside the fruits, nuts, herbs and cereals at Guildhall. The leaves of common mallow, common nettle, fat hen, common chickweed, bladder campion and white hemp-nettle were cooked similar to spinach whilst the seeds of fat hen and opium poppy were often added to bread for texture and flavour (Zohary and Hopf 1994, 128; Stokes and Rowley-Conwy 2002, 97; Mabey 1972, 90-2; Svanberg 2012, 320). Similar wet and shrubby grassland taxa were identified directly across the river at North Street (Adams 2022), albeit with the absence of economic and edible taxa. This suggests similar environs on either side of the river but with Guildhall evidencing the local human diet and economic crops.

Charcoal

The charcoal, mostly deriving from Roman contexts, was predominately of oak and would have been harvested for its ability to burn for a long time and its high burning temperatures (Austin 2003, 99). Oak is easily subjected to woodland management techniques of coppicing and pollarding (Rodwell 1991; Polunin and Walters, 1985) and would have provided a steady supply of fuel and timber wood at Guildhall. Coniferous wood of Scot's pine and yew were rare within the assemblage, although they burn well the wood may have been reserved for timber and woodworking (Uzquiano *et al*. 2015, 230; Gale and Cutler 2000; Ratcliffe 1984, 84). Wood of birch, alder, hazel, ash, plum-type and the apple sub-family, all provide excellent fuelwood (Taylor 1981) and were likely to have been opportunistically collected and added to the oak assemblage as additional firewood. The inclusion of poor fuelwoods of field maple and elm (Austin 2003, 99; Edlin 1949) support that the additional taxa was randomly collected rather than deliberately harvested. Roundwood, from small branches or twigs, formed less than 3% of the assemblage suggesting that the fuel derived from large branch or trunk wood. Contemporary Roman charcoal of oak, hazel, field maple and ash was identified nearby at Aldwark (Adams 2022a) indicating a similar, yet less varied, fuelwood exploitation across the city. No distinctions can be made across the Roman charcoal assemblage due to the similarity

of the deposits across the occupation. The same is true of the late 12th to early 13th century pit C19075 where oak dominated and was accompanied by several other taxa.

The charcoal assemblage indicates the exploitation of a managed yet shrubby oak woodland for fuelwood with the wood of hazel, plum-type and the apple sub-family growing alongside the pollarded or coppiced oak. Elm, field maple, ash and birch are light-loving trees and would have derived from more open landscapes (Pelling 2012; Austin 2003, 101; Rodwell 1991; Polunin and Walters 1985; Taylor 1981, 46) whilst poplar/ willow and alder are endemic to wet environs (Taylor 1981, 45, 54; Pelling 2012) and would have thrived along the banks of the River Ouse and its tributaries.

8.15.5 Conclusion

The Roman occupation at Guildhall sees the consumption of wild or horticulture fruits of common plum, apple/ pear, hawthorn and elder as well as the fibre/ oil crop of flax. The environment is largely waterlogged marshy ground indicated by wild taxa. Oak was the predominant fuelwood during the Roman occupation accompanied by taxa from shrubby wooded, open and riverine environs. The exploitation of fuelwood is similar across *Eboracum* and during the late 12th and early 13th century at Guildhall.

The medieval occupation of the site relies on a 'dredge' hulled barley and oat crop, likely for use as fodder that would have been cultivated on poor sandy acidic soils potentially improved by manuring. The local environmental was of shrubby ruderal grassland that was waterlogged or seasonally flooded by the River Ouse and this is echoed at North Street across the river. The medieval diet consisted of wild and cultivated fruits, nuts and herbs as well as the collection/ cultivation of potential 'wild' plants for green vegetables and calorific seeds. Flax and opium poppy were potentially cultivated for their oil, fibre or medicinal properties and fig would have been imported from the mainland suggesting a relatively high status to the site.

8.16 Roman Period material Culture and Identity at York Guildhall

By Dr Lindsay Banfield

8.16.1 Site Context

York Guildhall is located on the northern bank of the Ouse and outside of the curtain wall that belonged to the Roman legionary fortress. Although standing evidence for the curtain wall no longer exists along the stretch parallel to the Ouse, its projected line and location can be estimated from the remains of the wall found elsewhere in the city and the multangular tower that still stands today in the York Museum Gardens (Ottoway, 1996). In the Roman period, the site of York Guildhall would, therefore, have stood directly adjacent to the Ouse on an approximately 80m wide spit of land that ran external to the legionary fortress defences. The northern bank of the Ouse and the central part of York exists on a plateau and is slightly more elevated than that of the southern bank, but it must still have experienced periodic flooding and the narrow strip of land in question is unlikely to have been naturally suitable for occupation. The macrobotanical evidence for the site supports this idea with the presence of wild plant species that thrive in wet or waterlogged conditions recovered from within 2nd century dumped material (Adams, Section 8.15).

The sequence of dumping at the site may relate to the disposal of waste material in an area that was considered unsuitable for habitation or may have been part of a proactive attempt at raising the ground level to make it more functionally useful and less inclined to flood. We know from Roman Southwark that large-scale operations took place in London to reclaim land from the Thames that would otherwise have been unusable for building (Hirst and Wright 2003). The presence of an unusually high volume of CBM of the R11 fabric at Guildhall suggests that large-scale dumping of hardcore from a single demolition event may have taken place, and there are some indicators that at least some of this material came from inside the fortress (McComish, Section 8.3). This suggests that the dumped material was carried to the site from elsewhere. No in-situ structures were recorded for any of the site phases, though the presence of 2nd century and later phases of clay flooring suggest that buildings may have been present. In a densely populated urban area, it is probable that all land would have been utilised. We know from excavations at nearby Coney Street, which was also on the same 80m wide spit of land between the Ouse and the curtain wall that a succession of timber-built riverside warehouses, used to store grain, were present in the late 1st and early 2nd century (Kenward and Williams 1979, 47 and 76-7).

The finds from the site, therefore, may concern the industrial and economic activity occurring along the riverbank and may have been deposited as part of accidental loss or deliberate discard associated with these activities. Bulk finds may relate to a sequence of construction and demolition of buildings connected to these riverside enterprises. Alternatively, mass dumping of demolition material may also have occurred at the site, possibly as a means of reclaiming land subject to frequent flooding, or to create level surfaces on which to build. The material may have been brought from further afield to serve this purpose and/or redeposited as part of land clearance operations in the city. The true answer is likely to be a combination of both scenarios, and these may have occurred differently in various phases of the site's history. Consequently, the exploration of material culture with regards to identity at the York Guildhall site is complicated by the lack of a specific socio-economic context. Nonetheless, the finds can be examined within the wider context of *Eboracum* and the people who lived there.

8.16.2 The movement of people and goods

Unlike many contemporary urban centres, *Eboracum* shows scant evidence for previous occupation prior to the Roman era, and probably saw population growth occurring significantly later than settlements already established prior to the conquest period. After the establishment of the legionary fort in AD 70/1, it is likely that the civilian settlement saw a steady growth in size and population to support the needs and wants of the 5,000+ troops garrisoned there. Aside from the troops, a significant number of civilians would have moved into the area with them as an entourage of wives, children and slaves, with traders drawn by the spending power of troops paid in coin. The people moving to the newly established fort and settlement brought with them their possessions, religions, traditions, daily practices, and world views. They also brought with them a need to buy, sell and/or exchange goods in order to exist within the new society and economy that they had created.

A requirement to supply the troops with what they needed to operate would also have been a priority, and *Eboracum* was probably well-connected to military supply routes at an early stage of its establishment, via both river and road. Roman military supplies are likely to have bypassed

the 'normal' models of economy, in that they potentially travelled long distances, and cost more than the goods were worth in a commercial context. Military and imperial authorities had prime access to what they required to fulfil their needs, and harbour taxes, administration fees, customs dues, the cost of 'safe passage' from *pax Romana* and tolls could all be avoided by the military and the political elite (Bang 2008, 202-38). The supply routes and the passage of military supplies were also exploited by those involved in commercial exchange, bringing goods to the growing population of *Eboracum* from all over Britain, sometimes 'piggybacking' with goods intended for military consumption. Added to this, the Ouse provided a navigable waterway by which bulky goods could be more easily transported to and from the east coast of Britain. From here, the North Sea connected *Eboracum* to the rest of the wider Roman Empire. The movement of goods and people into and out of Roman York was, therefore, an important and regular part of everyday life. This probably increased exponentially on the arrival of Septimus Severus and the imperial family around AD 208 (Hodgson 2014). For a short time, *Eboracum* became the heart of the Roman Empire, marking it as a highly important urban centre and a place where money was no object when it came to imperial priorities and the movement of people and goods to realise them.

The finds at York Guildhall can be used to explore the theme of movement by examining the provenance of objects recovered from the site. It is possible to look at the distance travelled by goods and the locations from which they came to see if any changes are visible in the data. As pottery was the most prolific find group from the site, is more easily dated, and is less likely to suffer from post-depositional degradation, it provides a good evidence type to examine in relation to this question. Although the source of the pottery has been discussed by Griffith (Section 8.1.8), presenting the data visually has the potential to provide new insight. Figure 36 has been created using the pottery data from site periods 2-5 for fragments that were neither residual nor intrusive. It presents the source location of each pottery group with the inclusion of both the weight and the sherd count.

The map for Period 2 (Phases 3 to 4, late 1st to 2nd century AD) shows that the bulk of the pottery deposited at the site was locally sourced, with smaller amounts coming to *Eboracum* from a cluster of locations in southern Gaul. Samian pottery from southern Gaul was already a well-established product in Britain prior to the settlement of *Eboracum*, and the ninth legion had been active in Gaul prior to the conquest of Britain. Therefore, the movement of goods to the fort and settlement from this part of the empire is expected, either via established exchange routes or through the movement of troops and people. The number of sources for pottery is low when compared to other periods, and also low when compared with other Romano-British military and urban assemblages. This indicates that the movement of goods and people into and out of *Eboracum* during this period was modest, as would be expected for a newly established settlement with a road network that may not have been fully completed. It is possible that items from Gaul were not reaching *Eboracum* directly, but that goods were brought in through the movement of people, and through exchange or military supply from already established economic centres in Britain.

By Period 3 (Phases 6 to 9, 2nd to early 3rd century AD), there was a vast difference in the connectivity of *Eboracum* with the wider empire. Although locally sourced pottery was still important, the range of sources was significantly higher than in Period 1. The distance between production and consumption location was also much higher, showing that goods and people

were travelling to *Eboracum* from all over the empire. A stronger connection between the north and the south of Britain is apparent, showing that movement and exchange with other parts of the province was successfully being carried out and that road networks connecting the city to other areas were enabling this. Although most of the pottery sources are from regions close to the coast (see Horden and Purcell, 2000 for why this might be the case), a single sherd of pottery from eastern Gaul shows that goods were being moved to the site from locations much further inland, which would have been a more complex undertaking. In terms of consumption, pottery from the Mediterranean region indicates that goods associated with imported styles of living were both necessary and accessible for the population of the settlement, while local wares and locally produced goods were also a key part of daily life.

A peak in the range of pottery sources occurs in Period 4 (Phases 10 to 13, mid- to late 2nd to early 3rd century AD). During this period, deposited pottery was from an increased range of British locations, with a significant volume of imported pottery from the wider empire too. Imports from several Mediterranean regions continued, with pot from Italy present in the assemblage for the first time. It is also possible to identify an increase in pottery from non-coastal sources, showing good connections between *Eboracum* and the central and eastern areas of Gaul. Consumption does not seem vastly different from Period 3 and this consistency indicates that *Eboracum* continued to be somewhere where imported lifestyles were experienced within a well-connected and economically successful trade hub. By Period 5, a significant contraction in pottery sources occurred, with pottery from Britain deposited in great volumes. Examples from the Mediterranean are represented by very few sherds, though a sustained presence at the site indicates a possible lower, but continued, level of exchange with these regions. This suggests that connectivity may have still existed, but that the demand for or access to goods from this region was lesser than in previous periods.

8.16.3 Food and culture

The pottery sources discussed in the previous section can also be used to explore the theme of food and culture, as can the pottery forms that were present at the site. Some forms were used to store food or drink and were transported, along with their contents, to other places for consumption. Similarly, specific pottery forms can be indicative of certain food or drink preparation, storage, or consumption activities. These can convey cultural or everyday practices associated with food and drink and are highly significant behaviours concerning socio-cultural identity (Cool 2006). Alongside the pottery, the macro-botanical assemblage and animal bone evidence provides insight into the types of food and drink consumed at *Eboracum*. These groups of evidence may have been created by the same groups of people and dumped at the Guildhall site at the same time, either as redeposited material or as rubbish build-up.

As shown by Griffiths (see Section 8.1), the Period 2 pottery assemblage recovered from the site was dominated by jars, flagons, bowls, and mortaria. There were significantly fewer examples of tableware present in Period 2 than in Periods 3 and 4. A change in the forms of pottery deposited between Periods 2 and 3 may represent changing relationships between the occupants of *Eboracum*, the food they consumed and how they consumed it, reflecting the changing identity of *Eboracum* as it developed from a newly established fortress in the 1st century AD into a thriving and well-connected urban centre with a diverse population. A significant contemporary change in the number of imported wares also suggests this. However,

it is possible that the pottery from the site was being dumped or redeposited from different parts of *Eboracum* and this has the potential to misrepresent the extent to which there was chronological change in pottery use, food preparation and consumption practices. Even if all the material recovered from Guildhall came from within the fortress and relates to military use, certain areas of the fort were used for specific activities. For example, the presence of ovens in the rampart at Housesteads, combined with the deposition of lava milling tools and a pottery assemblage dominated by forms associated with food preparation and storage indicate that the rampart and inner curtain area wall area were probably used for food processing and preparation. Pottery assemblages from other parts of the fort were dominated by tableware forms, and so food consumption probably took place away from the preparation areas (Banfield 2023). Therefore, rubbish generated within these areas would create different profiles of food preparation or consumption, as would rubbish created in the civilian settlement. The Period 2 pottery from Guildhall, with its unusually large volume of mortaria when compared with other sites of similar date, may have been dumped during refurbishment works to the rampart, which is in close proximity to the site, while later period dumps may have been from other parts of the fort or civilian settlement where consumption of food and drink occurred.

The animal bone assemblage from the Guildhall site has interesting differences when compared to other assemblages recovered from Roman contexts in York (Poole, Section 8.7). Fewer cattle and more pig bones were present than expected, reflecting a different pattern of consumption or deposition to other parts of *Eboracum*. This may indicate that the material dumped at the site relates to a specific group of people that ate meat in different proportions to others in the city, or that cattle bones were deposited differently to pig bones. The proportions of animal bones from British assemblages is measurable and can be used for inter-site comparison. Interpretations of these differences can be linked to identity. For example, during the Iron Age, indigenous dietary patterns favoured sheep as the dominant meat source (Hambleton 1999). A change occurred in the Roman period, whereby a preference for cattle and pig developed, with military sites in Britain showing this transition most strongly. The change may have been brought to Britain by the auxiliary troops, who were largely from Gaul and Germany where these dietary patterns already existed (King 1984). Legionary assemblages tend to have more pig bones present and more closely resemble animal bone assemblages from Italian sites. This may reflect a continuation of Italian diet and culture in Romano-British legionary fortresses (King 2001). The Guildhall assemblage does resemble the profile of animal bone assemblages form other legionary fort sites from Roman Britain (Figure 37), suggesting that the dumped material may have originated from inside the fortress. However, emulation of culture and diet may have occurred in the civilian population, while other immigrants may have arrived in *Eboracum*, also bringing with them their dietary preferences.

These preferences are shown in the number of imported wares that may have been used to transport food and drink to the population of *Eboracum*, in particular the amphorae that are well-recognised as having served this purpose. Wine, olive oil and fish sauce could be moved in these vessels, and the sherds of amphorae recovered from the Guildhall site came from Spain, Gaul, north Africa and Italy. It should also be remembered that food and drink products were also transported in wooden barrels and that these are significantly less visible in the archaeological record. At Vindolanda, over 300 barrel staves have been recovered, many recycled into new forms such as floorboards. This level of preservation is not seen at *Eboracum*

and it must be assumed that a large amount of food and drink arrived at the fortress and settlement in the same way (Sands and Marliere 2020). Although the contents of the barrels and amphorae are difficult to reconstruct, we know from the fish bone evidence that garum was at least one component of these imported food products (Russ, Section 8.8). Garum is a food product that is strongly associated with Mediterranean culture, and evidence for its consumption shows that this type of cuisine was enjoyed by people who deposited their food waste at the Guildhall site. As with other imported food and drink, it tends to be associated with high-status groups and the military who had privileged access to goods from across the empire.

8.16.4 Social status and social identity

Social status is a part of human identity that is difficult to pinpoint from finds evidence due to the intersectional nature of status. For the Roman era, this is especially difficult to reconcile as there were many aspects of social status that we do not fully understand. How objects may have been used and interpreted by others in the past is not known and other representations for status may have existed that are more difficult to identify in the archaeological record. High status objects and evidence for wealth and importance tend to be more easily extracted from the background noise of archaeological material as they tend to be unusual or conform to known patterns of consumption. This is also the case for the finds from the Guildhall site. Although none of the items recovered from the Guildhall are particularly unusual for Romano-British military-urban sites, some of them are highly decorative. These items are more likely to have been used by people with greater access to wealth, such as the urban elite and the military, who could afford to purchase objects that cost more to produce than their purely functional counterparts. Objects of personal adornment were probably used as indicators of status as these provided people with the means to outwardly articulate their economic prowess, amongst other aspects of their identity.

The enamelled buckle plate (SF45) is one object that probably belonged to an individual expressing themselves through a decorative dress item. Although Roman period copper alloy tends to become green post-deposition due to the build-up of surface corrosion product, during the time of its use, it would have been shiny, golden-coloured, and eye-catching. The brightly coloured enamel would have been equally attractive, making a statement for whoever wore it. The association between this type of buckle plate and the military (Ridler, Section 8.12) further emphasises how the owner may have been able to procure such an object and how it may have played a role in communicating their status and identity, both as military personnel and as someone of means. Meanwhile, the bone pin with the hand profile design (SF22) is an object that may have been worn to communicate membership to a cult, social group or as an expression of individual identity. The meaning of the object would have been clear to anyone ‘in the know’ but may not have translated to others outside of this circle of knowledge. Similar pins from Roman London have been found whereby the hand is holding a pomegranate or an egg and have been interpreted as symbols of fertility or luck (Hall and Wardle 2005). Regardless of the meaning of the hand form, its rarity suggests that this was not a type of pin that was made at scale and the person who owned it may have had it specially commissioned. This method of status expression is still seen today in the fashion industry, whereby the wearing of unique and specially made items is connected to high-status groups.

The most illustrative finds from the site that link the inhabitants of *Eboracum* to specific military groups are the stamped tiles that name the 9th and the 6th legions (McComish, Section 8.3). It is probable that these items were deposited at the site during periods of refurbishment to the fort. The presence of these named units at *Eboracum* is well-known and the tiles do not create new information for us in this regard. However, they further emphasise the military profile of the site and provide us with a tangible reminder of the written evidence that we have for the movement of these troops across the empire, and what their lived experiences must have been.

Other objects recovered from the site at Guildhall, specifically the ear scoop, provide evidence for new behaviours and habits that were imported to Britain alongside the objects needed to carry them out. Although ear scoops and toilet instruments existed in the province prior to contact with the Roman world, their visibility in the archaeological record and the probable extent of their use increased significantly post-conquest. Ear scoops were used for personal hygiene alongside the habit of bathing, a practice that is widely recognised as initially being part of Mediterranean culture. They are common finds in urban and military contexts, though they are less common in Britain than tweezers and nail cleaners. This suggests that the importance and visibility of nail cleaning and hair plucking was greater than that of ear cleaning in the province (Carr 2001). Ear cleaning may have been one act in a suite of bathing behaviours that was not widely adopted, as indigenous communities across the empire negotiated changes in societal norms post-conquest. The presence of the ear scoop at the Guildhall site indicates that the person who owned the object was invested in carrying out all aspects of the bathing process and saw it as an integral part of the act.

9 SUMMARY AND INTERPRETATON

The updated project design formulated during assessment of the site raised a series of objectives to be explored through research questions framed by historical periods (Savine 2022, 113). The discussion element of this section is intended to investigate the various themes through the lens of the research questions.

These questions are presented in Table 2 below:

Table 2 Relevant regional research aims
ROMANO-BRITISH
The growth of York's urban (districts/boroughs?)
How was urban York organised, what roles did this district/borough perform, and how did the function and morphology change throughout the Romano-British period?
How and why did the urban landscape change in the late Roman period, and what roles may military influence have played in this period?
Can excavation and research better define the 3rd and 4th century decline in the city and the processes that drove the decline?

Table 2 Relevant regional research aims
Can we detect evidence of gentrification for purposes of state visits and changes in Imperial administration?
How best may we enhance study of the origins and development of early land reclamation and drainage, particularly in Yorkshire?
EARLY MEDIEVAL
The growth of York's urban (districts?)
Can we understand more about changes to urban districts in the early medieval period?
Roads and rivers: transport routes and cultural boundaries
What roles may rivers have played as corridors for the movement of goods and people, and how might these have varied over time?
LATE MEDIEVAL
The growth of York's urban (districts?)
How did York develop after the Norman Conquest, both within the urban core and in suburban and extra-mural areas?
What can we understand about the development of ecclesiastical houses and their impact on the late medieval urban landscape?
Religion
How can we refine our understanding of local and regional architectural styles, including sculptured stonework, decorations and monuments?
What may we deduce from scientific analyses of cemetery populations about changes in diet, mortality and other demographic variables, both within the region and between social groups?
Industry and trade
How and where was post-Conquest pottery manufactured and distributed, and what communication systems were employed?
POST MEDIEVAL
Ecclesiastical structures, estates and burials
What was the impact of the Reformation upon ecclesiastical buildings and monastic estates?

9.1 Period 1: Natural Geological Processes

Summary

Observations from the monitoring of boreholes and piles demonstrate that the top of the glacial till slopes down towards the River Ouse, from a maximum height of 7.27m AOD at the north-east to 2.2m AOD at the south-western end of the site.

At the north-eastern end of the site, in Excavation Area 2, an approximately 0.4m thick deposit of pebbly clay was found above the till.

Interpretation

The higher deposit lacked the stratified make-up of the underlying glacial till, but whether the less structured appearance of the pebbly clay was the result of natural or anthropogenic processes remains unclear. One possibility is that deposition of this material is connected with landscaping undertaken in the late 1st or 2nd century.

9.2 Periods 2-5: Romano-British Activity

Despite the limited physical extent of Romano-British deposits investigated, the quality of preservation, and the type and character of deposits provides sufficient information to allow for an attempt to be made at reconstructing a sequence spanning the late 1st to 3rd century.

9.2.1 Period 2: Late 1st to 2nd century landscaping and early dumping activity

Summary

The earliest definitively human activity observed involved clearance and re-profiling of a strip of land occupying space on the north-eastern bank of the River Ouse. It appears that terracing was carried out in front of the south-western side of the legionary fortress close to where the main approach road from the south-west, designated Road 10 by the RCHME (RCHMY 1962, 3), entered the fortress at the *porta praetoria*. The site is situated immediately adjacent to the north-west side of the road which, by at least by the mid to late 2nd century, was carried across the River Ouse via a bridge (Ottaway 2011, 93-4, fig. 47). Excavation at Guildhall, it should be stressed, has revealed only a very small area of this activity.

The re-profiling observed involved the stripping away of turf and topsoil exposing the till beneath, resulting in a bank exposed at an angle of 30.47° with a flat platform both above and below it. The face of the bank was then covered in a layer of gravel (Phase 3). The ground above the bank, at least in the small area exposed, was covered with more compacted gravel and pebbles. Terracing below the bank, closer to the river, is inferred by the presence of hard standing exposed at the deepest point of excavation in Trench 2 (Phase 4), and by successive buildings near what must have been the foot of the bank. The results of borehole survey and the earliest deposits encountered in Trench 3 hint at a second and possibly even a third terrace stepping down towards the Ouse.

Interpretation

A transect of boreholes across the site has produced a profile that projects an image which could be interpreted as terraces stepping down to the north-eastern bank of the Ouse on some scale.

Whether it was limited to the area immediately adjacent to the north-west side of the main approach road, or quite how far it might have stretched in front of the fortress remains unknown.

Unfortunately, few dateable finds were recovered from Phases 3 and 4 and their provenance is questionable. As a result, attributing a date to the Period 2 activity remains a little uncertain and is principally reliant on deposits that accumulated above. Overlying the lower part of the gravel bank were a series of late 1st to early 3rd century deposits assigned to Phase 13, while a thick organic soil (Group 104 in Phase 5), containing late 1st to 2nd century pottery had accumulated on top of the Phase 4 surface in Trench 2 and similar material was found approximately 5m further south-east in Excavation Area 2 (Group 105 in Phase 5), showing that dumping from nearby occupation was taking place on this part of the terrace, perhaps not long after it had been constructed. Dating of the earliest deposits closer to the river margin is reliant on the radiocarbon dating of charred wheat grain retrieved from sediment just above naturally-occurring sands in borehole BH03, some 19m south-west of Trench 2 and at a point approximately 6m deeper. Here sample <41> produced a date of AD 125-240 (95.4% probability). Radiocarbon dating of deposits was restiricted to sediments in borehole BH03, placing limits on our ability to draw meaningful parallels with hand excavated deposits of similar date further up slope away from the riverbank.

Large scale landscaping operations have been identified at other sites in Roman York, but to date only within the civilian settlement on the south-western side of the River Ouse, for example around Skeldergate and Bishophill. There, terracing was at such a scale to only have been possible as part of deliberate civic planning rather than private enterprise and has been linked to a major campaign of building and reorganisation across that part of the civilian settlement during the late 2nd to mid-3rd century (McComish 2015, 14 and Ottaway 2011, 115). This is much later than the Guildhall terracing which is plausibly associated with the legionary fortress by creating a clear, tidy area across its south-west frontage. The fortress was established in the late 1st century, but it seems the terracing is more likely to have been undertaken during the course of refurbishment of the fortress in the early part of the 2nd century when work was initiated on the replacement in stone of timber structures, including gates, towers and palisades (Ottaway 2011, 67).

9.2.2 Period 3: 2nd century building and occupation activity

Periods 3 and 4 span the 2nd century and saw buildings come to occupy the terrace at the foot of the gravel bank. A domestic character to this occupation is attested by the scale and make-up of the structures encountered and the finds uncovered, including the range and types of pottery and animal bone. However, some marked differences between these two periods was apparent in the finds assemblages.

Summary

The first building, found in Trench 2 and assigned to Phase 6, was represented by a layer of silty sand laid on top of what appeared to have been sub-base material, a significant component of which was CBM and 2nd century pottery, creating a barrier with the underlying damp organic deposit in Phase 5. A thin, dry, compact occupation deposit covered the floor, again dated to the 2nd century by pottery, also gives the impression of an internal setting.

In contrast dumps in Phase 7, only around 3-4m to the south-east, had accumulated on top of or close to the foot of the gravel bank, which was almost certainly open ground at the time. Eventually both floor and dumps were covered by deposits characteristic of building demolition (Phase 8) and more dumping was to follow (Phase 9). This material contained an extensive range of late 1st to early 2nd century pottery suggesting it originated from a different source than the underlying Phase 6 structure and Phase 7-8 deposits.

Interpretation

It is unsurprising that buildings sprang up at this location, so close to the river where it was crossed by the southern approach road as it ran up to the *porta praetoria*. These key communication routes and the fortress delineate three sides of this area and it seems likely that terracing was designed to enhance and take advantage of what would become a prime development site. North African amphorae associated with the floor of the first building in Trench 2 indicates occupation became established at the site in the mid-2nd century date as this type of vessel only arrived in Britain after around AD 140.

Apart from the floor no other structural elements of the building were found. However, a substantial quantity of mortar and plaster was present in the overlying Phase 8 deposits, part of which extended over the floor in Trench 2 where it contained the second largest quantity of this material by weight (nearly 4.5 kg) found at the site. Notably much of the mortar and plaster was in large enough fragments to suggest the point of origin was close by. Even if this was not the building associated with the Phase 6 floor at least some indication of the style in which buildings nearby were decorated and something of their status, for example some of the painted plaster, boasts an elaborate trellis design with leaves. Additionally, over-painting on some plaster demonstrates sufficient longevity for redecoration to have occurred. The emerging impression is of well-appointed residential buildings at the site.

The Period 3 pottery assemblage also points to high-status domestic activity at or close to the site. In comparison with Period 2 a significant increase in the relative proportion of table wares is evident, alongside an increase in fine ware and a decrease in mortaria. However, as Griffiths pointed out the source of this material is not certain, for example rubbish dumping from the nearby fortress cannot be discounted.

The life span of the first building ends in the second half of the 2nd century when it was demolished. The types and location of building debris gives some insight into the demolition process, which appears to have been careful and systematic with only materials not easily recycled left behind, for example the mortar and plaster, while other building materials such as CBM and masonry were completely absent. This gives some credibility to the mortar and plaster originating from this room as it seems logical for wall render to have been stripped away early in the demolition process, enabling access to the reuseable structural material behind it. In contrast the demolition material above the Phase 7 dumping south-east of the building was more mixed, with more Type 9 plaster present alongside a range of *tegula*, *imbrex*, boxflue and brick. A post AD 160 date for demolition is confirmed by the recovery of East Gaulish Samian ware from the south-eastern part of the demolition deposits (Group 109 in Phase 8).

More dumping was to follow (Phase 9), probably in the latter part of the 2nd century considering the presence of part of a late 2nd to 3rd century African-style bowl in Trench 2 (C3100).

Interestingly the pottery assemblage in the Phase 9 dumping included an extensive range of late 1st to early 2nd century pottery suggesting it originated from a source different to the underlying Phase 6 structure, Phase 7 deposits and Phase 8 demolition material.

Period 3 coincides with the late Antonine period (*c*. AD160-192) refurbishment of the legionary fortress, involving the upgrading of timber structures to stone (McComish *et al*. 2021, 68). The rebuilding programme was on a vast scale and, although initiated in the early part of the 2nd century, may not have been completed until the early part of the 3rd century (Ottaway 2011, 67). It is conceivable that the recently cleared site at the North Annexe, Guildhall presented a convenient dumping ground for waste materials deriving from the rebuilding program.

9.2.3 Period 4: Late 2nd to early 3rd century structures, occupation activity and dumping

There seems to have been little or no hiatus between the clearance of the first building in Trench 2 and the construction of a new building at the site; indeed, the Phase 9 dumping may have been intended to raise the ground level in order for new construction to begin. The Period 4 animal bone and pottery assemblages are the largest from any of the Romano-British periods at Guildhall North Annexe; this and their content demonstrates a continuation of high-status consumption at the site into the 3rd century.

Summary

All that was found of the second building in Trench 2 (Phase 10) was a floor and deposits associated with its construction, use and demolition. The construction techniques employed were very similar to those used for the first building, although some of the materials used were different. Levelling deposits once more provided a sub-base for the floor, again crushed pottery accounted for a significant proportion and provides dates ranging from the 1st to 3rd centuries. Other artefacts were also found in the bedding layer, including a fragment of an iron tool that may have been part of a shovel.

A thick layer of clean clay had been used to form the floor. No occupation material was found lying directly on it, suggesting that an additional floor surface, since removed, could have been laid on top. However, despite a relatively large area of the clay being exposed no imprint was observed on its surface, and as such it seems unlikely that a stone or timber floor surface would have been in place.

The earliest structural remains in Excavation Area 2 shared a comparable height with the second building in Trench 2 and the two appear to be contemporary. However, these were rather less substantial, comprising a slender wall footing with a coarse mortar floor on one side. The floor was covered with thin clayey occupation type material that was mirrored by similar deposits on the other side of the footing. Pottery in a levelling deposit directly below the structure dates its construction to the mid-2nd to early 3rd century, while a copper alloy military buckle plate of 2nd to 3rd century date and a 3rd century oxidised ware bowl found in occupation material adjacent to the footing go some way to confirming when the structure was in use.

Both structures were sealed beneath demolition material. In Trench 2 mortar and painted plaster again dominated the assemblage of building debris, although this time some stone was present including fragments of tufa and Oolitic limestone and the earliest example of a stone roof flag found at the site. But perhaps the standout feature of the demolition deposits here

was the sheer quantity of mortar and plaster, amounting to around 35kg from two deposits. In contrast very few fragments of mortar or plaster were found across the remains of the structure further south-east in Excavation Area 2, probably reflecting the materials it was made of and what it had been used for.

Subsequent activity at the site suggests that the lifespan of the second phase of buildings may not have been long. Demolition and clearance of the buildings was followed by extensive dumping, much of which included an organic or cessy component and an array of 2nd to 3rd century pottery. The dumping covered not just the area previously occupied by the buildings but also completely covered the gravel bank seen in Excavation Area 2. The effect would have been a reduction in the prominence of the bank's slope as it became obscured below dumping.

Interpretation

The rationale for removing the first building and replacing it with the second remains open to speculation. Our knowledge of the form of both is limited to that of the floors and the building debris left behind, but there is perhaps a little more that can be inferred about their function from the scant structural remains and the artefacts associated with them. The new buildings demonstrate continuity of residential, domestic occupation. Both the animal bone and the pottery assemblages from Period 4 are the largest from any of the Romano-British periods identified at the site. To a certain extent this may reflect the larger area available for excavation over that of Periods 1-3, but it is clear that consumption continued as a focus of activity in the vicinity.

One distinct difference with the Period 3 building is that decorative painted plaster was all but absent from the demolition layer covering the second building in Trench 2. Might this indicate a decline in status into Period 4? Certainly the proportion of fine wares decreased, but table wares as a whole still account for one third of the Period 4 pottery assemblage, so any adjustment to the status of the new buildings over that of the old may not have been drastic and perhaps what is being seen is a localised change limited to the utilisation of a single room in one building over that of its predecessor, rather than a significant change in the type of activity taking place at the site.

Little distinction is evident in consumption habits across Periods 3 and 4 which remain high status in character. There was an increase in the forms and sources of pottery in Period 4 but no variation in the animal bone assemblage was apparent. Across both periods large domesticated animal species (cattle, pig and sheep) dominate and were supplemented with chicken, fish, shellfish and avian eggs, while, as Poole points out, the proportion of pig and chicken in the diet of those living at or close to the site was high, even for an urban centre. In addition, dumping from 2nd and early 3rd century occupation demonstrates that wild or horticultural fruits were being consumed; whether cultivation was taking place in the vicinity is not known but remains a possibility.

9.2.4 Period 5: 3rd century structure and later Roman activity

Summary

In Excavation Area 2 the remains of a large 3rd century structure cut through earlier activity on the terrace at the foot of the bank and the Period 4 dumped deposits covering the bank itself. A clay bonded cobble and limestone foundation followed the north-west/south-east axis defined by the topography of the site. This measured up to 1.7m wide and at least 1m deep (the base was not observed within the limit of excavation), a scale sufficient to support a substantial masonry wall, later lost to robbing activity. Only a 4m length of the foundation was exposed, however continuation to the south-east is hinted at by the form and extent of later deposits, suggesting a potential extent of at least 8m. Extrapolating the line of the foundation in the other direction projects it marginally north-east of Trench 2. Unfortunately the watching brief interventions between Excavation Areas 1 and 2 where the wall might have been expected to pass were not deep enough to determine a continuation in that direction. Trench 2 and NA WB 8 revealed flat stony deposits dating to the 3rd century. These were at a comparable height to the foundation and immediately adjacent to where the south-western face of the wall could have extended. None of these surfaces were sufficiently consolidated to suggest they might be the remains of a road but were either fairly crude surfaces or perhaps an attempt to raise and consolidate the ground level in this area. Another flat stony deposit was found at the base of Trench 3, a little over 6m south-west of Trench 2. This surface was present at a height around 2m lower than those further to the north-east, but the mid-3rd century date of pottery recovered from it suggests they could be contemporaneous. Should that be the case it complements the suggestion of a lower terrace closer to the river bank.

Interpretation

Whether the presence of a substantial 3rd century masonry structure superseding the earlier buildings represents a significant change in how this area was being utilised is difficult to say with any certainty. There is, however, a little that can be said about the structure and the stony deposits adjacent to it, how they compare to the Phase 3 and 4 buildings and other Roman buildings known in the vicinity.

The extent to which the Period 5 stony deposits could be exposed is a little limiting in understanding them. However, enough was observed to show that, where not disrupted by medieval pit digging, they were flat, perhaps too crude to be internal floors, nor thick enough to be part of a road or lane, on balance an external surface or yard would seem the most likely explanation. The topography of the site is important to consider here as well. The wall foundation was at the foot of the bank, so if it were part of a building it must have been the north-east side, the rest occupying the terrace to the south-west. This would bring the stony surfaces inside the building, which, as already stated, seems unlikely. Neither were any return walls found, but these might easily have passed either side of Excavation Areas 1 and 2 or through the gap between. NA WB 7 was ideally situated to confirm this but did not extend to a depth where structural remains might have been expected. An absence of demolition material contrasts with the earlier buildings and the final clearance of the structure does not appear to have been completed until as late as the 12th century. This raises the prospect of the foundation belonging to a structure other than a building. The scale of the footing indicates it was sufficient

to support a substantial masonry wall and its position at the foot of the bank suggests the possibility of a retaining wall, in effect superseding the late 1st/2nd century (Period 2) gravel bank.

This remodelling may well be linked with improvements to the south-west façade of the legionary fortress where the projecting towers, associated rampart and ditch had probably been completed by the early 3rd century (Ottaway 2011, 75). It may also be linked to other changes at sites in the zone between the fortress and the river during the 3rd century.

It is also clear that the intensity of activity at the site drops off in the 3rd century and although, as Griffiths points out, large quantities of 3rd century pottery were found in post-Roman deposits activity in the later 3rd and 4th centuries is limited in comparison with that of the late 1st and 2nd centuries. There does not appear to be a return to residential occupation but there is some evidence to suggest that dumping of waste material continued (although some of this, at least, could be directly associated with construction of the putative retaining wall as some deposits rich in 3rd century finds occupy the space between the slope of the bank and the back of where the wall is likely to have extended).

9.3 Period 6-8: Medieval Activity

The indications are that following the Romano-British period the site remained fairly marginal until after the Norman Conquest. Considerable effort then appears to have gone into raising the ground level, perhaps in response to flooding or changes in the river regime. However, development of land on the preriphery of an area known to have high-status dwellings must also have been influenced by demographic and economic considerations. From the mid-13th century development of the site was intrinsically tied to the founding of an Augustinian friary and its subsequent expansion during the 14th and 15th centuries.

9.3.1 Period 6: Late 11th to early 13th century activity

Summary

Identifiable activity returned to the site with robbing out of the Period 5 retaining wall in Excavation Area 2. Backfilling appears to have then taken place soon after with unwanted material from close by being pushed into the robbing cut to fill and level it off. These deposits included a mix of clays and sandy silts containing a small selection of late 11th and 12th century pottery along with large quantities of Roman pottery, with some dating to the late 3rd and 4th century. Continuing into the late 12th or early 13th century Phase 18 activity was centred on the disposal of domestic refuse, some in small pits but larger dumps also developed, serving to raise the ground level by around 0.4-0.5m across the area formerly occupied by the retaining wall and the earlier bank behind it.

Further to the south-west Trenches 3 and 4 in Excavation Area 1 reveal a similar pattern of late 11th and 12th century refuse disposal, again in small pits and dumps, here assigned to Phase 19. In contrast to Phase 18, craft processing waste, in this case antler off-cuts, as well as domestic refuse was present.

Borehole cores have provided some important data relating to exploitation of the river margin during the transition from the Roman to medieval periods, including the position of the underlying glacial till, the lithology of the deposits that accumulated above it and changes to the environment that occurred as these deposits developed. Few dateable artefacts were recovered

from the cores, however, a distinction has been made between organic sands in the lower part of the sequence where anthropogenic material was scarce and overlying deposits where finds were more common (Jackson-Slater and Krawiec 2020, 6; fig.4).

The upper part of this sequence suggests the presence of damp meadows along the bank of the River Ouse which were subject to seasonal waterlogging. Cereal crops may have been grown in this location during the 11th-13th century, and if so the poor sandy acidic soils there were likely to have been improved by the addition of manure (see Section 8.15 Adams).

Further away from the river bank a series of mixed silty and clayey levelling deposits with a stony content were next laid down across Excavation Area 2 (Group 132; Phase 20). They raised, consolidated and reduced the gradient of the slope down towards the river. Phase 20 continued with a series of rubbish pits dug through the levelling deposits. These features were larger than those they preceded, but their content was again domestic in character. Levelling deposits dating to the late 12th or 13th century and comprising moderately stony clayey silts then sealed the pits. The south-eastern edge of this activity was cut by a north-east/ south-west aligned wall foundation consisting of roughly-dressed limestone fragments and cobbles. Finds retrieved from the construction of the wall foundation date its construction to the late 12th to early 13th century. There is less certainty regarding the length of its lifespan. The next significant activity identified above the building, across the wall and to its south-east, involved the laying of a levelling deposit in preparation of a surface, but this did not occur until at least the 16th century, and it is not certain what might have been removed as a result. This does leave a possibility that the building remained standing into the mid-16th century.

A second possible structure, comprising a 0.85m long, north-west/ south-east aligned linear feature interpreted as a robbed-out wall line, was found in Trench 4. Pottery found in the construction cut backfill dates to the late 11th to early 13th century, indicating that it was likely to be contemporary with the structure in Excavation Area 2. However, deposits above the robbed-out wall line in Trench 4 date to the mid-13th to mid-14th century, suggesting any structure here may not have remained in use for anything like the length of time the building in the north-eastern corner of Excavation Area 2 potentially remained standing.

After the removal of the late 11th to early 13th century structure in Trench 4 there appears to have been an effort to raise the ground level across the south-western end of Excavation Area 1, perhaps with the intention of preparing the ground for a new structure, of which a mortar floor found in Trench 3 was a part.

Interpretation

The return of significant activity to the site is not apparent until the late 11th or 12th century, at which time robbing out of the Period 5 retaining wall occurred, or at least was completed. Dating of this activity is based on the recovery of a small quantity of pottery, including unglazed Stamford ware, found above the wall foundation in Excavation Area 2 and other deposits further to the south-east that equated with those robbing backfills.

A re-emergence of occupation in the vicinity is implied by the discard of domestic refuse in dumps and pits both in Excavation Area 2 and further south-west in Trenches 3 and 4 in Excavation Area 1 where some craft working waste was also found. A pre-conquest date is

implied by the presence of antler processing waste as forest laws, royal protection and controlled hunting seasons restricted access to this material in the medieval period (MacGregor *et al*. 1999, 2004).

A considerable rise in the ground level along the north-eastern margin of the River Ouse from the Roman to medieval periods, consistently in excess of 5.5m at the south-western end of the borehole transect between BH01-04, has been demonstrated, with periodic fluctuations between drier and wetter conditions apparent during the 11th to 13th centuries. However, fully understanding the depositional sequence is complicated by a considerable overlap in radiocarbon dates recorded in BH03. A small quantity of wheat grains were present in the lower deposits identified in the borehole, in sufficient quantity to suggest cultivation was taking place; unfortunately their presence straddles samples dated to 21-169 cal AD and 1040-1180 cal AD, raising some uncertainty over when that cultivation occurred. A wetter period dominated by hazel and alder followed before conditions became drier and those species less prominent. That transition coincides with a continued rise in ground level, approximately 1.5m, which began in the early to mid-13th century. The upper part of this deposition has a produced a mix of Roman and 12th to 13th century dates implying that land reclamation may have been achieved with material imported from off-site. Wetter conditions again took hold at a time when anthropogenic material became more abundant; unfortunately, at least in the case of BH03 this did not offer any dateable material in the deposits above those submitted for radiocarbon dating. The pattern of ground reclamation appears to have continued as wetter conditions abated and cultivation returned, this time with hulled barley as the main crop. The date for this second phase of cultivation is a little uncertain, but its height coincides with that of 11th-13th century pottery found in BH02 only 2.7m to the south-west, and was found to be physically lower than the 4th and late 11th/12th century deposits at the base of Trench 4, sited 5.8m to the north-east.

Continued exploitation of the site following the Norman Conquest is implied by the recovery of a William I silver penny from a 14th century refuse pit. Occupation, however, appears to become more firmly established in the late 12th or 13th century following an effort to raise and consolidate the ground level in preparation for what may have been more organised disposal of domestic refuse into larger rubbish pits across the central and northern parts of the site. Meanwhile ground reclamation followed by cultivation of fodder crops took place in meadowland along the river margin. It was also around this time that the first new structures in a millennium appear, of which one to the east may have remained standing as late as the 16th century.

9.3.2 Period 7: Mid-13th to mid-14th century activity

Summary

In Trench 3 the structure with the mortar floor had fallen out of use and was demolished at some point after the mid-13th century, following which ground level was again raised across the south-western part of Excavation Area 1, represented by clearly equivalent deposits observed in both Trench 3 and 4. Downslope and cutting into the south-east of these deposits in Trench 4 were the remains of a structure, a major component of which was an expanse of edge-set tiles laid at a level 0.75m lower than the contemporary ground level immediately to the north-east.

The scale of this structure is hinted at by the extent of the tiles (2.51m north-east/south-west by 2.19m north-west/south-east) and a 1.04m wide linear cut running along their north-east side, potentially the line of a wall up to which the surface had originally extended.

A concentration of heating was evident in the north-east part of the surface, close to where the wall had been, suggesting that this was a hearth. The tiles in this area were set at right angles to those further to the south-west, dividing the surface into two roughly equal halves on an alignment parallel to the probable wall line. Exposure to heat was less apparent across the south-west part of the surface. Pottery recovered from the make-up of the hearth and the probable robbed out wall has produced mid-13th to mid-14th century dates, while a layer of mortar covering them, and which perhaps relates to demolition of the structure it formed part of, dates to the mid-14th to mid-15th century.

After the building with the edge-set tile hearth had been cleared away the ground level in Trench 4 was increased to match that in Trench 3, a process undertaken fairly rapidly judging by the friable character of deposits observed here.

The closing phase of this period is defined by a series of large pits ranging across Excavation Area 1. These features contained a range of domestic refuse including mid-13th to mid-14th century pottery, but also an unusually large group of late 11th to early 13th century curved and flanged tile, while one pit contained a large quantity of Splashed ware pitcher wasters.

Interpretation

During the 13th century periodic efforts were channelled into raising the ground level at the south-western end of Excavation Area 1. The removal of probable structures in Trenches 3 and 4, one towards the end of Period 6 and the other early in Period 7, both took place prior to the accumulation of dumped deposits above, indicating a deliberate process rather than a matter of convenient disposal. Indeed, the relatively early dates attributed to deposits at the top of this sequence suggests material had either been excavated from some depth nearby or imported to the site for this purpose.

The effect was to bring the ground level at the north-eastern end of Trench 4 up to match that in Trench 3. This was successfully achieved by the mid-13th century and allowed for the construction of a new building, the scale of which appears to have been substantially greater than those preceding it. Only two elements of this building were exposed in Trench 4: the robbed-out line of its north-east wall and a large edge-set tile hearth that had extended up to it. The height of the wall robber-cut extended base to top edge from 7.59-8.36m AOD; intriguingly this corresponds closely with layers of crushed limestone in borehole BH03 7.5m to the south-west, which ranged in depth from 7.78-8.54m AOD. Radiocarbon dates from BH03 demonstrate that the crushed limestone was deposited after the mid-13th century and occurred shortly after the cessation of the second phase of cereal cultivation close to the river bank. Any link drawn between the structure in Trench 4 and structural or demolition type deposits in BH03 cannot be viewed as more than conjectural, but poses an interesting set of circumstantial evidence, nonetheless.

Only a little more certainty regarding the character and use of the building can be ascertained from the remains found in Trench 4. A thin layer of burnt material was present above the hearth,

presumably the remains of its last use, demonstrating it had been well maintained and kept clean. Therefore, a domestic setting appears most likely, but beyond this no evidence for the use of the building was found. This structure does, however, represent the first large-scale medieval occupational presence on the site. It appears to have been built no earlier than the mid-13th century remaining in use up until the mid-14th century, dates corresponding with the establishment of an Augustinian friary which is known to have occupied the site by 1272 (VCHY 1961, 361).

Demolition of the building was followed by more landscaping in yet another effort to raise the ground level. The interior of the edge-set tile hearth building was infilled and dumping continued well beyond, covering an area at least 9.63m north-east/south-west encompassing the full extent of Trenches 3 and 4. A lack of compaction to these deposits suggests a rapid process undertaken perhaps with the intention of convenient disposal more than landscaping in preparation for future building work, which seems to have been the case with comparable deposition that occurred in the 12th and 13th century. New buildings were placed on this part of the site, but their construction did not immediately follow clearance of the edge-set tile hearth building or subsequent landscaping activity. Pottery dates the landscaping to the mid-14th century while the abundance of earlier pottery also present, including a large volume of Roman wares, suggest this material was sourced from some depth. Ground reduction, either for landscaping or foundation excavation associated with building work elsewhere within the priory precinct could explain the large volume of material and the varied dates of its content, potentially attesting to development of the friary running up to the middle part of the 14th century.

Change is also reflected in the content of one of five large refuse pits cutting into the Excavation Area 1 landscaping. On the whole, the content of these pits was domestic in character, mostly animal bone and mid-13th to mid-14th century pottery. Of particular interest is the contents of the pit furthest to the north-east, C3065 in Trench 2. The upper fill of this feature contained a large quantity of pre-mid-12th century Splashed glazed pottery wasters, seconds and kiln props and an unusually large quantity of curved and flanged tile, a form in use from the late 11th to the early 13th centuries, all somewhat earlier than the mid-13th to mid-14th century date attributed to the primary fill at the base of the pit. This would seem to suggest demolition, or at least de-roofing, of a building pre-dating the founding of the friary. The pottery wasters hold further interest as they are of a type known to have been produced in Beverley, but how wasters from that far afield came to be disposed of in York two hundred years after their manufacture is something of a mystery. However, an association with a late 11th to early 13th century building would seem to be the case.

9.3.3 Period 8: 14th century land division and associated structures

Summary

Following landscaping and pit digging in Excavation Area 1 at the end of Period 7 reorganisation of the site appears to have taken place. Two distinct zones of activity were created with the construction of two parallel stone wall foundations, representing either a building or buildings, now occupying the west side of the site leaving an open area to their south-east.

The south-eastern foundation incorporated relieving arches and ran close to the full length of Excavation Area 1 on a north-east/south-west alignment. No dateable artefacts were recovered from the fabric of the wall, however its position in the stratigraphic sequence indicates a date later than the mid-13th to mid-14th century Period 7 features and deposits into which it was cut. A second substantial stone-built wall foundation ran parallel with the first wall 2.5m north-west of it. On the whole, the materials and construction techniques employed for both foundations were much the same, although the mortars used were a little different.

At the south-western end of the north-western foundation were other structural elements, including edge-set tiles and other footings made-up of various brick, tile and stone elements. Quite how these related to the larger foundations is unclear due to the limited extent uncovered. However, they were present at a level lower than the top of the stone foundation and may represent earlier structures. A series of low walls constructed from bricks dating to the 14th-16th century were found extending from the north-west of the foundation indicating the presence of a suspended floor.

The south-east half of the site now became a graveyard. Archaeological investigation across this part of the site was somewhat disjointed, being split between various interventions including part of Excavation Area 1, Excavation Area 2 and watching brief interventions of varying scale between the two. Consequently, it was only possible to excavate burials, or parts of burials directly impacted by the construction programme. Despite these limitations a well ordered graveyard is apparent with burials laid out north-west to south-east, perpendicular to the buildings nearby, and arranged in rows, up to four of which could be recognised. The five burials closest to the Period 8 friary buildings had been severely impacted by post-Dissolution demolition activity. However, parts of ten inhumations were recovered from 14 possible graves in Excavation Area 2 and NA WB 7. No complete individuals were recovered, either because of modern truncation or because part of a burial lay beyond the limit of excavation.

Available dating evidence has established a 13th-16th century date for use of the graveyard, delineated by the 14th century building to the north-west and a late 12th to early 13th century building to the south-east. North-west of all but two graves was a north-east/ south-west aligned probable linear feature, perhaps either a ditch or robbed-out wall. Backfilled in the 14th century this feature has one grave cut into it and a second very close by or just north-east of it.

A general lack of skeletal completeness for the ten articulated individuals recovered from the friary burial ground limits the information that could be collated from the assemblage, for example, it was only possible to calculate the stature of five individuals. The individuals present include four males, one possible female and four sex undetermined individuals, while sex estimation was not attempted on adolescent SK4 due to a lack of sexually dimorphic traits. The disarticulated remains presented similar proportions to the age profile with an MNI of eight adults and one juvenile. In addition, important details of food consumption have been established by isotopic calibration. A significant marine component to the diet of the two individuals subject to this analysis is apparent, standing at 24% for SK1 and 18% for SK2.

After the graveyard was established, extensive remedial work was carried out on the south-eastern stone-built wall. This work included the addition of three buttresses along the south-east side of the wall, the north-eastern one disrupting two graves in Trench 2, and either extension to or rebuilding of the south-west end of the wall.

Other structural elements, including cobble surfaces and mortar bonded limestone wall footings, were found during the course of the watching brief works. Dating these is difficult as few finds were found in association with them, however, a broad medieval date is implied by their form, material make-up and position in relation to other medieval structures.

Interpretation

The material evidence attributed to Period 8 portrays a re-organisation of space within the friary precinct during the course of the 14th century or soon after. At this time a substantial masonry building, or buildings, came to occupy the north-western side of the site and a graveyard was laid out to its south-east. The form established by these spaces remained intact until the Dissolution in the mid-16th century, but development or alteration to both evidently occurred. The fragmentary nature of the remains do, however, leave considerable uncertainty regarding the exact form, extent and function of the structures.

The relationship between the stone-built wall foundations is not entirely clear. It is possible that the foundation to the south-east supported a free-standing wall sited along a boundary; the later addition of buttresses on its south-eastern side point to this being its external face. Evidently the wall foundations share some characteristics, including material types and construction techniques, while both date to the 14th century or later, placing construction firmly within the lifespan of the Augustinian friary known to have occupied the site from the late 13th century (VCHY 1961, 361). Six of the 14 architectural fragments recovered were in the perpendicular style dating to 1350-1540, confirming building work at the site from this time. It is possible that the foundations belong to the same structure, the space between perhaps representing an aisle on the south-eastern side of a building extending north-east/south-west through the friary precinct. However, there is not sufficient evidence to verify this hypothesis and they may equally have formed elements of separate structures, or they may belong to different phases of the same building.

Structural weakness in the south-eastern wall was evidently an issue, resulting in a failure at its south-western end. Rebuilding or strengthening involved thickening on the south-eastern side and the application of large quantities of mortar effectively encasing the stonework in this area. Further to the north buttresses built in a similar way with copious quantities of mortar were also added. Several causes for structural instability in this part of the site present themselves. Firstly, a drop in the height of glacial till is recorded from borehole data, from around 7m AOD between Trench 2 and 3 to approximately 2m AOD between Trenches 3 and 4. Ground reclamation particularly that dating to the mid-13th century, as previously described in Period 7, was extensive, thick and rapid, potentially accounting for a significant proportion of raised ground in this area. Dumped material would likely have been subject to a process of on-going compaction under its own weight with any organic component gradually dissipating as it continued to settle. Failure at this point may reflect an abrupt change from firm ground to less stable conditions. A second possible factor is offered by the point at which the foundation was re-built. It coincides with the robbed-out wall line north-east of the edge-set tile hearth, potentially exposing softer ground below or adjacent to the earlier building. Notably the north-western 14th century stone foundation does not show any indication of being subject to comparable stability issues. Perhaps this wall carried less weight, the underlying strata was more stable or the remains of earlier structures provided better stability.

Infilling of the north-west/ south-east aligned linear feature at the northern end of Excavation Area 2 also fits into the time frame of 14th century re-organisation. Part of its interest lies in its perpendicular alignment with other medieval boundary or structural features found at the northern end of the site, all the others being present in Trench 4, for example the robbed out wall north-east of the edge-set tile hearth assigned to Period 7. Whether it belonged to a ditch or a robbed out wall line, its position, on top of perhaps slightly higher but certainly firmer ground close to the edge of the upper Roman terrace, might be significant. It may be that it delineates a zone of land reclamation close to the river bank and more stable ground higher up further from the Ouse. If this was the case it might be seen as a legacy of pre-14th century activity superseded by re-organisation within the friary precinct.

No other structural features were encountered between the south-east 14th century wall in Excavation Area 1 and the north-west wall of the late 12th to early 13th century Period 6 structure located in the eastern corner of Excavation Area 2. This space measured approximately 13m across and was occupied by burials. If, as seems likely, this space was open ground in a location fairly central to the southern part of the friary precinct it could be that a cloister garth was present here, the wall, or walls to the north-west potentially belonging to a cloister alley or other adjacent building.

The arrangement of the burials and other probable graves suggests that the cemetery was well ordered with perhaps four rows of graves idenfified. Unfortunately, post-medieval and later activity appears to have had a significant negative impact on the survival of burials in the cemetery, and even where articulated remains were found the no individuals was more than 50% complete; something of a disappointment as bone preservation and surface condition was good and fragmentation low.

Drawing out meaningful conclusions regarding the demography, age, sex, pathologies, socioeconomic status and dietary intake of the population interred at the site is hampered by the small size of an assemblage that is lacking in completness. The little information we do have suggests a population primarily made-up of adults, where some juveniles are present but infants are absent. In addition, the remains are strongly weighted towards males, with only a single possible female represent among the articulated remains.

The presence of juveniles and potentially of females in the population could be taken to infer lay persons of elevated social and economic status were interred at the site, those perhaps with sufficient wealth to have donated to the friary. However, some results of the analysis might not compliment this assertion; the results of stature analysis, for instance, were inconclusive and it is not clear whether variables such as genetic make-up, nutrition, environment and disease were in any way governing factors. Greater certainty could be attributed to the active lifestyles of the individuals, as suggested by well-developed musculoskeletal markers and signs of muscle trauma, while detail of food consumption compares favourably with studies of other monastic sites, including the Gilbertine priory at Fishergate in York and Malmesbury Abbey in Wiltshire, by demonstrating the substitution of meat dishes with fish (Mays 2006, 182-3). These factors hint at a mixed burial ground where friary inhabitants were interred alongside lay persons.

In form the graveyard appears to have been well organised with neat rows of burials running parallel to the large structures to the north-west, and intercutting of graves was observed only in two instances. Pottery and radiocarbon dates demonstrate that it continued in use into the

15th or 16th century; an early 16th century Nuremburg Jetton was found in the backfill of one grave, but deposition of this item may belong to the activity at the site following the Dissolution as this grave and indeed all of those closest to the buildings on the north-west side of the site were subject to considerable damage that occurred during demolition of the friary buildings.

9.4 Periods 9 and 10: Post-medieval and modern activity

Summary

By the mid-16th century standing buildings on the site were those formed by the Period 8 parallel walls in Excavation Area 1 and possibly the Period 6 building located in the eastern corner of Excavation Area 2. Demolition and clearance activities resulted in structural remains to the west becoming sealed below a mortar rich deposit containing limestone rubble, but although some building debris was found further east this had been incorporated into levelling deposits onto which a clay-bonded cobble surface was laid. A series of small cut features, gullies and a pit were then dug though or close to the surface. Soil accumulation then ensued across the whole site.

Modern activity at the site was represented by standing buildings and associated utilities that came to populate the site from the late 19th and early 20th centuries, such as the North Annexe, the neighbouring Council Chambers and boatyard buildings.

Interpretation

Nothing of any medieval structure within the areas investigated survived above ground level, indeed ground reduction around some walls appears to have occurred resulting in damage to graves along the north-west periphery of the graveyard. What little of the friary buildings remained shows how thorough demolition must have been.

Use of the site following clearance of medieval buildings is seen in the eastern part of Excavation Area 2. Pottery and CBM incorporated into a stony surface and overlying trample here date to the 16th-18th century and features and deposits above it date to between the late 16th and early 18th centuries. However, quite what sort of activity they relate to is not clear, but perhaps some sort of garden or horticultural activity is a possibility. Certainly, soil accumulation occurred across the site which by the early 18th century had become gardens to the rear of new properties fronting onto Lendal.

Buildings began to encroach into gardens behind what are now 12 and 14 Lendal in the 19th century, the last being the 'Hutments' buildings, built in c.1945.

10 DISCUSSION

10.1 Periods 1-2, late 1st to early 2nd century

The Guildhall North Annexe site occupies a narrow stretch of land between the north-eastern bank of the River Ouse and the south-western frontage of the legionary fortress, which was established in the late 1st century. Wild plant species recovered from 2nd century deposits suggests the local environment was waterlogged and marshy, as might be expected in the environs of what was a tidal river at the time.

Activity at the site begins in the late 1st or early 2nd century with a campaign of landscaping, which in all likelihood was initiated by the military in order to maintain an open field of view

free of clutter and obstruction, as seems to have been the case on the south-western bank of the river opposite the fortress and the Guildhall site during this early period of Roman presence (Ottaway 2011, 91). Terracing appears to have been an element of the landscaping, at least above the gravel bank. However, the creation of terraces elsewhere in Roman York seems to have been with the intention to produce platforms for building on rather than re-profiling simply for the sake of clearance or decluttering. In any case buildings with a residential character would soon occupy the area, suggesting a potential change in emphasis away from military defensive requirements towards necessities of a more civic nature. This does not necessarily preclude a military influence, and any extramural settlement or *canabae* on the north-eastern bank of the Ouse would, at least initially, have been under military supervision (RCHMY 1961, xxxiv and Ottaway 2021, 65). Indeed, as Griffiths points out the range and types of pottery forms for Period 2 is consistent with early military and urban centres.

10.2 Periods 3-4, mid-2nd to early 3rd century

The material evidence portrays a residential district characterised by consumption of goods where an absence or craft working and industrial activity, or any obvious commercial purpose is notable and perhaps offers some distinction from other areas of the extra-mural settlement. The broader context for development of a residential district between the legionary fortress and the River Ouse north-west of the river crossing in the late 2nd and early 3rd century is that of a rapidly evolving urban landscape where districts or zones defined by their topographical placement, access to communication routes and emphasis or concentration of particular activities were experiencing a period of change, arguably central to which was the Late Antonine period programme of construction in the fortress from around AD 160-192, including the re-digging of the ditch and reconstruction and widening of the rampart behind the wall (Ottaway 2011, 68 and Ottaway 2021, 68).

Change is apparent at other locations between the fortress and the north-eastern bank of the River Ouse. At 39-41 Coney Street granaries constructed from timber had been sited adjacent to the river bank close to the south corner of the fortress since the late 1st century. The last of these was dismantled in the mid-2nd century and replaced in the late 2nd to mid-3rd century with other buildings which are not thought to have been used as stores (Hall 1986, 16-20). The end of commercial activity here seems to have occurred around the same time that the first building (Period 3) in Guildhall Trench 2 appeared, although construction of the later Coney Street buildings perhaps did not start until Guildhall Period 4 was underway.

Timber and masonry buildings dating to the 1st and 2nd century have also been found close to the junction of Spurriergate and High Ousegate, again in close proximity to the river bank and the south corner of the fortress, first in 1959 with more uncovered at 7-15 Spurriergate in 2005. The earliest phase of buildings at Spurriergate predates those at Guildhall by perhaps as much as 50 years but occupation assigned to the 2005 excavation's Trench 6 Phases 1C and 1D are likely to have been contemporary with Guildhall Phases 3 and 4. Additionally the character of the Period 3 and 4 structures at Guildhall resonates with the buildings at 7-15 Spurriergate, for example the recovery of large quantities of *opus signinum* demonstrates a degree of status comparable to that suggested by painted plaster at Guildhall, while a post-built structure with a sandy mortar-like floor, found in Trench 10, is analogous to the flimsy Period 4 structure at Guildhall (RCHMY 1962, 59-60, fig. 49; MAP 2005, 70-4, 85-6 and 89).

The mid to late 2nd century began to see the emergence of riverfront development on the opposite bank of the Ouse from the Guildhall site, here a zone immediately adjacent to the north-western side of the southern approach road assumed a distinct commercial character. Evidence for construction, or reconstruction of a bridge is inferred by the discovery at Wellington Row (directly opposite the Guildhall), of a cobble and gravel causeway that served to elevate Road 10 on its approach to the river, a necessity to mitigate the height difference between the lower south-western side of the river and the more elevated north-eastern bank occupied by the fortress (Ottaway 2011, 93-4, figs. 9 and 47). Buildings have been found close to the north-western side of the approach road in this area. Closest to the river, again at the Wellington Row site, was a large stone-built building, the precise function of which is uncertain; it appears unlikely to have been a dwelling or workshop, and Ottaway suggests it could have served as a meeting place for a *collegium* or guild (ibid., 97). Buildings at the neighbouring 5 Rougier Street site include one with a gritstone wall or stylobate and two phases of warehousing, the floors of which were raised on pillars to aid ventilation (Ottawy 2021, 94-5). A little further from the river, at 24-30 Tanner Row, a series of timber structures were built. The earliest date to the late 2nd century and may have been workshops later replaced with other timber buildings including what was probably a butcher's shop (ibid., 113, 124 and 131).

Demand for materials, commodities and services necessary to facilitate the 2nd and 3rd century growth of the town could have stimulated the emergence of commercial and manufacturing activity south-west of the Ouse. Ease of access to key communication routes would have been fundamental to sustaining activity here and a key consideration in selecting this particular location in the first place, perhaps encouraging relocation of commerce from other sites such as the 39-41 Coney Street warehousing. Alternatively, increased pressure on areas desirable for residential use might have stimulated movement. The two are not necessarily mutually exclusive, but at least imply a degree of planning reliant on local administration rather than purely private initiative, not dissimilar to that which must have been necessary for the construction of a massive artificial terrace at Bishophill in the late 2nd or early 3rd century (McComish 2015, 14). Certainly, the archaeological evidence is not extensive enough to offer much more than speculation on this point, but the limited information we have suggests that the rise of commercial activity south-west of the river was occurring alongside the emergence or expansion of a residential district opposite, on the north-eastern bank.

It is possible to say a little regarding the Period 3 and 4 occupants of the Guildhall North Annexe site. As highlighted above the building remains and finds assemblages demonstrate that a degree of comfort, if not prosperity, was being enjoyed. The few personal items that were recovered also reflect this and perhaps go some way to offering insight to the identity of those occupying the area, for example the fragment of mirror (SF68) and keys (SF65 and SF195) from Period 3 deposits. A bone hair pin (SF22) is particularly evocative, this object shows a hand in profile holding an object that is usually interpreted as an egg or pomegranate. This type of decorative object is rare: two other examples from York, both in copper alloy, are held at the Yorkshire Museum. A second carved bone example has recently been found at 105-111 Micklegate, where early indications are that this example was recovered from deposits relating to occupation dating to the 2nd or 3rd century (Loffman pers comm.), offering some potential parallel with the Guildhall object. Banfield (Section 8.16.4) notes the rarity of this type of object

suggesting it was a special commission, the wealth and high-status of the owner reflected by its bespoke character.

A military style copper alloy buckle plate (SF213) has also been found in association with one of the Period 4 buildings, and we know from inscriptions that many veterans remained in York after their time of service and that some had families.

Collectively the finds and structural remains depict a moderately affluent domestic setting, perhaps occupied by veterans and their families.

10.3 Periods 5, 3rd and 4th century

Whether the presence of a substantial 3rd century masonry structure superseding the earlier buildings at Guildhall North Annexe represents a significant change in how this area was being utilised is difficult to say with any certainty. There is, however, a little that can be said about the structure and the stony deposits adjacent to it in how they compare to the Phase 3 and 4 buildings and other Roman buildings known in the vicinity, this then presents an opportunity to explore what factors may have been driving this change.

The *praetentura* barrack blocks at Blake Street were re-built in stone in the 2nd century; here the Main Range was constructed on clay and cobble foundations up to 1m wide supporting masonry walls 0.55-0.6m thick (Hall 1997, 340, fig. 234). This is somewhat smaller than the Guildhall Period 5 foundation which, at up to 1.7m wide and at least 1m deep, bears closer comparison with Interval Tower SW5 (approximately 80m north of the Guildhall North Annexe site) whose foundations were in the range of 1.4 to 1.6m across and 1 to 1.1 m deep (Sumpter and Coll 1975, 75), or those of a masonry structure found during construction of the Lendal Post Office in 1883 which were approximately 1.5m wide (RCHMY 1962, 61; fig. 50). Other masonry walls of smaller scale were also recorded at the Post Office site, although their location is not specified by the RCHME and they are not thought to have necessarily been part of the larger building (ibid., 61). Unfortunately, we know nothing of the date, function or lifespan of the Post Office site buildings beyond the use of masonry at a large scale, but this in and of itself may reasonably be taken to indicate a later 2nd or 3rd century date for those structures.

Large scale reorganisation south-east of the fortress was clearly underway in the early part of the 3rd century. New streets were laid out and large stone-built structures begin to appear, including baths and temples, for example inscriptions found in the 1830's at the former Midland Bank on the corner of Nessgate and High Ousegate are associated with temples, including one dedicated to Hercules (RCHMY 1962, 119 and Ottaway 2011, 88). Meanwhile, as has been seen at 39-41 Coney Street and 5 Spurriergate, other buildings were being removed, in this instance to make way for a new road, part of what the RCHME designates as Road 2 (RCHME 1962, 3). This route runs from the south-east to near the *porta praetoria* where a crossroads is formed with Roads 10 and 5, the latter continuing north-west ultimately to join with Roads 6 and 7 en route to *Cataractonuim* (Catterick).

Projecting a line between the nearest known locations of Road 2 (39-41 Coney Street) and Road 5 (Museum Gardens) would see Road 5 pass close to the north-east of Excavation Area 2 and place an intersection with Road 10 approximately 50m south-east of the North Annexe site, more-or-less at the front door of the 15th century Guildhall building. This poses the question as to whether the succession of compacted sand and cobble surfaces found below the South Range

of the Guildhall might be part of Road 2 or 10 and if Road 5 could have passed along a terrace north-west of their junction, potentially with the Period 5 wall retaining ground alongside.

There are some difficulties with this premise, not least how accurate extrapolating a line between the Museum Gardens and Coney Street locations, separated by approximately 510m, might actually be. The South Range surfaces are certainly in line with where Road 2 might be expected to run, but they lack the thickness to definitely demonstrate they belong to a road. For example, where remains of Road 2 were found at 127 and 131 Lawrence Street in 1974-5 it was 7.5m wide, 0.5-0.8m thick and comprised several distinct layers (Brinklow *et al*. 1986, 87), while at 5 Spurriergate it was at least 4.4m wide and 0.9m thick (ibid., 20). The South Range surfaces are around half as thick as the equivalent phase of road surface seen at 39-41 Coney Street, but otherwise compare well in composition, for example, both earlier surfaces being of better quality than those that followed. The slight drop in height seen along the south-western side of the South Range surfaces might represent a camber and could account for the relatively thin form observed. Unfortunately, the small area exposed ($1m^2$ for the lower surface and less than $2m^2$ for the upper) impedes reaching a definitive conclusion for the South Range surfaces. These could alternatively be argued to belong to a floor or yard, as perhaps were those at the base of both Trench 2 and 3, albeit a step or two higher up the terracing. Indulgingly Angelo Raine recounts observing a layer of cobbles sloping down (presumably towards the river) just outside the Guildhall entrance, which he interprets as part of a Roman road, the banks either side of which were strengthened with a retaining wall (Raine 1955, 145). Unfortunately, it is not noted whether the retaining walls extended parallel to the road as it sloped down, holding back banks to either side, or if it ran perpendicular to the road as might be concluded from the Period 5 structure observed in Excavation Area 2.

Neither was convincing evidence for a road found at the North Annexe site. The stony surfaces south-west of the wall foundation lacked sufficient structural cohesion to credibly be interpreted as forming part of a road, and in any case they were on the whole situated around 0.4m lower than the South Range surfaces. A similar issue regarding height discrepancy is found when exploring the possibility that the road might have run across the terrace above the retaining wall. Here the top of the terrace was 0.4-0.5m higher than the upper extent of the South Range surfaces. However, considering the 55m distance between Excavation Area 2 and the South Range, the height differences might not be sufficient to exclude the possibility of the roads continuing across or passing close by. That said, there is no indication that any road was in place up to the inside (north-east) edge of the wall. Here the latest deposits present between the 1st/2nd century gravel bank and the wall foundation had clearly been impacted by disturbance relating to robbing out of the wall in the 12th century; had these been sealed by a road they would surely have been shielded from the depredations of demolition or robbing activities. A flat area of cobbles was found at the top of the upper terrace around 2m north-east of where the wall probably ran, but this appears to be contemporary with the gravel bank. However, the presence of a flat surface here at least presents the possibility that a road could have been set back a short distance from the retaining wall at that level.

The terraces and the South Range surfaces have the advantage of providing a flat level area desirable for a major junction. Alternatively, the crossroads could have been situated further north-east, closer to the *porta praetoria*. Road surfaces are present under the Mansion House approximately 25-30m north-east of the Guildhall South Range. The road found here was 1-

1.2m higher, while the 1st to 2nd century date assigned to it suggests it is more likely to belong to Road 10 on its rise from the river crossing to the fortress gateway. This change in elevation could be seen to demonstrate how important terracing would have been in facilitating the passage of traffic along the north-west/south-east axis in front of the fortress.

Evidence concerning the route of roads passing through or near the site is at best inconclusive. However, even today there is an appreciable slope down from the front of the Mansion House to the Guildhall behind it, so it may well have been the case that the flat area uncovered at the South Range was one of few convenient areas available for the road to pass. Wherever the routes of Roads 2 and 5 ran what is clear is that they in effect bypass the fortress on its south-western side granting the burgeoning 3rd century settlement south-east of the fortress direct access to the new river crossing and flourishing settlement south-west of the river while avoiding the fortress, access to which may have been increasingly restricted during the residence of Septimius Severus at York in 208-11. To what extent military and security requirements relating to preparations for military campaigning at this time influenced reorganisation or whether this was more closely connected with a maturing town remains unclear. However, as Ottaway highlights, inscriptions associated with temples signify that civilian autonomy was emerging from military control (Ottaway 2011, 88).

Whatever the catalyst, a degree of gentrification is apparent across the settlement at this time and the prospect of a large masonry building occupying the Guildhall site in the 3rd century cannot be totally dismissed; indeed, the buildings seen below the Post Office could very well be contemporaneous and add context to this, but there remains a distinct possibility that buildings were cleared from in front of the fortress to be replaced with hard standing and a retaining wall. Removing clutter here may have been desirable to enhance or at least not detract from the appearance of the re-built south-western frontage of the fortress. Plausibly this reflects a continuation or re-establishment of military authority governing decision-making in this zone, something perhaps supported by the recovery of a fine enamelled military buckle plate from one of the stony surfaces.

The decision to relocate or remove residential occupation from the site in the early 3rd century appears to have had a long lasting implications for how the river front zone was used. Some late 3rd and 4th century pottery was present in medieval deposits, as were four 4th century coins, implying a continued utilisation of the site but there is no evidence to suggest that intensive occupation returned. What followed appears to have been a prolonged hiatus exemplified by the very small proportion of Post-Roman and Anglo-Scandinavian wares represented in the pottery assemblage. Not until the late 11th or 12th century robbing of the retaining wall and dumping above the stony deposits in Trenches 3 does a measure of exploitation begin to re-emerge at the site.

10.4 Periods 6, Late 11th to early 13th century

Following the demise of the Roman settlement, Palliser argues, on the basis of numismatic evidence, for a revival of York as a major economic centre in the reign of Adfrith, King of Northumbria 685 - *c*. 705 (Pallister 2014, 34-5). The form of the settlement of York at this time was of a polyfocal proto-urban settlement, comprising three nuclei; a fortified episcopal and possible royal districts within the former fortress, potentially defined from each other by the former *via principalis*, a commercial *wic* close to the confluence of the Ouse and Foss, while

evidence for the early foundation of a number of churches within the *colonia* point to an additional ecclesiastical centre south-west of the Ouse (ibid., 37-9, Rees Jones, 2013, 36-7). Church domination of the settlements either side of the Ouse suggests survival of the Roman bridgehead until at least the 9th century (ibid., 34), potentially remaining as a viable crossing-point as late as the early Norman period, as suggested by Rees Jones (2013, 95). The position of the Guildhall site would therefore place it in, or at least proximal to, the episcopal centre within the fortress.

The distribution of Anglian find spots within both the fortress and *colonia* demonstrate occupation of these districts in the 7th-9th centuries (Kemp 1996, 3); the same cannot be said for the Guildhall where no material evidence, pottery or indeed any other artefact type could be attributed to this period. This perhaps emphasises the marginal position of this zone outside of the fortress despite proximity to both the River Ouse and its bridging-point.

Overall evidence for any early medieval activity at the site was extremely limited and largely reliant on the small assemblage of 9th to late 11th century Anglo-Scandinavian pottery, representing less than 2% of the post-Roman pottery, much of which was found residually in later medieval deposits.

Recovery of a handful of late 11th century pottery sherds found in association with robbing of Roman structures implies an exploitation of resources rather than necessarily a return of occupation to the area, but whether this occurred prior to the Norman Conquest is by no means certain. Use of the site at this time is, however, hinted at by antler off-cuts in deposits close to the base of Trench 4 and their occurrence residually in later deposits and features which perhaps points to some limited form of occupation associated with craft working. Further evidence for an Anglo-Scandinavian presence in the vicinity relies on the recovery of a single large sherd of 9th-10th century Torksey ware from a pit situated adjacent to the Roman road below the Mansion House. This could be seen to imply a continued importance of local communication routes converging nearby, even at a time where the focal point of population and commercial activity was to be found south-east of the fortress along the Micklegate/ Layerthorpe axis enabled by a new crossing point south-east of the Roman bridgehead.

The early medieval evolution of street layout within and adjacent to the fortress reflects the division of landholding between the archbishop and the king, an arrangement which appears to have been sustained following the Norman Conquest. In the later 11th century, the King's Fee accounted for lands in the central riverside districts, extending up to the former *via principalis* in the fortress and continuing across to parts of the *colonia* south-west of the Ouse (Rees-Jones 2013, 29-39 and 45; Maps 5 and 7). Rees Jones' hypothesis that the Roman river-crossing remained viable, linking the Royal House south-west of the river with the King's Larder and The Minster north-east of the Ouse (ibid., 95), seems credible in light of landholding arrangements and re-urbanization of areas in the King's Fee during the Norman period (ibid., 135).

As mentioned above robbing out of Roman structures may not have occurred until the early Norman period when a revival of intensive activity seems to have taken hold at the site. Documentary evidence indicates a strong baronial presence at prominent sites in the King's Fee (ibid., 107), central to which was the north-east/south-west axis of Coney Street connecting the commercial and residential district centred on Ousegate and Coppergate with St. Mary's Abbey, founded in 1088, on the west side of the city. Active clearance of the site may have been

stimulated by the construction of aristocratic mansions, serving to remove obstacles to convenient access to the river bank and as an expedient source of building material.

The first medieval structures on the site belong to the late 12th or early 13th century and Norman architectural styles are apparent from masonry and roofing material, which are indicative of high status buildings in the vicinity. The presence of new structures was accompanied by an increase in waste disposal, mainly within pits but dumping was also taking place. Evidence is limited to the study of samples from a single borehole but there is some suggestion that land reclamation along the river margin was associated with improving the quality of soil in damp meadows and was linked to cultivation of cereals. Quite how or why cultivation of land to the rear of high status property occupying burgage plots fronting onto Coney Street was desirable, appropriate or even necessary is unclear and it may be that wheat cultivation in the 12th century was only short-lived, soon superseded by further ground reclamation which itself may have been in response to adjustments in seasonal river levels as wetter and drier periods have been demonstrated as ground levels dramatically increased into the 13th century.

Intriguingly cultivation later returned, this time hulled barley, a fodder crop, was produced. Pinning a date to this phase of cultivation has not been straightforward. Radiocarbon dates from borehole BH03 suggest a mid-13th century date is most likely, but artefacts recovered from nearby tend towards a late 11th of 12th century date for activity at or around the height this later cultivation was identified at. In the mid-12th century orchards are described as occupying land to the rear of properties fronting onto North Street (ibid., 75), again giving an impression of marginal land prone to flooding and not suited to occupation.

10.5 Periods 7, mid-13th to mid-14th century

Major societal and economic changes were well underway in England by the 12th century, reflected in York by increased prosperity and population growth, prompting urban merchants and craftsmen to assert themselves by pushing for greater influence in civic matters (Palliser 2014, 113-4). The result was a growth in civic government in the 13th century (Rees Jones 2013, 109). This was not occurring in isolation and the later 12th century saw a new relationship develop between the King and his barons, an effect of which can be seen through changes in property ownership across the city and along Coney Street in particular (ibid., 109).

Key to this change was the dispersal of local gentry away from Coney Street to other locations as diverse as Walmgate and Bishophill by the 14th century (ibid., 131). Transfer of ownership would see the development of future public buildings, a prime example being the predecessor to the current 15th century Guildhall: originally the property of Gerard and Hugh, sons of Lefwin, it became a civic common hall in 1256 (ibid., 197). York's Jewish community also became an important presence on Coney Street, acquiring several properties there by the mid-13th century (ibid., 203).

The transfer of royal and baronial sites to religious foundations was also a common occurrence in York during the 13th and 14th centuries, the city becoming one of nine English towns to host all four of the main orders. By 1230 the Dominicans were present on part of the King's House curtilage south-west of the Ouse and Franciscans on land north-east of the Ouse adjacent to York castle. The Carmelites initially settled north of the city around 1253 before relocating to between Fossgate and Hungate north of the River Foss. The Augustinians were relative latecomers, but are of particular relevance, as by 1272 they had acquired land between Old

Coney Street (now Lendal) and the River Ouse, central to which is the Guildhall North Annexe site (Palliser 2014, 128, 153; Addyman 2015, Maps 5 and 6).

Change at Guildhall North Annexe in the mid-13th century is characterised by the removal of structures, small parts of which were encountered in Trenches 3 and 4, and subsequent elevation to the ground level. The landscaping appears to have occurred prior to construction of a new building sited near the river in an area subject to considerable land reclamation that had, perhaps relatively recently, seen cereal cultivation. The north-east side of the building extended across Trench 4 where a large hearth was also present. The size of the hearth hints at a large scale building even though no other structural elements remained intact, and although no definitive link could be established with a horizon of limestone rubble observed in a borehole to the south-west, what may be debris relating to construction or demolition of this building lies approximately 7.5m from its north-eastern extent.

Four factors influence our understanding of this building, and by association the early Augustinian friary; its apparent large scale, its location away from the street front close to the river, a domestic character, as suggested by the clean, well-maintained hearth, and a lifespan that starts in the mid-13th century and continued up to the mid-14th century.

A continuation of substantial Norman houses fronting Coney Street to the Guildhall North Annexe site seems very probable. A stone hall certainly neighboured to the south-east, later to develop into the Guildhall, so construction of a large building here in the mid-13th century might not be in and of itself evidence of new ownership. However, it is larger than preceding structures on this part of the site. In addition, other factors such as demolition of earlier buildings and a new waste disposal regime place construction of this building within a period characterised by significant change. Its sighting approximately 50m back from the street and within 20m of the river might reflect a necessity to adopt a previously marginal area at a time space was constrained, either by the clearance or adaptation of existing buildings in more prominent positions, in all likelihood occupying higher ground at the north-eastern end of the site closer to the street. A domestic character to occupation is reflected by the remains of the building and the content of the large rubbish pits found north of it. Management of waste disposal offers another distinction from earlier periods, the larger rubbish pits hinting at an increased population with greater resources at their disposal. The exception to the pattern of domestic refuse disposal is the late 11th-13th century roofing material found at the top of one pit which, if anything, adds further evidence of the clearance of earlier high status buildings on the site. A possible candidate is presented by the wall foundation at the eastern side of Excavation Area 2. Lastly, the building continued in use until a re-organisation within the friary precinct took place, probably around the mid-14th century, well into the timeframe of Augustinian occupation of the site.

The structural and other remains assigned to Period 7 demonstrate a period of change associated with the founding and early life of the Augustinian friary, and hint at alignments governed by the physical constraints of the site. However, their limited nature can do little more than provide an appreciation that change was occurring around the time that historical evidence tells us of the Augustinian presence. We can only guess at the reasoning behind the acquisition of property here: the availability of the land or a bequest from a prominent individual or family could have been reason enough, although what the VCH terms ‘unverified tradition’ states that

seven houses were bought to found the friary (VCH 1961, 361). Whatever the case, the site's location offered clear benefits, proximity to key communication routes perhaps foremost among these. Access to the river would have been attractive, for example other monastic institutions acquired land near the Ouse and Foss to provide convenient warehousing sites for wool shipments (Palliser 2014, 119). The road network as well would have been important, with Coney Street providing easy access to St. Mary's Abbey to the north-west and Ouse Bridge, re-built in stone in 1155, to the south-east (Rees Jones 2013, 95). Connecting the road and the river were the common lanes and landings, two of which lie either side of the friary precinct. To the south-east was Common Hall Lane, later covered over when the Guildhall was re-built in the mid-15th century, and to the north-west St. Leonard's landing and ferry where quarried stone was brought up from Tadcaster of the Minster and other buildings including the Guildhall (Raine 1955, 146-7).

10.6 Periods 8, 14th century land division and associated structures

Historical documents provide some useful, if limited, information on the Augustinian land ownership in York, of which expansion of landholding during the second half of the 14th century was an important part, influencing and perhaps even acting as the catalyst for significant change.

From the beginning the north-eastern and south-western boundaries were constrained by Old Coney Street and the River Ouse respectively. The original north-western and south-eastern boundaries is, however, less certain. The suggestion that seven houses were bought at the founding of the friary points to burgages existing at the site by the mid-13th century. Urban manors were often sub-divided into rows of tenements, typically 1 to 3.5 perches in width, presenting an interesting correlation with the seven houses obtained for the friary (Rees jones 2013, 71). The local perch width in York has been calculated at 18 feet, approximately 5.5m (ibid., 41), equating to a potential street frontage of 126 feet or 38.5m, a distance matched almost exactly by that of properties running from 6 to 18 Lendal, the modern equivalent of Old Coney Street, which occupy a street frontage measuring 38.65m. To their north-west is a lane running down towards what was St. Leonard's landing, the City River Cruises boatyard today, which conceivably represents the legacy of a much earlier boundary. Without more evidence this lane presents a best guess for the extent of the friary in that direction.

More properties were added in the second half of the 14th century, five between 1353 and 1370, a narrow plot of land near Old Coney Street, recorded as lying near the friary church and extending from a corner of the precinct's old wall to the old gate, was donated in 1382 followed in 1391 by yet another plot on Old Coney Street (VCH 1961, 361). A south-east expansion of the friary, bringing it close to Common Hall Lane and the Guildhall would seem a plausible location for these acquisitions, although growth to the north-west encompassing properties backing onto St. Leonard's Landing remains a possibility. It seems that Augustinian landholding perhaps nearly as much as doubled over a 40 year period up to the end of the 14th century.

How much of this new land was directly absorbed into the friary precinct is not known, but the construction of new buildings and re-organisation of space occurring around this time demonstrates a significant evolution of the friary that the provision of additional space would have enabled. However, the addition of greater space appears to have had little effect on the alignment of new buildings. The physical constrains of the site, determined by the River Ouse as

much as in earlier periods, proved to be a major influence on building alignment, consequently buildings were arranged either north-east/ south-west or on the same north-west/ south-east orientation of the burials in the graveyard.

As we have seen, documentary evidence records the friary church as located near Old Coney Street within a walled precinct that had a gateway onto Old Coney Street (ibid.). However, nothing else is known regarding the layout of buildings within the precinct, but something is known of what changes were made over time, these include the gift of 100 marks for plumbing works in a new dormitory, made by Thomas Gare, a merchant and Lord Mayor of York in 1420-1, while a donation was made towards building of the cloister in 1452 (Raine 1955, 131-2).

If, as seems likely, the Guildhall North Annexe site occupies a part of the early friary that was away from the street frontage a re-arrangement of space and construction of new buildings here, after the mid-14th century, might be seen to demonstrate an impact beyond just that of newly attained land. The impression is of largescale remodelling, something alluded to in mid-15th century documents, demonstrating that important elements of the friary complex were under construction 60 years after the last recorded land acquisitions on Old Coney Street.

Relating the archaeological remains of the mid-14th century wall foundations and neighbouring open space to recorded development, perhaps associated with an expanded friary precinct, can only cautiously be speculated on as much uncertainty surrounds the rather limited remains uncovered. Information to be derived from the small assemblage of architectural fragments is likewise limited. Six of the 14 architectural fragments recovered were in the perpendicular style dating to 1350-1540, perhaps the sumptuous stonework referenced by Henry Gudebarne in 1425 (ibid., 132), confirming building work at the site during a time period that fits neatly with the documentary evidence. However, all of this material was found residually in later deposits and could not be tied to any particular structure.

One area that provides some clue is that of the graveyard and its inhabitants. The possibility of burial of both males and females, and juveniles as well as adults suggests at least some were secular individuals. St. Andrew's, the Gilbertine priory on Fishergate in York has been subject to detailed study and provides some useful local comparison. There the cloister garth and alleys had been used during the 13th to early 14th centuries for the burial of lay men and women, some of enhanced social and economic status, while there is also suggestion that other burials were of individuals revered by the monastic community (Kemp and Graves 1996, 117-8 and 139-40; fig. 158). Spacing between the outer wall of the St. Andrew's cloister alley and that of surrounding ranges were a little over 3m, are not dissimilar to the 14th century parallel walls at Guildhall North Annexe which were a little under 3m apart. In contrast, no burials were found in that space at Guildhall North Annexe and seem to have been limited to the open area south-east of the walls. Documentary evidence refers to building work on a cloister taking place in the mid-15th century, but where in the friary complex this was located is not known. All that can be said with any certainty is that the parallel wall foundations at Guildhall North Annexe date to no earlier than the mid-14th century, consequently any correlation with documentary evidence is tentative at best but falls within a plausible spatial arrangement, timeframe and set of circumstances.

10.7 Periods 9 and 10, post-medieval and modern activity

The friary was surrendered on 28th November 1538 (Raine 1955, 133) and the following year leased to Sir George Lawson, a wealthy city alderman and Crown official who owned a mansion on Lendal (Palliser 2014, 271 and 285), and in whose family it remained until 1568.

In his request to Thomas Cromwell, at this time Chancellor of the Exchequer, for the friary grounds Lawson describes the site as 'small in extent, with no ground but a little kitchen garden adjoining the walls of my house' (VCH 1961, 361). This is perhaps something of an understatement of the scale of a site at one point considered for housing the Council in the North, as Lawson was seeking a free gift of it before finally accepting a 21 year lease (ibid., 361). The suggestion that there was 'no ground but a little kitchen garden' might not necessarily be inaccurate, perhaps a deliberate attempt to underplay a site with built-up character. Lawson's statement also raises an interesting question regarding the extent of the friary precinct and where it sat in relation to neighbouring properties, but unfortunately the exact location of Lawson's Lendal property is not known.

A 1540 account roll of St. Thomas's Hospital records the sale of roofing lead from the Augustinian friary (Raine 1955, 133), its buildings then appear to share the same fate as many medieval monasteries, effectively becoming a quarry of easily accessible stone. The result was the complete disappearance of the friary above ground level with the exception of part of the precinct wall along the river front.

Redevelopment of the site is not apparent until 1714 when numbers 10, 12 and 14 Lendal were built by Henry Baines, the gardens of which encompass the location of the Guildhall North Annexe site. Originally built as a pair of three storey town houses these properties still stand today, the ground floors converted into commercial premises in the 19th century. Conversion work in the basement of no.12 in 1959 uncovered 15th century stonework, presumably belonging to the friary (RCHMY 1981, 155).

From the end of the 19th century the Guildhall complex expanded into gardens at the rear of 12 and 14 Lendal, including the North Annexe in around 1902 and the 'Huntments' in 1945.

11 CONCLUSION

Analysis of the archaeological remains at the Guildhall has been shaped through an endeavour to frame it against questions set against the regional research aims (Table 2). The following section attempts to answer each of those questions based on the evidence formulated through the analysis. The limited nature of the archaeological programme of works, it should be noted, has resulted in a core of data constrained more often by the physical extent of archaeology uncovered rather than a lack of artefactual evidence, particularly in regard of the Roman period. Consequently, caution needs to be taken when ascribing definitive answers to any particular question, however an opportunity to explore certain aspects of the development in this part of the city and what factors perpetuated stasis or influenced change is certainly provided. The main strength of the results of the Guildhall archaeological work lies in its contribution to the existing body of archaeological excavation and historical research.

11.1 The outcomes of the analysis

11.1.1 Romano-British

The growth of York's urban districts/boroughs

- How was urban York organised, what roles did this district/borough perform, and how did the function and morphology change throughout the Romano-British period?

The Romano-British remains at the site offer insight into the organisation of the urban landscape, some with the potential for elucidating the emergence of districts, or zones, with a specific function or purpose which were subject to change over time. The limited extent of archaeological deposits explored is certainly a limiting factor, nonetheless the data set from the site provides valuable comparanda for other sites in York and other similar settings.

- How and why did the urban landscape change in the late Roman period, and what roles may military influence have played in this period?

The late 2nd or early 3rd century is defined by a shift away from residential occupation at the site. Little evidence for a sustained presence during the later Roman period as found at the site. Sites near the south corner of the fortress indicate construction of a new road linking settlement south-east of the fortress with the river-crossing and land routes leading to the north-west. This took place at a time when the *colonia*, south-west of the River Ouse, was undergoing considerable growth and change, and reconstruction work on the legionary fortress was underway. It may be that some military influence is being revealed with the clearance of buildings occupying space in front of the new south-west frontage of the fortress up to the River Ouse.

- Can excavation and research better define the 3rd and 4th century decline in the city and the processes that drove the decline?

Very little evidence was found for activity at the site following construction of a substantial revetting wall in the 3rd century. A small number of 3rd and 4th century coins were found in later deposits and features, suggesting that the site remained in use but perhaps in quite a limited way, indicating that it had perhaps become somewhat peripheral after the demise of the 2nd century residential district. Change at the site appears to have occurred at a time of urban growth, and development was underway across the settlement, the result being the site was no longer a focus for intensive activity. Consequently, the site has little to offer for understanding late Roman urban decline and its drivers.

- Can we detect evidence of gentrification for purposes of state visits and changes in Imperial administration?

Any indication of gentrification in the vicinity of the site is perhaps seen through an absence as much as a presence of evidence. It is plausible that a decision to clear residential buildings from between the fortress and the river and build a new retaining wall was influenced by reconstruction in stone of the south-west face of the legionary fortress with its new and impressive projecting towers, arguably the first example of this style in Britain (Ottawy 2011, 75), probably completed in the early 3rd century to coincide with the arrival of Septimius Severus in 208.

- How best may we enhance study of the origins and development of early land reclamation and drainage, particularly in Yorkshire?

No evidence for land reclamation during the Roman period was found at the site, although significant effort appears to have gone into landscaping along the river margin to either enhance the north-eastern bank of the Ouse or to prepare it for the placement of buildings.

11.1.2 Early medieval

The growth of York's urban districts

- Can we understand more about changes to urban districts in the early medieval period?

An absence of 7th to 9th century activity at the site seems to suggest that a peripheral character established for land between the fortress and the River Ouse in the 3rd and 4th century persisted into the Anglian period. The small number of Anglo-Scandinavian finds of pottery and antler offcuts hints at a renewal of a presence in the vicinity, but the archaeological evidence is perhaps too limited to suggest a significant revival of occupation in the area prior to the Norman Conquest.

Roads and rivers: transport routes and cultural boundaries

- What roles may rivers have played as corridors for the movement of goods and people, and how might these have varied over time?

No evidence was found that can contribute to this question. This may be a reflection of the limited extent of the early medieval activity that it was possible to explore.

11.1.3 Late medieval

The growth of York's urban districts

- How did York develop after the Norman Conquest, both within the urban core and in suburban and extra-mural areas?

The material evidence demonstrates that Norman buildings of elevated social status were present on or near the site. This fits into an established pattern of high status occupation within the King's Fee and Coney Street in particular. Documentary evidence indicates that urban manors had become established at the site, these were then sub-divided into smaller properties. Dispersal of aristocratic property ownership to other parts of the city, away from Coney Street, occurred in the 13th century. This change is reflected by the acquisition of Coney Street property by incoming groups, including the Jewish community and establishment of an Augustinian friary on Old Coney Street.

- What can we understand about the development of ecclesiastical houses and their impact on the late medieval urban landscape?

The archaeological evidence points to larger scale organised refuse disposal and some new building at the site in the mid-13th century. This change coincides with the establishment of an Augustinian friary on Old Coney street in 1272. The adoption of a site with easy access to the river network in York is seen with other monastic sites in the city and its suburbs and is thought to be linked to the wool trade. A central location in the city on one of the key land routes passing through it may also have been an important influence in selecting this site. The site of the friary appears to have been initially quite small. Acquisition of additional properties on Old Coney

Street in the 14th century seems to have led to a redevelopment of the site that was still taking place into the mid-15th century.

Religion

- How can we refine our understanding of local and regional architectural styles, including sculptured stonework, decorations and monuments?

Nothing of the friary buildings was found to survive above foundation level and only a few fragments of sculpted masonry were recovered. However, nearly half of the architectural fragments date to 1350-1540, and as such conceivably originated from buildings constructed during redevelopment of the site. It may well be the case that historical references to 'sumptuous stonework' allude to buildings constructed in the perpendicular style.

- What may we deduce from scientific analyses of cemetery populations about changes in diet, mortality and other demographic variables, both within the region and between social groups?

Useful insight into the friary burial ground population has been constrained by the small size and rather fragmentary nature of the human bone assemblage. This notwithstanding, clear signs of metabolic deseases have been identified, hinting at dietary deficiencies that could be linked to economic and social status. Artefact and radiocarbon analysis suggests that burials were taking place at this location during the 14th to 16th centuries, but a concentration in the latter part of this range seems probable. Burial is likely to have ceased at the Dissolution or soon after. The presence of males and possibly a female, and both juveniles and adults suggests that lay persons could have been interred here. There are other parallels in York for lay burials at monastic sites, St. Andrew's Gilbertine priory for example. At St. Andrew's the cloister garth and alleys were used for such individuals and the arrangement of structural remains and open space at the Augustinian friary hints at this being the case here as well. However, further excavation would be necessary to definitively prove this. The population of the Gilbertine priory offers other parallels. Isotopic analysis of human remains at both sites demonstrates a significant marine component to the diet.

Industry and trade

- How and where was post-Conquest pottery manufactured and distributed, and what communication systems were employed?

The presence of a large quantity of pre-mid-12th century Splashed glazed pottery wasters, seconds and kiln props appear to have their origin in Beverley, large chalk inclusions being the decisive indicator. The material make-up of the pottery makes the presence of a kiln site in the vicinity unlikely. One suggestion is that this material may have been used as boat ballast. The dispositional circumstance of this material is, however, a little unusual. They were found along with late 11th to the early 13th century curved and flanged tile in the upper fill of a large pit, the lower fil of which dated to the mid-13th to mid-14th century.

11.1.4 Post-medieval

Ecclesiastical structures, estates and burials

- What was the impact of the Reformation upon ecclesiastical buildings and monastic estates?

Once it became clear that the friary buildings were not suitable for repurposing they were comprehensively demolished. No evidence for any structure remaining above ground level was found. This follows a pattern for other urban monastic sites in York and in England more widely.

The answers to these questions make it clear that significant areas of uncertainty regarding the utilisation and development of this part of the city remain, and that any future archaeological works on or near the site could provide an opportunity to enhance our understanding of this part of the city.

13 LIST OF SOURCES

Sources accessed on 05/04/2022

http://mapapps.bgs.ac.uk/geologyofbritain/home.html British Geological Survey

https://www.york.gov.uk/HistoricEnvironmentRecord Historic Environment Record

14 REFERENCES

Acsádi, G. and Nemeskéri, J., 1970. *History of Human Life Span and Mortality*. Akadémiai Kiadó, Budapest

Adam, J. P., 2005. *Roman Building Materials and Technology.* Routledge: London and New York

Adams, S., 2021. 'The Bulk Environmental Samples', in B. Savine, 'Archaeological Investigations at The North Annexe, York Guildhall', York Archaeological Trust unpublished report, 91-5; 102-7

Adams, S., 2022. 'Bioarchaeology', in J. M. McComish, B. Savine, and B. Reeves, 'Archaeological Investigations at Mill House, North Street, York', York Archaeological Trust unpublished report, 40–51

Adams, S., 2022a. 'The Environmental Samples', in A. Rickinson and S. Smith, 'Archaeological Investigation at 22-24 Aldwark', York Archaeological Trust unpublished report, 8–11

Addyman, P.V., (ed), *The Archaeology of York.* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

2/19 O'Connor, T.P., 2003. *The analysis of urban bone assemblages.* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

3/1 Whitwell, J. B., 1976. *The Church Street Sewer and an Adjacent Building;* 32-27. York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

3/2 Sumpter A. B. and Coll, S., 1977. *Interval Tower SW5 and the South-west Defences: Excavations 1972-75.* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

3/3 Ottaway, P., 1996. *Excavations and observations on the defences and adjacent sites, 1971-90*. York Archaeological Trust Fascicule Series. Council for British Archaeology: York

4/1 Carver, M. O. H., Donaghey, S. and Sumpter, A. B. 1978. *Riverside Structures and a Well in Skeldergate and Buildings in Bishophill.* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

4/2 McComish, J. M., Ottaway, P., Pearson, N. and Wenham. P., 2021. *Roman York: Excavations South-West of the Ouse (1961-1993) at 5 Rougier Street, 24-30 Tanner Row and Sites in Bishophill.* York Archaeological Trust Fascicule Series. Council for British Archaeology: York

6/1 Brinklow, D., Hall, R. A., Magilton, J. R. and Donaghey, S., 1986. 'Roman Extra-mural Settlement and Roads. Coney Street, Aldwark and Clementhorpe, Minor Sites, and Roman Roads'. York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

6/2 Ottaway, P., 2011. *Archaeology in the Environs of Roman York: Excavations 1976-2005.* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

7/1 Kemp R., L., 1996. *Anglian Settlement at 46-54 Fishergate*. York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

7/2 Tweddle, D., Moulden J. and Logan, E., 1999. *Anglian York: A survey of the Evidence*. York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

10/4 Stocker, D. A., 1999. *The College of the Vicars Choral of York Minster at Bedern: Architectural Fragments*. York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

11/2 Kemp, R. L. and Graves, C. P., 1996. *The Church and Gilbertine Priory of St Andrew, Fishergate;* 294-297. York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

1**2/3** Lilly, J. M., Stroud G., Brothwell, D. H. and Williamson. M. H. (eds), 1994. *The Jewish burial ground at Jewbury*. York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

14/2 Kenward, H. K. and Williams, D, 1979. *Biological evidence from the Roman warehouses in Coney Street*. Council for British Archaeology: London and York

15/2 O'Connor, T. P., 1988. *Bones from the General Accident Site, Tanner Row*. York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

16/2 Perrin, J. R., 1981. *Roman Pottery from the Colonia: Skeldergate and Bishophill*. York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

16/4 Perrin, J. R., 1990. *Roman Pottery from the Colonia 2: General Accident and Rougier Street.* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

16/5 Mainman, A. J., 1990*. Anglo-Scandinavian Pottery from 16-22 Coppergate.* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

16/6 Mainman, A. J., 1993. *The Pottery from 46-54 Fishergate.* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

16/7 Monaghan, J., 1993. *Roman Pottery from The Fortress: 9 Blake Street.* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

16/8 Monaghan, J., 1997. *Roman Pottery from York.* York Archaeological Trust Fascicule Series. Council for British Archaeology: York

16/9 Mainman, A. and Jenner, A., 2013. *Medieval Pottery from York.* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

17/1 MacGregor, A., 1976. *Finds from a Roman Sewer System and an adjacent Building in Church Street*. York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

17/2 MacGregor, A., 1978. *Roman Finds from Skeldergate and Bishophill*. York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

17/6 Ottaway, P., 1992. *Anglo-Scandinavian Ironwork from Coppergate,* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

17/9 Rogers, N. S. H., 1993. *Anglian and other Small Finds from Fishergate*, York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

17/10 Cool, H. E. M., Lloyd-Morgan, G. and Hooley, A. D., 1995. *Finds from the Fortress*, York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

17/11 Walton Rogers, P., 1997. *Textile Production at 16–22 Coppergate*, York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

17/12 MacGregor, A., Mainman, A. J. and Rogers, N. S. H., 1999. *Bone, Antler, Ivory and Horn from Anglo-Scandinavian and Medieval York*, York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

17/15 Ottaway, P. and Rogers, N. S. H., 2002. *Craft, Industry and Everyday Life: Finds from Medieval York,* York Archaeological Trust Fascicule Series. Council for British Archaeology: London and York

19/2 O'Connor, T. P., 2003. *The Analysis of Urban Animal Bone Assemblages: A Handbook for Archaeologiasts*. York Archaeological Trust Fascicule Series. Council for British Archaeology: York

Addyman, P., (ed) 2015. *British Historic Towns Atlas. Volume **5**: York*. The Historic Towns Trust and York Archaeological Trust: Oxford.

Albarella, U., 2005. 'Alternate fortunes? The role of domestic ducks and geese from Roman to Medieval times in Britain', in G. Grupe and J. Peters, (eds.), *Feathers, Grit and Symbolism: Birds and Humans in the Ancient Old and New Worlds*, Rahden: Verlag Marie Leidorf, 249-58

Allen, M., 2011. 'Animalscapes and Empire: New Pespectives on the Iron Age/Romano-British Transition'. University of Nottingham unpublished PhD Thesis

Allen, M., 2014. 'Chasing Sylvia's Stag: Placing Deer in the Countryside of Roman Britain', in K. Baker, R. Carden and R. Madgwick (eds.), *Deer and People*, Oxford: Windgather Press, 174-86

Alberti, M., 2017. *Spindle Whorls*. Roman Finds Group Datasheet **7**

Allen, J. R. L., 2014. Whetstones from Roman Silchester (Calleva Atrebatum), North Hampshire: Character, manufacture, provenance and use: 'Putting an edge on it'. BAR British Series **597**: Oxford

AOC Archaeology, 2015. 'Hutments Site, The Guildhall, York: Interim Archaeological Evaluation Report'. AOC Archaeology Group unpublished report

AOC Archaeology, 2016. 'Guildhall Groundwork Investigation, York: Archaeological Watching Brief Report'. AOC Archaeology Group unpublished report

Armstrong, P., Tomlinson, D. and Evans, D.H., 1991. Excavations at Lurk Lane, Beverley 1979-82. Sheffield Excavation Reports **1**. J. R. Collis: Sheffield

Asouti, E. and Austin, P., 2005. 'Reconstructing Woodland Vegetation and its Exploitation by Past Societies, based on the Analysis and Interpretation of Archaeological Wood Charcoal Remains', *Environmental Archaeology* **10** (1), 1-18

Austin, P., 2003. 'The Wood Charcoal Macro-Remains', in T. Stevens, *Drayton Sand and Gravel Pit, Oving, Chichester, West Sussex, Excavation Area 1: Archive Report.* AOC Archaeology Group: Twickenham, 96-102

Baker, P. and Worley, F., 2019. *Animal Bones and Archaeology. Recovery to Archive*. Historic England: Swindon

Banfield, L., 2023. *Making flour the German way in Roman Britain.* BAR Roman Britain Series: Oxford

Banfield, L., forthcoming. 'Sharpening Knowledge: An Investigation into the social and economic significance of hones from Roman London'. *LAMAS Trans* **73**

Banham, D. and Faith, R., 2014. *Anglo-Saxon Farms and Farming*. Oxford University Press: Oxford

Bang, P. F., 2008. *The Roman Bazaar: A comparative study of trade and markets in a tributary empire.* 1st ed. Cambridge: Cambridge University Press.

Barclay, A., Knight, D., Booth, P., Evans, J., Brown, D. H. and Wood. I., 2016. *A Standard for Pottery Studies in Archaeology*. Prehistoric Ceramics Research Group, Study Group for Roman Pottery & Medieval Pottery Research Group

Barnes, I., Young, J. P. W. and Dobney, K. M., 2000. DNA-based Identification of Goose Species from Two Archaeological Sites in Lincolnshire. *Journal of Archaeological Science* **27**, 91-100

Barrett, J. H., 2001. *FISH: The York Fish Bone Recording Protocol*, Version 1.1. Fish Lab: University of York

Barrett, J. H., Locker A. M. and Roberts, C. M., 2004. "Dark Age Economics" Revisited: The English Fishbone Evidence AD 600-1600. *Antiquity* **78**, 618-36

Barrett J. H., Johnstone, C., Harland, J., Van Neer, W., Ervynck, A., Makowiecki, D., Heinrich, D., Hufthammer, A. K., Enghoff, I. B., Amundsen, C., Christiansen, J. S., Jones, A. K. G., Locker, A., Hamilton-Dyer, S., Jonsson, L., Lõugas, L., Roberts C. and Richards M., 2008. Detecting the medieval cod trade: A new method and first results. *Journal of Archaeological Science* **35**(4), 850-61

Barrett J. H., Orton, D. C., Johnstone, C., Harland, J., Van Neer, W., Ervynck, A., Roberts, C., Locker, A., Amundsen, C., Enghoff, I. B., Hamilton-Dyer, S., Heinrich, D., Hufthammer, A. K., Jones, A. K. G., Jonsson, L., Makowiecki, D., Pope, P., O'Connell, T. C., de Roo T. and Richards, M., 2011. Interpreting the expansion of sea fishing in medieval Europe using stable isotope analysis of archaeological cod bones. *Journal of Archaeological Science* **38**, 1516-24

Barrett, J. H. and Orton, D. C. 2016. *Cod and Herring. The archaeology and history of medieval sea fishing*. Oxbow: Oxford

Bateson, J. D., 1981. Enamel-Working in Iron Age, Roman and Sub-Roman Britain, British Archaeological Reports, British Series **93**, Oxford (BAR Reports)

Behrensmeyer, A. K., 1978. Taphonomic and ecologic information from bone weathering. *Paleobiology* **4**, 150-62

Berni Millet, P., 2008. *Epigrafía anfórica de la Bética. Nuevas formas de análisis.* Union académique internationale: Corpus international de timbres amphoriques Fasicule **14** and Col·lecció instrumenta **29**. Publicacions Universitat de Barcelona: Barcelona

Betts, I. M., 1985. 'A Scientific Investigation of the Brick and Tile Industry of York to the Mid-Eighteenth Century'. University of Bradford unpublished PhD thesis

Biddle, M., 1990. Object and Economy in Medieval Winchester, Winchester Studies **7**ii, Oxford

Biddulph, E., Brady, K., Simmonds, A. and Foreman, S., 2020. *Berryfields: Iron Age Settlement and a Roman Bridge, Field system and settlement along Akeman Street near Fleet Marston, Buckinghamshire*. Oxford Archaeology Monograph **30**: Oxford

Bidwell, P. and A. Croom., 2010. 'The supply and use of pottery on Hadrian's Wall in the 4th century', in R. Collins and L. Allason-Jones, *Finds from the Frontier: Material Culture in the 4th–5th centuries*. CBA Research Report **162**, 20-36

Bird, J. (ed.), 1998. *Form and Fabric; studies in Rome's material past in honour of B.R. Hartley*, Oxbow Monograph **80**. Oxford

Boessneck, J., 1969. 'Osteological differences between sheep (*Ovis aries* Linné) and goat (*Capra hircus* Linné)', in D. Brothwell, and S. Higgs, (eds), *Science in archaeology*, Thames and Hudson: London, 338-55

Brears, P., 1971. *The English Country Pottery: Its History and Techniques*. David & Charles: Newton Abbot

Brears, P., 2008. *Cooking and Dining in Medieval England*. Prospect Books: Devon

Brickley, M. and McKinley, M., 2004. *Guidelines to the standards for recording of human remains. Institute for Archaeologists Paper* **7**. Institute for Archaeologists: Reading

Brodribb, G., 1987 *Roman Brick and Tile*. Alan Sutton Publishing: Gloucester

Brooks, S., and Suchey, J. M., 1990. 'Skeletal age determination based on the os pubis: A comparison of the Acsádi-Nemeskéri and Suchey-Brooks methods'. *Human Evolution* **5**, 227-38

Brooks, S., 2007. Boat-Rivets in graves in pre-Viking Kent: Reassessing Anglo-Saxon Boat-Burial Traditions. *Medieval Archaeology* **51**, 1-18

Bronk Ramsey, C. and Lee, S., 2013 'Recent and phased development of the Program OxCal', Radiocarbon **55**, (2-3), 720-30

Brothwell, D., 1981. *Digging Up Bones.* Trustees of the British Museum: London.

Browning, J., Cooper, N. J., Johnson, E., Monckton, A. and Sawday, D., with Buckley, R., Cool, H., Nicholson, N. and Radini, A., 2021. 'Food and Drink', in Buckley, R. Cooper, N. J. and Morris, M., *Life in Roman and Medieval Leicester. Excavations in the town's north-east quarter, 1958–2006*. Leicester Archaeology Monograph **26**. 282-363

Buckland, P. C., 1976. 'Geological and Archaeological Noted on the Rocks Used in the Construction of the Sewer', in J. B .Whitwell, *The Church Street Sewer and an Adjacent Building,* Archaeological Trust Fascicule Series **3/1**. Council for British Archaeology: London and York, 32-27

Buckland, P. C., 1978. 'The Building Material' in M. O. H. Carver, S. Donaghey and A. B. Sumpter *Riverside Structures and a Well in Skeldergate and Buildings in Bishophill.* York Archaeological Trust Fascicule Series **4/1**. Council for British Archaeology: London and York, 40-4

Buckland, P. C., Hartley, K. F. and V. Rigby., 2001. The Roman Pottery Kilns at Rossington Bridge. Excavations 1956-1961. *Journal of Roman Pottery Studies* **9**

Bulleid, A. and Gray, H. St. G., 1917. The Glastonbury Lake Village. Volume **2**, Glastonbury Antiquarian Society: Glastonbury

Buikstra, J. E., and Ubelaker, D. H., 1994. *Standards for Data Collection from Human Skeletal Remains*. Arkansas Archaeological Survey Report **44**

Brunskill, R. W., 1997. *Brick Building in Britain.* Victor Gollancz: London

Cameron, R., 2003. *Land Snails in the British Isles*. Field Studies Council: Shropshire

Campbell, G., Moffett, L. and Straker, V., 2011. *A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation.* 2nd edn. English Heritage

Campbell, G., 2010. Oysters ancient and modern: potential shape variation with habitat in flat oysters (*Ostrea edulis* L.) and its possible use in archaeology. *MUNIBE Supplemento-Gehigarria* **31**, 176-87

Campbell, G., 2017. The collection, processing and curation of archaeological marine shells, in Allen, M. J. (ed.), *Molluscs in Archaeology: methods, approaches and applications.* Studying Scientific Archaeology **3**. Oxbow: Oxford and Philadelphia, 273-88

Camphuysen, C. J. and Henderson, P. A., 2017. *North Sea fish and their remains*. Royal Netherlands Institute for Sea Research and Pisces Conservation Ltd

Cappers, R., Bekker, R. M. and Janes, J. E. A., 2006. *Digital Seed Atlas of the Netherlands.* Gronlingen Archaeological Studies **4**. Barkhuis Publishing: Eelde

Carr, G., 2001. 'Romanisation' and the Body. *Theortical Roman Archaeology Conference 2000,* **1/1**, 112-24

Carrott, J., Hall, A, Issitt, M., Kenward, H. and Large, F., 1996. 'Plant and Invertebrate Remains from Post-Conquest Deposits at 16-22 Coppergate, York'. Environmental Archaeology Unit unpublished report **96/9**

Carrott, J., Hall, A, Hughes, P., Jacques, D., Johnstone, C., Kenward, H. and Worthy, D., 1998. 'An Assessment of Biological Remains from Excavations at St. Saviourgate, Yor'k. Environmental Archaeology Unit unpublished report **98/14**

Carruthers, W. J., 1995. *Charred Plant Remains from the Medieval Farmstead at Eckweek, Avon.* Ancient Monuments Laboratory Report **27/95**. Historic Buildings and Monuments Commission for England: London

Carruthers, W. J., 2002. 'The Charred and Mineralised Plant Remains', in J. Valentin and S. Robinson, *Excavations in 1999 on Land Adjacent to Wayside Farm, Nursteed Road, Devizes*, *The Wiltshire Archaeological and Natural History Magazine* **95**, 202-3

Carruthers, W. J., 2004. 'The Plant Remains', in J. Leary (ed), *Tathbert's Lundenwic: Archaeological Excavations in Middle Saxon London.* Pre-Construct Archaeology Limited Monograph No. **2**. Pre-Construct Archaeology Limited: London, 112-4

Carruthers, W. J. and Smith, D. N., 2020. *Mineralised Plant and Invertebrate Remains: A Guide to the Identification of Calcium Phosphate Replaced Remains.* Historic England: Swindon

Carson, R. A. G., Hill, P. V. and Kent, J. P. C., 1960. *Late Roman Bronze Coinage, AD 348–498: Reprinted with Additions and Corrections from the Numismatic Circular*. Spink: University of Virginia

Cerón-Carrasco, R. 2004. 'The fish remains from Glassknapper's Cave, Antler Cave and Wetweather Cave', in T. Pollard, *The excavation of four caves in the Geodha Smoo near Durness, Sutherland.* Scottish Archaeological Internet Report **18**, 27-8

Chartered Institute for Archaeologists (CIfA), 2014. *Standard and guidance for the collection, documentation, conservation and research of archaeological materials*

Claassen, C., 1998. *Shells*. Cambridge Manuals in Archaeology. Cambridge University Press: Cambridge

Coates, T., 2019b. 'Archaeological Investigations at the North Annexe, York Guildhall: 2020 Excavation 1'. York Archaeological Trust unpublished report **2020/119**

Coates, T., Kendal, K., Shaw, A. and Smith, K. 2020. 'Archaeological Investigations at the City of York Guildhall'. York Archaeological Trust unpublished report **2020/85**

Coates, T., 2020. 'Archaeological Investigations at the City of York Guildhall'. York Archaeological Trust unpublished report **2019/164**

Cohen, A. and Serjeantson, D., 1996. *A manual for the identification of bird bones from archaeological sites*. Archetype publications: London

Cool, H. E. M., 1998. 'Early occupation at St. Mary's Abbey, York: the evidence of the glass', in J. Bird (ed.), *Form and Fabric; studies in Rome's material past in honour of B.R. Hartley*, Oxbow Monograph **80**, 301-5

Cool, H. E. M., 2006. *Eating and Drinking in Roman Britain*. Cambridge University Press: Cambridge

Collingwood, R. G. and Wright, R. P., 1993. *The Roman inscriptions of Britain. Vol. II: Instrumentum Domesticum.* Fascicule 5. A. Sutton: Stroud

Corder, P., 1989. The Roman Pottery at Crambeck, Castle Howard, in P. R. Wilson, (ed.) *Crambeck Roman Pottery Industry.* Yorkshire Archaeological Society: Leeds

Cox, M., 2000. 'Ageing adults from the skeleton', in M. Cox and S. Mays (eds), *Human Osteology in Archaeology and Forensic Science*. London, 61-82

Creighton, J., 1999. The Pottery, in Halkon and Millet (eds.) *Rural Settlement and Industry: Studies in the Iron Age and Roman Archaeology of Lowland East Yorkshire,* 141-64. Yorkshire Archaeological Report No. **4**. Yorkshire Archaeological Society, Roman Antiquities Section and East Riding Archaeological Society

Current Archaeology, 2020. *From Augustinians to Eboracum at York Guildhall.* Issue **366**

Dar, G., Masharawi, Y., Peleg, S., Steinberg, N., May, H., Medlej, B., Peled, N. and Hershkovitz, I., 2010. 'Schmorl's nodes distribution in the human spine and its possible etiology'. *European Spine Journal* **19**, 670-5

Darling, M. and Precious B., 2014. *A Corpus of Roman Pottery from Lincoln.* Lincoln Archaeological Studies No. **6**. Oxbow Books: Oxford

Davey, N. and Ling, R., 1982. *Wall Painting in Roman Britain*. Alan Sutton Publishing: Gloucester

Dean, G., 2009. *Medieval York*. York Archaeological Trust: York

Deevy, M., 1998. *Medieval Ring Brooches in Ireland. A Study of Jewellery, Dress and Society*. Wordwell: Ireland

Dobiat, C., 1979. Überlegungen zur Verwendung der Hallstattzeitlichen Zweignebeln. *Archäologisches Korrespondenzblatt* **9**, 191-8

Dobney, K., Jacques, S. D. and Irving, B. G., 1996. *Of Butchers and Breeds. Report on Vertebrate Remains from Various Sites in the city of Lincoln*. Lincoln Archaeological Studies **5**: Lincoln

Dickson, C., 1987. 'The Macroscopic Plant Remains', in J. W. Hedges, (ed.), *Bu, Gurness and the Brochs of Orkney, Part I: Bu.* BAR British Series **163**. British Archaeological Reports: Oxford, 137-42

Driver, J. C., 1982. 'Medullary bone as an indicator of sex in bird remains from archaeological sites', in B. Wilson, C. Grigsonand S. Payne (eds), *Ageing and Sexing Animal Bones from Archaeological Sites*, British Archaeological Reports, British Series **109,** 251-68

Dunning, G. C., 1977. 'Mortars', in H. Clarke and A. Carter, *Excavations in Kings Lynn 1963-1970, Society for Medieval Archaeology*, Monograph Series **7**. London, 320-47

Eames, E., 1980. *Catalogue of Medieval Lead-Glazed Earthenware Tile in the Department of Medieval and later Antiquities British Museum, Volumes 1 and 2*. British Museum Press: London

Edlin, H. L., 1949. *Woodland Crafts in Britain: An Account of the Traditional Uses of Trees and Timbers in the British Countryside.* Batsford: London

Egan, G. and Pritchard, F., 1991. Dress Accessories, Medieval Finds from Excavations in London **3**. Her Majesty's Stationery Office: London

Egan, G., 1998. *The Medieval Household. Daily Living c. 1150 - c. 1450,* Medieval Finds from Excavations in London **6**. Her Majesty's Stationery Office: London

Egan, G., 2005. *Material Culture in an Age of Transition*, MoLAS Monograph **19**. London

Ellison, M., 1981. 'The Pottery', in B. Harbottle and M. Ellison, 'An Excavation in the Castle Ditch, Newcastle upon Tyne, 1974-76', *Archaeologia Aeliana* **5/9**, 95-164

Enghoff, I., 2000. Fishing in the Southern North Sea region from the 1st to the 16th century AD: evidence from fish bones. *Archaeofauna* **9**, 59-132

Evans, J. G., 1972. *Land Snails in Archaeology*. Seminar Press: London

Evans, J., 1993 Pottery function and finewares in the Roman north. *Journal of Roman Pottery Studies* **9**, 95-119

Fagan, B., 2006. *Fish on Friday. Feasting, Fasting, and the Discovery of the New World*. Basic Books: New York

Fiorentino, G. and D'Oronzo, C., 2010. 'Archaeobotanical and Experimental Approach to Identify 245 Fire Succession in Hearth Structures of Apollo Sanctuary at Hierapolis (Turkey)', in I. Théry-Parisot, L. Chabal and S. Costamagno (eds), 'Taphonomie des Résidus Organiques Brûlés et des Structures de Combustion en Milieu Archéologique'*, P@lethnologie* **2**, 59-68

Gale, R. and Cutler, D., 2000. *Plants in Archaeology.* Westbury Publishing and Kew: Otley

Garside Neville, S., 1996. 'Ceramic Building Materials', in R. L. Kemp and C. P. Graves 'The Church and Gilbertine Priory of St Andrew, Fishergate, York', York Archaeological Trust Fascicule Series **11/2.** Council for British Archaeology: York, 294-7

Gaunt, G. D. and Buckland, P. C., 2002. 'Sources of Building Materials in Roman York', in P. Wilson and J. Price (eds.), *Aspects of Industry in Roman Yorkshire and the North*. Oxbow Books: Oxford, 133–44

Gillam, J. P., 1970. *Types of Roman Coarse Pottery Vessels in Northern Britain*. 3rd edition. Newcastle.

Gillam, J. P., 1976. Coarse fumed ware in northern Britain and beyond. *Glasgow Archaeological Journal* **4**, 57–89

Giorgi, J., 2006. 'Plant Remains', in D. Seeley, C. Phillpotts and M. Samuel, *Winchester Palace: Excavations at the Southwark Residence of the Bishops of Winchester*, MoLAS Monograph **31**. London: Museum of London Archaeology Service, 118-30

Goodall, I. H., 2011. *Ironwork in Medieval Britain: an Archaeological Study, Society for Medieval Archaeology*, Monograph **31**. Maney: Leeds

Grant, A., 1982. 'The use of tooth wear as a guide to the age of domestic ungulates', in B. Wilson, C. Grigsonand S.Payne (eds.), *Ageing and Sexing Animals from Archaeological sites*, British Archaeological Reports, British Series **109:** Oxford, 91-108

Greep, S. J., 1983. 'Objects of Animal Bone, Antler, Ivory and Teeth from Roman Britain'. University of Cardiff unpublished Phd thesis

Greep, S., 1998. 'The Bone, Antler and Ivory Artefacts', in H. E. M. Cool and C. Philo, Roman Castleford. Excavations 1974-85. Volume **I**. The Small Finds. Wakefield, 267-84

Greig, J., 1996. 'Archaeobotanical and Historical Records Compared – A New Look at the Taphonomy of Edible and other Useful Plants from the 11th to 18th Centuries A.D.', *Circaea* **12** (2), 211-47

Griffiths, D. G. and K. Hartley., 2020. 'Mortaria', in D. W. Fell, *Contact, Concord and Conquest: Britons and Romans at Scotch Corner. A1 Leeming to Barton,* NAA Monograph Series No. **5.** Northern Archaeological Associates: Barnard Castle, 255-95

Greenfield, H. J., 2006. 'Sexing Fragmentary Ungulate Acetabulae', in D. Ruscillo (ed.), *Recent Advances in Ageing and Sexing Animal Bones*, Oxbow Books: Oxford, 68-86

Hall, J. and Wardle, A., 2005. 'Dedicated followers of fashion? Decorative bone hairpins from Roman London', in N. Crummy, {ed.), *Image, Craft and the Classical World.Essays in honour of Donald Bailey and Catherine Johns*. Instrumentum **29**. Montagnac, 172-9

Hall, R., 1986. *The Excavations at York. The Viking Dig.* The Bodley Head: London

Hall, R., 1996. *Book of York*. English Heritage: Swindon

Halstead, P., 1985. 'A study of the mandibular teeth from Romano-British contexts at Maxey', in F. Pryor (ed.), *Archaeology and Environment of the Lower Welland Valley Volume **1***, East Anglian Archaeology Report **27,** 219-82

Hambleton, E, 1999. *A Comparative Study of Faunal Assemblages from British Iron Age Sites.* BAR **282**. Oxford

Hammond, P., 2005. *Food and Feast in Medieval England*. Sutton Publishing: Stroud

Harden, D. B., 1962. 'Glass in Roman York', in Royal Commission on Historical Monuments (England), *An Inventory of the Historical Monuments in the City of York, Volume **1**.* Her Majesty's Stationery Office: London, 136-41

Hurst, H. R., 1985. *Kingsholm*, Gloucester Archaeological Report **1,** Gloucester Archaeological Publications: Cambridge

Harland, J. F., Barrett, J. H., Carrott, J., Dobney, K. and Jaques, D., 2003. The York System: An integrated zooarchaeological database for research and teaching. *Internet Archaeology* **13**

Hartley, B. R., 1970. *Roman Samian ware. Terra-Sigilata*. Hertfordshire Archaeological Society Print No **1**

Hartley, K. F., 1993. 'The Mortaria', in J. Monaghan, *Roman Pottery from the Fortress: 9 Blake Street*, York Archaeological Trust Fascicule Series **16/7**. Council for British Archaeology: London and York

Hather, J. G., 2000. *The Identification of Northern European Woods: A Guide for Archaeologists and Conservators.* Archetype Publications Ltd: London

Harvey, J., 1981. *Medieval Gardens.* Batsford: London

Hatting, T., 1995. Sex-related characters in the pelvic bone of domestic sheep (*Ovis aries* L.), *Archaeofauna* **4**, 71-6

Hayes, J. W., 1972. *Late Roman Pottery.* British School at Rome: London

Hayward, P. J. and Ryland, J. S. (eds), 1995. *Handbook of the Marine Fauna of North-West Europe*. Oxford University Press: Oxford

Hilson, S. 1996. *Dental Anthropology.* Cambridge: Cambridge University Press, 165-6

Hirst, S. M. and Wright, S. M., 2003. *Settlement in Roman Southwark.* London: MOLA

Hodgson, N., 2014. The British Expedition of Septimius Severus. *Britannia,* 31-51

Hope-Taylor, B., 1977. *Yeavering: an Anglo-British Centre of Early Northumbria*. Her Majesty's Stationery Office: London

Horden, P. and Purcell, N., 2000. *The Corrupting Sea: A study of Mediterranean history.* 1st edn. Blackwell: Oxford

Hoss, S., 2014. Cingulum Militare: Studien zum römischen Soldatengürtel des 1. bis 3. Jh. n. Chr., University of Leiden unpublished Phd thesis

Hostetter, E. and Noble-Howe, T. (eds), 1997. *The Romano-British villa at Castle Copse, Great Bedwyn, Castle Copse.* Indiana University Press: Indianapolis

Humpheys, O., 2021. *London's Roman Tools: Craft, Agriculture and Experience in an ancient City*, British Archaeological Reports, British Series **663**. BAR Publishing: Oxford

Hunter, F., Gibson, A-M. and Gerken, J., 2013. 'Worked Bone and Antler', in I. Armit and J. McKenzie, *An Inherited Place. Broxmouth Hillfort and the south-east Scottish Iron Age*. Society of Antiquaries of Scotland: Edinburgh, 251-309

Isings, C., 1957. *Roman Glass from Dated Finds*. J. B. Walters: Groningen/Djakarta

Jackson-Slater, C. and Krawiec, K., 2020. 'Archaeological Watching Brief on Piling Works and Archaeological Boreholes at Guildhall, York'. York Archaeological Trust unpublished report **2020/120**

Jacomet, S., 2006. *Identification of Cereal Remains from Archaeological Sites.* Basel Archaeobotany Lab, IPAS

Jaques, D., Hall, A., Kenward, H. and Carrot, J., 2004. *Technical report: plant, invertebrate and fish remains from excavations at 25 Bridge Street, Chester (site code: CHE/25BS'01*). Palaeoecology Research Services unpublished report **2004/46**

Jantz R. L, Hunt D. R and Meadows, L., 1994. 'Maximum Length of Tibia: How did Trotter Measure It?' *American Journal of Physical Anthropology* **93**, 525-8

Jenner, A., 1985. 'The potter's wheel – a product of function or tradition'. London Archaeologist **5/5**, 130-4

Jenner, A., 2022. 'The Pottery', in B. Savine, *Archaeological Investigations at the North Annex York Guildhall*. York Archaeological Trust unpublished report **2022/49**

Jenner, A, 2022. 'The Pottery', in M. Reeves, *Archaeological Evaluation at 65-69 Keldgate, Beverley*. York Archaeology unpublished report **2022/72**

Jenner, A. with Shaw, K. and Mence, S., forthcoming. *Yearsley Mill Pottery Assessment*

Jenner, A. and Bradshaw, K., forthcoming. *Cistercian Ware from Excavations in York*

Kemp, R., 1990. *Read all about it! - York Time Capsule Dented Excavations at 3-17 Coney Street, York, 1990*. Archaeology in York **15** (4)

Kendal, T. and Savine B., 2016. 'Archaeological Investigations at the Mansion House, York'. York Archaeological Trust unpublished report **2016/27**

Kerney, M. P. and Cameron, R. A. D., 1979. *A Field Guide to the Land Snails of Britain and North-west Europe.* Collins: London

Kilmurry, K., 1980. *The Pottery Industry in Stamford, Lincolnshire, AD 850-1250*, BAR British Series **84.** Oxford

King, A., 2001. 'The Romanization of diet in the western empire: comparative archaeozoological studies', in *Italy and the West: Comparative studies in Romanization.* Oxbow: Oxford, 210-33

King, A. C., 1984. 'Animal bones and the dietary identity of military and civilian groups in Roman Britain, Germany and Gaul', in *Military and Civilian in Roman Britain.* BAR **136.** Oxford, 187-217

Kippax, C. A., 1981. Avian Egg-shell from Archaeological Sites. *Journal of Archaeological Science* **8**, 315-35

Knowles, D. and Hadcock, R. N., 1971. Medieval Religious. *Houses, England and Wales* 2nd edn, Longman: London

Kraviec, K., Hill, T. and Adams, A., 2022. 'The Palaeoenvironmental Assessment', in B. Savine *Archaeological Investigations at The North Annexe, York Guildhall*, York Archaeological Trust unpublished report **2022/49**

Krawiec, K. and Loffman, G., 2022. 'Archaeological Investigations at Former Post Office, 22 Lendal, York'. York Archaeological Trust unpublished report **2022/54**

Kurlansky, M., 1999. *Cod: A Biography of the Fish That Changed the World*. Vintage: London

Leary, R., 2018. 'Romano-British Pottery', in C. Ambrey, D. Fell, R. Fraser, S. Ross, G. Speed and P. N. Wood, *A Roman Roadside Settlement at Healam Bridge: The Iron Age to Early Medieval Evidence, Volume 2, Artefacts*, NAA Monograph Series No. **3.** Northern Archaeological Associates: Barnard Castle

Leary, R., 2020. 'Pottery', in D. W. Fell, *Contact, Concord and Conquest: Britons and Romans at Scotch Corner. A1 Leeming to Barton*, NAA Monograph Series No. **5.** Northern Archaeological Associates**,** 255-95

Leary, R., 2021. 'Romano-British Pottery', in S. Ross and C. Ross, *Cataractonium: Establishment, Consolidation and Retreat, Volume 2. A1 Leeming to Barton,* NAA Monograph Series No. **6.** Northern Archaeological Associates: Barnard Castle

Legros, V., 2015. Archéologie de l'objet métalliques aux époques médiévale et moderne en Picardie: approaches typologique et fonctionelle, *Revue Archéologique de Picardie* **1/2**, 7-302

Livarda, A. and van der Veen, M., 2008. 'Social Access and Dispersal of Condiments in North-West Europe from the Roman to Medieval Period', *Vegetation History and Archaeobotany* **17**, 201-9

Locker, A., 1990. 'The fish bones', in D. S., Neal, A. Wardle and J. Hunn (eds), *Excavation of the Iron Age, Roman and medieval settlement at Gorhambury, St. Albans.* English Heritage Archaeology Report **2**, 212

Locker, A. M., 2000. *The role of stored fish in England 900-1750AD; the evidence from historical and archaeological data*. University of Southampton PhD Thesis

Locker, A., 2007. In *piscibus diversis*; the Bone Evidence for Fish Consumption in Roman Britain. *Britannia* **38**, 141-80

Locker, A., 2018. *Freshwater Fish in England. The social and cultural history of coarse fish from prehistory to present day.* Oxbow: Oxford

Lovejoy, C. O., 1985. 'Dental wear in the Libben population: Its functional pattern and role in the determination of adult skeletal age at death'. *American Journal of Physical Anthropology* **68**, 47-56

Mabey, R., 1972. *Food for Free: A Guide to the Edible Wild Plants of Britain.* Fontana/ Collins: London

Mainman, A., 2019. *Anglian York*. Blackthorn Press: Pickering

Malacrino, C. G., 2010. *Constructing the Ancient World: Architectural Techniques of the Greeks and Romans*. Getty Publications: Los Angeles

Maltby, M., 1979. *Faunal Studies on Urban Sites: The Animal Bones from Exeter*. University of Sheffield: Sheffield

Maltby, M., 2007. 'Chop and Change: Specialist Cattle Carcass Processing in Roman Britiain', in B. Croxford, N. Ray, R. Roth and N. White (eds.), *TRAC 2006: Proceedings of the Sixteenth Annual Theoretical Roman Archaeology Conference, Cambridge 2006*. Oxbow Books: Oxford

Maltby, M. 2014. 'The exploitation of animals in Roman Britain', in M. Millett, L. Revell and A. Moore (eds.), *The Oxford Handbook of Roman Britain*. Oxford: Oxford University Press, 791-806

Maltby, M., 2018. 'Counting Roman chickens: Mulitdisciplinary approaches to human-chicken interactions in Roman Britain', *Journal of Archaeological Science: Reports* **19**, 1003-15

Margeson, S., 1993. 'Norwich Households: Medieval and Post-Medieval Finds from Norwich Survey Excavations 1971-78', *East Anglian Archaeology* **184**

Martin-Kilcher, S., 1987. *Die Romischen Amphoren aus Augst und Kaiseraugst. Ein Beitrag zur römischen Handels- und Kulturgeschichte. Forschungen in Augst* **7/1**. Römermuseum Augst: Augst

MAP, 2005. '7-15 Spurriergate York SE 6032 5184 Archaeological Assessment Report, Volume 1'. MAP Archaeological Consultancy Ltd unpublished report

Mattingly, H. and Sydenham, E. A. (eds), 1923-94. *Roman Imperial Coinage*. Spink: London

Mays, S., 2018. *The Role of the Human Osteologist in an Archaeological Fieldwork Project*. Historic England: Swindon

McComish, J. M., 2012. 'An analysis of Roman Ceramic Building Material from York and its Immediate Hinterland.' University of York unpublished MA dissertation

McComish, J. M., 2015. 'Excavations by York Archaeological Trust within the Walled Area to the South-west of the River Ouse', York. York Archaeological Trust web based report **2015/48**

McComish, J. M., 2020a. 'York Archaeological Trust AF Recording Guidelines'. York Archaeological Trust unpublished report

McComish, J. M., 2020b. 'York Archaeological Trust Ceramic Building Material and Stone Tile Recording Methodology'. York Archaeological Trust unpublished report

McComish, J. M., Kendall, T., Savine, B. and Mays, S., 2021. *Roman Burials at 16-22 Coppergate, York*. YAT Web Publication Report, York

McParland, L. C., Collinson, M. E., Scott, A. C., Campbell G. and Veal, R., 2010. 'Is Vitrification in Charcoal a Result of High Temperature Burning of Wood?, *Journal of Archaeological Science* **37**, 2679-87

Mitchiner, M., 1988. *Jetons, Medalets and Tokens. Vol. 2, The Medieval Period and Nuremburg*. Seaby: London

Miles, A. E. W., 1962. 'Assessment of age from the dentition'. *Proceedings of the Royal Society of Medicine* **51**, 1050-7

Milner G. R., 1992. *Determination of Skeletal Age and Sex: A Manual Prepared for the Dickson Mounds Reburial Team*. Dickson Mounds Museum: Illinois

Mitchell, P., and Brickley M., 2017. *Updated Guidelines to the Standards for Recording Human Remains*. CIfA and BABAO Paper No. **14**

Moffett, L., 1991. *Botanical Remains from Worcester Deansway.* Ancient Monuments Laboratory Reports **123/91**. English Heritage: London

Moore, P. D., Webb, J. A. and Collinson, M. D., 1991. *Pollen Analysis*. Blackwell: London

Monckton, A., 2000. *Charred Plant Remains from an Iron Age Settlement Site at Dirft East, Covert Farm, Crick, Northamptonshire*. Leicester: University of Leicester Archaeological Services (ULAS), ULAS Report No. **2000/107**

Naggs, F., Preece, R. C., Anderson, R., Peiris, A., Taylor, H and White, T. S., 2014. *An Illustrated Guide to the Land Snails of the British Isles*. Natural History Museum: London

Newby, M. and Painter, K. (eds), 1991. *Roman Glass. Two Centuries of Art and Invention*, Society of Antiquaries London Occasional Papers **13**: London

Newell, R. W., 1995. 'Some notes on "Splash glazes"', Medieval Ceramics **19**, 77-88

Nicholson, R. A., 1999. 'Fish remains', in A. Connor and R. Buckley, *Roman and Medieval Occupation in Causeway Lane, Leicester. Excavations 1980 & 1991.* Leicester Archaeology Monograph **5**, 333-7

Nicholson, R. A., 2009. ,The fish remains,, in J. Browning, R. Buckley, J. Carrott, H. Cool, N. Cooper, J. Crowther, J. Davies, A. Forward, J. Grieg, D.Higgins, A. Hill, R. Hopkins, E. Johnson, R. Macphail, P. Mills, A. Monckton, G. Morgan, R. Nicholson, C. Possnert, A. Radini, S. Ripper, D. Sawday, D. Smith, M. Söderman and R. Tomlin, *Life and Death in Leicester's North-East Quarter: Excavation of a Roman Town House and Medieval Parish Churchyard at Vine Street, Leicester (Highcross Leicester) 2004-2006. Vol. **2**: The Specialist Reports*. University of Leicester Archaeological Services: Leicester, 476-80

North, J. J., 1975. *English Hammered Coinage: Volume 2, Edward I to Charles II, 1272-1662*. Spink: London

O'Connor, T. P., 1993. 'Birds and the scavenger niche', *Archaeofauna* **2**, 155-62

O'Connor, T. P., 2013. *Animals as Neighbours. The Past and Present of Commensal Species*. Michigan State University Press: East Lansing

Orton, C. R., 1980. 'Introduction to the pottery reports', in D. M. Jones, *Excavations at Billingsgate Buildings 'Triangle', Lower Thames Street 1974*. Transactions London and Middlesex Archaeological Society Special Paper **4**

Ottaway, P., 1993. *Roman York*. Batsford and English Heritage: Swindon

Ottaway, P., 2011. *Roman York*. 2nd edition. History Press: Stroud

Ottaway, P. 2021, 'Introduction', in McComish *et al*. *Roman York:, Excavations South-west of the Ouse (1961-1993) at 5 Rougier Street, 24-30 Tanner Row and Sites in Bishophill*. York Archaeological Trust Fascicule Series **4/2**. Council for British Archaeology: York

Ottaway, P. 2021, '5 Rougier Street', in McComish *et al*. *Roman York: Excavations South-west of the Ouse (1961-1993) at 5 Rougier Street, 24-30 Tanner Row and Sites in Bishophill*. York Archaeological Trust Fascicule Series **4/2**. Council for British Archaeology: York

Ortner, D. and Putschar, W., 1985. *Identification of Pathological Conditions in Human Skeletal Remains*: Smithsonian Contributions to Anthropology: Washington

Palliser, D., M., 2014. *Medieval York 600-1540*. Oxford university Press: Oxford

Parker, A., 2016. Excavations in the South Transept of St. Mary's Abbey. *FORUM: The Journal of the Council for British Archaeology, Yorkshire*. **4**, 71-6

Parkinson, J., 1656. *Paradisi in Sole Paradisus Terrestris.* London

Payne, S., 1985. Morphological Distinctions between the Mandibular Teeth of Young Sheep, Ovis, and Goats, Capra. *Journal of Archaeological Science* **12**(2), 139-47

Payne, S. and Bull, G., 1988. Components of variation in measurements of pig bones and teeth, and the use of measurements to distinguish wild boar from domestic pig remains. *Archaeozoologica* **2**, 27-66

Peacock, D. P. S., 1977. *Pottery and early commerce.* Seminar Press: London

Peacock, D. P. S. and Williams D. F., 1986. *Amphorae and the Roman Economy.* Longman Group: London

Pearce, J., 1992. *Post-Medieval Pottery in London, 1500-1700 Border Wares*. HMSO: London

Pearson, A., 2006. *The Work of Giants: Stone and quarrying in Roman Britain*. Tempus: London

Pelling, R., 2000. 'Charred and Mineralised Plant Remains', in B. M. Charles, A. Parkinson and S. Foreman, 'A Bronze Age Enclosure and Iron Age Settlement at Elms Farm, Humberstone, Leicestershire', *Transactions of the Leicestershire Archaeological and Historical Society* **74**, 207-13.

Pelling, R., 2011. 'Charred Plant Remains', in K. Egging Dinwiddy and P. Bradley, *Prehistoric Activity and a Romano-British Settlement at Poundbury Farm, Dorchester, Dorset.* Wessex Archaeology: Salisbury, 142-57

Pelling, R., 2012. *Dowd's Farm, Hedge End, Hampshire: Supplement to Publication Charcoal.* Wessex Archaeology unpublished report

Perrin, J. R., 1977. ‘‘Legionary’ Ware in York’, in J. Dore and K. Green, *Roman Pottery Studies in Britain and Beyond. Papers presented to John Gillam, July 1977.* BAR Supplementary Series **30**. British Archaeological Reports: Oxford

Perrin, J. R., 1999. Roman Pottery from Excavations at and Near to the Roman Small Town of Durobrivae, Water Newton, Cambridgeshire, 1956-58. *Journal of Roman Pottery Studies* **8**

Pfleger, V., 2000. *A Field Guide in Colour to Molluscs*. Bookmart Limited: Leicester

Phenice, T., 1969. A Newly Developed Visual Method of Sexing in the Os Pubis. *American Journal of Physical Anthropology* **30**, 297-301

Philips, D., and Heywood, B., 1995. *Excavations at York Minster* **1**: *From Roman Fortress to Norman Cathedral*. Her Majesty’s Stationery Office: London

Philips, J. and Wilson. P., 2021. *Life, Death and Rubbish Disposal in Roman Norton, North Yorkshire: Excavations at Brooklyn House 2015-6.* Archaeopress: Oxford

Polunin, O. and Walters, M., 1985. *A Guide to the Vegetation of Britain and Europe.* Oxford University Press: Oxford

Poole, K., 2010. ‘Bird introductions’, in O’Connor, T.P. and Sykes, N. J. (eds.), *Extinctions and Invasions: A Social History of British Fauna*, 156—65. Windgather Press: Macclesfield

Poole, K., 2018. ‘Zooarchaeological Evidence for Falconry in England, up to AD 1500’, in K-H. Gersmann and O. Grimm (eds.), *Raptor and Human – Falconry and Bird Symbolism throughout the Millenia on a Global Scale, Volume **3***. Wachholz Museum: Hamburg, 1027-54

Poole, K., 2022. 'The Animal Bone' in B. Savine, *Archaeological Investigations at The North Annexe, York Guildhall*. York Archaeological Trust unpublished report, 66-9

Poole, K., 2023. ‘Assessment of Animal Bones from Queen Street, York’. York Archaeology unpublished report

Presslee, S., Wilson, J., Woolley, J., Best, J. Russell, D., Fischer, R., Kessler, B. Boano, R., Collins, M. and Demarchi, B., 2018. The identification of archaeological eggshell using peptide markers. *STAR: Science Technology of Archaeological Research* **4**(1), 13-23

Price, J., 1991. 'Decorated mould-blown glass tablewares in the first century AD', in M. Newby and K. Painter (eds), *Roman Glass. Two Centuries of Art and Invention*, Society of Antiquaries London Occasional Papers **13,** 56-75

Price, J., 1995. 'Roman glass', in D. Phillips and B. Heywood, *Excavations at York Minster* **1**: *From Roman Fortress to Norman Cathedral* 346-71

Price, J. and Cool, H. E. M., 1985. 'Glass (including glass from 72 Dean's Way)’, in H. R. Hurst, *Kingsholm*, Gloucester Archaeological Report **1**, 41–54

Price, J. and Cottam, S., 1998. *Romano-British Glass Vessels: a Handbook,* CBA Practical Handbook in Archaeology **14**: York

Prior, J. and Alvin, K. L., 1983. ‘Structural Changes on Charring Wood of *Dichrostachys* and *Salix* from Southern Africa’. *International Association of Wood Anatomists* **4**, 197-206

Prummel, W., 1988. *Distinguishing features on postcranial skeletal elements of cattle,* Bos primigenus *f.* Taurus*, and red deer,* Cervus elaphus*.* Schriften aus der Archäologisch-Zoologischen Arbeitsgruppe Schleswig-Kiel: Kiel

Prummel, W. and Frisch, H-J., 1986. A Guide for the Distinction of Species, Sex and Body Side in Bones of Sheep and Goat. *Journal of Archaeological Science* **13**(6), 567-77

QUEST, 2014. 'A report on the geoarchaeological investigations at The Guildhall Hutment site, York, YO1 0TE (NGR: SE 600 519)'. QUEST unpublished report

Raine, A., 1955. *Medieval York, A topographical survey based on original sources*. John Murray: London

Rainsford, C., Not dated. 'Hungate, York, Block H Roman Faunal Report (Stage 1)'. York Archaeological Trust unpublished report

Ratcliffe, D. A., 1984. 'Post-Medieval and Recent Changes in British Vegetation: the Culmination of Human Influence', *New Phytologist* **98** (1), 73-100

RCHMY: Royal Commission on Historical Monuments (England), 1962. *An Inventory of the Historical Monuments in the City of York, Volume **1**.* Her Majesty's Stationery Office: London

RCHMY: Royal Commission on Historical Monuments (England), 1981. *An Inventory of the Historical Monuments of the City of York, Volume **5**, Central.* Her Majesty's Stationery Office: London

Read, B., 2002. *Metal Artefacts of Antiquity*. Portcullis Publishing: Langport

Reece, R., 1995. 'Site finds in Roman Britain', *Britannia* **26**, 179-206

Rees-Jones S., 1994. 'The Historical Background', in J. M. Lilly, G Stroud, D. H. Brothwell, M. H. Williamson (eds), *The Jewish burial ground at Jewbury*. York Archaeological Trust Fascicule Series **12/3**. Council for British Archaeology: London and York, 301-12

Rees Jones, S., 2013. *York. The Making of a City 1068-1350*. Oxford University Press: Oxford

Reeves, B. and Milsted, I., 2017. 'City of York Guildhall: YAT Project Proposal Submission'. York Archaeological Trust unpublished report **2017/115a**

Reniere, S., Thiébaux, A., Dreesen. R, Goemaere, E. and De Clerq W., 2018. 'Cross-Channel Connectivity: Wealden Whetstone Imports from Roman Britain to the Continent'. *Oxford Journal of Archaeology*. **37/3**, 313-37

Reimer, P.J., Bard, E., Bayliss, A., Beck, J.W., Blackwell, P.G., Bronk Ramsey, C., Buck, C.E., Cheng, H., Edwards, R.L., Freidrich, M., Grootes, P.M., Guilderson, T.P., Haflidason, H., Hajdas, I., Hatte, C., Heaton, T.J., Hoffmann, D.G., Hogg, A.G., Hughen, K.A., Kaiser, K.F., Kromer, B., Manning, S.W., Nui, M., Reimer, R.W., Richards, D.A., Scott, E.M., Southon, J.R., Staff, R.A., Turney, C.S.M. and van der Plicht, J., 2013, 'IntCal13 and Marine13 Calibration Curves 0–50,000 Years BP', Radiocarbon **55** (4), 1869-87

Riddler, I., 1998. 'Styli', in G. Egan, *The Medieval Household. Daily Living c. 1150 – c. 1450, Medieval Finds from Excavations in London* **6**. Her Majesty's Stationery Office: London

Riddler, I. D. and Trzaska-Nartowski, N. I. A., 2003. 'Late Saxon Worked Antler Waste from Holy Rood, Southampton (SOU106)', in I. D. Riddler, *Materials of Manufacture. The Choice of*

Materials in the Working of Bone and Antler in Northern and Central Europe during the First Millenium AD, British Archaeological Reports, International Series **1193**. Archaeopress: Oxford, 65-75

Riddler, I. D., 2001. 'The Small Finds', in M. Hicks and A. Hicks, *St. Gregory's Priory, Canterbury. Excavations 1988-1991*, The Archaeology of Canterbury, New Series **2**. Canterbury Archaeological Trust: Canterbury, 267-87

Riddler, I. D., 2006. 'The Coins, Small Finds and Building Materials', in K. Parfitt, B. Corke and J. Cotter, *Townwall Street, Dover. Excavations 1996,* The Archaeology of Canterbury, New Series **3**, Canterbury Archaeological Trust: Canterbury, 255-318

Riddler, I. D., 2012. 'Early and Middle Saxon Artefacts', in S. Wrathmell, *A History of Wharram Percy and its Neighbours*, *Wharram. A Study of Settlement on the Yorkshire Wolds XIII*, York University Archaeological Publications **15**. York, 135-54

Riddler, I. D. Trzaska-Nartowski, N. I. A. and Hatton, S., 2023. An Early Medieval Craft. Antler and Bone Working from Ipswich Excavations 1974-1994, East Anglian Archaeology **178**. Suffolk County Council Archaeology Section: Bury St Edmunds

Roberts, C. and Manchester, K., 2005. *The Archaeology of Disease*, 3rd edn. Sutton Publishing Ltd: Stroud

Roberts, I., and Cumberpatch, C., 2009. 'A Stamford ware kiln in Pontefract', Medieval Archaeology **53**, 45-50

Robinson, M. and Griffiths, S. 2008. 'Plant and Invertebrate Remains' in D. Stansbie, A. Smith, G. Law and T. Haines, 'Excavation of Iron-Age and Roman Occupation at Coln Gravel, Thornhill Farm, Fairford, Gloucestershire, 2003 and 2004', *Transactions of the Bristol and Gloucestershire Archaeological Society* **126**, 63-9

Rodwell, J. S. (ed.), 1991. *British Plant Communities: Woodland and Scrub.* Cambridge: Cambridge University Press

Rogers, N. S. H., 2004. 'Finds', in R. Finlayson, Hungate, evidence from an excavation at the site of the former Henly's Garage, Stonebow, York, Archaeology of York Web Publication **5**. York Archaeological Trust. York, 40-4

Rollason, D., 1999. 'Historical Evidence for Anglian York' in Tweddle, D., Moulden J. and Logan, E. *Anglian York: A survey of the Evidence*. York Archaeological Trust Fascicule Series **7/2**. Council for British Archaeology: London and York

Rook, T., 1979. 'Tiled Roofs', *British Archaeological Reports International Series* **68**, 295-301

Roskams, S. and Whyman, M., 2005. *Yorkshire Archaeological Research Framework: resource assessment*

Roskams, S. and Whyman, M., 2007. *Yorkshire Archaeological Research Framework: research agenda*

Rudling, D. R., Cartwright, C., Swift, G., Foster, S., Shepherd, J., Hinton, P. and Tebbutt, F., 1986. 'The Excavation of a Roman Tilery on Great Cansiron Farm, Hartfield, East Sussex'. *Britannia* **17**, 191–230

Russ, H. and Chorro Giner, M., 2022. *Fish remains from Waterside, Liecester*. Unpublished report prepared for University of Leicester Archaeological Services. (publication pending)

Salisbury, E. 1961. *Weeds and Aliens.* London: Collins

Salzman, L. F., 1997. *Building in England Down to 1540 A Documentary History.* Oxford University Press: Oxford

Sands, R. and Marliere, E., 2020. Produce, Repair, Reuse, Adapt,and Recycle: The Multiple Biographies of a Roman Barrel. *European Journal of Archaeology,* **23/3**, 356-80

Savine, B., 2022. 'Archaeological Investigations at The North Annexe, York Guildhall'. York Archaeology unpublished report **2022/49**

Schaefer, M., Black, S. And Scheuer, L., 2009. *Juvenile Osteology: a Laboratory and Field Manual*. Academic Press: Amsterdam

Schenk, A., 2008. Regard sur la Tabletterie antique: Les objets en os, bois de cerf et ivoire du Musée Romain d'Avenches, Documents du Musée Romain d'Avenches 15, AvencheSoulat, J., 2018 *Le Mobilier Funéraire de Type Franc et Mérovingien dans le Kent et sa Périphérie*, Europe Médiévale **13**. Éditions Mergoil: Drémil-Lafage

Schmid, E., 1972. *Atlas of Animal Bones*. Elsevier: Amsterdam

Schwarcz H. P. and Schoeninger, M. J., 1991. Stable Isotope Analysis in Human Nutritional Ecology. *American Journal of Physical Anthropology **34**,* 283-321

Schwartz J. H., 1995. *Skeleton Keys*. Oxford University Press: Oxford

Schweingruber, F. H., 1990. *Macroscopic Wood Anatomy,* 3rd edn. Birmensdorf: Swiss Federal Institute for Forest, Snow and Landscape Research

Sealy, J., Armstrong, R. and Schrire, C., 1995. Beyond Lifetime Averages: Tracing Life Histories Through Isotopic Analysis of Different Calcified Tissues From Archaeological Human Skeletons. *Antiquity* **69**, *263,* 290-300

Serjeantson, D., 1996. 'The animal bones', in S. R. Needham and A. Spence (eds), *Refuse and Disposal at Area 16 East Runneymede*. Runneymede Bridge Research Excavations, Volume **2**. British Museum Press: London, 194-223

Serjeantson, D. and Woolgar, C. M., 2006. 'Fish consumption in medieval England', in C. M., Woolgar, D. Serjeantson and T. Waldron, *Food in Medieval England. Diet and Nutrition*. Oxford University Press: Oxford, 102-30

Serjeantson, D., 2023. *The Archaeology of Wild Birds in Britain and Ireland*. Oxbow Books: Oxford

Sidell, E. J., 1993. A methodology for the identification of avian eggshell from archaeological sites. *Archaeofauna* **2**, 45-51

Skingley, P. (ed), 2022. *Coins of England and the United Kingdom*. Spink: London

Silver, I. A., 1969. 'The ageing in domestic animals', in D. Brothwell and E. S. Higgs (eds.), *Science in Archaeology*. Thames and Hudson: London, 283-302

Snape, M., Bidwell, P. and Croom, A., 2002. Aldborough Roman Town: Excavation by Miss D. Charlesworth, 1961–73, and by RHCME, 1959–60. *Yorkshire Archaeological Journal* **74**, 29-112

Snoddy, A. M. E., Buckley, H. R., Elliott, G., Standen, V. G., Arriaza, B.T, and Halcrow, S. E., 2018. 'Macroscopic features of scurvy in human skeletal remains: A literature synthesis and diagnostic guide'. *American Journal of Physical Anthropology* **167**(4), 1-20

Spavold, J., 2009 'Faith made manifest'. An interpretation of the decoration on Cistercian wares' *Medieval Ceramics* **31**, 33–48

Stace, C., 1997. *New Flora of the British Isles*, 2nd ed. Cambridge University Press: Cambridge

Stevens, C. J., 2015. 'Charred and Mineralised Plant Remains' in J. I. McKinley, M. Leivers, J. Schuster, P. Marshall, A. J. Barclay and N. Stoodley, *Cliffs End Farm, Isle of Thanet, Kent: A Mortuary and Ritual Site of the Bronze Age, Iron Age and Saxon Period.* Wessex Archaeology: Salisbury, 193–9

Stewart, J. R. M., Allen, R. B., Jones, A. K. G., Penkman, K. E. H. and Collins, M. J., 2013. ZooMS: making eggshell visible in the archaeological record. *Journal of Archaeological Science* **40**, 1797-804

Stewart, J. R. M., Allen, R. B., Jones, A. K. G., Kendall, T., Penkman, K. E. H., Demarchi, B., O'Connor, T. and Collins, M. J., 2014. Walking on Eggshells: A Study of Egg Use in Anglo-Scandinavian York Based on Eggshell Identification Using ZooMS. *International Journal of Osteoarchaeology* **24**, 247-55

Stewart-Macadam, P., 1989a. 'Porotic hyperostosis: relationship between orbital and vault lesions'. *American Journal of Physical Anthropology* **80**, 187-93

Stokes, P. and Rowley-Conwy, P., 2002. 'Iron Age Cultigen? Experimental Return Rates for Fat Hen (*Chenopodium album* L.)', *Environmental Archaeology* **7** (1), 95-9

Stopford, J., 2005. *Medieval Floor Tiles of Northern England. Pattern and Purpose: production between the 13th and 16th centuries.* Oxbow Books: Oxford

Streeter, D., Hart-Davies C., Hardcastle, A., Cole, F. and Harper, L. 2009. *Collins British Common Wild Flower Guide.* William Collins: London

Stuiver, M., and Reimer, P.J., 1986. 'A computer program for radiocarbon age calculation, Radiocarbon **28**, 1022-30

Svanberg, I., 2012. 'The Use of Wild Plants as Food in Pre-Industrial Sweden', *Acta Societatis Botanicorum Poloniae* **81** (4), 317-27

Swan, V. G., 2002. 'The Roman pottery of Yorkshire in its wider historical context', in P. Wilson and J. Price (eds), *Aspects of industry in Roman Yorkshire and the North.* Oxbow: Oxford, 35-79

Taylor, M., 1981. *Wood in Archaeology*. Shire Publications: Aylesbury

Thiébaux, A., Feller, M., Duchêne, B. and Goemaere, E., 2016. 'Roman whetstone production in northern Gaul (Belgium and Northern France)', *Journal of Lithic Studies*, **3** (3), 565-87

Thomas, R., Law, M., Browning, E., Hill, A. and Small, R., 2020. The Changing Exploitation of Oysters (*Ostrea edulis* L. 1758) in Late Medieval and Early Modern England: A Case Study from Dudley Castle, West Midlands. *Environmental Archaeology* **25**(1), 82-95

Tillott, P. M., 1961. 'The sites and remains of the religious houses'. *A History of the County of York: the City of York*. *British History Online*. London: Victoria County History, 357–65

Todd T. W., 1921a. 'Age Changes in the Pubic Bone. I: The Male White Pubis'. *American Journal of Physical Anthropology* **3**, 285–334

Todd T. W., 1921b. 'Age Changes in the Pubic Bone. III: The Pubis of the White Female. IV: The Pubis of the female white-negro hybrid'. *American Journal of Physical Anthropology* **4**, 10-70

Tomber, R. and Dore, J., 1998. *The National Roman Fabric Reference Collection*. MoLAS Monograph **2**. London

Toynbee, J. M. C., 1962. *Art in Roman Britain*. Phaidon: London

Troels-Smith, J., 1955. 'Karakteriseringaf lose jordater (characterisation of unconsolidated sediments)'. *DenmarksGeologiskeUndersogelse*, Series **IV/3**, 10, 73

Trotter, M. and Gleser, G. C., 1952. 'Estimation of stature from long bones of American whites and negroes'. *American Journal of Physical Anthropology* **10**, 463–514

Trotter, M., 1970. 'Estimation of stature from intact limb bones' in T. D. Stewart (ed.), *Personal Identification in Mass Disasters*. Washington Smithsonian Institute: Washington DC, 71-83

Tsalkin, V. I., 1970. *Drevneishie domashnie zhivotnye Vostochnoi Evropy*. Izdatelstvo Nauka: Moscow

Tweddle, D., Moulden, J. and Logan, E., 1999. *Anglian York: A Survey of the Evidence.* York Archaeological Trust: York

Tykot, R. H., 2004. 'Stable Isotopes and Diet: You are what you eat', in M. Martini, M. Milazzo, and M. Piacentini (eds), *Proceedings of the International School of Physics "Enrico Fermi" Course* **CLIV**. Iso Press: Amsterdam

Ubelaker D. H., 1989. 'Estimation of age at death from immature human bone'. In M. Y. Işcan (ed) *Age markers in the human skeleton*. Charles C. Thomas: Illinois, 55-70

Uzquiano, P., Allué, E., Antolín, F., Burjachs, F., Picornel, L., Piqué, R. and Zapata, L., 2015. 'All About Yew: On the Trail of Taxus baccata in Southwest Europe by means of Integrated Palaeobotanical and Archaeobotanical Studies', *Vegetation History and Archaeobotany* **24**, 229-47

Van Lemmen, H 2013. *Ceramic Roofware* Princes Shire Publications: Risborough

van Neer, W., Ervynck, A. and Monsieur, P., 2010. Fish bones and amphorae: evidence for the production and consumption of salted fish products outside the Mediterranean region. *Journal of Roman Archaeology* **23**, 161-95

Van der Veen, M., Livarda, A. and Hill A., 2007. 'The Archaeobotany of Roman Britain: Current State and Identification of Research Priorities', *Britannia* **38**, 181-210

von den Driesch, A., 1976. *A guide to the measurement of animal bones from archaeological sites*. Peabody Museum Bulletin **1**. Harvard University: Cambridge

von den Dreisch, A. and Boessneck, J., 1974. Kritische Anmerkungen zur Widerristhohen-Berechnung aus langmassen vor-und fruhgeschichtlicher Tierknochen. *Saugetierkundliche Mitteilungen*

Victoria County History (VCHY), 1961. *A History of Yorkshire: The City of York*. Victoria County History: London

Vitruvius (Translated by M. H. Morgan), 1914. *The Ten Books on Architecture*. Dover Publications: New York

Waldron, T., 2009. *Palaeopathology*. Cambridge University Press: Cambridge

Ward Perkins, J. B., 1954. Medieval Catalogue, London Museum Catalogue **7**, 2nd edn. Museum of London: London

Warry, P., 2006. 'Tegulae: manufacture, typology and use in Roman Britain'. *BAR British Series* **417**

Wastling, L., forthcoming. 'The Pottery from excavations at Capital Park, Beverley 2022

Waterman, D. M., 1959. 'Late Saxon, Viking and Early Medieval Finds from York'. *Archaeologia* **97**, 59-105

Watkins, G., 1991. 'The Pottery' in Armstrong, P., Tomlinson, D. and Evans, D.H. *Excavations at Lurk Lane, Beverley 1979–82*. Sheffield Excavation Reports **1**. J. R. Collis Publications: Sheffield

Wheeler, A., 1981. Fish bones, in Partridge, C. (ed.) *Skeleton Green. A Late Iron Age and Romano-British site.* Britannia Monograph **2**, 242-3

Wheeler, A. and Jones, A. K. G., 1989. *Fishes*. Cambridge Manuals in Archaeology. Cambridge University Press: Cambridge

White, T. M. and Folkens, P. A., 2005. *The Human Bone Manual*. Elsevier Academic Press: Amsterdam

Williams, D. F., 1995. 'Amphorae', in Phillips, D. and Heywood, B., *Excavations at York Minster. Volume **I**: From Roman fortress to Norman cathedral. Part **2**: The finds.* Royal Commission on the Historical Monuments of England. Her Majesty's Stationery Office: London

Williams, D. F., 1997. 'Amphorae', in J. Monaghan, *Roman Pottery from York.* The Archaeology of York **16/8**. Council for British Archaeology: York

Wilson, B. and Mee, F. 1998. *The Medieval Parish Churches of York. The Pictoral Evidence*. The Archaeology of York Supplimentery Series, **1/1**. York Archaeological Trust: York, 141

Wilson, P. R. (ed), 1988. 'North-East Yorkshire Studies. Archaeological Papers'. *Roman Antiquities Section, Yorkshire Archaeological Society* Appendix 10, 135-40

Winder, J. M., 1993. *A study of the variation in oyster shells from archaeological sites and a discussion of oyster exploitation*. PhD Thesis, University of Southampton, Department of Archaeology, Faculty of Arts

Windler, R., 1989. Ein frühmittelalterliches Männergrab aus Elgg ZH: Bemerkungen zu einem filligranverzierten Schnallentyp, *Jahrbuch der Schweizerischen Gesellschaft für Ur- und Frühgeschichte* **72**, 181-200

Woolgar, C., 2000. 'Take this penance now, and afterwards the fare will improve: seafood and late medieval diet', in D. J. Starkey, C. Reid and N. Ashcroft (eds), *England's Sea Fisheries: the commercial sea fisheries of England and Wales since 1300*. Chatham: London, 36-44

Whyman, M. 2012. 'York 800: Excavations in Guildhall Yard'. *Northern Archaeology Today: York Archaeological Trust Magazine* **2**, 20-24

Yalden, D. and Albarella, U., 2009. *The History of British Birds*. Oxford University Press: Oxford

York Archaeological Trust, 1999. *2000 Years of York, The Archaeological Story*. Thornton and Pearson Ltd: Bradford

York Conservation Trust, 2016. '14 Lendal: Design and Heritage Statement', York Conservation Trust unpublished report

Yule, B., 1989. Excavation at Winchester Palace, Southwark. *The London Archaeologist* **6**(2), 31–9

Yule, B., 2005. *A Prestigious Roman Building Complex on the Southwark Waterfront: Excavations at Winchester Palace, London, 1983-90*. MoLAS Monograph **23**. MoLAS: London

Zeuner, F. E., 1963. *A History of Domesticated Animals*. London: Hutchinson

Zohary, D. and Hopf, M., 1994. *Domestication of Plants in the Old World,* 2nd edn. Oxford University Press: Oxford

ONLINE RESOURCES

Atkinson, M. and Preston S., 2015. Heybridge: A late Iron Age and Roman settlement. Excavations at Elms Farm 1993-5. Volume **2**. *Internet Archaeology* **40**. https://doi.org/10.11141/ia.40.1

Archaeological Fish Resource. http://fishbone.nottingham.ac.uk Accessed June 2023

BGS Geology Viewer. The Geological Map Viewer of Britain. https://geologyviewer.bgs.ac.uk/?_ga=2.31696766.1121149875.1698143516-1313243196.1698143516 Accessed 18th April 2022

Campbell, G. 2015. "What do I do with all these shells?" Basic guidance for the recovery, processing and retention of archaeological marine shells. *Quaternary International*. http://dx.doi.org/10.1016/j.quaint.205.09.013

Carreras, C., 2014. University of Southampton (2014) *Roman Amphorae: a digital resource [data-set]*. York: Archaeology Data Service [distributor] https://doi.org/10.5284/1028192

Greenlee, J. W. 2020. *English Eel-Rents: 10th-17th Centuries.* Historia Cartarum. https://historiacartarum.org/eel-rents-project/english-eel-rents-10th-17th-centuries Accessed January 2022

Marine Bivalve Shells of the British Isles. https://naturalhistory.museumwales.ac.uk/BritishBivalves/id.php Accessed January 2021.

Nabone Fish. https://www.nabohome.org/products/manuals/fishbone/fish/fish.html Accessed June 2023

Laubenheimer, F., 2014. University of Southampton (2014) Roman Amphorae: a digital resource [data-set]. York: Archaeology Data Service [distributor] https://doi.org/10.5284/1028192

Orton D. C., Makowiecki, D., de Roo, T., Johnstone, C., Harland, J., Jonsson, L., Heinrich, D., Enghoff, I. B., Lougas, L., Van Neer, W., Ervynck, A., Hufthammer, A. K., Amundsen, C., Jones, A. K. G., Locker, A., Hamilton-Dyer, S., Pope, P., MacKenzie, B. R., Richards, M., O'Connell T. C. and Barrett, J. H., 2011. 'Stable isotope evidence for late medieval (14th–15th C) origins of the eastern Baltic cod (*Gadus morhua*) fishery'. *PLoS ONE* **6**(11). e27568. http://dx.doi.org/10.1371/journal.pone.0027568

Osteobase. http://osteobase.mnhn.fr Accessed June 2023

Schoch, W., Heller, I., Schweingruber, F. H. and Kienast, F., 2004. *Wood Anatomy of Central European Species*. http:www.woodanatomy.ch

Willis, S., 2005. Samian Pottery, a Resource for the Study of Roman Britain and Beyond: the results of the English Heritage funded Samian Project. An e-monograph. (Supplement to Internet Archaeology **17**) http://intarch.ac.uk/journal/issue17/willis_index.html

Winder, J. M., 2011. *Oyster Shells from Archaeological Sites: a brief illustrated guide to basic processing*. https://oystersetcetera.wordpress.com/2011/03/29/oyster-shells-from-archaeological-sites-a-brief-illustrated-guide-to-basic-processing

Winder, J. M., 2015. Oysters and Other Marine Shells, in Atkinson, M. and Preston, S. J. Heybridge: A Late Iron Age and Roman Settlement, Excavations at Elms Farm 1993-5. *Internet Archaeology* **40**. http://dx.doi.org/10.11141/ia.40.1.winder

ACKNOWLEDGEMENTS

YAT extend thanks to the teams at CYC, Vinci and Moortown Group Ltd, and everyone involved with the scheme for their cooperation throughout the project.

Archaeology team: Thomas Coates, Giulia Gallio, Paul Howlett, Clare Jackson-Slater, Arran Johnson, Toby Kendal, Ian Milsted, Alexandra Rickinson, Ben Savine, Amy Talbot, Marina Vatilioti. Illustrations were compiled by Briannie Price and Marius Ilie. The project was managed by Ian Milsted, Ben Reeves and Kate Smart. Fran Birtles is thanked for her assistance in compiling the tables and references.

APPENDIX 1 – INDEX TO ARCHIVE

Table 3 Index to archive

Item	Number of items
Context register	17
Context sheets	423
Drawing register	20
Original drawings	406
Sample register	3
Sample sheets	37
Levels register	39
Matrix sheets	16
Watching brief day sheets	56
Architectural Fragment sheets	21
Digital photographs	8807
Written Scheme of Investigation	1
Report	1

APPENDIX 2 – CONTEXT LIST

Table 4 Context list

Context	Set	Group	Phase	Description
3021	1211	182	41	Posthole backfill. Firm, dark brownish grey, silty sand.
3022	1211	182	41	Posthole cut. Sub-oval shape in plan, aligned east to west, sharp break of slope at top, vertical sides, sharp break of slope from sides to base, flat base.
3023	1188	168	22	Robbing trench backfill. Loose, yellowish brown, silty sand with lime mortar.
3024	1188	168	22	Robbing trench cut. Sub-oval shape in plan, aligned north-east/south-west, moderate break of slope at top, concave sides, moderate break of slope at sides, flat base. 0.80m long, 0.55m wide, 0.34m deep.
3025	1197	168	22	Demolition spread. Loose, light yellowish greyish brown, coarse silty sand.
3026	1038	115	12	Build-up. Friable to firm, mid-greenish brown, clayey silty sand.
3027	1118	152	29	Pit backfill. Friable, dark greyish-brown, silty sand.
3028	1118	152	29	Pit backfill. Friable, light white yellow, silty sand with lime mortar.
3029	1118	152	29	Pit backfill. Friable, dark greyish brown, sandy silt.
3030	1118	152	29	Pit cut. Sub-oval shape in plan, aligned north to south, sharp break of slope at top, sharp concave sides, moderate break of slope at sides, flat base. 1.77m long, 0.65m wide, 0.50m deep.
3031	1196	169	36	Grave backfill. Firm to loose, mid-yellowish brown with white flecks, gritty sandy silt.
3032	1195	169	36	Grave backfill. Loose, dark greyish brown, sandy silt.
3033	1194	169	36	Grave backfill. Loose, mid-yellowish brown, silty sand.
3034	1141	160	31	Grave cut. Sub-rectangular shape in plan, aligned north-west/south-west, sharp break of slope at top, concave sides, moderate break of slope at sides, flat base. 1.44m long, 0.80m wide, 0.20 deep.
3035	1143	160	31	Grave cut. Sub-rectangular shape in plan, aligned north-west/south-east, sharp break of slope at top, vertical sides, moderate break of slope at sides, relatively flat base. 1.28m long, 0.68m wide.
3036	1142	160	31	Grave cut. Sub-rectangular shape in plan, aligned north-west/south-east, sharp break of slope at top, vertical sides, sharp break of slope at base, flat base. 1.31m long, 0.71m wide, 0.13m deep.
3037	1114	151	28	Make-up deposit. Friable, dark greyish greenish brown, silty sand.
3038	1193	169	36	Grave backfill. Loose, light greyish brown, sandy silt.
3039	1140	160	31	Grave cut. Sub-rectangular shape in plan, aligned north-west/south-east, moderate break of slope at top, concave sides, sharp break of slope at base, flat base. 2.36m long, 0.63m wide, 0.16m deep.
3040	1197	169	36	Demolition spread. Loose, greyish brown, sandy silt.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
3041	1139	160	31	Grave cut. Sub-rectangular shape in plan, aligned north-west/south-east, moderate break of slope at top, concave sides, sharp break of slop at base, flat base.
3042	1123	154	30	Levelling deposit. Friable to loose, mid-yellowish brown, silty sand.
3043	1193	169	36	Grave backfill. Loose, greyish brown, sandy silt.
3044	1176	166	36	Buttress. Hard rectangular, light greyish white, limestone buttress foundation, with loose to friable, light yellowish grey, lime mortar.
3045	1176	166	36	Buttress backfill. Soft, dark greyish brown, sandy silt.
3046	1176	166	36	Buttress cut. Sub-rectangular in plan, aligned south-west/north-east, not fully excavated, in section sharp break of slope, tapered sides, flat base. 1.54m long, 1.49m wide, 0.02m deep.
3047	1124	158	30	Levelling deposit. Firm, light greyish brown, sandy silt.
3048	1113	148	26	Make-up deposit. Firm/compacted, dark brown mottle with orange patches, clayey silt.
3049	1123	154	30	Levelling deposit. Firm, dark greyish brown, sandy silt.
3050	1122	152	29	Pit backfill. Loose, dark greyish brown, sandy silt.
3051	1124	158	30	Levelling deposit. Firm, light orangish brown, sandy silt.
3052	1121	152	29	Levelling deposit. Friable, mid yellowish brown, sandy silt.
3053	1049	125	16	Levelling deposit. Firm, mid greyish brown, sandy silt.
3054	1113	148	26	Make-up deposit. Firm/friable, dark greenish greyish brown, sandy silt.
3055	1158	152	29	Loose/friable, dark greyish brown, gritty clayey silt.
3056	1112	148	26	Gully backfill. Firm, mixed mottled dark reddish brown with dark charcoal lenses, silty clay.
3057	1111	148	26	Make-up deposit. Firm/loose, light whitish yellowish brown with dark brown mortar silt lenses, silty clay.
3058	1112	148	26	Gully backfill. Firm, mixed light orangish brown with dark brownish grey, sandy clay.
3059	1112	148	26	Gully cut. Linear shape in plan, aligned north-west/south-east, sharp break of slope at top, moderate convex, gradual break of slope at base, flat base.
3060	1158	152	29	Pit backfill. Friable, mid-greyish brown, gritty silt.
3061	1158	152	29	Pit cut. Linear in plan, aligned north-east/south-west, moderate stepped sides, sharpish break of slope at base, flat base. 1.25 long, 0.94m wide, 0.70m deep.
3062	1159	152	29	Pit backfill. Friable, mid-greyish brown, gritty silt.
3063	1159	152	29	Pit cut. Irregular circular cut, stepped moderate slope, concave base. 1.72m long, 1.24m wide, 0.4 deep.
3064	1121	152	29	Pit backfill. Firm, greyish greenish brown, sandy silt.
3065	1121	152	29	Pit cut. Rectangular in plan, aligned south-west/north-east, unseen in plan or section.
3066	1122	152	29	Pit cut. Oval in plan, aligned south-east/north-west. Gradual break of slope at top, concave sides, uneven base. 1.54m long, 1.12m wide, 0.11m deep.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
3067	1048	125	16	Firm, mixed dark greenish brown and mid-red brown silty sand and clay with large fragments of limestone, c.20%, and frequent large and medium sized cobbles.
3068	1120	151	28	Make-up deposit. Friable, mid-greyish brown, rubbly silt.
3069	1159	152	29	Pit backfill. Friable, mid-greyish, clayey silt.
3070	1117	151	28	Make-up deposit. Friable, light brown, silty sand.
3071	1039	123	13	Levelling deposit, Loose, mid-green brown, sandy silt.
3072	1137	164	32	Construction cut backfill. Friable, mid-greyish brown, gritty silt, with a thick lens of orange sandy clay.
3073	1137	164	32	Construction cut of stone wall. Linear in plan, aligned north-north-east/south-south-west, vertical sides, sharp break of slope at base, base not fully seen. 4.32m long, 0.49m wide, 1.41m deep.
3074	1119	151	28	Pit backfill. Friable, mixed dark grey reddish brown, clayey gritty silt.
3075	1119	151	28	Pit cut. Irregular circular shape plan, gradual sloping sides, concave base. 1.30m long, 1.14m wide, 0.12m deep.
3076	1115	148	26	Pit backfill. Friable, dark grey, clayey silt.
3077	1115	148	26	Pit cut. Linear/rectangular shape in plan, moderate to vertical sides, no visible base. 1.02m long, 0.57m wide, 0.31m deep.
3078	1113	148	26	Make-up deposit. Friable, mid-greyish brown, clayey silt.
3079	1137	164	32	Construction cut backfill. Friable, pinkish orange, sandy clay-silt.
3080	1111	148	32	Make-up deposit. Firm/soft, mid-orange brown, clayey sand with patches of firm clay.
3081	1109	147	26	Levelling deposit. Loose, mid-orangey brown, sandy clay.
3082	1029	115	12	Dump. Friable, mid-yellowish-green mortar.
3083	1189	169	36	Red brick floor butting against magnesian limestone wall 3090.
3084	1116	150	27	Wall robbing backfill. Loose, greyish white mortar.
3085	1116	150	27	Wall robbing cut. Linear shape in plan, aligned north-west/south-east, vertical sides, gradual break of slope at base, base not visible. 1.80m long, 1.37m wide.
3086	1024	112	10	Clay levelling deposit. Firm, light reddish brown, silty clay with lenses of sandy silt.
3087	1135	158	30	Construction cut backfill. Friable, dark greyish brown, clayey sand.
3088	1135	158	30	Large Magnesian limestone wall. Linear in plan, aligned north-west/south-east, rough faced large limestone blocks, bonded with lime mortar.
3089	1135	158	30	Construction cut. Linear in plan, aligned north-west/south-east.
3090	1137	164	32	Post-medieval magnesian limestone wall.
3091	1104	146	24	Demolition dump.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
3092	1023	112	10	Levelling deposit. Friable to loose, mid-greyish green, silty sand with lenses of limestone fragments.
3093	1104	146	24	Possible floor surface. Firm, compacted plaster surface with sandy silt.
3094	1092	143	24	Levelling deposit. Firm, mid-brownish grey, silty sand.
3095	1021	112	10	Occupation deposit. Friable to loose, dark blueish blackish grey, sandy silt.
3096	1108	150	27	Mortar floor layer. Firm, yellowish white mortar.
3097	1082	140	23	Construction cut. Linear shape in plan, aligned north-west/south-east, straight sloping sides, sharpish break of slope, flat base. 0.85m long, 0.25m wide.
3098	1107	149	27	Use deposit. Friable, dark greyish black, silty clay.
3099	1109	149	27	Pit backfill. Friable, light reddish orangey brown, sandy silt.
3100	1016	110	9	Build-up/dump. Friable to loose, mid- grey, sandy silt with patches of clay.
3101	1015	108	8	Levelling deposit. Firm, greyish pink, clay.
3102	1090	142	24	Surface/make-up deposit. Firm, mixed light whitish grey/mid-brownish grey, silty sand.
3103	1015	108	8	Demolition deposit. Friable, mid-yellowish brown silty clay.
3104	1088	142	24	Levelling deposit, friable dark brownish grey, sandy silt.
3105	1010	106	6	Occupation deposit. Firm, mid-greyish green, silty sand.
3106	1087	141	24	Levelling deposit. Friable, mid-brownish grey, sandy clay.
3107	1106	149	27	Tile surface. Edge set tiles, bonded with reddish sandy clay.
3108	1009	106	6	Floor surface. Loose, light yellowish brown, silty sand.
3109	1061	130	19	Pit backfill. Friable, light reddish orangey brown, sandy silt.
3110	1060	130	19	Levelling deposit. Firm, dark greyish brown, sandy clay.
3111	1009	106	6	Levelling deposit. Firm, light blueish green, mottled silty sand. Same as (3112).
3112	1009	106	6	Levelling deposit. Firm, light blueish green, mottled silty sand.
3113	1061	130	19	Pit cut. Unknown shape in plan, aligned north-east/south-west, gradual break of slope at top, shallow concave sides, gradual break of slope at base, base unknown.
3114	1106	149	27	Hearth structure. Burnt limestone fragments, bedded in orange pink clay.
3115	1106	149	27	Construction cut. Rectangular shape in plan, aligned north-east/south-west, Flat base with a slightly deeper rectangular section at north-east end. It measures 2.51m long, 2.19m wide.
3116	1059	130	19	Pit backfill. Soft, dark brownish grey, sandy clay.
3117	1052	126	17	Dump. Firm, dark greyish brown, silty clay.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
3118	1059	130	19	Pit cut. Sub-oval shape in plan, aligned north/south, sharp break of slope at top, moderately concave sides, unknown break of slope from sides to base, unknown base. 0.70m long, 0.45m wide, 0.28 deep.
3119	1101	145	25	Posthole backfill. Friable, dark blackish grey, sandy silt.
3120	1101	145	25	Posthole cut. Circular in plan, aligned north/south, steep sloping sides, gradual break of slope at base, concave base. 0.27m long, 0.26m wide.
3121	1102	145	25	Posthole backfill. Friable, mid/dark greyish brown, clayey silt.
3122	1102	145	25	Posthole cut. Circular in plan, aligned north-east/south-west, moderate sloping sides, gradual break of slope at base, concave base. 0.23m long, 0.13m wide.
3123	1091	143	24	Made ground. Soft, mid-orange grey, silty clay.
3124	1103	145	25	Levelling deposit. Friable, dark grey, silty clay.
3125	1007	103	4	Surface. Firm, mid-greenish brown, silty clay.
3126	1094	144	25	Pit backfill. Light, greyish white and pink mortar.
3127	1094	144	25	Pit cut. Irregular shape in plan, aligned north-west/south east, moderate uneven sloping sides, gradual break of slope and concave base. 0.73m long, 0.33m wide, 0.10m deep.
3128	1093	144	25	Pit backfill. Loose, light greyish white mortar with crushed limestone.
3129	1093	144	25	Pit cut. Sub-circular shape in plan, aligned north-east/south west, moderate straight sloping sides, gradual break of slope, concave base. 0.40m long, 0.20m wide.
3130	1091	143	24	Made-ground. Soft, mid-greyish brown, clayey silt.
3131	1088	143	24	Made-ground. Friable, mid-greyish brown, clayey silt.
3132	1008	104	5	Build-up deposit. Firm, dark greyish blue, silty clay.
3133	1039	123	13	Levelling deposit, Loose, mid-green brown, sandy silt.
3134	1039	123	13	Dump. Friable, dark blue grey, clayey silt with frequent charcoal fragments.
3135	1038	119	16	Build-up/trample. Friable, dark bluish grey, charcoal layer.
3136	1105	146	24	Trample. Firm, dark greenish brown, sandy silt.
3137	1110	147	26	Robbed wall backfill. Loose, mid-brownish grey, sandy silty/mortar.
3138	1110	147	26	Robbed wall cut. Linear shape in plan, aligned north-east/south-west, sharp break of slope at top, sharp concave sides, flat base.
3139	1089	142	24	Mortar surface/dump. Moderately compact thin white mortar.
3140	1087	141	24	Levelling deposit. Soft, mid/dark greyish brown, silty clay.
3141	1109	147	26	Levelling deposit. Firm/friable, mid-orangey brown, clayey sandy silt.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
3142	1086	141	24	Levelling deposit. Friable, mid-brownish grey, sandy clay.
3143	1082	140	23	Construction cut backfill. Soft, mid-greyish brown, silty sand.
3144	1058	129	19	Make-up deposit. Friable, mid-greenish grey, silty sand and mortar.
3145	1058	129	19	Made ground. Firm, light greyish brown, clayey silt.
3146	1177	166	33	Buttress construction cut backfill.
3147	1177	166	33	Buttress 2. Sub-square shape in plan, mixed components made up of roughly shaped magnesian limestone and sandstone blocks bonded by whitish lime mortar. 1.35m long, 1.42m wide, 0.50m+ deep.
3148	1177	166	33	Construction cut.
3149	1175	166	33	Mortar infill of wall.
3150	1174	166	33	Construction cut backfill.
3151	1173	166	33	Large Magnesian limestone wall. Linear in plan, aligned north-east/south-west, rough faced large limestone blocks, bonded with lime mortar.
3152	1173	166	33	Construction cut. Linear shape in plan, aligned north-east/south-west
3153	1174	166	33	Mortar infilling of the south-westernmost side of wall 3088.
3154	1049	125	16	Levelling deposit. Loose, light brownish red, clayey silt.
3155	1048	125	16	Levelling deposit. Loose, light brownish grey, silty clay.
3156	1111	148	26	Make-up deposit. Friable, dark brownish bluish grey, clayey sand.
3157	1118	152	29	Pit backfill. Friable, light whitish greyish brown, silty sand.
3158	1187	169	36	Clearance event across excavation area, demolition of friary buildings and associated ground reduction.
3159	1175	166	33	Construction cut. Linear in plan, aligned north-east/south-west.
8000	1212	180	41	Sewer backfill. Firm, dark brown, silty clay.
8002	1212	180	41	Sewer cut. Rectilinear shape in plan, aligned east/west for 4.40m then a turn to the north for 22.0m at the east end, sharp break of slope at top, steep sides, sharp break of slope at base, flat base. 4.40m long, 0.86m wide, 1.0m deep. 22.0m long, 1.60m-2.0m wide, 1.0m deep.
8002	1201	176	39	Levelling deposit. Soft/loose, dark brown, silty clay.
8003	1189	169	36	Dump. Loose/friable, soft in places, mid-orangey red, light and dark brown patches, crushed brick matrix with lenses of clay, sand and mortar.
8004	1189	169	36	Surface deposit. Hard/loose/friable, small and medium roof tile fragments in a crushed tile matrix.
8005	1165	165	32	Tile structure. Shattered, friable, orangey red, stacked roof tile, two courses of steeply stacked rooftile, unbonded. Rectilinear in plan, aligned south-west/north-east. 1.60m long, 0.34 wide, 0.35 deep.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
8006	1137	164	32	Limestone wall. Rectilinear shape in plan, aligned south-south-west/north-north-west, hard, creamy yellow, magnesian limestone wall stones, small, medium and large in size, bonded by a soft creamy white gritty mortar. 1.60m long, 0.20m wide, 0.05m deep – partially exposed.
8007	1166	165	32	Tile structure. Square shape in plan, aligned south-south-east/north-north-west, hard, orangey red, steeply stacked roof tile. 0.42m long, 0.42m wide, depth unknown.
8008	1167	165	32	Wall footing. Rectangular in plan, aligned north-west, south-east, sandstone boulder – sub-cubic. Hard, dark orangey brown. 0.51m long, 0.51 wide, 0.30m deep.
8009	1190	169	36	Build-up deposit. Hard, orangey red, small and medium fragments of broken roof tile.
8010	1167	165	32	Wall footing. Rectilinear shape in plan, aligned north-west/south-east, medium sized square and rectangular stone blocks, unbonded with mortar remnant, hard, crumbly, creamy white/grey, gritty. 1.80m long, 0.30m wide.
8011	1189	169	36	Dump. Loose/friable, soft in places, mid-orangey red, light and dark brown patches, crushed brick matrix with lenses of clay, sand and mortar.
8012	1198	169	36	Dump. Soft, light greyish creamy white, powdered mortar fragments.
8013	1198	169	36	Dump. Soft, mid-orangey brown, sand.
8014	1189	169	36	Dump. Soft, mid-orangey brown, sandy clay.
8015	1189	169	36	Disturbed brickwork. Loose, orangey red and mid-brown, approximately seven broken bricks, sand and small mortar fragments.
8016	1170	165	32	Brick wall. Rectangular in plan, aligned south-west/north-east, six courses seen of hard, orangey red, bricks, flush stretcher bonded, dry joints soft, orangey brown mortar. 1.20m long to L.O.E., 0.50m wide, 0.37m deep.
8017	1169	165	32	Brick wall. Rectangular in plan, aligned south-west/north-east, hard, orangey red, bricks, flush stretcher bonded, dry joints soft, orangey brown mortar. 1.20m long to L.O.E., 0.50m wide, 0.37m deep.
8018	1169	165	32	Wall core. Soft, orangey red, light yellowy brown patches, broken bricks, angular limestone fragments in clay, sand, mortar and crushed CBM matrix.
8019	1164	162	32	Trample. Soft, light white creamy grey, gritty mortar.
8020	1162	162	32	Surface. Hard, mid-orangey brown, CBM, unexcavated.
8021	1167	165	32	Wall footing. Rectilinear shape in plan, aligned north-west to south-east, roughly laid assortment of rough and dressed stone blocks, unbonded but with mortar remnants, hard crumbly creamy white/grey. 1.80m long, 0.50m wide.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
8022	1165	165	32	Bedding. Soft, orangey yellowy brown, gritty sharp sand.
8023	1165	165	32	Bedding. Hard, orange, small and medium fragments of roof tile.
8024	1163	162	32	Trample. Soft, firm in places, dark grey, gritty sand and clayey silt.
8025	1161	162	32	Levelling deposit. Very firm, light greyish brown, gritty sandy clay.
8026	1189	169	36	Dump. Loose, friable, soft in places, orangey red, light and dark brown patches. Crushed brick matrix with lenses of clay, sand and mortar.
8027	1137	164	32	Limestone wall. Rectilinear shape in plan, aligned south-south-west/north-north-east, hard creamy yellow magnesian limestone wall, small medium and large in size, bonded by a soft creamy white gritty mortar. 1.40m long, 0.02m wide at south-west, 0.20m wide at north-north-east, 0.35m deep.
8028	1172	165	32	Limestone wall. Irregular in plan, aligned south-south-west/north-north-east, large angular limestone blocks bedded in sand, unbonded with mortar remnants. 0.90m long, 0.60m wide, 0.41m deep (max).
8029	1171	165	32	Brick wall. Rectangular in plan, aligned north-east/south-west, hard orangey red bricks, three courses seen in section, flush stretcher bonded dry joints and soft orangey brown mortar. 0.90m long, 0.60m wide, >0.10m deep.
8030	1171	165	32	Wall core. Soft, orangey red, light yellowy brown patches, broken bricks and angular limestone fragments in clay, sand mortar and crushed CBM matrix.
8031	1172	165	32	Bedding. Soft, yellowish brown, sand.
8032	1172	165	32	Wall cut backfill. Loose, dark brown, gritty stony silty clay.
8033	1199	175	39	Levelling deposit. Soft/loose, dark brown, silty clay.
8034	1212	180	41	Sewer backfill. Firm, dark brown, silty clay.
8035	1212	180	41	Sewer cut. Rectilinear shape in plan, aligned north-north-west/south-south-east, 4.40m turn to the west at southern end, sharp break of slope at top, steep sides, sharp break of slope at base, flat base. 22.0M + 4.40m long, 1.60m wide, 1.0m deep.
8036	1215	183	41	Build-up. Soft/loose, dark black greyish brown, silty clay.
8037	1191	169	36	Dump. Loose, light creamy yellowy brown, crushed mortar and limestone.
3038	1199	175	39	Levelling deposit. Firm, loose in places, dark brown, clayey silt.
8039	1136	163	35	Wall cut backfill. Firm/soft, dark greyish brown, silty clay.
8040	1136	163	35	Limestone wall. Rectangular in plan, aligned north-west/south-east, medium and large blocks randomly laid, bonded by mortar, soft crumbly light yellow grey. 1.0m long, 0.5m wide, depth not excavated.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
8041	1136	163	35	Construction cut. Rectangular shape in plan, aligned north-west/south-east, sharp break of slope at top, vertical sides, base not seen. 1.60m long, 1.0m wide to L.O.E., depth not excavated.
8042	1160	167	36	Build-up. Soft, dark greyish black, light grey lenses, charcoal and ash.
8043	1160	167	36	Build-up. Firm, dark brown, silty stony clay.
8044	1132	157	35	Cobble surface. Hard, dark grey, small to medium cobbles set into clay bedding.
8045	1132	157	35	Bedding deposit. Firm/compacted, dark orangey brown, clay.
8046	1160	167	36	Build-up. Firm, mid-greenish brown, clayey sandy silt.
8047	1127	155	34	Build-up. Firm, mid-greenish brown, clayey gritty sandy silt.
8048	1215	183	41	Build-up. Soft/loose, dark black greyish brown, sandy silt.
8049	1209	178	40	Foundation backfill. Firm/loose, mid-yellowy brown, clayey silt.
8050	1209	178	40	Construction cut. Rectilinear shape in plan, aligned north-north-east/south-south-west, seen in plan only. 0.86m long, 0.28m wide.
8051	1200	175	39	Build-up. Firm, mid-pink greyish brown, silty clay.
8052	1168	165	32	Brick wall. Sub-square in plan, aligned north-east/south-west, six courses seen in section of hard orangey red bricks, stretcher bonded with soft, orangey brown mortar. 0.20m exposed only in length.
8053	1170	165	32	Wall core. Soft, orangey red with light yellowy brown patches, small to medium broken bricks and angular limestone fragments in clay, sand mortar and crushed CBM matrix.
8054	1138	159	34	Pit backfill. Loose, dark greyish brown, clayey gritty silt.
8055	1138	159	34	Skeleton. Disarticulated and placed at bottom of pit.
8056	1138	159	34	Pit cut. Oval shape in plan, aligned north-north-east/south-south-west, sharp break of slope at top, steep sides, gradual break of slope at base, concave base. 0.32m long, 0.48m wide (max), 0.38m deep.
8057	1137	161	31	Grave backfill. Firm, dark greenish brown, clayey silt.
8058	1145	161	31	Skeleton. Supine, extended, aligned north-west/south-east.
8059	1145	161	31	Grave cut. Rectangular in plan, aligned north-west/south-east, sharp break of slope at top, vertical sides, north-west end truncated, south-east end at L.O.E., flat base. 0.60m long, 0.37m wide, 0.20m deep.
8060	1215	183	41	Build-up. Soft/loose, dark black brown, sandy silt.
8061	1208	178	40	Wall foundation backfill. Loose, mixed orangey grey and dark brown, sandy gritty silt matrix.
8062	1208	178	40	Wall construction cut. Rectilinear shape in plan, aligned north-north-west/south-south-east, sharp break of

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
				slope at top, vertical sides, base not seen. 0.30m long, 0.40m wide, >0.55m deep.
8063	1126	155	34	Build-up. Firm, loose in places, mid-brownish grey with orange and brown patches, gritty silt with silty clay lenses.
8064	1126	155	34	Build-up. Firm, mid-greyish brown, clayey silt.
8065	1125	155	34	Build-up. Loose, mixed orangey red and mid brown, gritty silt matrix.
8066	1126	155	34	Build-up. Firm, mid-greyish brown, gritty silt.
8067	1210	179	41	Wall foundation backfill. Hard, mottled orange grey and brown, gritty sandy clayey silt matrix.
8068	1210	179	41	Construction cut. Rectilinear shape in plan, aligned north-north-west/south-south-east, sharp break of slope at top, vertical sides, sharp break of slope at base, flat base. 3.0m long, 0.90m wide, 0.80m deep.
8069	1047	119	16	Levelling deposit. Firm, dark grey, silty sandy clay, cobbles and stones.
8070	1046	118	16	Cobble surface. Firm, mid-greyish brown, mottled grey, medium sized cobbles and small sub-angular stones in fine, gritty silt matrix.
8071	1046	118	16	Pebble surface. Firm/hard, mid-greyish orangey brown, small pebbles and small sub-angular stones set in silty grit.
8072	1030	115	12	Dump. Firm, mid-greenish brown, mottled grey with yellow patches, clayey silt.
8073	1022	113	11	Dump. Soft, dark brown black, clayey sandy silt with charcoal lenses.
8074	1019	110	9	Dump. Firm, friable in places, mid-yellowy greenish brown, clay lenses in clayey silt.
8075	1013	109	8	Dump. Firm/soft, mid-yellowy greyish green, sandy clayey silt.
8076	1011	107	7	Dump. Very firm, mid-brown with red and black streaks, clay with charcoal and sandy lenses.
8077	1204	176	39	Build-up. Soft, dark blackish brown, silt.
8078	1129	153	34	Dump. Firm, dark blackish brown with orange flecks, charcoal with burnt clayey silt.
8079	1128	153	34	Dump. Firm, mid-yellowy orange, sandy clay.
8080	1083	136	20	Dump. Firm, mid-yellowy greenish brown, clayey silt with clay lenses.
8081	1213	181	41	Drain backfill. Firm, dark greyish brown, very mixed, clay sand gravel silt and stones.
8082	1213	181	41	Drain cut. Rectilinear shape in plan, aligned north-north-west/south-south-east, top not seen, steep sides, sharp break at base, flat base. 3.0m long to L.O.E., 0.60m wide at base, >1.20m deep.
8083	1144	161	31	Grave backfill. Firm, dark brown, clayey stony silt.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
8084	1144	161	31	Grave cut. Not seen in plan, aligned east/west, sharp break of slope at top, steep sides, gradual slope to base, base not seen. 0.60m long, 0.12m wide, 0.40m to L.O.E.
8085	1130	155	34	Grave backfill. Firm, dark greyish brown, gritty clayey stony silt.
8086	1130	155	34	Pit or grave cut. Not seen in plan, aligned north-west/south-east, sharp break of slope at top, gradual sides, gradual break towards unseen base. 1.07m long, 0.55m wide, 0.26m deep.
8087	1128	153	34	Build-up. Soft, mid-pinkish brown, silty sand.
8088	1135	158	30	Limestone wall. Sub-rectangular in plan, aligned north-east/south-west, small medium and large blocks of limestone, randomly laid, bonded by mortar, soft crumbly yellowy white gritty with small limestone fragments. 1.20m long, 1.16m wide.
8089	1175	166	33	Limestone buttress. Sub-rectangular in plan, aligned north-east/south-west, small medium and large limestone blocks, randomly laid, bonded by very hard greyish white, speckled pink, yellowy, grey and black gritty mortar. 1.25m long, 0.75m wide (as seen in machined slot).
8090	1173	166	33	Limestone wall. Linear in plan, aligned north-west/south-east, small medium and large limestone blocks randomly laid, bonded by very hard, greyish white, speckled pink, yellowy, grey and black, gritty mortar. 0.50m long, 1.06m wide (as seen in machined slot).
8091	1174	166	33	Limestone wall – infill. Rectangular in plan, aligned north-west/south-east, small medium and large blocks, randomly laid, bonded by very hard, greyish white, speckled pink, yellow, grey and black, gritty mortar. 0.30m long, 0.64m wide (as seen in machined slot).
8092	1173	166	33	Limestone wall. Sub-rectangular in plan, aligned north-east/south-west, small medium and large blocks, carefully laid, bonded by very hard greyish white, speckled pink, yellow, grey and black, gritty mortar. 1.50m long, 1.00m wide (as seen in machined slot)
8093	1174	166	33	Limestone wall-infill. Sub-rectangular in plan, aligned north-east/south-west, small medium and large limestone blocks, randomly laid, boned by very hard, greyish white, speckled pink, yellow, grey and black gritty mortar. 1.50m long, 0.60m wide (as seen in machined slot).
19000	1216	184	-	Unstratified
19001	1214	181	41	Modern drain backfill. Firm, mixed mid-orangey brown and dark brown, clay and clayey silt.
19002	1214	181	41	Modern drain cut. Linear in plan, aligned north-east/south-west, sharp break of slope at top, vertical sides. 7.1m long, 1.1m wide, 1.3m deep.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
19003	1205	177	39	Dump. Friable, light brown, sand, mortar and limestone fragments.
19004	1131	156	30	Linear feature backfill. Firm, mid brown, silt.
19005	1131	156	30	Linear feature cut. Aligned north-west/south-east, sharp break of slope at top, steep slightly concave sides, gradual break to a flat base. 1.40m long, 1.10m wide, 0.97m deep.
19006	1150	161	161	Grave backfill. Friable, dark brown, clayey silt.
19007	1205	177		Dump. Friable to firm, dark brown, clayey silt.
19008	1210	179	41	Modern disturbance backfill. Soft to friable, dark brown, clayey silt.
19009	1154	161	39	Grave backfill. Firm, mixed mid-orangey brown clay and dark grey silt.
19010	1154	161	39	Grave cut. Sub-rectangular shape in plan, aligned north-west/south-east, sharp break of slope at top, south side near vertical, other sides truncated, flat base. 0.44m long, 0.58m wide, 0.33m dep.
19011	1083	136	20	Build-up. Firm, mid-greyish brown, sandy silt.
19012	1083	136	20	Build-up. Firm, dark greyish brown clayey silt.
19013	1054	128	18	Firm, light red brown clay with frequent pebbles and cobbles.
19014	-	-	-	Void
19015	1051	124	14	Friable, mixed mid-red brown and mid-grey clay with medium and large cobbles.
19016	1037	121	13	Soft to friable, mid-greenish brown, silty sand. Frequent gravel, occasional medium sized pebbles and charcoal flecks.
19017	1002	101	2	Firm, mid-orange brown clay with moderate pebbles.
19018	1002	101	2	Firm, mid-orange brown clay with moderate pebbles.
19019	1206	177	39	Clearance cut backfill. Loose, mixed light grey, orangey brown and mid-brown, clayey silt and mortar.
19020	1204	176	39	Build-up. Firm, mid-brown, coarse sandy silt.
19021	1210	179	41	Modern disturbance cut. Irregular shape in plan, aligned north-east/south-west, sharp break of slope at top, irregular sides, irregular base. 3.75m long, 1.60m wide, 0.40m deep.
19022	1204	176	39	Build-up. Loose to friable, mid-brown with greyish white flecks, sandy gritty silt.
19023	1150	161	31	Skeleton SK1. Supine, extended, aligned north-west/south-east.
19024	1148	161	31	Skeleton SK2. Supine, extended, aligned north-west/south-east.
19025	1185	173	38	Gully backfill. Soft, dark brown, greyish brown towards base, clayey silt.
19026	1185	173	38	Gully cut. Linear shape in plan, aligned south-southwest/north-northeast, sharp break of slope at top, sides gradual to the north-west and steeper to the south, flat base. 1.00m long, 0.25m wide, 0.06m deep.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
19027	1183	172	38	Dump. Loose, light greyish brown, coarse sandy silt.
19028	1184	173	38	Gully backfill. Soft, dark brown, clayey silt.
19029	1184	173	38	Gully cut. Linear shape in plan, aligned north-northwest/south-southeast, sharp break of slope at top, steep sides, flat base. 1.00m long, 0.18m wide, 0.05m deep.
19030	1183	172	38	Linear cut. Linear shape in plan, aligned south-east/north-west, sharp break of slope at top, steep sides, flat base. 1.60m long, 0.60m wide, 0.07m deep.
19031	1181	171	37	Dump. Soft, dark brown, clayey silt.
19032	1181	171	37	Dump. Loose, light yellowish brown, coarse sandy silt.
19033	1180	171	37	Cobble surface. Very firm, mid-brown mottled grey, orangey red and greyish white, small and medium sized cobbles and pebbles in a firm red clay base with a clayey silt sub-base.
19034	1179	170	37	Levelling deposit. Soft to firm, dark brown with greyish white flecks, coarse sandy silt and silt.
19035	1202	170	37	Soft, mid-brown, dark greyish brown, silt with frequent small angular and sub-angular stones and charcoal flecks. Occasional small and medium CBM fragments.
19036	1133	157	36	Foundation. Limestone blocks randomly laid, bonded with very hard, greyish white mortar.
19037	1134	157	36	Surface. Compact grey pebbles in an orangey brown matrix.
19038	1134	157	36	Bedding. Compact dark, orange brown, clay.
19039	1179	170	37	Dump. Loose to soft, light yellowish brown, mortar and angular limestone fragments.
19040	1178	168	22	Build-up. Soft, dark brown, clayey silt with a coarse sandy and stony base.
19041	1100	139	22	Build-up. Firm, mid-greyish brown, clayey silt.
19042	1097	138	22	Animal burrow fill. Very soft, mid-greyish brown, sandy silt.
19043	1098	138	22	Posthole backfill. Soft, dark brown, clayey silt.
19044	1097	138	22	Animal burrow. Irregular shape in plan, aligned north/south, sharp break of slope at top, steep to vertical sides, stepped with burrows traversing horizontally and dipping down vertically, uneven base. 0.70m long, 0.48m wide, 0.39m deep.
19045	1098	138	22	Post pad or packing. Loose light greyish white, limestone fragments with soft mid brown silt.
19046	1098	138	22	Post pad cut. Oval shape in plan, aligned north/south, sharp break of slope at top on the west side and gradual on the east side, vertical side to the west and gradual side to the east, sharp break of slope to base on the west and gradual on the east side, base flat. 0.80m long, 0.56m wide, 0.18m deep.
19047	1095	138	22	Pit backfill. Soft, mid to dark greyish brown, clayey silt.
19048	1071	132	20	Trampled surface. Firm, dark brown and mid-orangey brown, silty clay with clay lenses.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
19049	1095	138	22	Pit cut. Rectangular shape in plan, aligned north-east/south-west, steep break of slope at top, steep sides, sharp break of slope to a flat base. 1.36m long, 0.46m wide, 0.19m deep.
19050	1148	138	22	Grave backfill. Firm, dark grey, clayey silt.
19051	1150	161	31	Grave cut. Linear shape in plan, aligned north-west/southeast, sharp break of slope at top, near vertical sided, gradual break to a flat base. 1.50m long, 0.63m wide, 0.46m deep.
19052	1148	161	31	Grave cut. Sub-rectangular shape in plan, aligned north-west/south-east, sharp break of slope at top, near vertical sided, flat base. 1.02m long, 0.75m wide, 0.55m deep.
19053	1206	177	39	Clearance cut. Linear shape in plan, aligned north-east/south-west, moderate break of slope at top, uneven base. 2.10m long, 0.37m wide, 0.13m deep.
19054	1077	134	20	Pit backfill. Friable, dark greyish brown silt.
19055	1149	161	31	Grave backfill, partially excavated. Soft to friable, dark greyish brown clayey sand.
19056	1149	161	31	Skeleton SK3. Supine, extended, aligned north-west/south-east.
19057	1149	161	31	Grave cut. Sub-rectangular shape in plan, aligned north-west/south-east, sharp break of slope at top, steep sided, moderately sharp break to a flat base. 0.15m long, 0.50m wide.
19058	1147	161	31	Grave backfill. Firm, mid to dark brown, clayey silt.
19059	1147	161	31	Grave cut. Linear shape in plan, aligned north-west/south-east, sharp break of slope at top, steep sided, slightly concave flat base. 1.04m long, 0.68m wide, 0.24m deep.
19060	1154	161	31	Skeleton SK4. Supine, extended, aligned north-west/south-east.
19061	1078	134	20	Possible pit backfill. Firm, dark brown, clayey silt.
19062	1078	134	20	Possible pit cut. Linear shape in plan, aligned north-west/south-east, sharp break of slope at top, north-east side steep to near vertical, gradual break to base, base outside limit of excavation. 0.63m long, 0.45m wide, 0.32m deep.
19063	1084	136	20	Dump or build-up. Firm, dark greyish brown, clayey silt.
19064	1151	161	31	Grave backfill. Friable, dark brownish grey, silt.
19065	1151	161	31	Skeleton SK5. Position and alignment unknown (skull only).
19066	1151	161	31	Possible Grave cut. Semi-circular shape in plan, aligned north-east/south-west, moderate break of slope at top, shallow concave sides, gradual break to shallow concave base. 0.40m long, 0.56m wide, 0.18m deep.
19067	1152	161	31	Grave backfill. Soft to friable, dark greyish brown, clayey sandy silt.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
19068	1152	161	31	Skeleton SK6. Supine, extended, aligned north-west/south-east.
19069	1152	161	31	Grave cut. Linear shape in plan, aligned north-west/south-east, sharp break of slope a top, south side near vertical, other sides truncated, uneven base. 0.40m long, 0.39m wide, 0.32m deep.
19070	1075	133	20	Pit backfill. Friable, dark greyish brown, silt.
19071	1153	161	31	Grave backfill. Firm, dark greyish brown and mid-orange, silty clay and clay.
19072	1153	161	31	Skeleton SK7. Supine, extended, aligned north-west/south-east.
19073	1153	161	31	Grave cut. Linear shape in plan, aligned north-west/south-east, sharp break of slope at top, north side near vertical, south side moderately steep, uneven tapering base. 0.44m wide, 0.35m long, 0.40m deep.
19074	1077	134	20	Pit backfill. Friable, dark brown, silt.
19075	1075	133	20	Pit backfill. Friable, dark brown, silt.
19076	1146	161	31	Grave backfill. Friable, mid-brown, silt.
19077	1146	161	31	Skeleton SK8. Supine, extended, aligned north-west/south-east.
19078	1146	161	31	Grave cut. Irregular shape in plan, aligned north-west/south-east, sharp break of slope at top on northeast side, moderately steep concave sides, gradual break of slope to base, flattish base. 0.80m wide, 0.45m long, 0.31m deep.
19079	1077	134	20	Pit cut. Linear shape in plan, aligned south-west/north-east, gradual break of slope at top at northeast end, shallow break of slope at top at southwest end, gradual side at northeast end, shallow at southwest end, gradual break of slope to base, flat base. 2.20m long, 0.60m wide.
19080	1075	133	20	Pit cut. Irregular shape in plan, aligned north-east/south-west, Unclear break of slope at top to north-east, gradual at south-west end, steep to near vertical sides, irregular base. 2.20m long, 0.60m wide.
19081	1076	134	20	Pit backfill. Friable, mid to dark brown, silt.
19082	1066	131	18	Possible in situ burning. Friable, dark red and black, sand.
19083	1069	132	20	Possible surface. Firm, dark greenish brown with mid-reddish brown patches, clayey sand and clay.
19084	1074	133	20	Pit backfill. Firm, greyish mid-brown, sandy silt.
19085	1072	132	20	Build-up. Firm, greenish mid-brown, clayey silt.
19086	1076	132	20	Pit cut. Sub-oval shape in plan, aligned north-east/south-west, sharp break of slope at top, steep concave sides, gradual break of slope to a shallow concave base. 1.23m long, 0.60m wide, 0.60m deep.
19087	1069	132	20	Possible surface. Firm, dark greenish brown with reddish brown patches, clayey sand and clay.
19088	1069	132	20	Possible surface. Firm, mid-orangey brown sandy clay.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
19089	1066	131	19	Burnt patch. Soft to friable, mixed dark grey, orange and black patches, sandy silt with clay lenses.
19090	1070	132	20	Dump. Firm, light greenish brown, sandy silt.
19091	1074	133	20	Pit backfill. Friable, mid-orangey brown, silt.
19092	1065	131	19	Pit backfill. Firm, dark brownish grey, sandy silt.
19093	1069	132	20	Dump. Friable, light greenish brown with dark grey patches, sandy silt and silt.
19094	1074	133	20	Pit backfill. Friable, dark brown, clayey silt.
19095	1065	131	19	Pit cut. Sub-oval shape in plan, aligned north-east/south-west, sharp break of slope at top, moderately steep concave sides, gradual break to a shallow concave base. 1.30m long, 0.95m wide, 0.32m deep.
19096	1063	131	19	Dump. Friable to firm, dark greenish grey, clayey silt.
19097	1068	132	20	Dump. Firm, mixed dark greenish grey and light reddish brown, silt and sandy clay.
19098	1062	131	19	Pit backfill. Friable to firm, dark brown, silt.
19099	1064	131	19	Build-up. Firm, dark greyish brown, sandy silt.
19100	1074	133	20	Pit backfill. Friable to firm, mixed mid-orangey brown and dark greyish brown, clay.
19101	1183	172	38	Build-up. Firm, dark grey, clayey silt.
19102	1045	123	13	Dump. Firm, mixed mid-greenish grey and light to mid-grey, sandy silt.
19103	1057	128	18	Layer. Firm, light reddish brown, clay.
19104	1073	133	20	Pit backfill. Friable, mid-greenish brown, clayey silt.
19105	1073	133	20	Pit backfill. Firm, mixed dark grey and light reddish brown, silt and clay.
19106	1064	131	19	Layer. Firm, mixed dark grey and mid-reddish brown, clayey silt and clay.
19107	1063	131	19	Dump. Friable, mixed dark greenish grey, mid-green and light reddish brown, sandy silt and clay.
19108	1062	131	19	Pit cut. Sub-oval shape in plan, aligned north-west/south-east, sharp break of slope at top, steep concave sides, gradual break to a concave base. 0.92m wide, 0.70m long, 0.36m deep.
19109	1073	133	20	Pit backfill. Soft, mid-brown, clayey silt.
19110	1073	133	20	Pit backfill. Soft, dark grey, silt.
19111	1073	133	20	Pit cut. Rectangular shape in plan, aligned north-east/south-west, sharp break of slope at top, near vertical flat side to south-west, north-east side initially moderately steep, gradually breaking to a steep flat profile. 2.00m long, 0.35m wide, 1.10m deep.
19112	1055	128	18	Robbing backfill. Friable, mid-greyish brown, slightly sandy silt.
19113	1055	128	18	Robbing cut backfill. Friable, mid-greyish brown, slightly sandy silt.
19114	1051	124	14	Wall footing. Loose, light brown, cobbles bonded with light brown clay.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
19115	1051	124	14	Wall footing. Aligned north-west/south-east. Medium and large cobbles bonded with light reddish brown clay.
19116	1003	102	3	Gravel surface. Compacted, light yellowish brown, sand and small and medium sized pebbles.
19117	100	100	1	Natural. Hard, light reddish brown with light grey streaks, clay.
19118	1003	102	3	Gravel surface. Compacted, light yellowish brown, sand and gravel.
19119	1051	124	14	Wall construction cut. Linear shape in plan, aligned north-west/south-east, sharp break of slope at top, vertical sides, base not exposed. 1.70m wide, 0.90m long, 0.60m deep.
19120	1051	124	14	Wall construction cut. Linear shape in plan, aligned north-west/south-east, sharp break of slope at top, vertical sides, base not exposed. 1.65m wide, 0.28m long, 0.84m deep.
19121	1045	123	13	Dump. Soft, mid-grey, sandy silt.
19122	1044	123	13	Dump. Friable, mid-green and mid-grey, silty sand.
19123	1042	122	13	Dump. Firm, light to mid-red, sandy clay.
19124	1041	121	13	Dump or build-up. Firm, light to mid-grey, sandy silt.
19125	1100	139	22	Dump. Very loose, mid-grey brown mottled with grey and orange patches, clayey silt.
19126	1100	139	22	Robber cut backfill. Soft, mid-brown, clayey silt.
19127	1096	138	22	Demolition deposit. Hard, light yellowy brown, small and medium angular limestone fragments bonded with light whitish grey mortar.
19128	1096	138	22	Pit backfill. Loose to friable, mid-greyish brown, silt.
19129	1096	138	22	Rubbish pit cut. Irregular shape in plan, aligned north/south, sharp break of slope at north-northwest side and gradual on the east side, sides steep on the north and north-west and gradual on the east side, gradual break of slope to a flat base. 1.80m long, 1.20m wide, 0.44m deep.
19130	1099	139	22	Robber cut. Rectangular shape in plan, aligned south-west/north-east, sharp break of slope at top, vertical sides, flat base. 1.60m long, 0.90m wide, 0.15m deep.
19131	1085	137	21	Wall foundation. Hard, grey cobbles and light greyish white rough limestone fragments bonded with soft, dark brown, silt.
19132	1085	137	21	Wall foundation cut. Linear shape in plan, aligned north-east/south-west, sharp break of slope at top, vertical sides, base excavated. 3.00m long, 1.00m wide, 0.92m deep.
19133	1069	132	21	Surface. Firm, mottled mid-brown with light yellowish brown and orange patches, silt with clay lenses.
19134	1056	128	18	Dump. Firm, mottled mid-brown with yellowish brown patches, silt with clay lenses.
19135	1063	131	19	Dump. Soft, dark brown, clayey silt.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
19136	1056	128	18	Dump. Soft, mottled dark grey brown, yellowish brown and mid-grey, clayey silt with clay and ashy charcoal lenses.
19137	1034	121	13	Dump. Soft, mid-greyish brown, clayey silt.
19138	1034	121	13	Dump. Firm, dark brown and light yellowish brown, silt with clay lenses.
19139	1033	121	13	Dump. Firm, mid-greyish brown, silt.
19140	1041	121	13	Dump or build-up. Soft, mid-grey, sandy silt.
19141	1040	116	13	Dump or build-up. Firm, light grey, clay.
19142	1040	116	13	Dump. Friable, mid-greenish brown, silty sand.
19143	1053	127	18	Robber cut. Linear shape in plan, aligned north-west/south-east, sharp to moderate break of slope at top, near vertical sides, base slopes down slightly from north-west to south-east.
19144	1053	127	18	Robber cut. Linear shape in plan, aligned north-west/south-east, sharp to moderate break of slope at top, near vertical sides, flat base.
19145	1006	102	3	Trample or erosion. Loose, mid-grey, sandy silt and small pebbles.
19146	1003	102	3	Gravel surface. Compact, light brown, small to medium-sized pebbles with light brown sand.
19147	1001	100	1	Terrace. Firm, mid-reddish brown with light grey lenses, clay.
19148	1040	116	13	Dump. Friable, mid-greenish grey and mid-grey, sandy silt.
19149	1044	123	13	Build-up. Slightly soft to friable, light greenish brown, silty clay and clay lenses.
19150	1032	120	13	Channel cut. Rectilinear shape in plan, aligned north-east/south-west, sharp break of slope at top, steep to vertical sides, stepping down onto an uneven concave base. 1.00m long, 1.08m wide, 0.20m deep.
19151	1033	121	13	Build-up. Soft to firm, mixed mid brown with mid brownish orange patches, fine silt with clay and ash patches.
19152	1067	132	20	Dump. Firm, mid orangey-brownish grey, stony silt with charcoal base and pink clay nodules.
19153	1005	102	3	Gravel dump. Loose, mid orangey brown, small and medium sized pebbles in a sandy grit matrix.
19154	1005	102	3	Gravel dump. Loose, mid orangey brown, small pebbles in a sandy grit matrix.
19155	1004	102	3	Compacted deposit. Very firm, orangey brown with greenish patches, gritty silty clay with pebbles and angular and sub-angular stones.
19156	1004	102	3	Compacted deposit. Very firm, orangey brown with greenish patches, gritty silty clay with pebbles and angular and sub angular stones.
19157	1001	100	1	Terrace. Very firm, light orangey-yellowy brown, clay with sand and silt lenses.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
19158	1043	122	13	Build-up. Soft to friable, dark grey-black, clay.
19159	1042	122	13	Build-up. Firm, light greyish brown and light pinkish brown, clay.
19160	1040	116	13	Build-up. Friable to firm, light greenish brown, sand.
19161	1040	116	13	Build-up. Firm, mixed mid-brownish grey and purplish brown, clayey sand.
19162	1040	116	13	Build-up. Firm, mid-greyish brown, clayey silt with yellowish sand lenses.
19163	1037	121	13	Build-up. Soft to friable, mid-greenish brown, silty sand.
19164	1035	116	13	Build-up. Firm, mid-greyish brown, sandy silt.
19165	1041	121	13	Build-up. Friable, mid-grey, sandy silt.
19166	1036	117	13	Stakehole backfill. Soft, mid-grey, silt.
19167	1036	117	13	Stakehole. Oval shape in plan, sharp break of slope at top, vertical sides, tapering to a point at the base. 0.12m long, 0.15m wide, 0.28m deep.
19168	1186	174	38	Pit backfill. Very loose, mid brown with grey patches, gritty silty sand.
19169	1186	174	38	Pit cut. Oval shape in plan, aligned north-east/south-west, steep break of slope at top, sides gradual on the east and steeper on the west side, gradual break to a flat base. 1.46m long, 0.86m wide, 0.22m deep.
19170	1035	116	13	Build-up. Firm, mid-reddish brown, clay.
19171	1182	170	37	Build-up. Firm, dark brown flecked with white, gritty stony clayey silt.
19172	1031	115	12	Dump. Firm, mid-brown, sandy silt.
19173	1183	172	38	Grave cut. Rectilinear shape in plan, aligned north-west/south-east, sharp break of slope at top, steep sides to the north and south, other sides truncated, gradual break to a flat base. 0.54m long, 0.46m wide, 0.11m deep.
19174	1183	172	38	Grave backfill. Soft, dark brown, sandy silt.
19175	1183	172	38	Grave cut. Rectilinear shape in plan, aligned north-west/south-east, sharp break of slope at top, steep sides to the north and south, other sides truncated, gradual break to a flat base. 0.57m long, 0.42m wide, 0.14m deep.
19176	1028	114	11	Build-up. Firm, dark grey, silt with mid-reddish brown clay patches.
19177	1026	113	11	Make-up mortar layer. Loose, light yellowish white and light yellowish brown, coarse gritty sand.
19178	1084	136	21	Dump. Soft, mid brown, sandy stony silt with clay lenses.
19179	1028	114	11	Build-up. Firm, mid-reddish brown, clay.
19180	1070	132	20	Dump. Firm and sticky, pink with mid brown streaks, clay with silt lenses.
19181	1068	132	20	Dump. Firm and sticky, pink, clay with some silt.
19182	1067	132	20	Dump. Stiff, pink, clay and silt.
19183	1063	131	19	Dump. Soft, dark brown, gritty stony silt.

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
19184	1035	116	13	Build-up. Firm, mid-greyish brown, clayey silt.
19185	1031	115	13	Build-up or dump. Soft to friable, dark grey, silt with mid-orangey brown sandy concretions.
19186	1031	115	13	Build-up or dump. Friable, mid-orangey brown, coarse sandy silt with coarse sandy orange concretions.
19187	1027	114	11	Build-up. Firm, mottled mid-yellowy brown and pink with greyish yellow patches, sandy silt with lenses of pink and grey clay.
19188	1027	114	11	Build-up. Firm, mid-orangey brown with orange patches, sandy clayey silt.
19189	1025	113	11	Wall. Aligned north-east/south-west, undressed large limestone fragments, unbonded, 2 course high and 1 course wide. 1.20m long, 0.24m wide.
19190	1051	124	14	Construction cut backfill. Firm, mixed light grey and mid-pinkish brown, clay.
19191	1020	113	11	Build-up. Firm, dark brown, clayey silt.
19192	1020	111	9	Build-up. Firm, mid-brown, silty clay with mid-pinkish brown clay patches.
19193	1020	111	9	Build-up. Friable, mid-brown, clayey silt.
19194	1018	109	8	Dump. Soft, black, silty clay and charcoal.
19195	1018	109	8	Build-up. Firm, light yellowy brown with dark brown patches mottled orange, yellow and black, clay with soft crumbly silt lenses.
19196	1017	109	8	Build-up or dump. Firm, mid-pinkish brown and light grey, clay with coarse sandy and silty lenses.
19197	1017	109	8	Build-up. Friable to firm, mid-brown, silty clay.
19198	1014	107	7	Build-up or dump. Firm, mid-orangey brown with light yellowy brown patches, clay.
19199	1014	107	7	Build-up or dump. Friable, mid-greyish brown, coarse sandy silt with mid-grey clay patches.
19200	1012	105	5	Build-up or dump. Soft, dark brown, silty clay.
19201	1012	105	5	Build-up or dump. Firm, mottled mid-orangey brown grey and black, clayey silt.
19202	1155	161	31	Grave backfill. Hard, mid greyish brown with white flecks, gritty stony clayey silt.
19203	1155	161	31	Skeleton SK9. Supine, extended, aligned north-west/south-east.
19204	1155	161	31	Grave cut. Rectilinear shape in plan, aligned north-west/south-east, vertical break of slope on the south side, other sides truncated, break of slope to base not seen, base flat. 0.80m long, 0.38m wide, 0.12m deep.
19205	1003	103	4	Cobble surface. Firm, mid-dark brown, clayey silty gritty matrix with grey cobbles.
19206	1081	135	20	Posthole backfill. Very soft, dark brown, sandy gritty silt.
19207	1081	135	20	Posthole. Oval shape in plan, aligned south-west/north-east, sharp break of slope at top, vertical sides, base not seen. 0.26m long, 0.21m wide, 0.45m deep (not fully excavated).

Table 4 Context list				
Context	**Set**	**Group**	**Phase**	**Description**
19208	1080	135	20	Posthole backfill. Very soft, dark brown, sandy gritty silt.
19209	1080	135	20	Posthole. Round shape in plan, un-aligned, sharp break of slope at top, vertical sides, base not seen. Diameter 0.22m, 0.12m deep (not fully excavated).
19210	1079	135	20	Posthole backfill. Very soft, dark brown, sandy gritty silt.
19211	1079	135	20	Posthole. Round shape in plan, un-aligned, sharp break of slope at top, vertical sides, base not seen. Diameter 0.26m, 0.12m deep (not fully excavated).
19212	1071	132	20	Dump. Friable to hard, light pinkish brown and greyish brown with orange patches, burnt clay and ashy silty clay.
19213	1207	177	39	Levelling deposit. Hard, dark brown with white flecks, stony clayey sandy gritty silt.
19214	1033	121	13	Linear cut backfill. Firm, light greenish brown, stony gritty silt.
19215	1033	121	13	Linear cut backfill. Firm, light greenish brown, stony gritty silt.
19216	1032	120	13	Linear feature cut. Rectangular shape in plan, aligned north-east/south-west, sharp break of slope at top, steep sides to the east and west, sharp break of slope to a flat base. Length unknown, 1.15m wide, 0.20m deep.
19217	1067	132	20	Dump. Soft and crumbly, mid-orange yellowy brown, gritty silty clay.
19218	1056	128	18	Pit backfill or dump. Soft, dark greyish brown, sandy silt.
19219	1050	122	13	Dump. Firm, mid yellowy brown, silty clay.
19220	1156	161	31	Grave backfill. Friable, mid-brownish grey, silty sand.
19221	1156	161	31	Grave cut. Sharp break of slope at top, u-shaped profile, flat base. 0.54m wide, 0.84m deep.

APPENDIX 3: PLATES AND FIGURES

Plate 1 Gravel bank C19146, Phase 3, above glacial till. Facing south-east, 0.5m scale units

Plate 2 Flat cobbles at top of bank, C19205, Phase 3. Facing north-east, 0.1m scale units

Plate 3 Bedding or levelling deposits C3011-12, Phase 6. Facing north-west, 0.1m scale units

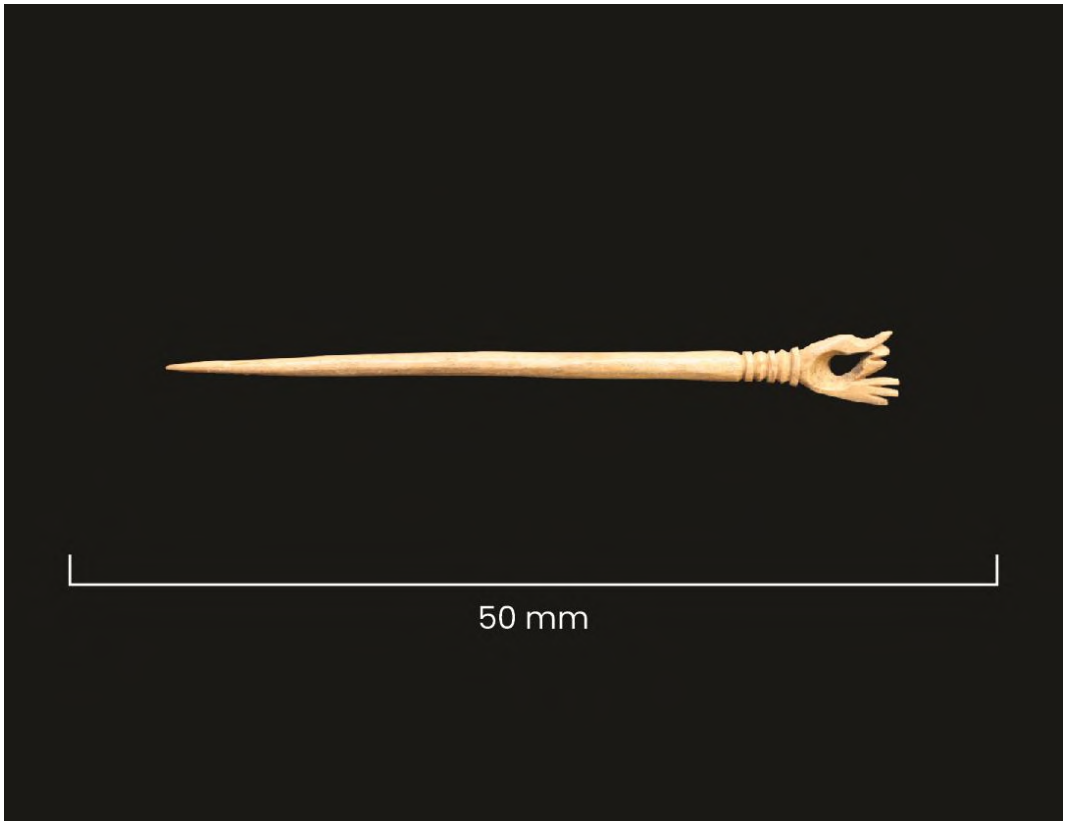


Plate 4 Bone pin SF22 from C3103, Phase 8. 10mm scale units

Plate 5 C19194, Phase 8, in centre of image. Facing east, 0.1m scale units

Plate 6 Floor bedding or levelling deposit C3092, Phase 10. Facing north, 0.1m scale units

Plate 7 Clay floor C3086, Phase 10. Facing north, 0.1m scale units

Plate 8 Mortar surface C19177, Phase11. Facing north-east, 0.1m scale units

Plate 9 Antler toggle SF239 from C19187, Phase 11

Plate 10 Demolition deposit C3026, Phase 12. Facing north, 0.1m scale units

Plate 11 Levelling deposit C3071, Phase 13. Facing north-west, 0.5m scale units

Plate 12 Channel C19150, Phase 13, cut into bank. Facing east, 0.1m scale units

Plate 13 Shale ring SF244 from channel fill C19151, Phase 13. 10mm scale units

Plate 14 Cobble and clay wall foundation C19114-15, Phase 14. Facing north-east, 0.1m scale units

Plate 15 Stony levelling C3053, Phase 16. Facing north-west, 0.1m scale units

Plate 16 Enamelled copper alloy buckle plate SF45

Plate 17 Probable robbing backfill C19136, Phase18. Facing south-east, 0.1m scale units

Plate 18 Ground consolidation C19133, Phase 20. Facing north-east, 0.1m scale units

Plate 19 Wall foundation C19132, Phase 22. Facing north, 0.1m scale units

Plate 20 Build-up in Trench 3, C3081, Phase 26. Facing north-east, 0.5m scale units

Plate 21 Build-up in Trench 3, C3081, Phase 26. Facing north-west, 0.5m scale units

Plate 22 Heat fractured limestone C3114, Phase 27. Facing south-west, 0.1m scale units

Plate 23 Edge set tile hearth C3099 and C3107, Phase 27. Facing south-west, 0.5m scale units

Plate 24 14th century pit S1121, Phase 29, cut into to by buttress S1176 in Trench 2. Facing west

Plate 25 Medieval structures in Excavation Area 1. Facing north-east, 0.5m scale units

Plate 26 Cobbles at north-east end of wall foundation C3088, Phase 30. Facing south-east, 0.5m scale units

Plate 27 Profile of wall foundation C3088, Phase 30, in Trench 3. Facing south-east, 0.5m scale units

Plate 28 SF196-7 in grave S1154, Phase 31. Facing south-east, 10mm scale units

Plate 29 Relieving arch in wall Foundation C3090, Phase 32, Trench 4. Facing west

Plate 30 Sub floor structures S1171-72, Phase 32, butting up against wall foundation C3090 in NA WB 3. Facing north-west, 0.1m scale units

Plate 31 Profile of wall foundation C8092, Phase 33, NA WB 5. Facing north-west, 0.5m scale units

Plate 32 Wall foundation S1173 and buttress S1175, Phase 33. Facing west, 0.5m scale units

Plate 33 Edge of gravel surface butting up against wall in G195, Phase 34, NA WB 11. Facing north-east, 0.1m scale units

Plate 34 Disturbed grave S1192, Phase 36. Facing north-west

Plate 35 Brick and tile rubble S1189, Phase 36, between north-west side of site and wall foundation C3090. Facing north-east, 0.5m scale units

Plate 36 AF14, mid-12th to 13th century walling block with an integral capital

Plate 37 Post-medieval cobble surface C19033, Phase 37. Facing south-west, 0.1m scale units

Plate 38 Spouted pitcher with large chalk inclusion (C3052)

Plate 39 Spouted pitcher showing reduced and over-fired sherd and oxidized adjoining rim sherds

Plate 40 Splash Glazed Candlestick (C3050)

Plate 41 Splash Glazed Candlestick (C3052)

Plate 42 Pitcher rim showing strap handle twisted to the left at the lower end

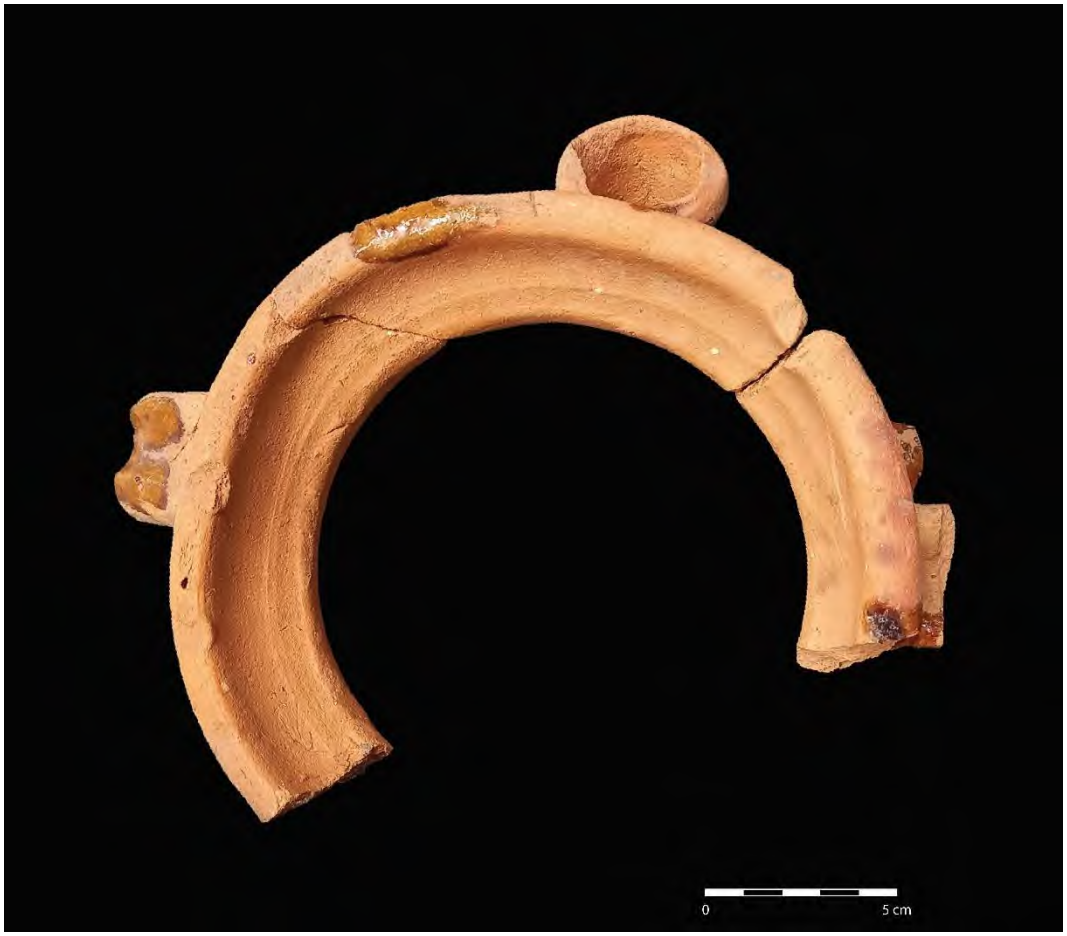


Plate 43 Two handled pitcher (C3052)

Plate 44 Over-fired pitcher rim showing a scar where the handle was joined to the rim (3052)

Plate 45 Glaze over broken edge of pitcher rim sherd (C3052)

Plate 46 Gritty ware jar rims (C3052)

Plate 47 White Gritty ware body sherds, heavily sooted (C3052)

Plate 48 Tubular spout from fully glazed jug (C3052)

Plate 49 AF14, Scale units 50mm

Plate 50 Reverse (left) and front (right) of a plaster fragment from the Guildhall with keying lines on the reverse

Plate 51 A comparative example showing the reverse elevation of a fragment of mortar/plaster where keying was only present over part of the wall (Project 0834, Context 5117, SF 4526)

Plate 52 A cross-section of a Type 10 plaster fragment showing two superimposed layers of mortar/plaster

Plate 53 A comparative example of surface keying from within the legionary fortress at York

Plate 54 A fragment from the Guildhall with a triangular keying mark

Plate 55 Group 1 painted plaster with a black stripe on the front (left) and the reverse (right)

Plate 56 Group 1 painted plaster with a red surface

Plate 57 Group 1 painted plaster with a red surface with small patches of green above, possibly leaves

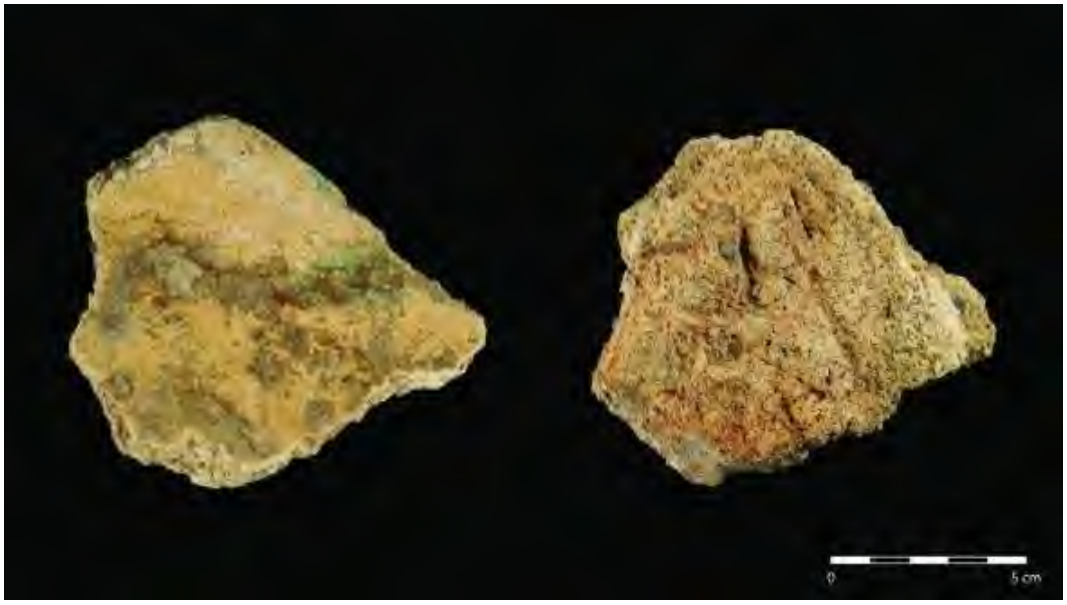


Plate 58 Group 1 plaster front (left and reverse) with patches of green paint

Plate 59 Group 1 front with a thin red line (left) and the reverse (right)

Plate 60 Group 1 plaster with a red and white stripe

Plate 61 Type 11 mortar with leaf and trellis design

Plate 62 Moulded plaster fragment with rebate

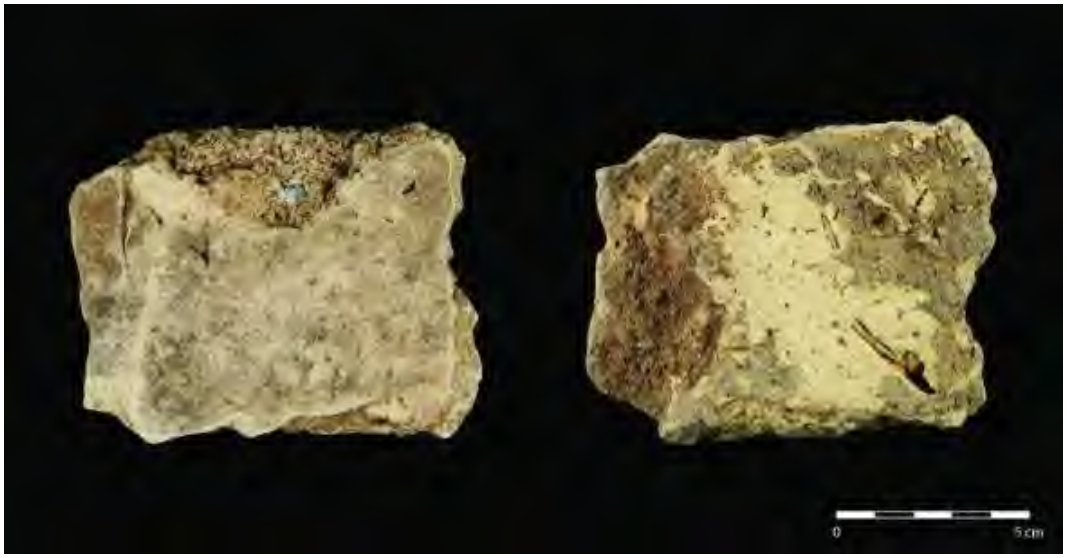


Plate 63 Moulded plaster fragment with part of hollow curve on the surface at the left hand side

Plate 64 Moulded plaster fragment with part of hollow curve on the surface

Plate 65 The keying on a Type 1b mortar fragment

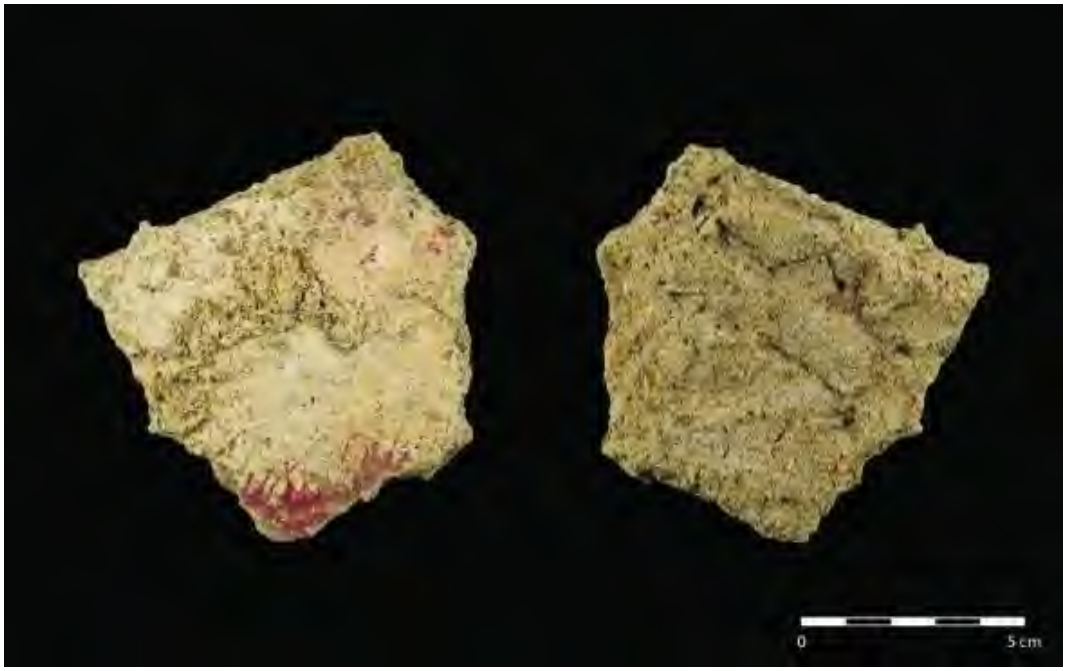


Plate 66 Type 7a plaster with splashed red paint

Plate 67 Type 17 plaster with blue-green paint

Plate 68 SK 7, cranium displaying 'orange peel-like' surface. Scale 2cm

Plate 69 SK 7, cribra orbitalia in the orbital sockets. Scale 5cm

Plate 70 SK 7, dental pathologies of AMTL and a large carious lesion. Scale 2cm

Plate 71 SK 10, osteophytes around the joint margins of a vertebral body attributed to degenerative joint disease and advancing age. Scale 2cm

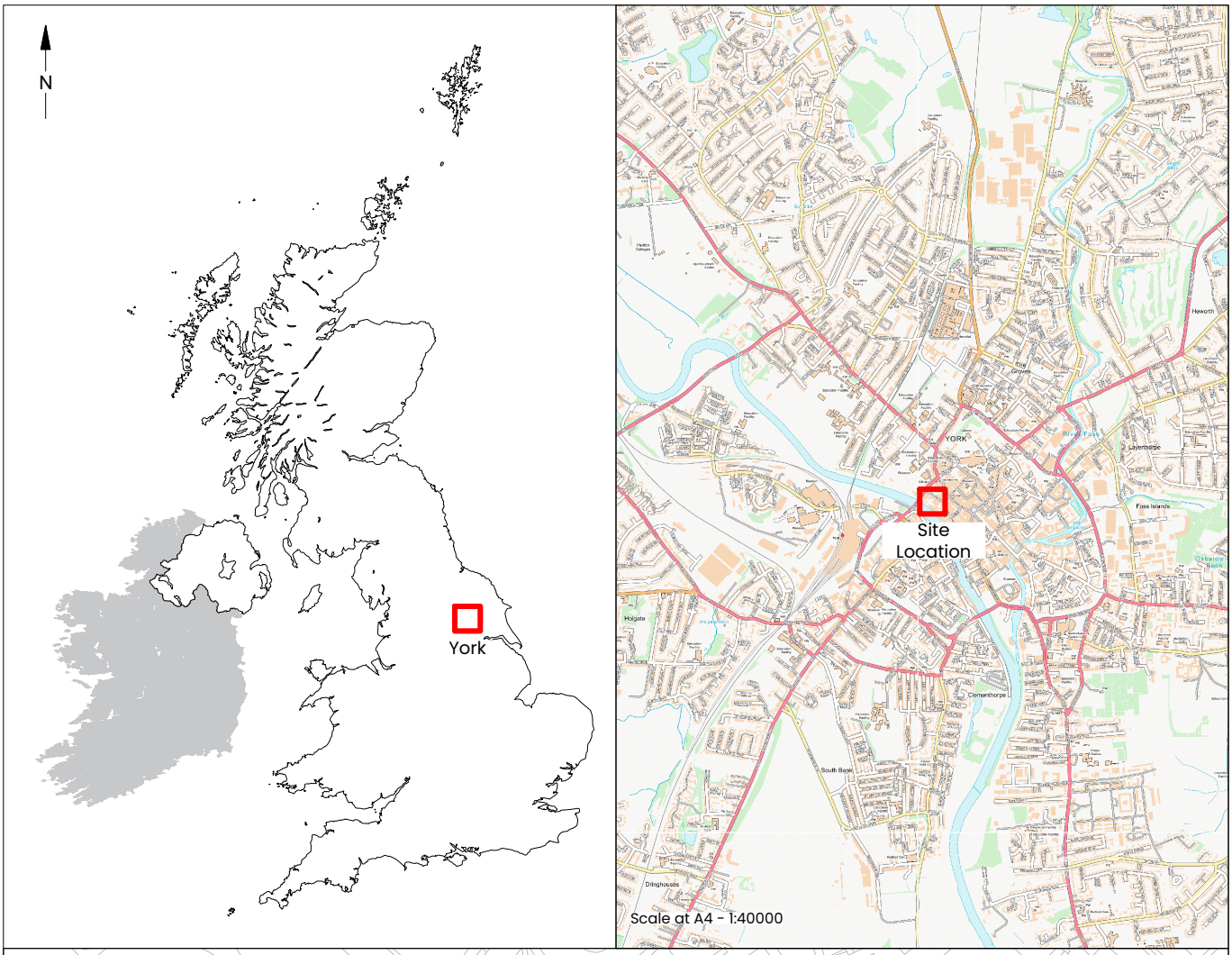
Plate 72 SK 10 periosteal new bone on the right radial tuberosity attributed to degenerative joint disease, along with myositis ossificans of new bone growth along the interosseous crest linked to muscle trauma. Scale 5cm

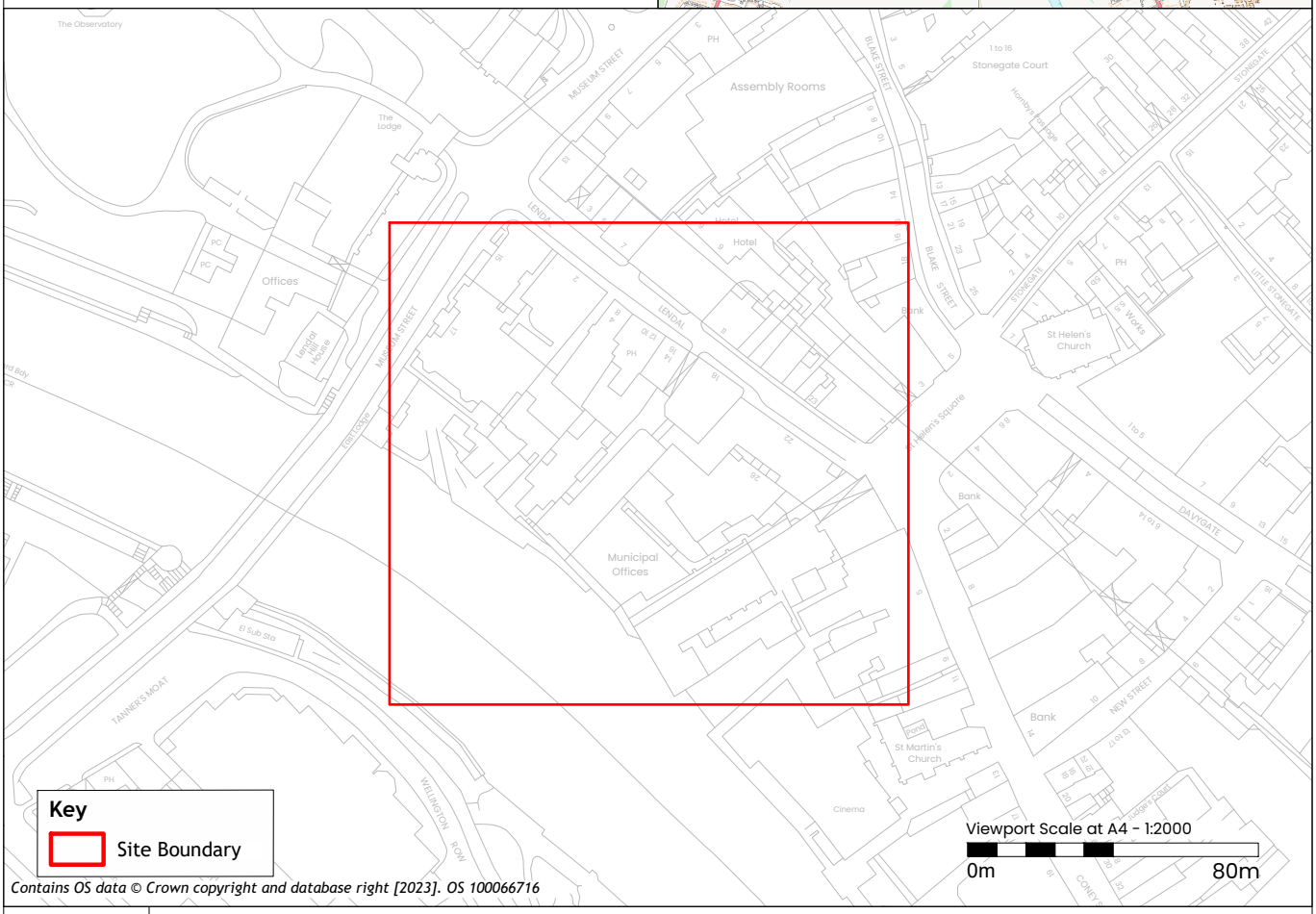
Plate 73 SK 10, myositis ossificans on the left and right ischium displaying new bone on the ischial tuberosity related to muscle trauma. Scale 5cm

Plate 74 SK 10, myositis ossificans along the linea aspera on the left femur attributed to muscle trauma. Scale 2cm

Plate 75 1st metacarpal (HB8022) with a transverse fracture with evidence of healing. Scale 5cm

Plate 76 SF41 Silver penny of William I





Contains OS data © Crown copyright and database right [2023]. OS 100066716

Figure 01 - Location Map
6019 - North Annexe, York Guildhall

Scale at A4 - Varies
Drawn by BP

Figure 02 - North Annexe and Other Sites In The Environs of York Guildhall
6019 - North Annexe, York Guildhall

Scale at A3 - 1:500
Drawn by BP

© Crown copyright and database rights 2023 OS 100066716

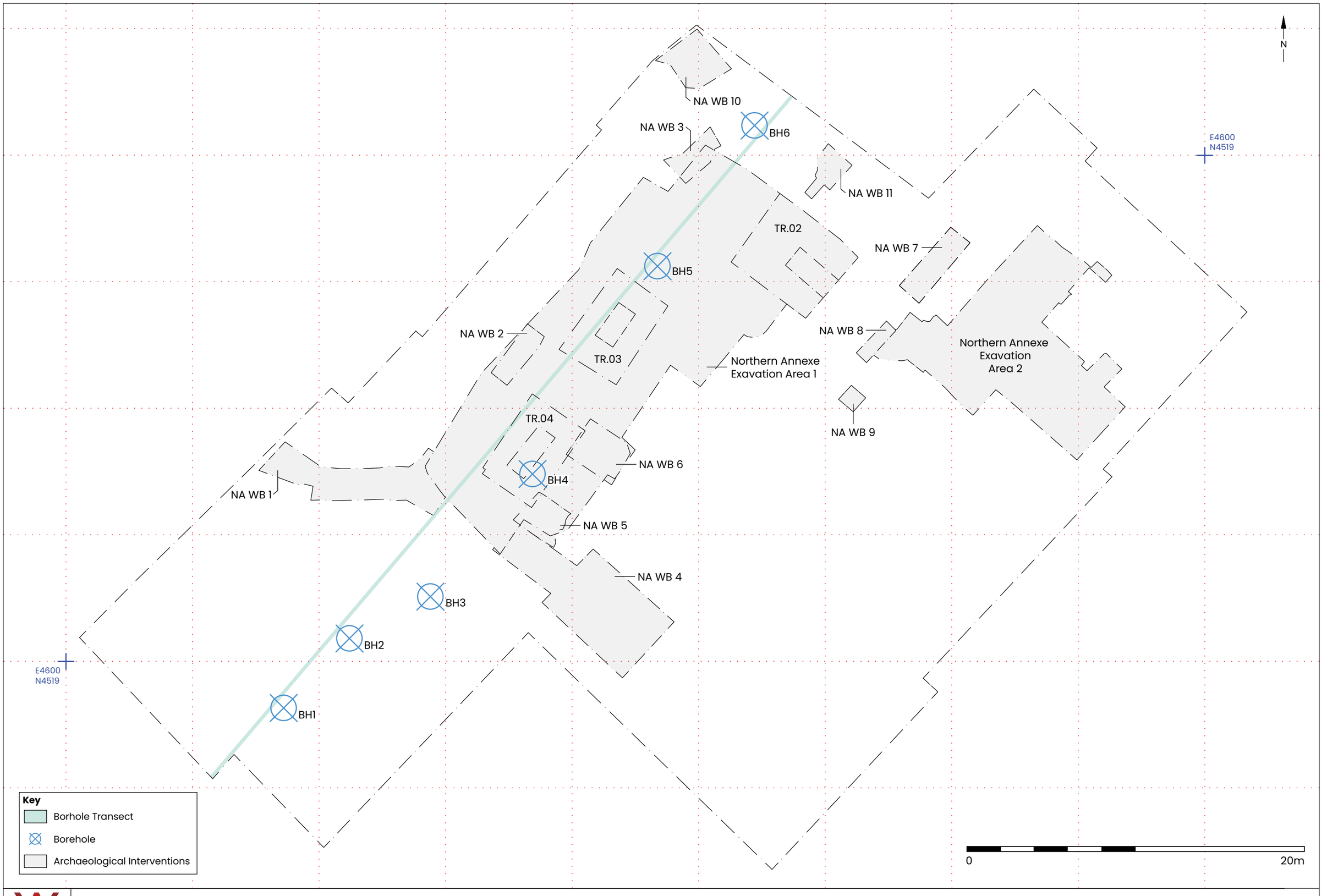


Figure 03 - North Annexe Archaeological Interventions and Boreholes
6019 - North Annexe, York Guildhall

Scale at A3 - 1:200
Drawn by BP

Figure 04 - Plan of Sections Figures 05 - 11.2
6019 - North Annexe, York Guildhall

Scale at A3 - 1:150
Drawn by BP

Fig.05
North West Facing Section [19010], [19073], [19069], [19120], [19079], [19086], [19144], [19066] and [19062]

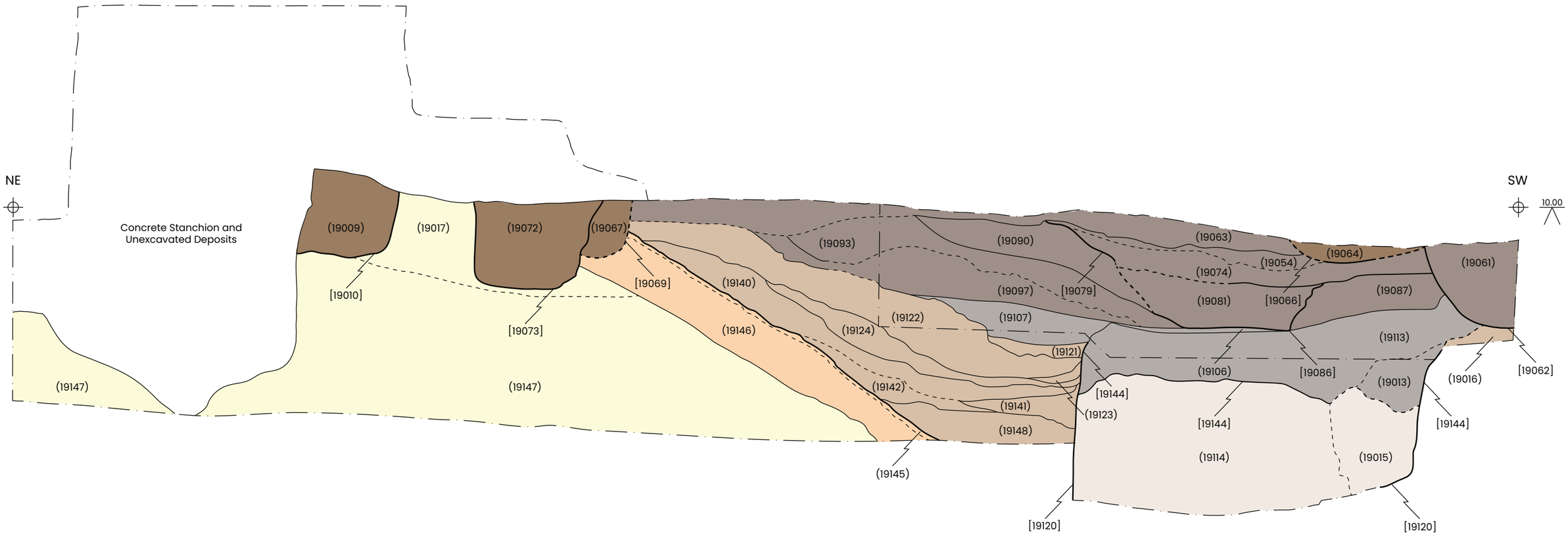
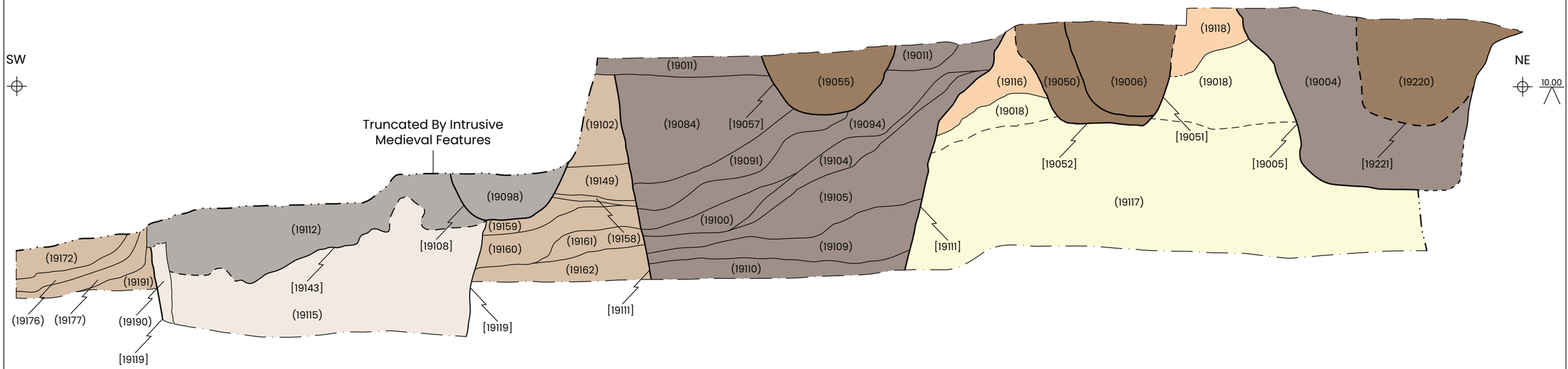


Figure 05 - Section Figure 05
6019 - North Annexe, York Guildhall

Scale at A3 - 1:20
Drawn by BP and BS

Fig.06
South East Facing Section [19005], [19051], [19052], [19057], [19111], [19119] and [19221]



Key

- Phase 1 and 2
- Phase 3
- Phase 13
- Phase 14
- Phase 18
- Phase 20 & 30
- Phase 31

0 2m

Figure 06 - Section Figure 06
6019 - North Annexe, York Guildhall

Scale at A3 - 1:20
Drawn by BP and BS

Fig.07
South West Facing Section [3158]

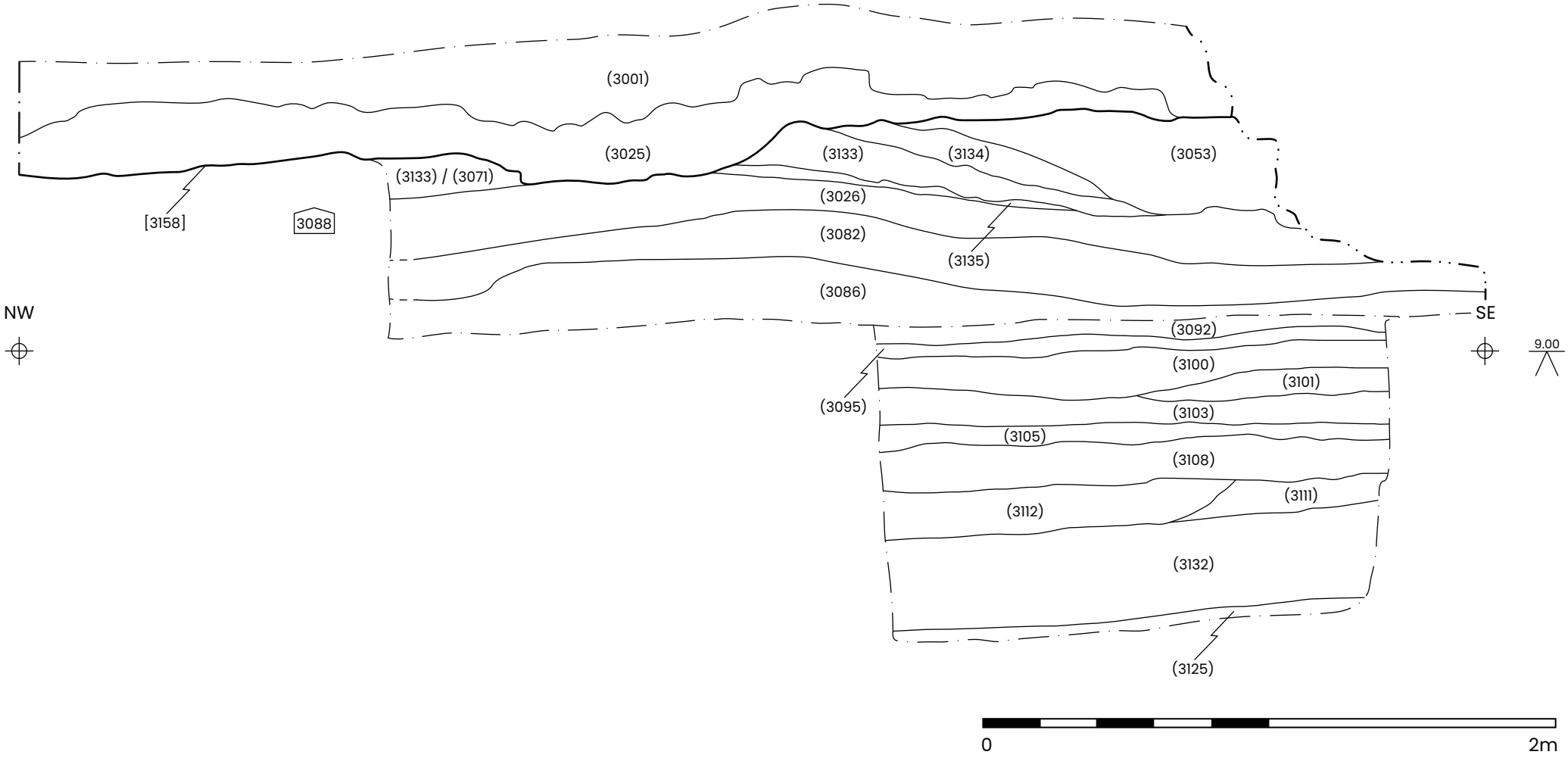


Figure 07 - Section Figure 07
6019 - North Annexe, York Guildhall

Scale at A4 - 1:20
Drawn by BP and BS

Fig.08.1
North West Facing Section [8059], [8068] and [8084]

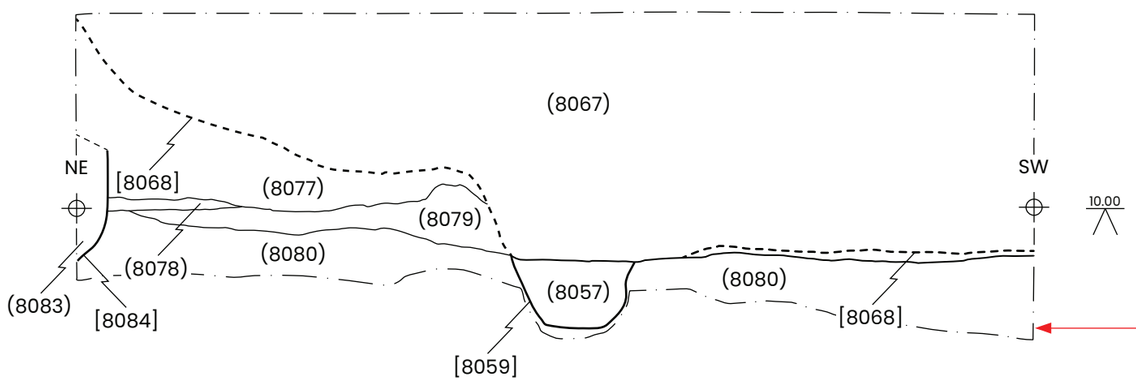
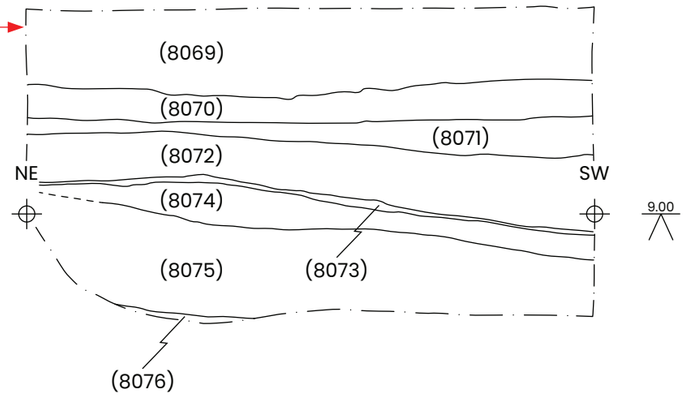


Fig.08.2
North West Facing Section



0 2m

Figure 08 - Section Figures 08.1 and 08.2
6019 - North Annexe, York Guildhall

Scale at A3 - 1:20
Drawn by BP and BS

Fig.09.1
South West Facing Section [3030], [3059], [3088], [3118] and [3138]

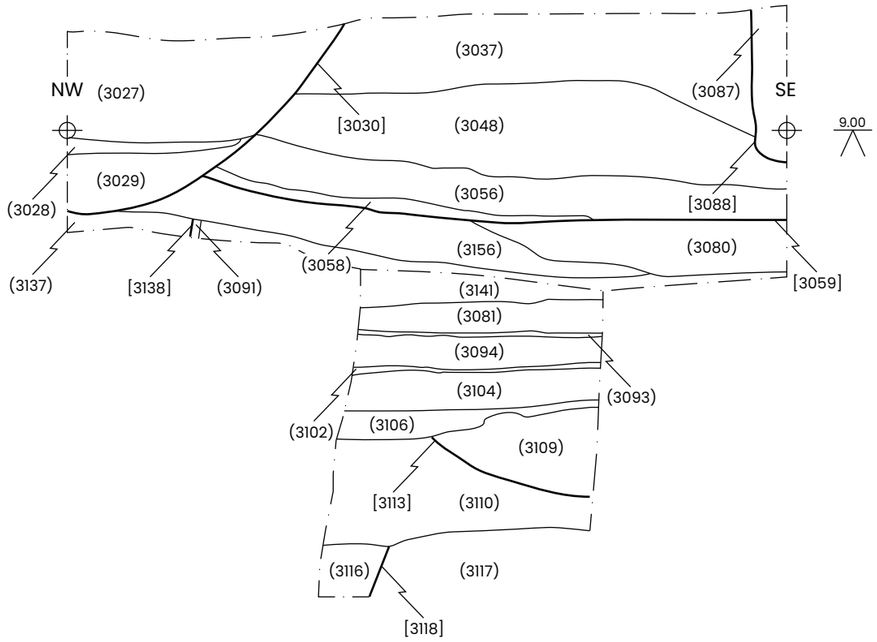


Fig.09.2
North Facing Section

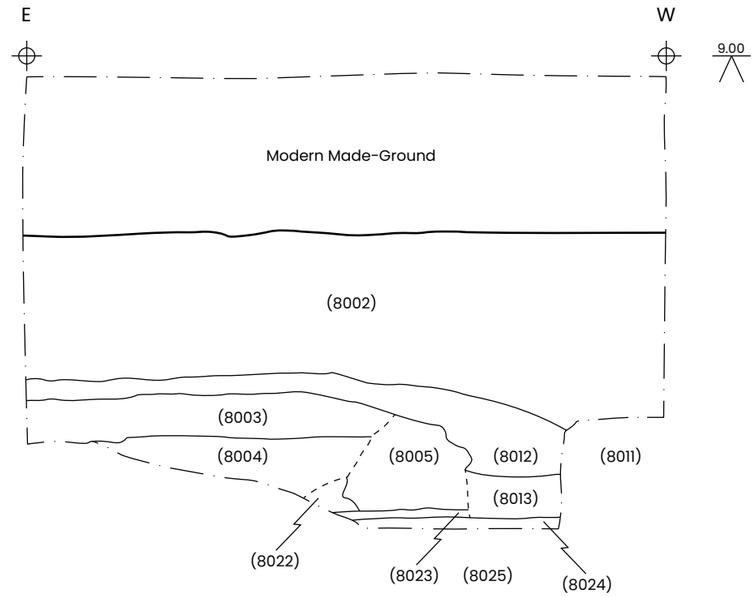


Fig.09.3
North East Facing Section [3065]

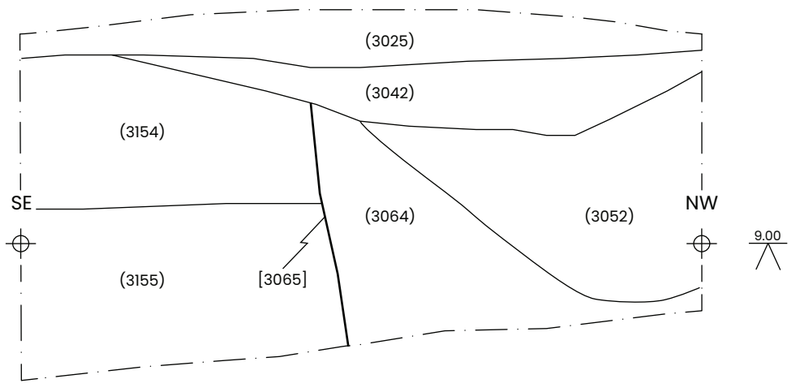
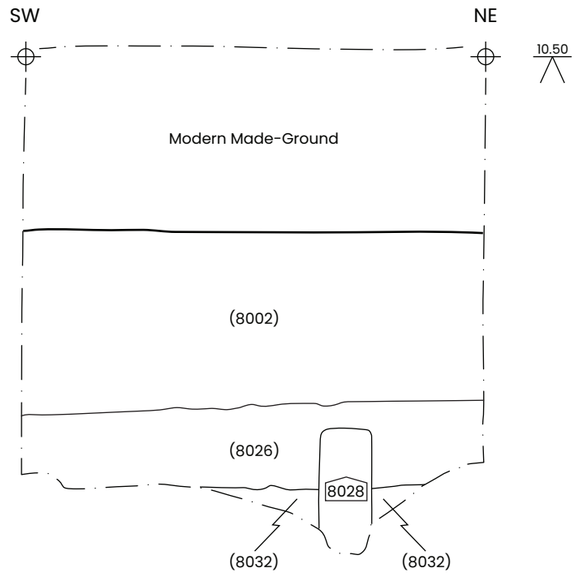


Fig.09.4
South East Facing Section



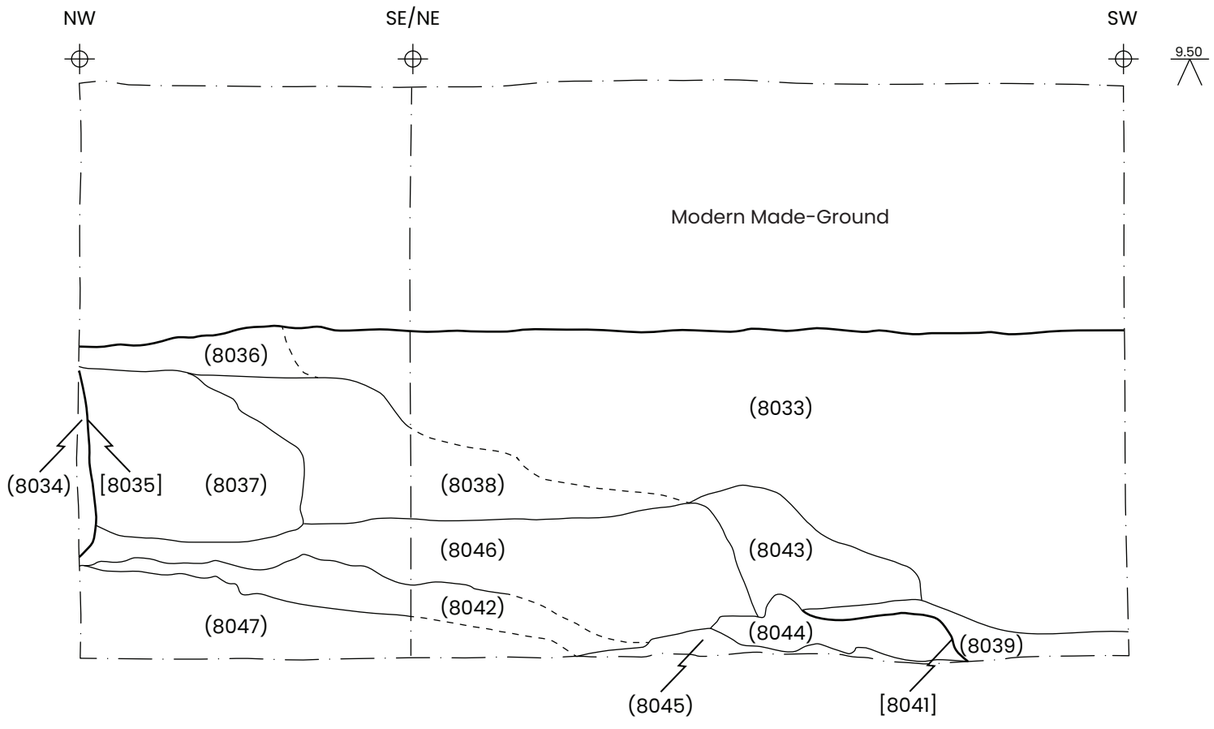
0 2m

Figure 09 - Section Figures 09.1 - 09.4
6019 - North Annexe, York Guildhall

Scale at A3 - 1:20
Drawn by BP and BS

Fig.10.1
South East Facing Section

Fig.10.2
North End of NA WB 3



0 1m

Figure 10 - Section Figures 10.1 and 10.2
6019 - North Annexe, York Guildhall

Scale at A3 - 1:10
Drawn by BP and BS

Fig.11.1
South West Facing Section [8035]

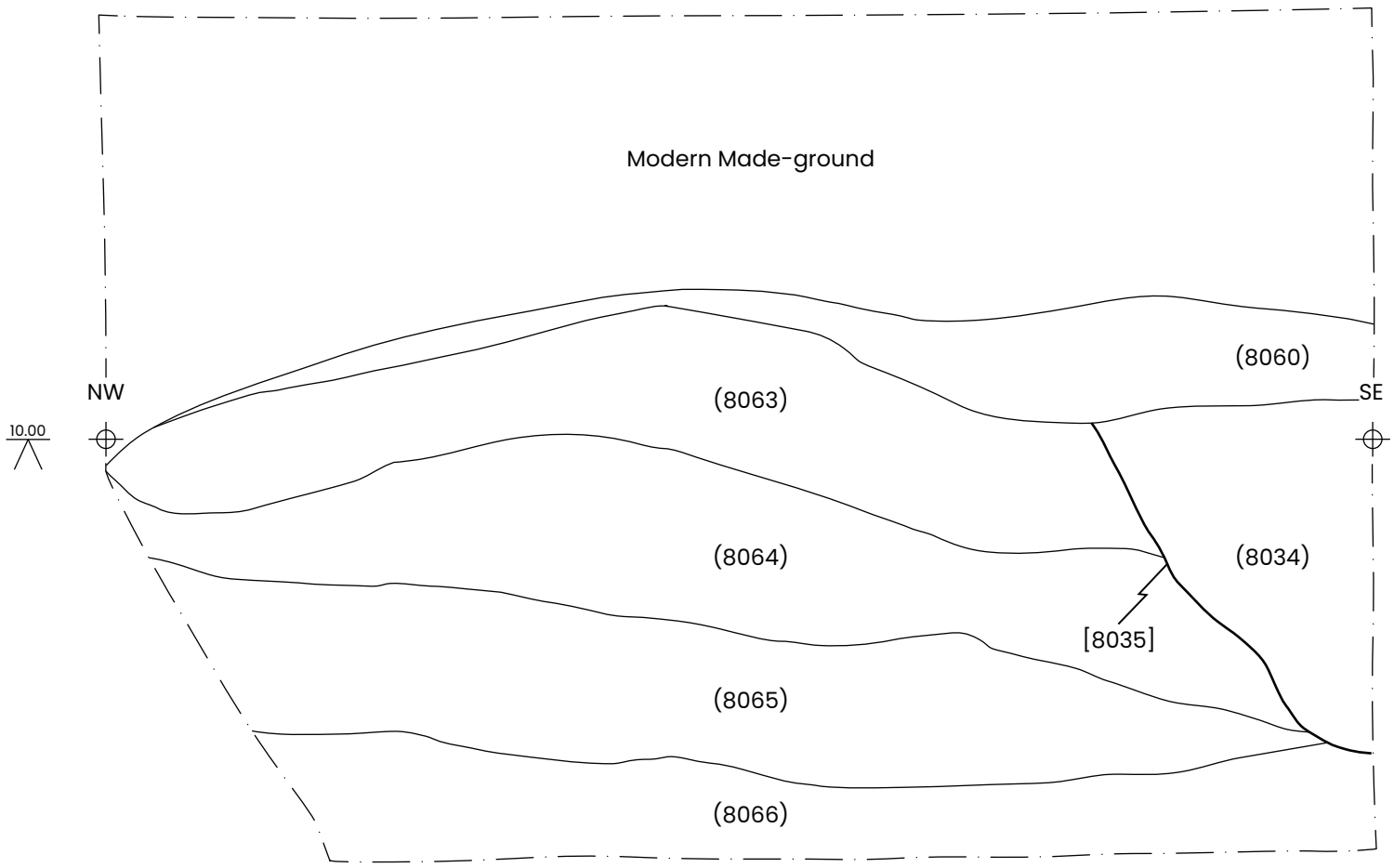
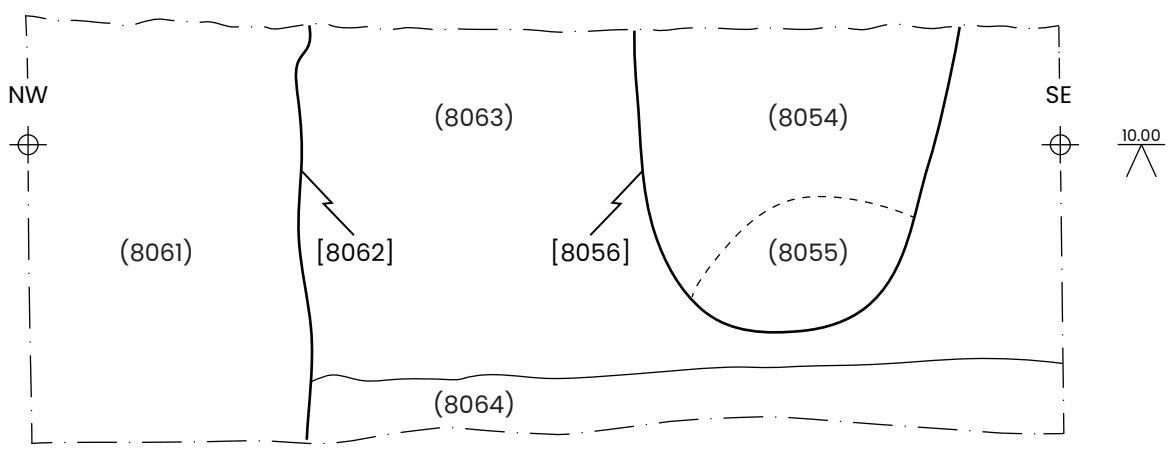


Fig.11.2
South West Facing Section [8056] and [8062]



0 1m

Figure 11 - Section Figures 11.1 and 11.2
6019 - North Annexe, York Guildhall

Scale at A3 - 1:10
Drawn by BP and BS

Fig.06
South East Facing Section [19005], [19051], [19052], [19057], [19111], [19119] and [19221]

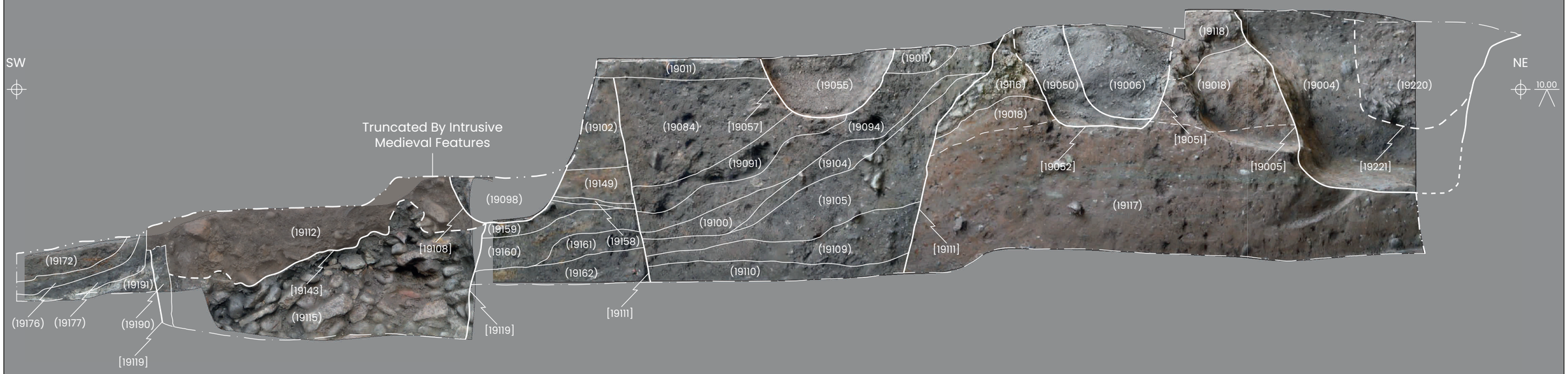


Figure 13 - Orthorectified View of Section Figure 06
6019 - North Annexe, York Guildhall

Scale at A3 - 1:20
Drawn by BP and BS

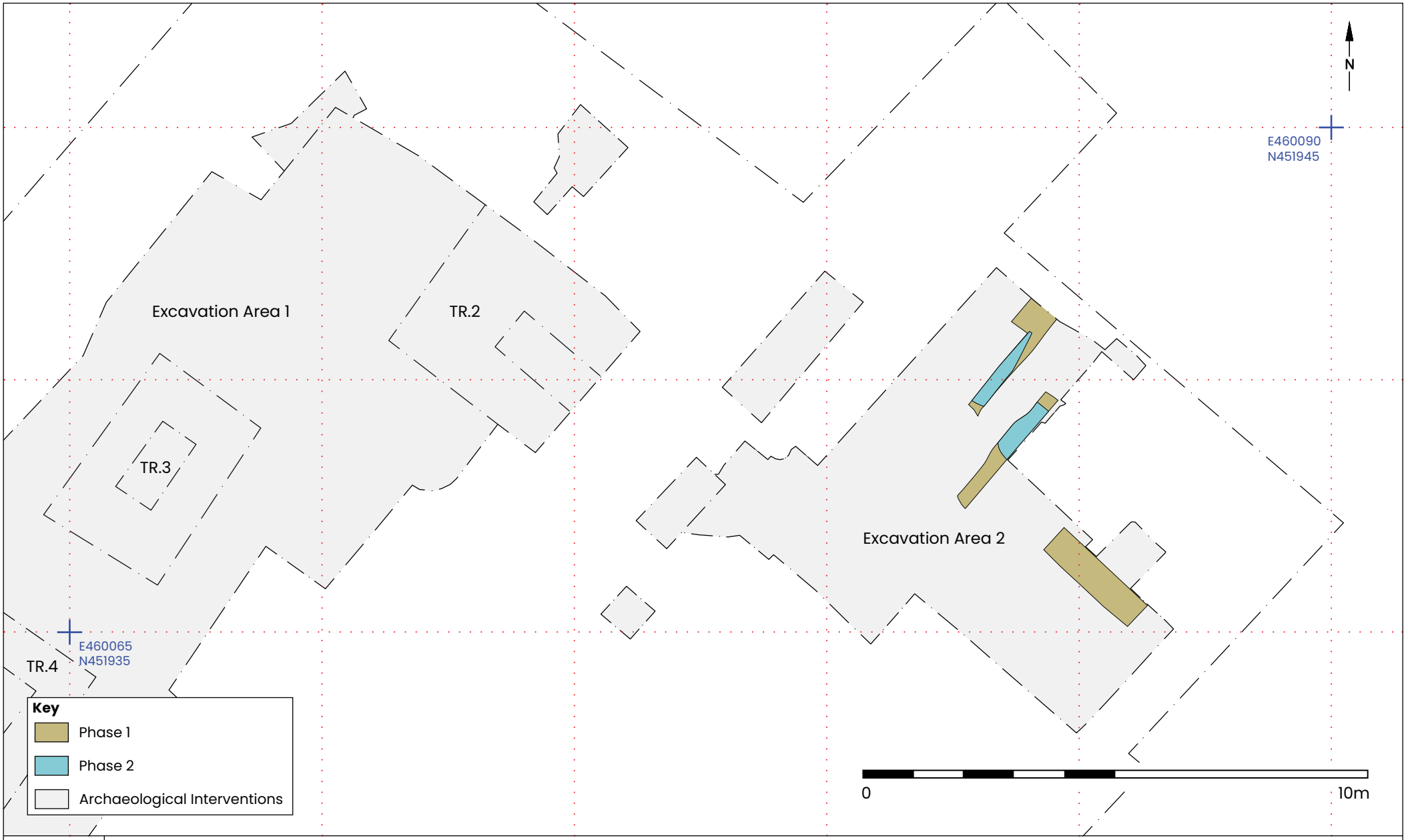


Figure 14 - Period 1: Naturally-occurring & Possible Re-worked Naturally-occurring Deposits. Phases 1 - 2
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

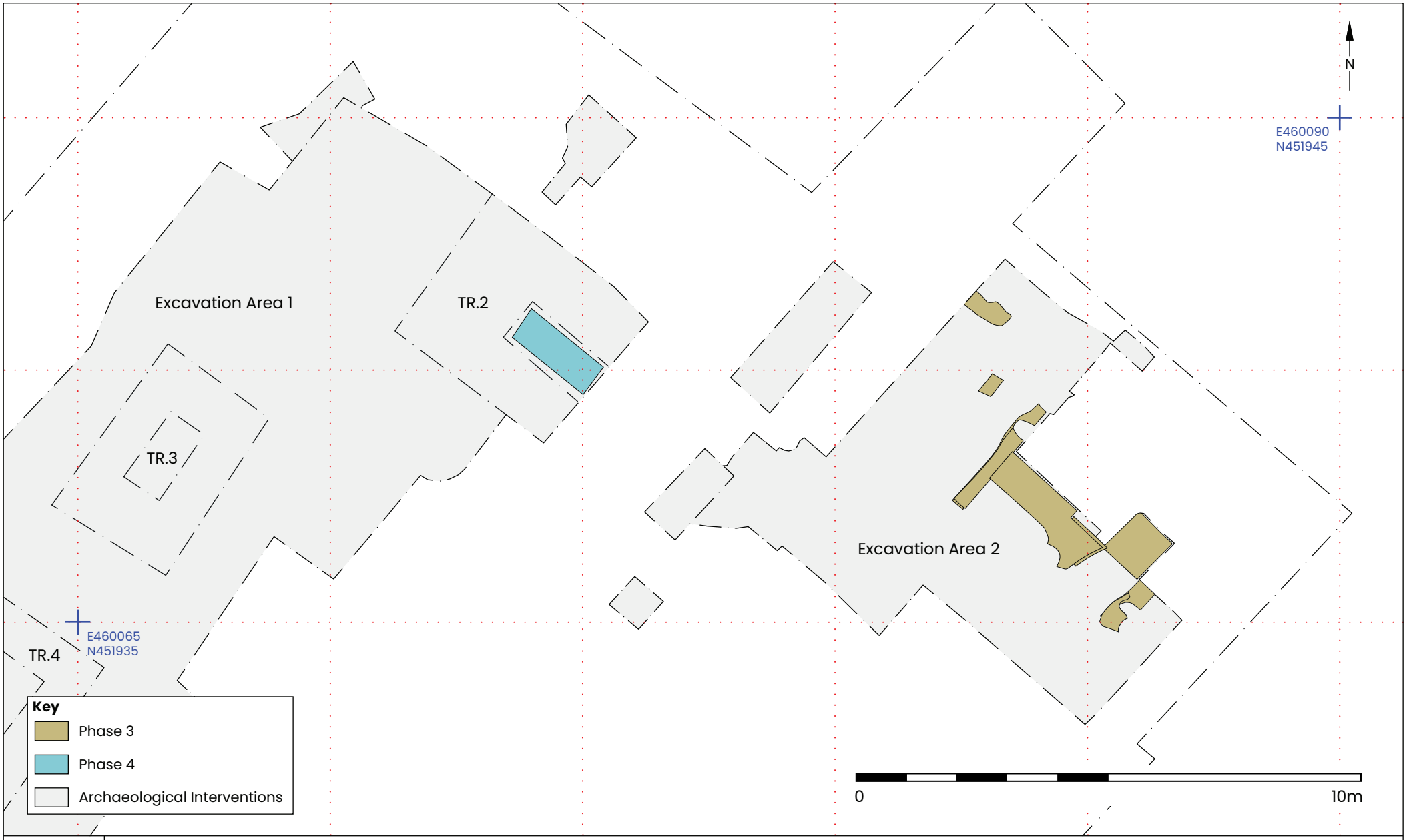


Figure 15 - Period 2: Late 1st to 2nd Century Ground Preparation and Related Activity. Phases 3 - 4
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

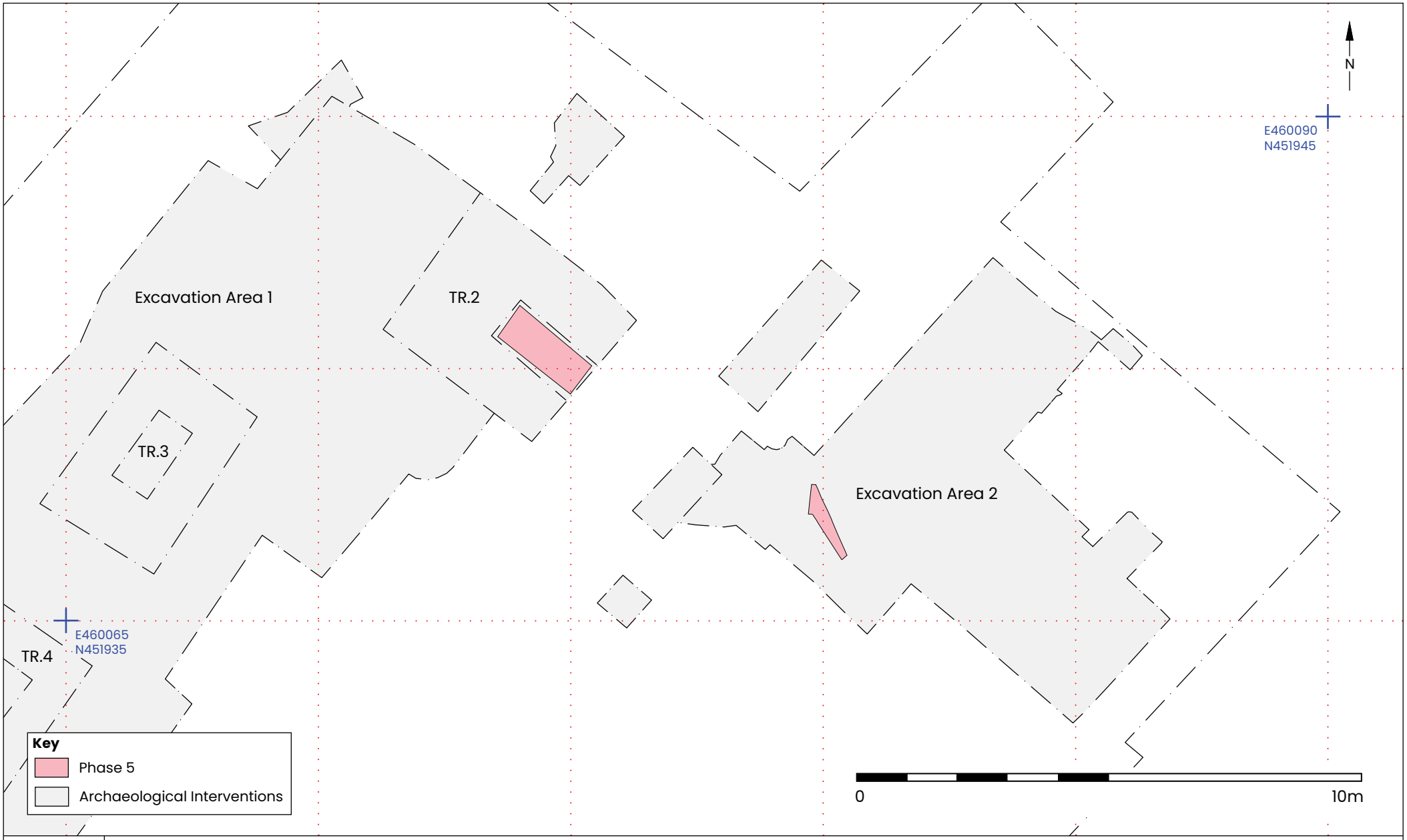


Figure 16 - Period 2: Late 1st to 2nd Century Ground Preparation and Related Activity. Phase 5
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

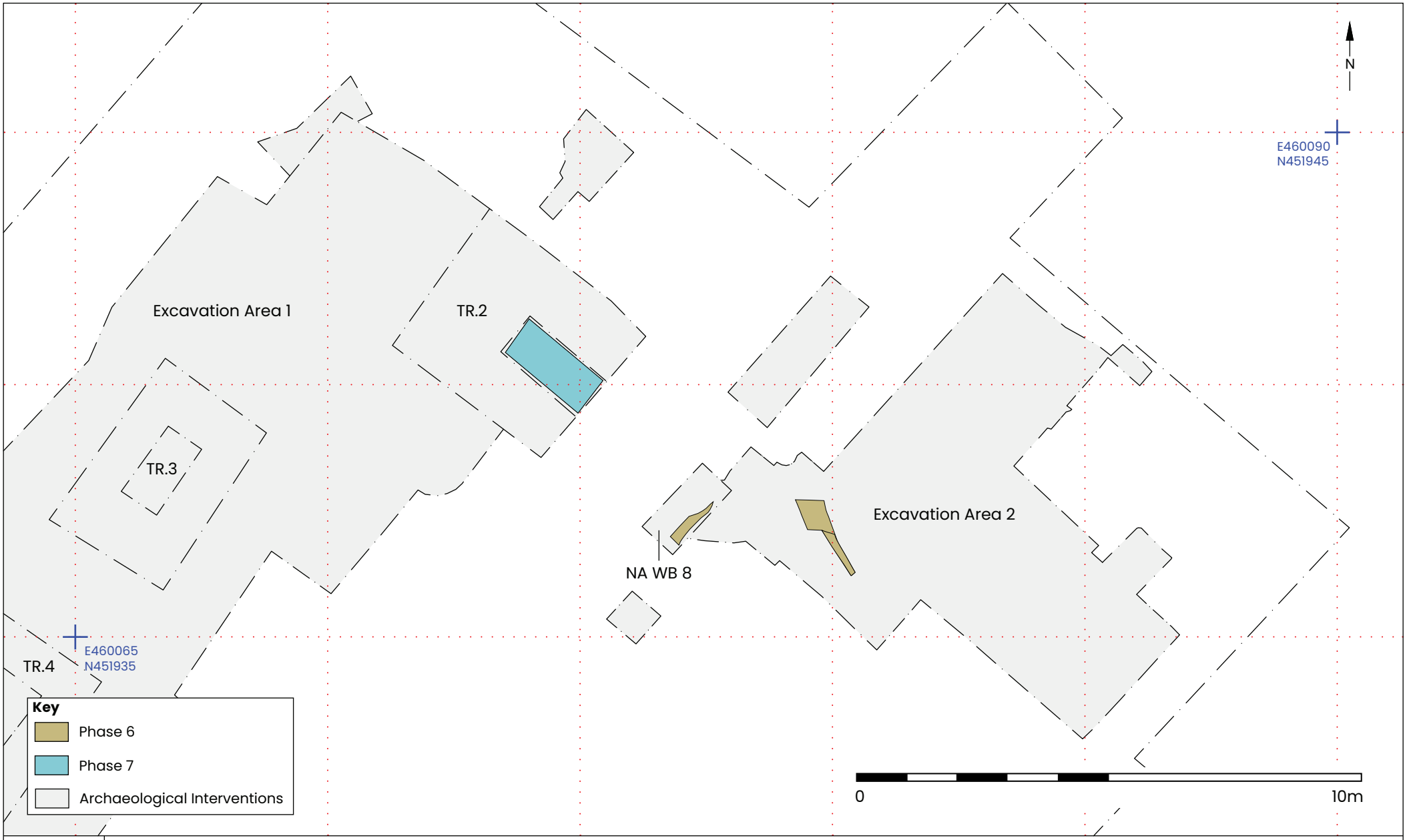


Figure 17 - Period 3: 2nd to Early 3rd Century Building, Use and Abandonment. Phases 6 - 7
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

Figure 18 - Period 3: 2nd to Early 3rd Century Building, Use and Abandonment. Phase 8
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

Figure 19 - Period 3: 2nd to Early 3rd Century Building, Use and Abandonment. Phase 9
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

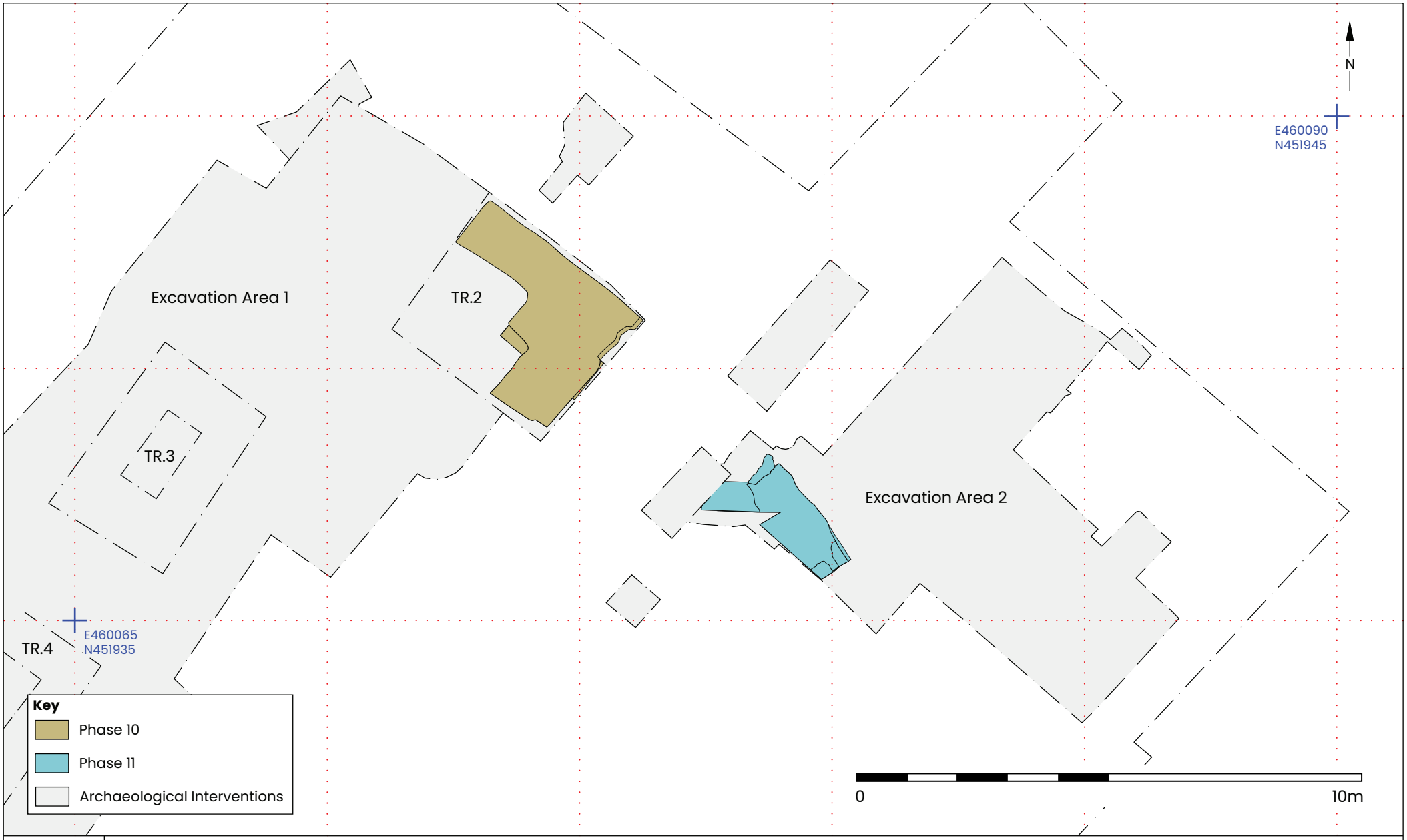


Figure 20 - Period 4: Mid to Late 2nd - Early 3rd Century Structures and Occupation. Phase 10 - 11
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

Figure 21 - Period 4: Mid to Late 2nd - 3rd Century Structures and Occupation. Phase 12
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

Figure 22 - Period 4: Late 2nd to 3rd Century Dumping. Phase 13
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

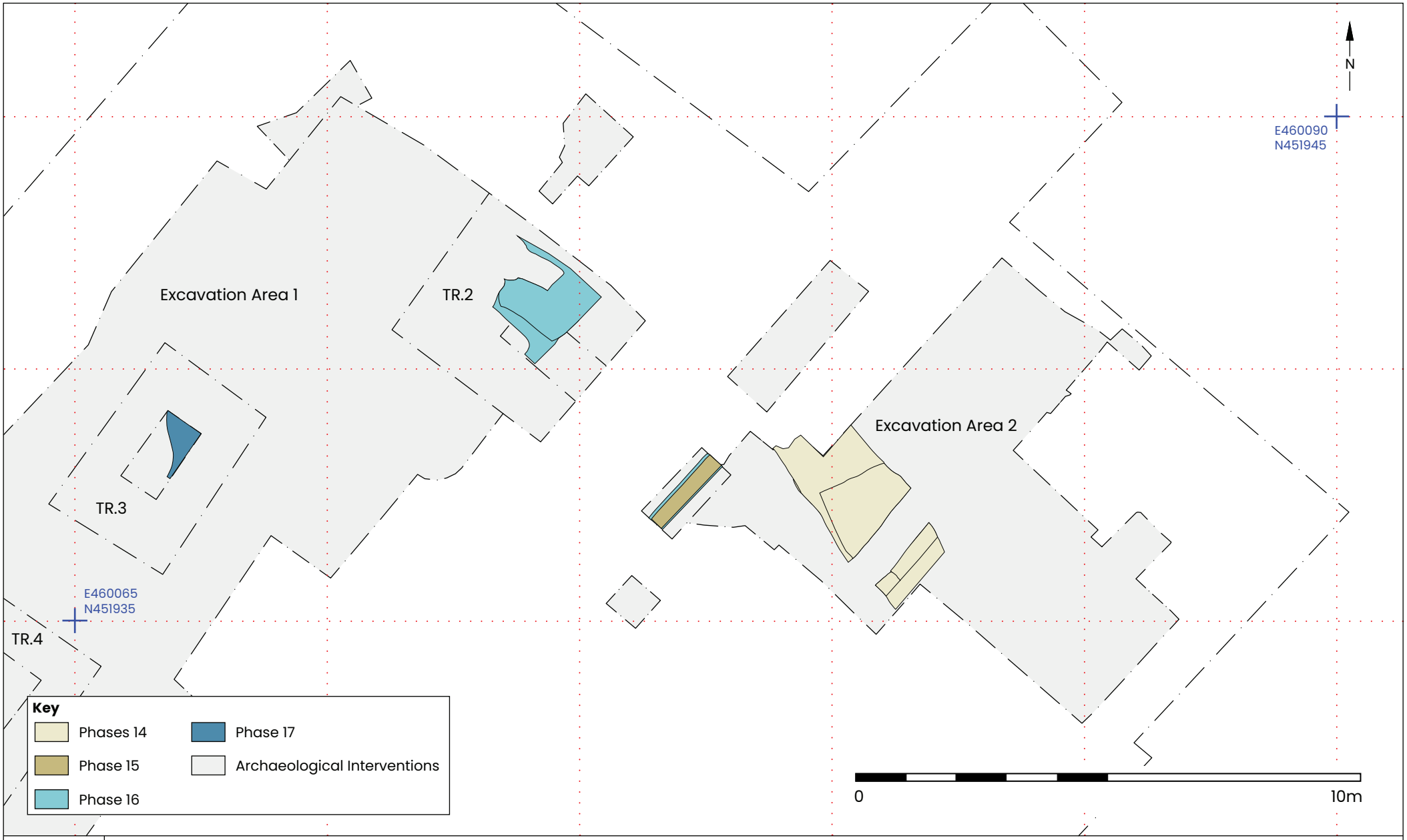


Figure 23 - Period 5: 3rd Century Structure and Associated Deposits. Phases 14 - 17
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

Figure 24 - Period 6: Late 11th to Early 13th Century Activity. Phases 18 - 19
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

Figure 25 - Period 6: Late 11th to Early 13th Century Refuse Disposal in Excavation Area 2.
Phase 20, Groups 132 - 135
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

Figure 26 - Period 6: Mid-11th to Mid-13th Century Structures and Related Activity. Phases 21 - 23
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

Figure 27 - Period 6: Mid-13th to Mid-14th Century Levelling, Possible Structure and Associated Features.
Phases 24 - 25
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

Figure 28 - Period 7: Mid-13th to Mid-14th Century Build-up in Excavation Area 1. Phases 26 - 27
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

Figure 29 - Period 7: Landscaping and Refuse Disposal in Excavation Area 1. Phases 28 - 29
6019 - North Annexe, York Guildhall

Scale at A4 - 1:100
Drawn by BP and BS

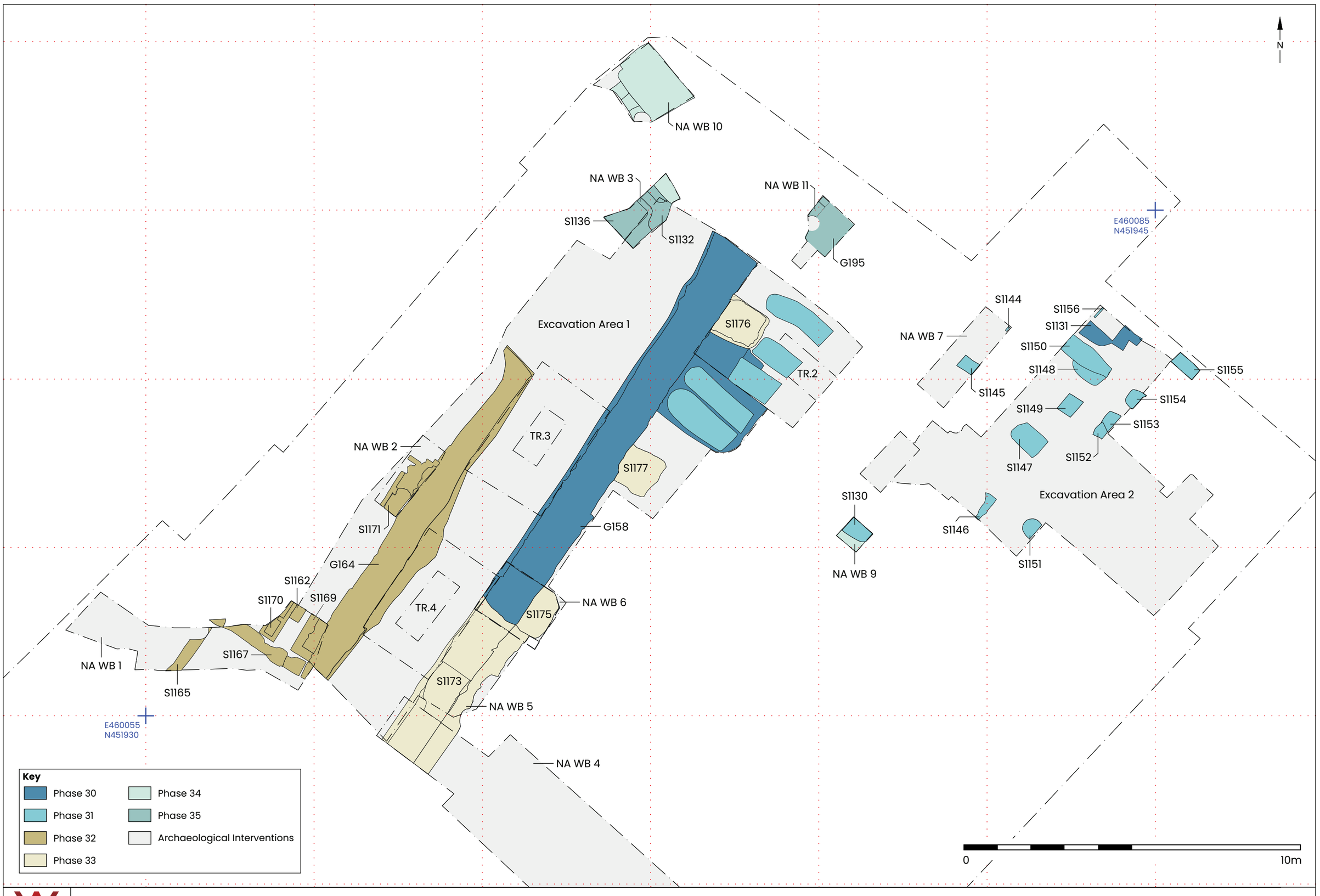


Figure 30 - Period 8: The Augustinian Friary. Phases 30 - 35
6019 - North Annexe, York Guildhall

Scale at A3 - 1:100
Drawn by BP and BS

N

E460085
N451945

Excavation Area 1

TR.2

S1192

TR.3

NA WB 2

S1189

G169

TR.4

NA WB 1

E460055
N451930

Excavation Area 2

Key

- Phase 36
- Phase 37
- Phase 38
- Archaeological Interventions

0 10m

Figure 31 - Period 9: Post-medieval Activity. Phases 36 - 38
6019 - North Annexe, York Guildhall

Scale at A3 - 1:100
Drawn by BP and BS

Figure 32 - Period 9: Post-medieval Activity. Phases 39 - 41
6019 - North Annexe, York Guildhall

Scale at A3 - 1:100
Drawn by BP and BS

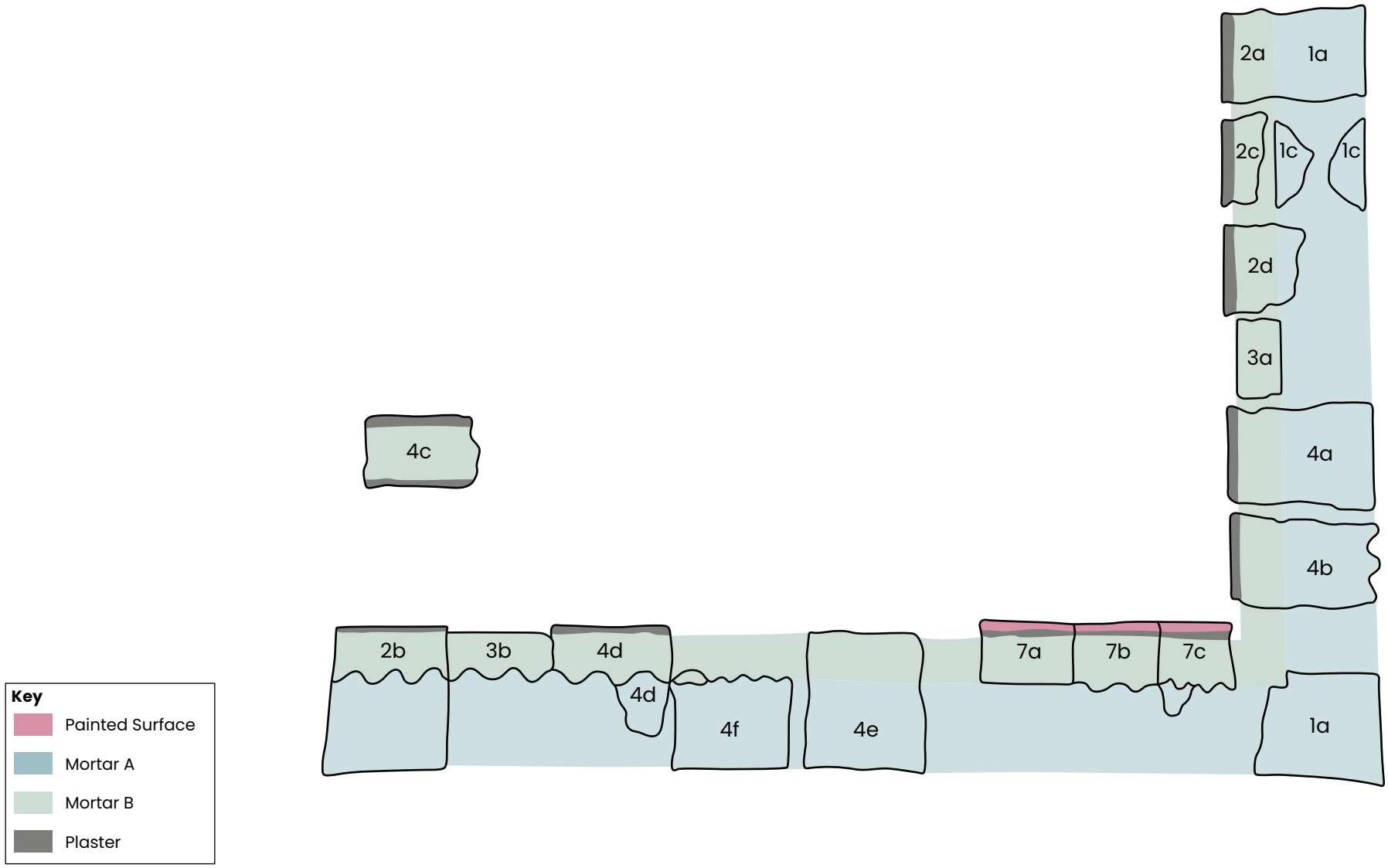


Figure 34 - Group 5 Mortar Fragments
6019 - North Annexe, York Guildhall

Not to scale
Drawn by JM and BP

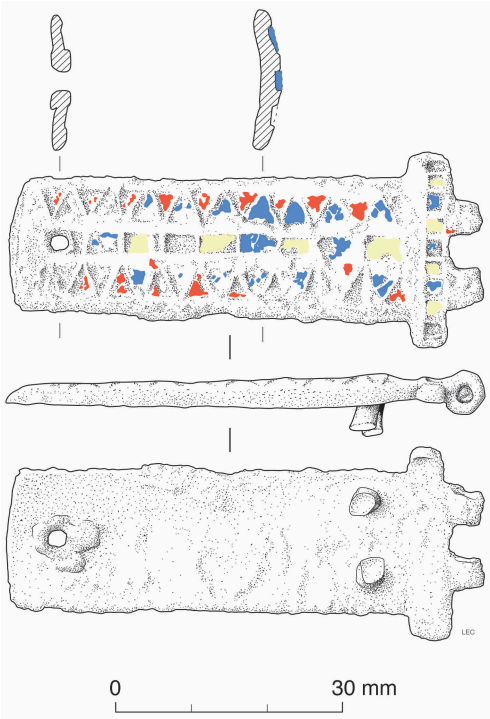


Figure 35 - Enamelled copper alloy buckle plate SF45 6019 - North Annexe, York Guildhall

Scale at A4 - 1:1
Drawn by LC

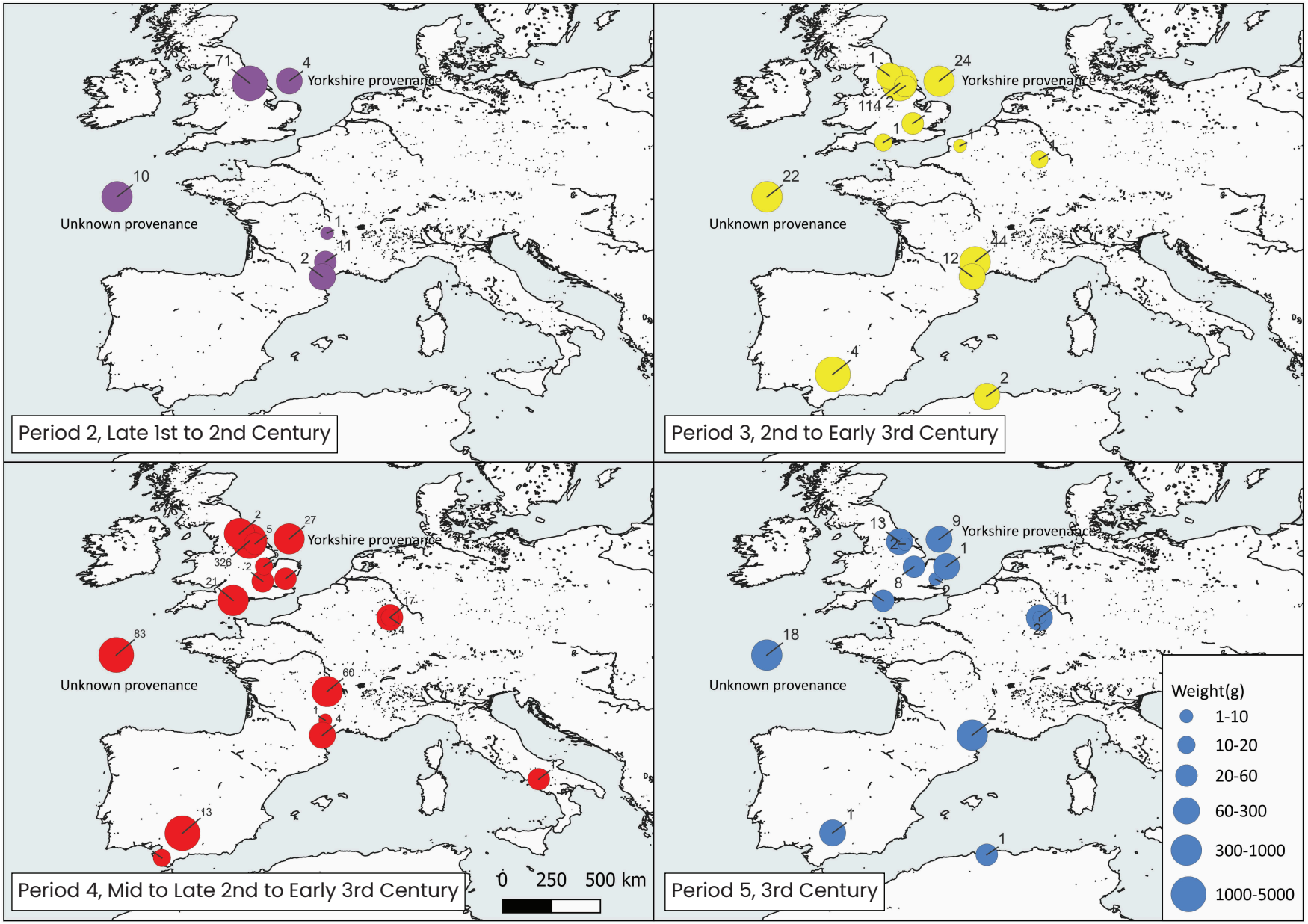


Figure 36 - Pottery Production Sources
6019 - North Annexe, York Guildhall

Drawn by LB

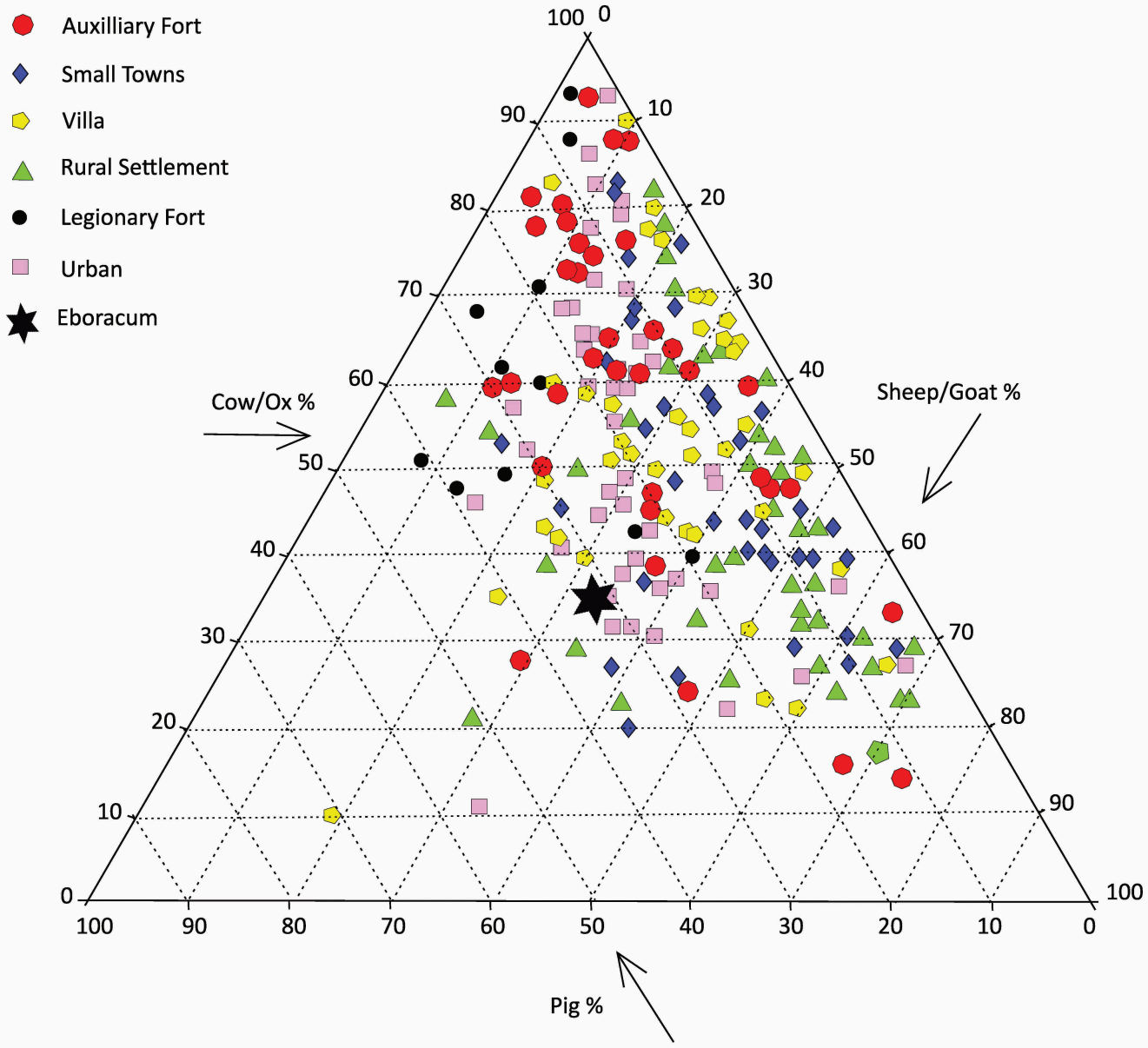


Figure 37 - Romano-British Animal Bone Assemblages
6019 - North Annexe, York Guildhall

Drawn by LB

Chart 1 Bone preservation

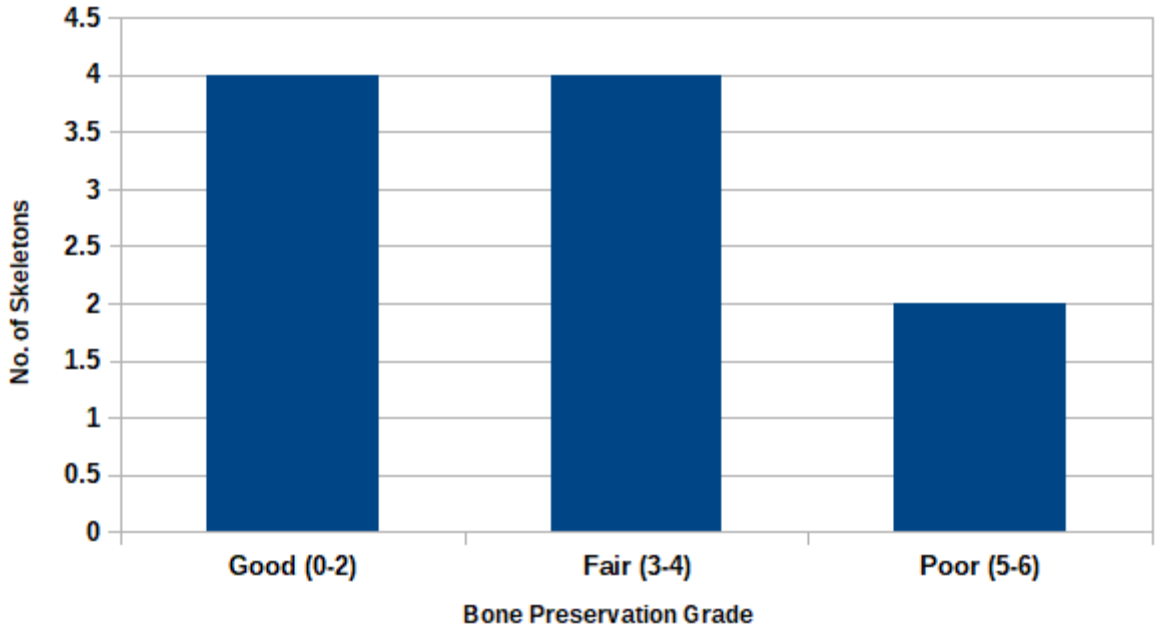


Chart 2 Skeletal Completeness

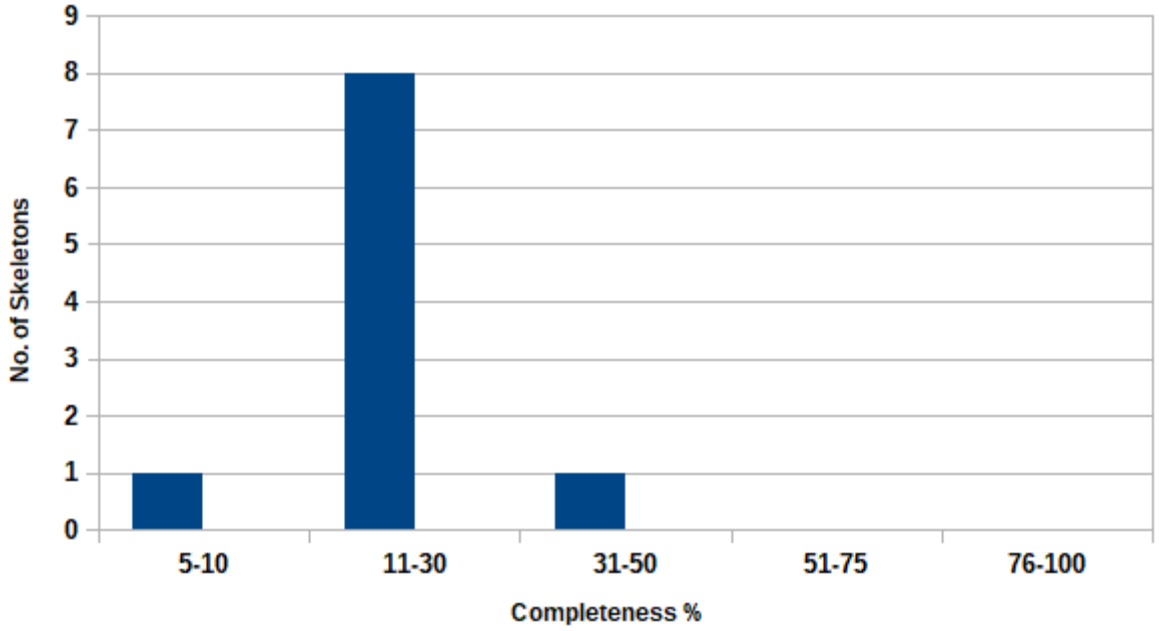


Chart 3 Bone Fragmentation

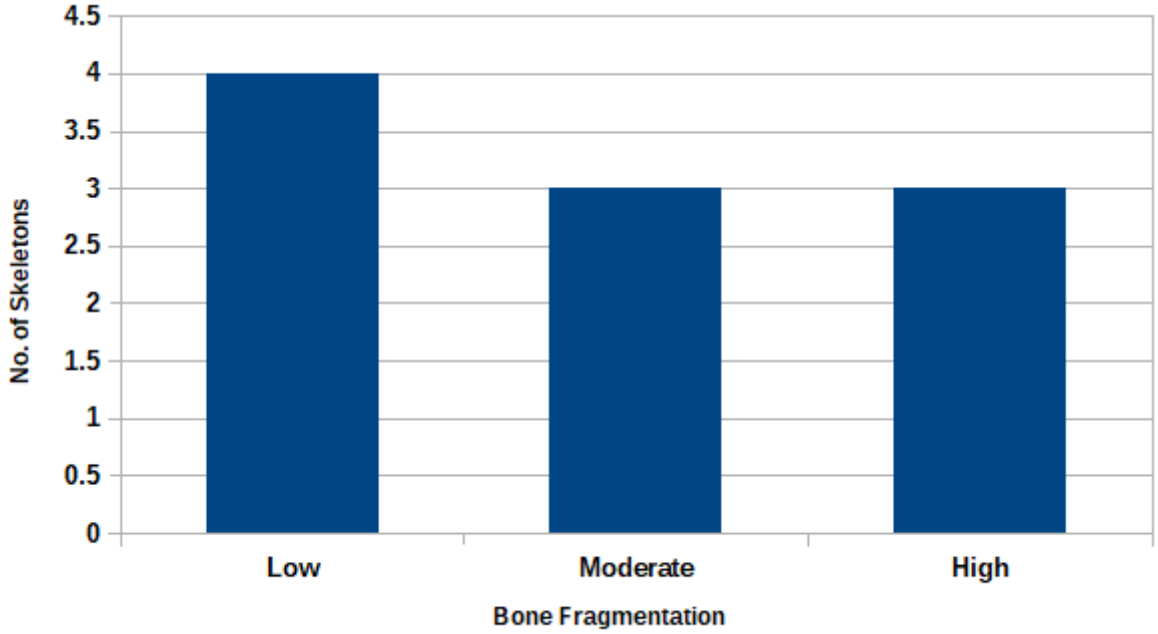


Chart 4 Surface Bone Condition

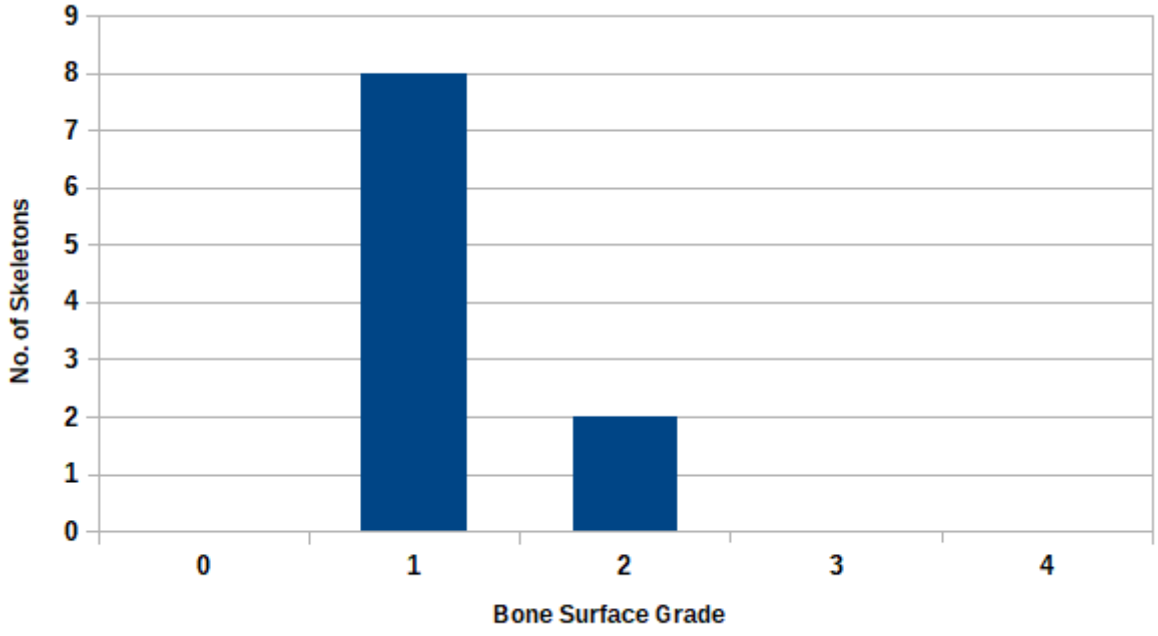


Chart 5 Sex categories of assemblage

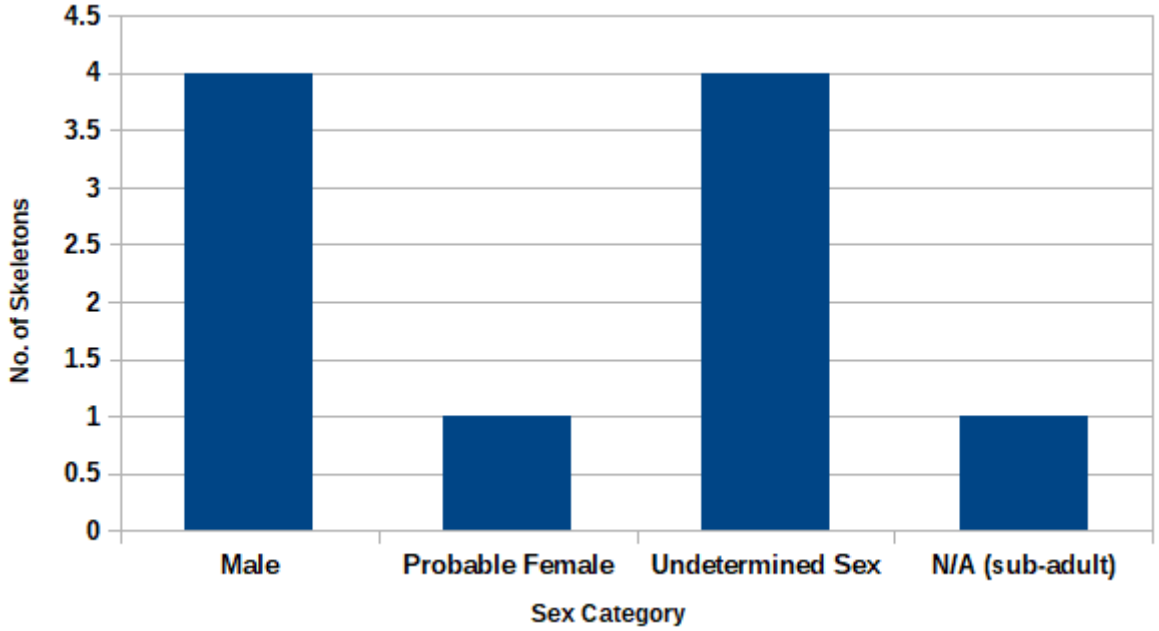
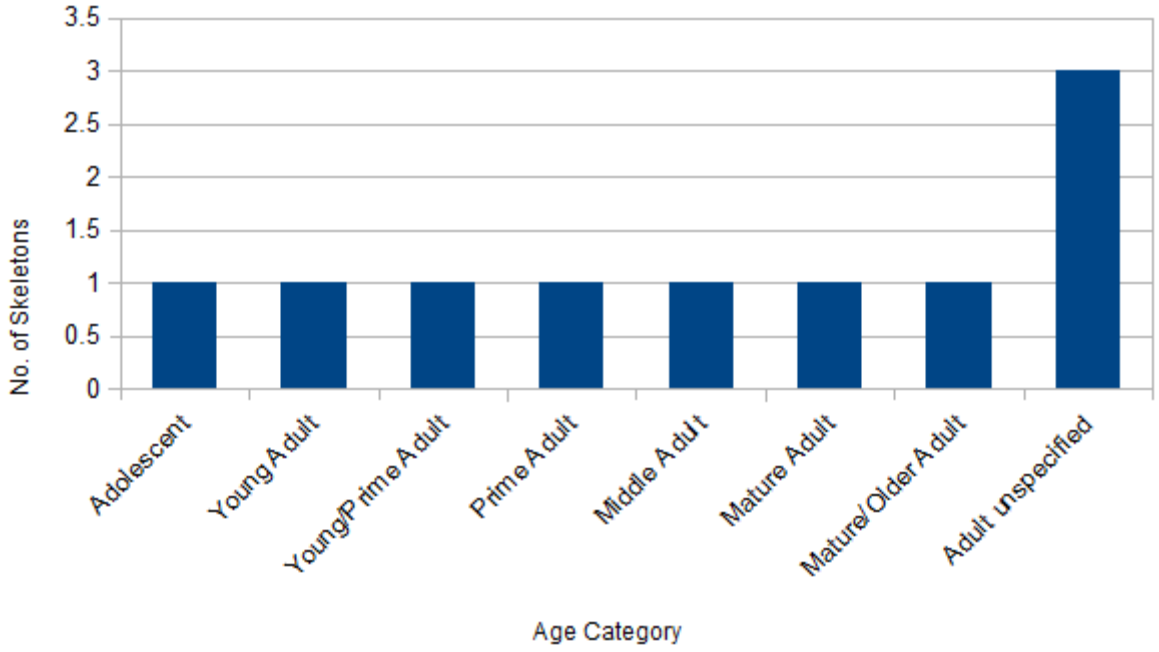


Chart 6 Age categories of assemblage



APPENDIX 4: SPECIALIST TABLES

Table 5 Romano-British pottery by ware types						
Ware	**Count**	**%**	**Weight (g)**	**%**	**EVEs**	**%**
Amphorae	121	5.2%	13227.1	25.6%	50	1.2%
Fine ware - Samian	341	14.7%	3422.6	6.6%	639.5	15.2%
Fine ware - other	71	3.1%	413.9	0.8%	141	3.4%
Mortaria	34	1.5%	4817.7	9.3%	214.5	5.1%
Coarse ware	1758	75.6%	29852	57.7%	3154	75.1%
Grand Total	2325	100.0%	51733.3	100.0%	4199	100.0%

Table 6 Ware totals by period and phase groups							
Period and phases	**Ware**	**Count**	**%**	**Weight (g)**	**%**	**EVEs**	**%**
Romano-British (phases 3 to 17)	Amphorae	49	4.2%	4330.1	17.4%		0.0%
	Fine ware - Samian	230	19.9%	1999.7	8.0%	437	19.7%
	Fine ware - other	22	1.9%	76.8	0.3%	7	0.3%
	Mortaria	14	1.2%	2864.6	11.5%	121	5.4%
	Coarse ware	842	72.8%	15615.7	62.7%	1656.5	74.6%
	Sub-total	***1157***	***100.0%***	***24886.9***	***100.0%***	***2221.5***	***100.0%***
Medieval and later periods (phases 18 and later)	Amphorae	59	5.3%	7380.3	29.7%	50	2.6%
	Fine ware - Samian	91	8.2%	1271.7	5.1%	183	9.5%
	Fine ware - other	48	4.3%	334.3	1.3%	134	6.9%
	Mortaria	18	1.6%	1893.1	7.6%	93.5	4.8%
	Coarse ware	888	80.4%	13950.3	56.2%	1469.5	76.1%
	Sub-total	***1104***	***100.0%***	***24829.7***	***100.0%***	***1930***	***100.0%***
Unstratified	Amphorae	13	20.3%	1516.7	75.2%		0.0%
	Fine ware - Samian	20	31.3%	151.2	7.5%	19.5	41.1%
	Fine ware - other	1	1.6%	2.8	0.1%		0.0%
	Mortaria	2	3.1%	60	3.0%		0.0%
	Coarse ware	28	43.8%	286	14.2%	28	58.9%
	Sub-total	***64***	***100.0%***	***2016.7***	***100.0%***	***47.5***	***100.0%***
	Grand total	**2325**		**51733.3**		**4199**	

Table 7 All Romano-British pottery by ware						
Wares	**Count**	**%**	**Weight (g)**	**%**	**EVEs**	**%**
Amphorae	***121***	***100.0%***	***13227.1***	***100.0%***	***50***	***100.0%***
Aegean amphorae	2	1.7%	360.8	2.7%		0.0%

Table 7 All Romano-British pottery by ware						
Wares	**Count**	**%**	**Weight (g)**	**%**	**EVEs**	**%**
Amphorae unidentified	1	0.8%	25.3	0.2%		0.0%
Baetican amphorae	58	47.9%	10196.1	77.1%	50	100.0%
Cadiz amphorae	2	1.7%	12.9	0.1%		0.0%
Campanian amphorae	4	3.3%	69.9	0.5%		0.0%
Gaulish amphorae	47	38.8%	2202.7	16.7%		0.0%
North African amphorae	6	5.0%	346.7	2.6%		0.0%
Southern Spanish amphorae	1	0.8%	12.7	0.1%		0.0%
Fine ware - Samian	***341***	***100.0%***	***3422.6***	***100.0%***	***639.5***	***100.0%***
Central Gaulish Samian ware	144	42.2%	1696.2	49.6%	200	31.3%
East Gaulish Samian ware	46	13.5%	568.2	16.6%	75.5	11.8%
South Gaulish Samian ware	151	44.3%	1158.2	33.8%	364	56.9%
Fine ware - other	***71***	***100.0%***	***413.9***	***100.0%***	***141***	***100.0%***
Central Gaulish Black-slipped ware	2	2.8%	3.9	0.9%		0.0%
Ebor White-slipped ware	1	1.4%	17.5	4.2%		0.0%
Lower Nene Valley Colour-coated ware	50	70.4%	316	76.3%	119.5	84.8%
Mica-dusted ware	1	1.4%	6.7	1.6%		0.0%
Moselkeramik Black-slipped ware	7	9.9%	29	7.0%		0.0%
Oxidised ware	1	1.4%	1.3	0.3%	3.5	2.5%
Reduced ware	1	1.4%	3.5	0.8%		0.0%
White ware	3	4.2%	16.6	4.0%	18	12.8%
White-slipped ware	1	1.4%	2.5	0.6%		0.0%
Ebor Roughcast ware	4	5.6%	16.9	4.1%		0.0%
Mortaria	***34***	***100.0%***	***4817.7***	***100.0%***	***214.5***	***100.0%***
Cantley White-slipped ware	1	2.9%	173.7	3.6%	17.5	8.2%
Catterick Vicinity White-slipped ware	7	20.6%	649	13.5%	41	19.1%
Catterick/Cantley/Swanpool	2	5.9%	327.9	6.8%		0.0%
Catterick/Cantley/Swanpool?	1	2.9%	392	8.1%	22	10.3%
Ebor Oxidised ware	4	11.8%	590.8	12.3%	17.5	8.2%
Ebor reduced ware	4	11.8%	1167.5	24.2%	47.5	22.1%
Ebor White-slipped	4	11.8%	740.6	15.4%	23	10.7%
Ebor white-slipped ware	1	2.9%	46.7	1.0%	4	1.9%
Mancetter-Hartshill White ware	5	14.7%	265.5	5.5%	23	10.7%
North Gaulish White ware	3	8.8%	415.4	8.6%	19	8.9%
Verulamium Region White ware	2	5.9%	48.6	1.0%		0.0%
Coarse ware	***1758***	***100.0%***	***29852***	***100.0%***	***3154***	***100.0%***
Black-burnished ware	109	6.2%	1316.3	4.4%	177.5	5.6%
Calcite-gritted ware	38	2.2%	945	3.2%	123.5	3.9%
North Gaulish White ware	1	0.1%	5.1	0.0%		0.0%
Oxidised ware	699	39.8%	12367.5	41.4%	1151	36.5%

Table 7 All Romano-British pottery by ware						
Wares	**Count**	**%**	**Weight (g)**	**%**	**EVEs**	**%**
Reduced ware	642	36.5%	10479.2	35.1%	1199	38.0%
Verulamium Region White ware	9	0.5%	143.6	0.5%		0.0%
White ware	62	3.5%	1336.8	4.5%	266.5	8.4%
Dales-type ware	6	0.3%	52.8	0.2%	7	0.2%
White-slipped ware	188	10.7%	3156.2	10.6%	213.5	6.8%
Derbyshire Coarse ware	2	0.1%	22.5	0.1%	1	0.0%
Shell-tempered ware	1	0.1%	10	0.0%		0.0%
Ebor Roughcast ware	1	0.1%	17	0.1%	15	0.5%
Grand Total	**2325**	**100.0%**	**51733.3**	**100.0%**	**4199**	**100.0%**

Table 8 Amphorae				
Period and phases	**Origin**	**Count**	**Weight**	**EVEs**
Romano-British (phases 3 to 17)	Baetican amphorae	22	3263.5	
	Cadiz amphorae	2	12.9	
	Campanian amphorae	2	40.9	
	Gaulish amphorae	20	839.1	
	North African amphorae	3	173.7	
	Sub-total	***49***	***4330.1***	
Medieval and later phases	Aegean amphorae	2	360.8	
	Amphorae unidentified	1	25.3	
	Baetican amphorae	28	5454.9	50
	Campanian amphorae	2	29	
	Gaulish amphorae	22	1324.6	
	North African amphorae	3	173	
	Southern Spanish amphorae	1	12.7	
	Sub-total	***59***	***7380.3***	***50***
Unstratified	Baetican amphorae	8	1477.7	
	Gaulish amphorae	5	39	
	Sub-total	***13***	***1516.7***	
	Grand total	**121**	**13227.1**	**50**

Table 9 Samian table wares by phase and production location					
Phase and period	**Origin**	**Count**	**Weight**	**EVEs**	**MNV**
Romano-British (phases 3 to 17)	South Gaulish Samian ware	110	741.5	277.5	76
	Central Gaulish Samian ware	91	976.5	123.5	78
	East Gaulish Samian ware	29	281.7	36	26
	Sub-total	***230***	***1999.7***	***437***	***180***
Medieval and later phases	South Gaulish Samian ware	25	302.6	67	23
	Central Gaulish Samian ware	50	690	76.5	45

Table 9 Samian table wares by phase and production location					
Phase and period	**Origin**	**Count**	**Weight**	**EVEs**	**MNV**
	East Gaulish Samian ware	16	279.1	39.5	13
	Sub-total	***91***	***1271.7***	***183***	***81***
Unstratified	South Gaulish Samian ware	16	114.1	19.5	14
	Central Gaulish Samian ware	3	29.7		3
	East Gaulish Samian ware	1	7.4		1
	Sub-total	***20***	***151.2***	***19.5***	***18***
	Grand total	**341**	**3422.6**	**639.5**	**279**

Table 10 Samian forms by estimated vessel equivalents (EVEs) and maximum number of vessels (MNV)				
Form	**EVEs**	**%**	**MNV**	**%**
Beaker		0.0%	1	0.4%
Bowl	165.5	25.9%	105	37.6%
Cup	254.5	39.8%	45	16.1%
Dish	218.5	34.2%	54	19.4%
Dish/bowl	1	0.2%	3	1.1%
Uncertain		0.0%	71	25.4%
Grand Total	**639.5**	**100.0%**	**279**	**100.0%**

Table 11 Function and form by source — Roman vessels											
	Form code	**LGF SA**	**LEZ SA**	**LMV SA**	**EG SA**	**HGB SA**	**MAD SA**	**RHZ SA**	**SIN SA**	**TRI SA**	**Grand Total**
Function	Beaker sub-total					1					1
Beaker	Beaker					1					1
Bowl	Bowl sub-total	39	31	15	8	3	1	3	1	4	105
Plain bowl	Bowl	4	5	2	1						12
Plain bowl	Dr18/31 or 18/31R				1						1
Plain bowl	Dr31R		8	2	1	3					14
Plain bowl	Dr38				1						1
Plain bowl	Dr38/44		1	1							2
Plain bowl	Dr44								1		1
Plain bowl	Ritt8	2									2
Decorated bowl	Dec bowl	9	7	8	2		1			2	29
Decorated bowl	Dr29	13									13
Decorated bowl	Dr30	2									2
Decorated bowl	Dr37	6	10		2			3		2	23
Decorated bowl	Cu11	3		2							5
Cup	Cup sub-total	17	17	9	1	1					45
	Dr27	15	7	3							25
	Dr33	1	8	4	1	1					15
	Dr35		1								1
	Dr35/36	1									1
	Dr46			1							1
	O&P46		1								1
	Cup			1							1

Table 11 Function and form by source — Roman vessels											
	Form code	**LGF SA**	**LEZ SA**	**LMV SA**	**EG SA**	**HGB SA**	**MAD SA**	**RHZ SA**	**SIN SA**	**TRI SA**	**Grand Total**
Dish	***Dish sub-total***	***30***	***5***	***10***	***6***	***2***	***1***				***54***
	Dish	5		1	1	1					8
	Dr15/17	1		1							2
	Dr18	16		3							19
	Dr18/31	3		1	1						5
	Dr18/31 or 18/31R		1								1
	Dr18/31R	1									1
	Dr18R	1									1
	Dr22?	1									1
	Dr31		3	3	4		1				11
	Dr36	1		1							2
	Dr42	1									1
	LudTg					1					1
	Wa79		1								1
Dish/bowl	***Dish/bowl sub-total***		***1***	***1***							***3***
	Dish/bowl		1								2
	Dr18R/31R	27	22	14	5		1	1		1	1
Uncertain	***Uncertain sub-total***	***27***	***22***	***14***	***5***		***1***	***1***		***1***	***71***
	Uncertain	113	77	49	20	7	3	4	1	5	71
	Grand Total		**1**	**1**							**279**

Table 12 Fine wares other than Samian ware				
Period and phases	**Ware**	**Count**	**Weight (g)**	**EVEs**
Romano-British (Phases 3 to 17)	Central Gaulish Black-slipped ware	1	2.1	
	Ebor Roughcast ware	2	7.6	
	Lower Nene Valley Colour-coated ware	13	47.7	7
	Moselkeramik Black-slipped ware	6	19.4	
	Sub-total	***22***	***76.8***	***7***
Medieval and later Phases	Central Gaulish Black-slipped ware	1	1.8	
	Ebor Roughcast ware	2	9.3	
	Ebor white-slipped ware	2	20	
	Lower Nene Valley Colour-coated ware	36	265.5	112.5
	Mica-dusted ware	1	6.7	
	Moselkeramik Black-slipped ware	1	9.6	
	Oxidised ware	1	1.3	3.5
	Reduced ware	1	3.5	
	White ware	3	16.6	18
	Sub-total	***48***	***334.3***	***134***
Unstratified	Lower Nene Valley Colour-coated ware	1	2.8	
	Sub-total	***1***	***2.8***	
	Grand total	**71**	**413.9**	**141**

Table 13 Mortaria				
Period and phases	**Ware**	**Count**	**Weight (g)**	**EVEs**
Romano-British (Phases 3 to 17)	Central Gaulish Black-slipped ware	1	2.1	
	Ebor Roughcast ware	2	7.6	
	Lower Nene Valley Colour-coated ware	13	47.7	7
	Moselkeramik Black-slipped ware	6	19.4	
	Sub-total	***22***	***76.8***	***7***
Medieval and later phases	Central Gaulish Black-slipped ware	1	1.8	
	Ebor Roughcast ware	2	9.3	
	Ebor white-slipped ware	2	20	
	Lower Nene Valley Colour-coated ware	36	265.5	112.5
	Mica-dusted ware	1	6.7	
	Moselkeramik Black-slipped ware	1	9.6	
	Oxidised ware	1	1.3	3.5
	Reduced ware	1	3.5	
	White ware	3	16.6	18
	Sub-total	***48***	***334.3***	***134***
Unstratified	Lower Nene Valley Colour-coated ware	1	2.8	
	Sub-total	***1***	***2.8***	
	Grand total	**71**	**413.9**	**141**

Table 14 Roman Coarse wares				
Period and phases	**Wares**	**Count**	**Weight**	**EVEs**
Romano-British (Phases 3 to 17)	Oxidised ware	375	6851	612
	Reduced ware	290	5479.8	653
	White-slipped ware	105	1765.2	89.5
	Black-burnished ware	35	560.2	79.5
	White ware	28	815.5	207.5
	Ebor Roughcast ware	1	17	15
	Calcite-gritted ware	2	40.4	
	Dales-type ware	1	5.6	
	Verulamium Region White ware	4	75.9	
	North Gaulish White ware	1	5.1	
	Sub-total	**842**	**15615.7**	**1656.5**
Medieval and later phases	Oxidised ware	316	5446.6	539
	Reduced ware	337	4818	518
	White-slipped ware	83	1391	124
	Black-burnished ware	70	724.3	98
	Derbyshire Coarse ware	2	22.5	1
	White ware	34	521.3	59
	Calcite-gritted ware	35	901.7	123.5
	Dales-type ware	5	47.2	7
	Shell-tempered ware	1	10	
	Verulamium Region White ware	5	67.7	
	Sub-total	**888**	**13950.3**	**1469.5**
Unstratified	Oxidised ware	8	69.9	
	Reduced ware	15	181.4	28
	Black-burnished ware	4	31.8	
	Calcite-gritted ware	1	2.9	
	Sub-total	**28**	**286**	**28**
	Grand total	**1758**	**29852**	**3154**

Table 15 Roman vessel form by Period (not including amphorae)						
	Period					
Form	**2**	**3**	**4**	**5**	**Post-Roman**	**Grand Total**
Cup		11.0%	4.1%		7.6%	6.5%
Beaker		5.6%	0.0%	10.4%	3.3%	2.8%
Beaker/Small Jar		3.2%	2.6%			1.0%

Table 15 Roman vessel form by Period (not including amphorae)						
	Period					
Form	2	3	4	5	Post-Roman	Grand Total
Bowl	20.4%	28.6%	19.4%	26.7%	19.2%	21.0%
Bowl/dish			0.3%			0.1%
Dish	3.0%	4.9%	9.2%	10.4%	5.1%	5.7%
Dish/bowl			0.2%		0.0%	0.0%
Dish/platter					0.3%	0.2%
Flagon	27.5%	14.1%	31.1%		20.1%	21.6%
Flagon/Amphora			0.0%		0.0%	0.0%
Flagon/Jar	0.0%					0.0%
Jar	31.7%	20.3%	23.0%	26.7%	33.6%	29.1%
Jar narrow-necked		2.3%	2.9%		0.6%	1.2%
Jar/bowl					0.7%	0.4%
Deep bowl/Jar					0.7%	0.4%
Dolium/large bowl					0.7%	0.4%
Mortaria	11.0%	3.5%	3.5%	25.9%	5.5%	5.8%
Lid	1.2%	6.4%	3.7%		1.5%	2.6%
Bowl/lid	2.1%				0.2%	0.3%
Tazze	3.0%		0.0%		0.9%	0.8%
Candlestick			0.0%			0.0%
Unguentaria	0.0%					0.0%
Grand Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
n=	**363**	**536.5**	**623**	**67.5**	**1713**	**3303**

Table 16 Roman ware groups by period, relative proportions by EVEs						
		Period				
Ware group	Ware	2	3	4	5	Grand Total
Fine ware - Samian	SGS South Gaulish	8.4%	27.7%	0.0%		11.3%
	CGS Central Gaulsih	0.0%		10.8%	0.0%	4.1%
	EGS East Gaulish		0.9%	2.7%	19.9%	2.2%
Fine ware - other	CNG BS			0.0%		0.0%
	NGWW		0.0%			0.0%
	NVCC			0.0%	9.6%	0.4%
	C24 Moselkeramik/Trier			0.0%	0.0%	0.0%
Mortaria	Mortaria	10.4%	3.5%	3.5%	24.0%	6.1%
Coarse ware	Ebor oxidised	63.8%	25.9%	25.1%	15.1%	34.1%
	Ebor white-slipped		12.4%	3.5%		5.5%
	Grey	14.8%	9.0%	12.6%	31.5%	12.7%
	Grey B.	0.0%	9.5%	9.5%	0.0%	6.8%

Table 16 Roman ware groups by period, relative proportions by EVEs						
		Period				
Ware group	Ware	2	3	4	5	Grand Total
	Rustic	0.0%	3.3%	2.0%	0.0%	1.9%
	Misc. oxid.		0.0%	0.0%		0.0%
	White		5.5%	23.4%		10.8%
	White (not Ebor)		0.0%	0.0%		0.0%
	BB1		2.3%	5.3%	0.0%	2.8%
	BB2	2.6%		1.4%	0.0%	1.1%
	C. gritted			0.0%	0.0%	0.0%
	H (shelly)			0.0%		0.0%
	Ver Wh.		0.0%	0.0%		0.0%
	Grand Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
	n=	**383**	**543.5**	**621**	**73**	**1620.5**

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
0	0	Unstratified	Unstratified	51
1019	BF5	9	16th century	2 Cistercian handle joins 1 Brandsby type jug rim 1 Torksey type grey ware 1 Humber type 1 purple glazed highly fired oxidised 2 Roman 1 amphora sherd in bag with two labels for Contexts 1019 and 1021
1021	BF6	21	Late 17th / Early 18th century	7 Brandsby type jug including dark green glazed rilled rim and mottled green glazed body sherds with applied thumbed vertical strips 1 Ryedale type with reduced internal surface 2 English stoneware with light grey salt glaze 1 slipware posset rim with brown pellets on yellow ground 1 terracotta plant pot rim 1 post medieval fine oxidised horizontal rod handle with amber glaze 1 post medieval fine oxidised with purple glaze 1 post medieval moderately gritted oxidised rim with brown glaze 1 over-fired coarse grey ware 1 post medieval oxidised jug base with reduced core 2 post medieval with light green brown glaze 1 Humber type drinking jug base 1 Humber type jar body
2026	BF12	3	16th century	1 late Humber cistern base with internal glaze large sherd 1 Cistercian small sherd

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 white slipped moderately gritted oxidised ware small sherd
2053	BF13	2	17th century	2 post medieval buff Ryedale type pipkin with olive green internal glaze and green and yellow glaze over the rim CLEAN BREAK JOINS
3000	BF202	7	20th century	1 York glazed ware, light copper green and yellow glaze, body sherd, medium 1 white ware mortaria, rim sherd, small sherd 2 Cistercian, one rim, small sherds 1 amphora, medium sherd 1 grey burnished ware, sandy buff fabric, small body sherd 1 20th century plate rim, white hard fabric, painted stripe and heart decoration, clear glaze
3001	BF201	16	late 16th/17th century	4 finely gritted oxidised with reduced core splashed glaze, joining jug rim sherds, green brown glaze, scarring from handle on one sherd, medium sherds 2 Ebor ware, small body sherds 1 scrap Samian rim 1 Samian bowl rim, medium sherd 1 x Ryedale/red earthenware body sherd with remains of handle base, thumb impressed, internal green glaze, medium sherd 1 Crambeck ware base, burnished external, medium sherd 2 York ware body sherds, one yellow green glaze, one green, small sherds 1 York ware tubular spout, embossed strips and dots decoration, light green glaze, medium sherd 1 Ryedale/late Humber base, reduced fabric with white external margin, green external glaze, small sherd 1 Beverley type base, very abraded and pocked, slightly sagging base, unglazed, large sherd 1 Brandsby ware base, oxidised external, light grey internal with buff internal surface, specks of green glaze on underside of base, medium sherd
3007	BF25	3	17th century	3 Frechen stoneware Small sherds
3011	BF26	2	Late 14th/early 15th century	1 Hambleton 1 Humber Small sherds

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3013	BF27	4	Late 12th/early 13th century	1 Roman Calcite Gritted 1 Roman Grey 1 Splashed 1 Early York Glazed Small sherds
3019	BF28	1	12th century	1coarse red ware Small abraded sherd
3020	BF29	1	13th-15th century	1 scrap reduced green glaze
3023	BF200	5	17th century	1 gritty ware, small 1 finely gritted, oxidised splashed glaze ware, small body sherd 1 oxidised Ryedale ware, unglazed body sherd, small 1 Brandsby ware 1York Glazed ware
3025	BF199	8	late 16th/17th century	1 Cistercian, small body sherd 1 Cistercian, decorated design of straight vertical lines, with pellet at one end, similar found at Kirstall Abbey (ref. Spavold 2019 unpublished), small body sherd 1 Brandsby type rim with green glaze, abraded 1 late Humber ware, reduced fabric with white margin under green glaze on external surface, small body sherd 1 very abraded, moderately gritted, oxidised ware, small 1 amphora, oxidised and buff fabric, with oxidised internal and buff external surfaces, medium body sherd 1 Ebor rim, abraded, small sherd 1 oxidised Ryedale base, with brown glaze on underside, very abraded
3026	BF198	189	2nd century and intrusive mid-14th century	1 colour coated ware, with roughcast decoration, small sherd 1 Roman white ware, small body sherd 3 Ebor ware, scraps to small 1 Ebor ware with buff surfaces, small 1 Ebor with reduced core, narrow lattice decoration, small body sherd 2 Ebor shallow dish/ pie dish rim sherd, one burnt, small 1 finely gritted, oxidised splash glazed ware, base, slightly abraded, medium sherd 3 finely gritted, oxidised splash glazed ware, small to medium body sherds 2 moderatey gritted oxidised ware, buff external surface with sooting, one with burnt edges after broken, small 1 moderately gritted oxidised fabric with reduced

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				core, small body sherd, sooting on external surface 2 York ware, body sherds, sooting on external surfaces, small to medium sherds 3 oxidised, hard fabric with slip on external surface, small body sherds 1 finely gritted oxidised fabric, strap handle with central groove, unglazed, small 1 moderately gritted oxidised fabric strap handle with two grooves on one side, unglazed, small
				1 moderately gritted oxidised fabric with reduced internal, base sherd, small 1 abraded moderately oxidised fabric, small body sherd 1 moderately gritted, oxidised with reduced core, hard fabric, small body sherd 1 reduced Ebor with white slip, small body sherd 1 finely gritted greyware with buff internal, burnt, medium body sherd 1 Roman greyware scrap with lattice decoration, brown fabric 1 large chip Ebor ware base 4 finely gritted, oxidised splash glazed ware, jug base, glaze on underside of base, medium sherds 1 finely gritted oxidised splash glazed body sherd, medium 6 Ebor, body sherds, small 2 Ebor ware, red slipped, small body sherds 1 Ebor foot ring base, medium 1 moderately gritted, oxidised ware, small body sherds 11 Ebor, white slipped, small body sherds 1 Ebor ware, white slipped, base with foor ring, small
				1 Ebor ware, white slipped strap handle with off centre groove, small 1 Ebor ware, white slipped strap handle, with two central grooves, small 1 Ebor ware, white slipped, flagon rim, slipped all surfaces, small 1 Ebor ware, bowl/dish rim, small 16 Roman greyware, body sherds, small to medium 3 BB2 ware, dish base, swirly pattern on external underside of base, large and 2 small sherds 12 greyware with narrow lattice decoration (pre 200 AD), small body sherds 1 greyware with rusticated decoration, body sherd, small 1 Roman greyware with horizontal banding decoration, medium 1 abraded scrap of greyware 1 hard, fine textured dark red fabric with slightly shiny/glossy dark grey margins (import?), scrap 1 mica dusted colour coated greyware with buff

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				core, small body sherd 1 Roman handmade greyware, small 1 scrap York ware base, burnt
				1 greyware jar rim, lattice decoration on shoulder, medium sherd 1 greyware jar rim with rilled decoration on shoulder, flat topped rim, medium sherd 1 burnished greyware jar rim, sandy red core, flat topped, lattice decoration on shoulder, small 1 greyware jar lid seated rim, small 2 burnished greyware jar rim, red sandy core, flat topped rim, lattice decoration on shoulder, joining sherds, small to medium 4 greyware jar rims, cursive design, 2 had some burnishing on external, small 1 burnished greyware base with foot ring, small 1 greyware base with foot ring, small 3 burnished greyware bases, small to medium 2 white ware flagon with ring neck, rim and neck sherds, small to medium 8 finely gritted, oxidised splash glazed, body sherds, slightly ribbed, strap handle scarring on one of the sherds, evidence of glaze on edge of 2 of the sherds (wasters/seconds?) green brown glaze, small to medium sherds 1 finely gritted, oxidised splash glazed, collared rim, roughly made, green brown glaze, kiln marks, medium sherd 2 amphora, oxidised/buff surfaces and reduced core, medium sherds
				2 BB1 jar rim, everted, joining sherd, small 1 abraded BB1 base, small 1 BB1 pie dish rim, small 1 BB2 small jar rolled rim, small 1 BB1 body sherd with vertical lines decoration, small 1 BB2 with red core, lattice decoration, small 1 BB1 body sherd, small 17 Samian body sherds, one burnt, small to medium 13 Samian bowl/cup rims, small 3 Samian bases with foot ring, small to medium 9 Samian, decorated body sherds, small 1 Samian base stamped 'FVSC', small 3 Gritty ware body sherds, small 1 Beverley ware, small 1 Beverley Type 2 ware, small 5 Beverley ware base sherds, large 1 Burnt Beverley ware, small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3027	BF197	35	13th century	7 York glazed ware, body sherds, small 2 reduced green glaze, body sherds, small 3 early York glazed ware, pink fabric, yellow green glaze, small joining body sherds 1 Roman colour coated rolled rim 2 Roman greyware body sherds, small 1 Roman greyware everted rim, small 1 BB1 body sherd, small 2 Roman greyware body sherds, lattice decoration, one abraded, small 1 Samian crenellated bowl with rolled rim, large sherd 1 Samian scrap
				5 finely gritted, oxidised splashed glaze with reduced core, light olive green glaze on external 1 finely gritted, oxidised splash glaze base, with green brown on base underside, small 1 finely gritted, oxidised splashed glaze, flat topped rim, with light green speck on top, small 1 finely gritted, oxidised splashed glaze, body sherd with light green glaze, over firing around edges?, small 1 finely gritted, oxidised fabric with iron inclusions, buff burnished external surface, small body sherd 1 moderately gritted, oxidised fabric, sooting on external surface, small body sherd 1 gritty ware, oxidised with reduced core, small body sherd 1 finely gritted, oxidised with buff, burnished external surface, straight-sided base, small 1 moderately gritted, oxidised with reduced internal, scrap 1 gritty ware rim, small
3029	BF196	23	mid 13th/mid 14th century	1 finely gritted, oxidised with reduced core splashed glaze, green brown glaze, medium body sherd 1 colour coated white fine ware with roughcast decoration, small body sherd 1 Ebor body sherd, small 1 Ebor bowl rim, with grooved decoration round rim and rouletting, medium sherd 1 reduced green glaze ware, small body sherd 1 coarsely gritted Roman greyware with red slip, small body sherd 2 York glazed ware, white, light grey fabric with light green glaze, small to medium sherds 2 early? York glazed ware, pink and white fabric, external buff, internal glaze in band, small to medium sherd 2 Brandsby type body sherds, green glaze, applied strip decoration, lightly reduced core, small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 finely gritted, hard reduced fabric with oxidised internal, green brown glaze, small body sherd 1 large moderately gritted, oxidised open fabric strap handle (Yorkshire red ware?) with embossed strip on one side, part of vessel is attached on internal side of handle, possibly indicating large two handled vessel? 1 Roman calcite gritted base, small 1 burnished greyware, everted rim jar, medium rim sherd, early 2nd century 1 finely gritted, oxidised splashed glaze, rim of jar, green brown glaze, small 2 greyware body sherds, small 1 Brandsby body sherd, light green glaze, reduced grey internal and white margin, small 1 burnished greyware body sherd, abraded, horizontal line decoration, small 1 colour coated, reduced fabric and buff coloured coat, small part of base included, small 1 hard, reduced dark grey fabric with oxidised internal surface, fabric is finely gritted, unknown form, small base, which then flares out and down - a form of platter? Roman
3031	BF195	14	15th/16th century	1 reduced green glaze body sherd with impressed vertical strip with thumb imprints, medium sherd 2 Cistercian ware body sherds, medium 1 moderately gritted, oxidised ware, squared rim, jug, medium 1 Brandsby ware, reduced internal, white external, green glaze, small body sherd 1 Crambeck parchement ware, small body sherd 1 York ware, everted rim, light green glaze, small 1 finely gritted, oxidised with reduced internal and buff surfaces, base, small 1 Samian base with foot ring, abraded, rouletted decoration on internal base, medium sherd 1 Samian rolled rim, small 4 Samian body sherds, small
3032	BF194	23	15th/16th century	1 Samian rolled rim, small 1 Stamford ware, scrap 1 Cistercian collared rim, medium 1 Cistercian cup base, small 2 reduced green glaze body sherd, olive green glaze, one oxidised internal surface, small 1 rusticated greyware body sherd, small 2 abraded greyware rims, very small 1 York ware, body sherd, small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				2 Ebor body sherd, small 1 Ebor rolled rim, small 2 very abraded oxidised sandy/finely gritted fabrics, small 2 moderately gritted, oxidised with reduced core, small body sherd 2 burnished greyware body sherds, small 1 Roman greyware with vertical line decoration, small body sherd 1 Roman white gritty fabric with moderate/large iron inclusions, red and grey slip on internal surface and top of rim, medium 1 calcite gritted, Huntcliffe type jar with hooked rim and lid-seating, late 4th century, medium 1 calcite gritted jar body sherd, medium
3033	BF193	4	mid 13th/mid 14th century	1 burnished greyware jar rim - cavetto rim, obtuse lattice decoration (post 200 AD) 1 Brandsby type body sherd, small 1 moderately gritted oxidised fabric with reduced core, squared rim of jar, medium 1 York ware base, burnt, small
3037	BF192	64	Late 2nd/3rd century 12th-mid 14th century	3 Samian body sherds, small 2 Samian rolled rims, small 1 Samian rolled rim, external decoration, small 4 amphora, abraded, buff fabric, large sherds 1 Ebor mortaria, internal abrasion, base sherd, large 1 Ebor with red slip, rim of platter, medium sherd 1 Roman greyware bowl with burnished buff surfaces, double incised lines just under rim, medium 1 Beverley ware body sherd, small 1 Beverley ware, splashed glazed 1 Gritty ware 1 coarsely gritted, oxidised fabric, small body sherd 1 finely gritted, oxidised fabric, small to medium body sherds 1 gritty ware, oxidised with reduced core, abraded, small 1 finely gritted, oxidised fabric base, sooting on external, buff external surface, small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				3 Beverley ware, splashed glazed 1 fine white ware, burnished external surface, small body sherd 2 Ebor ware body sherds, small 1 Ebor, white slipped, cup-mouthed flagon rim, medium 1 Ebor, white slipped strap handle, double grooved, medium 1 Ebor, white slipped small strap handle, one central groove, medium 2 Ebor, white slipped, probable flagon, base with foot ring, large sherd, abraded 8 greyware body sherds, small, abraded 3 burnished greyware body sherds, small, abraded 1 greyware strap handle with central groove, abraded, small 1 burnished greyware body sherd with double incised horizontal lines, medium 3 greyware with latticed decoration, body sherds, small 2 Roman greyware jar base, joining, small 1 colour coated oxidised fabric, roughcast decoration, small body sherd
				1 burnished greyware, dark red fabric with dark grey core and surfaces, hard fired, base, medium 1 burnished greyware base, small 1 greyware jar rim, calvetto rim, abraded, medium 4 burnished greyware jar rims, everted, small 1 fine greyware rim, everted, small 1 CG colour coated, rolled rim, small, metallic looking colour coat 1 moderately gritted, reduced fabric splash glazed ware, jar simple rolled rim, small 4 Samian moulded bowl including one rim
3038	BF191	10	12th to 15th century	1 Raeren type German stoneware mug base small sherd 4 Brandsby jug including three thumbed base sherds and a rod handle mainly large sherds 1 Splashed coarsely gritted reduced ware very small 1 Splashed finely gritted oxidised small sherd 1 Late Roman calcite gritted residual coarse ware small abraded 1 Humber unglazed medium sherd 1 Yorkshire red ware jug with rilled neck rod handle scar and dull abraded green glaze

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3043	BF289	8	2nd/3rd century	3 Roman Color coated beaker small 1 Roman Grey burnished medium 1 Roman white ware 1 Roman coarse ware with white surfaces and lightly oxidised core small 1 Roman lightly oxidised coarse ware 1 Roman coarse ware jar with lightly oxidised surfaces and lightly reduced core medium
3043	BF290	12	16th century	2 Cistercian drinking vessel including one rim small 6 Buff/lightly oxidised yellow glazed ware horizontal handled bowl *profile large sherds join sooted under base and over broken rim edge. Late yellow glazed or early Ryedale 1 late Brandsby jug with applied vertical strip with small finger impressions lightly sooted area inside 1 coarse oxidised jar rim large 1 coarse oxidised jar base large 1 Ryedale type red ware rim oxidised throughout with splashes of glaze small
3045	BF291	8	12th century	3 Splashed ware pitcher including collared rim small 1 Roman burnished small 1 Roman fine Grey ware 1 Roman Grey burnished small 2 Splashed coarsely gritted oxidised small abraded
3047	BF190	6	late 11th-mid 12th century	1 Splashed white moderately gritted ware lower wall with soot partially over lower broken edge medium 1 Splashed lightly oxidised moderately gritted ware small 1 Splashed moderately gritted lightly reduced ware with oxidised external surface and no glaze 2 Splashed hard oxidised jar including rim with lightly reduced core large and small 1 reduced over fired base
3048	BF189	75	12th/13th century	9 Rusticated Grey ware 1 late Humber with mottled stoneware type glaze small 3 Black Burnished bowl with thick white margins and reduced core including two everted rim large 2 Grey ware jar rim and base small an medium 2 Grey burnished medium 1 overfired Grey ware rim waster small 2 Calcite gritted small and medium including sherd with horizontal grooves 1 overfired medieval jug base large 2 Black Burnished with buff fabric including jar base medium and large 4 Grey ware body sherds small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 self slipped Grey ware small jar rim with red brown surfaces 11 Grey ware flagon rim small 1 Grey ware jar base medium 7 Ebor flagon and jar large 1 Colour coated small 1 Samian rim small 1 Colour Coated beaker rim with brown slip medium 7 Splashed finely grited oxidised pitcher including collared rim and base small to large 8 Splashed moderately gritted oxidised including abraded thick strap handlesmall to medium 3 Ebor type small 1 Splashed fabric base unglazed small 4 Roman hard buff ware including pedestal base small 1 Stamford yellow glazed small 1 White Gritty ware, large
3050	BF188	47	mid 13th/mid 14th century late 11th/mid12th century late 4th to 5th century	1 Colour Coated white ware, base, small sherd 1 Ebor lug handle from lug handled bowl?, medium sherd 4 Samian plain body sherds, one carinated, small sherds 1 Samian rim, rolled, small 1 colour coated, small body sherd 1 Roman white slipped oxidised, fine sandy fabric, small body sherd 1 Roman greyware, small body sherds 4 Splashed Glazed ware, overfired, small body sherds 1 Roman greyware, small, burnt, body sherd 2 burnished greyware, small body sherds 1 Roman greyware base, small 1 Roman burnished greyware rolled rim, small 1 Roman greyware with lattice decoration, small body sherd 4 gritty ware small body sherds 1 gritty ware jar rim, small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				5 finely gritted, oxidised splash glaze, small body sherds 1 Brandsby ware, green glaze, white margin, small body sherd 1 Mancetter-Harthill mortaria, form MR1, rim sherd, medium 1 Ebor simple rolled rim, small 1 oxidised with reduced core cub handle, medium 1 oxidised, self slipped, medium body sherd 2 calcite gritted ware, small body sherds 1 clacite gritted jar with lattice decoration, small body sherd 1 finely gritted, oxidised splash glaze candlestick, large sherd 1 reduced fabric pitcher with squashed tubular spout and abraded burnishing on external surface-anglo-scan in date? 3 Amphora, pink fabric and creamy white surface, small to large sherds 3 Beverley ware, small 1 White Gritty ware, small
3052	BF187	847	12th century	616 Splashed ware pitchers with fine to moderately gritted oxidised fabrics, body sherds 71 Splashed ware pitchers with fine to moderately gritted oxidised fabrics, bases 62 Splashed ware pitchers with fine to moderately gritted oxidised fabrics, rims, including spouts 25 Splashed ware pitchers with fine to moderately gritted oxidised fabrics, handles 8 gritty ware jar rim, squared, with sooting, medium to small 18 gritty ware body sherds, small to large 7 gritty ware base sherds, small to large 1 Ebor ring necked flagon, white slipped, medium 2 Ebor white slipped body sherds, small to medium 3 early medieval coarseware, body sherd, small to medium 2 Splashed ware pitchers with fine to moderately gritted oxidised fabric, fused in kiln, small 4 Splashed ware pitchers with fine to moderately gritted oxidised fabrics, with dark grey slip on external surface, medium to large body and base sherds

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 Ebor base, foot ring, small 1 BB1 ware, small body sherd 1 finely gritted splash glaze candlestick with reduced core, base 1 Brandsby? body sherd, small, light green glaze with light grey core 1 scrap York glazed ware rim 1 York glazed ware with yellow glaze, small body sherd 1 finely gritted oxidised splash ware with scratch/tool marks on internal surface, medium body sherd 1 burnished greyware base sherd, small 1 Roman greyware rim, everted, small 1 burnished greyware jar rim, small 1 Roman greyware body sherds, small 1 Roman greyware strap handle with central groove, small 1 Roman greyware with lattice pattern, small body sherd 1 Samian, carinated, small body sherd 4 finely gritted, reduced splash ware, body sherds, small to medium 1 mortaria in a Lincolnshire fabric, form ME - everted or hooked flange, large sherd 1 Ebor mortaria, form ME, large sherd 3 Beverley ware, small 1 White Gritty ware,small 4 Splashed ware, overfired, small to large
3053	BF186	73	late 2nd-late 3rd century Intrusive 11th century	1 greyware with rusticated decoration, body sherd, small 3 Ebor roughcast sherds, small 1 colour coated scrap, oxidised fabric 7 Ebor white slipped, body sherds small 1 Ebor white slipped base, small 1 Ebor white slipped strap handle with central groove, small 7 Ebor body sherds with reduced internal surface, small 1 greyware base, small 1 greyware body sherd, small 1 greyware body sherd with rouletted decoration and incised horizontal lines, medium 1 colour coated, oxidised fabric, grey colour external, purple mica? dusted internal, scroll design, small sherd 2 greyware with narrow lattice decoration, small body sherds 1 greyware with obtuse lattice decoration, small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 BB2 rim, small 2 burnished greyware with oxidised core, joining cavetto rims, small 2 burnished greyware rim, small 3 burnished greyware jar base, joining, small sherds 1 BB1 bowl rim, small 4 burnished greyware body sherds, small 1 BB body sherd, small 1 Ebor with reduced core, body sherd, small 1 Ebor with reduced core, flanged bowl, small 3 Ebor body sherds, one with incised horizontal lines, small 1 Ebor base with foot ring, small 10 Samian ware, body sherds, small and abraded 3 Samian rolled rims, small 2 Samian squared rims with rouletting decoration, small and abraded 1 decorated Samian body sherd, abraded 3 Samian bases, 2 with foot rings, medium sherds 1 Ebor, red slipped, small body sherd 1 Ebor base, abraded, reduced core, medium 2 oxidised gritty ware, joining body sherds, small 2 misc. very abraded scraps
3055	BF185	40	13th-15th century	2 colour coated fine ware, white fabric, metallic colour coat, small body sherds, one with embossed decoration 1 Beverley ware in splashed glaze, small body sherd 1 reduced green glaze rim, dish/platter, green brown, with high sheen glaze on all surfaces, small 1 reduced green glaze rim sherd, green glaze on external surface, small, incised horizontal line decoration 1 calcite gritted ware rim, small 1 Brandsby ware body sherd, combed decoration, green glaze, small 1 splashed glaze, finely gritted, oxidised, over fired green glaze, small body sherd 1 splashed glaze, finely gritted, oxidised, rilled body sherd, one dot of glaze, medium sherd 1 splashed glaze, finely gritted, oxidised with reduced core fabric, base, splash glaze on under base 2 splashed glaze, finely gritted, oxidised with reduced core, abraded body sherds, small 1 oxidised, finely gritted strap handle with 5 grooves, yellow green and green glaze, over fired? 1 finely gritted, oxidised with reduced core, splash ware, collared rim with green brown glaze, medium 1 coarsely gritted, reduced splash glazed fabric, body sherd, small, dark green/brown glaze

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 splashed glaze, finely gritted with reduced fabric, buff surfaces with grey core, small body sherd
				1 Roman greyware with lattice decoration, body sherd, medium 1 greyware shallow pie dish with flaring rim, medium sherd 1 burnished greyware rounded rim, small 1 burnished greyware part base, small 2 BB1 rims, small, rolled and plain 1 BB1 body sherd, small 1 moderately gritted oxidised splashed glaze, over fired glaze on internal and edges, small 4 gritty wares, body sherds, small to medium 1 Samian rolled rim, small sherd 1 Samian body sherd, small 2 York glazed ware rod handle with reduced core, 4 ridges, light copper glaze, joining sherds 1 Brandsby type body sherd with lightly rouletted decoration, small 1 early York glazed ware platter rim, with very light green glaze on internal surface, small sherd 3 York ware body sherds, copper green glaze, small 1 Humber type/lightly reduced green glaze ware medium body sherd 1 sandy oxidised fabric, small body sherd 1 finely gritted, reduced splash ware, small body sherd
3056	BF184	27	12th/early 13th century	2 moderately gritted, oxidised, small body sherds 1 finely gritted, oxidised with reduced core, buff surfaces, small body sherd 1 moderately gritted, reduced splashed glaze, over fired glaze. small body sherd 1 moderately gritted, oxidised, pink to buff fabric, sooting on external, medium body sherd 1 moderately gritted, oxidised splash glaze collared rim, green brown glaze, small 2 finely gritted, oxidised, splash glaze strap handles with wide central groove, thumb imprints at one end, green brown glaze, small to medium sherds 1 finely gritted, reduced splash glaze, bowl rim?, uneven internal surface - misfire, small sherd 2 finely gritted, reduced splash glaze, green glaze, small body sherds 3 finely gritted, oxidised splash glaze, grey,buff internal fabric, green brown glaze, evidence of sooting and burnt fabric on one of the sherds, small to medium body sherds

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 gritty ware rim scrap, green glaze 1 finely gritted, oxidised splash glaze, grey external margin, green brown glaze, medium body sherd 1 Ebor, with reduced core, two incised horizontal lines, small body sherd 1 Roman greyware body sherd, small 2 burnished greyware base sherd, scrap to small 1 finely gritted, oxidised rim, buff fabric, only slight curve at one end, so large vessel?, straight thick rim, medium sherd 1 finely gritted, reduced rim, rough external surface, small 1 finely gritted, reduced fabric, unknown form, misfire? 1 finely gritted, reduced with buff surfaces base, jar, sooting on base underside, roughly made, thumb smears and tool marks on internal surface, large sherd 2 finely gritted, oxidised splash glaze base, small 1 moderately gritted, oxidised base, medium sherd
3057	BF183	31	13th century-mid 14th century	1 splash glaze tile, medium? 1 coarsely gritted, reduced splash glazed jar base, brown glaze on external surface, small 7 finely gritted, oxidised splash glaze, green brown and brown glazes on external surface, one over-fired, small to medium sherds 1 finely gritted, reduced splash glaze, small body sherd 1 Roman greyware strap handle, wide central groove, small 1 Roman greyware base, very abraded on internal surface, small sherd 1 gritty ware, oxidised pink fabric, jar, sooting on external surface, small body sherd 1 Samian, small body sherd 1 burnished greyware rim sherd, simple rolled rim, small sherd 1 Roman greyware, small body sherd 1 burnished greyware with vertical line decoration, small body sherd 2 York glazed ware, small body sherds 1 Ebor complete base, small sherd 1 Ebor medium body sherd, smooth external surface, rilled internal surface 1 finely gritted, oxidised Beverley type?, tubular spout, green brown glaze, medium

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 Roman brown sandy fabric from Lincolnshire? Lid seated rim of large vessel, rough and crusty internal surface, medium surface 3 finely gritted, oxidised Beverleyy type?, with reduced core, base, one has rilled decoration, small to medium sherds 1 gritty ware small body sherd 2 moderately gritted, oxidised splash ware, abraded small body sherds 1 moderately gritted, white splash ware, jar base, sooting on external surface on sides and base, splash of green glaze on underside of base, medium sherd 1 finely gritted, oxidised splash ware, small body sherd
3058	BF182	22		1 Samian, small body sherd 2 burnished greyware, base, medium sherds 1 burnished greyware, small body sherd 1 coarsely gritted, reduced splash glaze rim, abraded, small 1 oxidised, finely gritted thick rim, small 1 coarsely gritted, oxidised splash glaze with reduced core, base, green brown glaze on external, medium sherd 1 finely gritted, oxidised splash glaze, base, green brown glaze on external and underside, sooting/burning on both surfaces, cracked, medium sherd 1 finely gritted, oxidised glaze strap handle with central groove, medium sherd, over fired glaze?
				1 glazed tile corner? 1 gritty ware jar base, sooting on external surface, buff internal, small sherd 2 finely to moderately gritted, oxidised splash glaze rim sherds, everted, green brown and brown glaze, external and on rim, small to medium sherds 1 finely gritted, oxidised splash glaze, brown and grey fabric, burnt?, brown external glaze, medium sherd 2 moderately gritted, oxidised platter/flanged dish rim, joining sherds, internal green glaze overlaying a white slip, small 1 coarsely gritted, oxidised splash glaze, small body sherd 1 York glazed ware jug base, external green glaze, medium 2 York glazed ware small body sherds, green external glaze 1 Torksey ware? small body sherd 1 York white ware simple rolled rim, bowl/dish, green glaze internal and on rim, medium sherd

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3060	BF181	17	mid 13th/mid 14th century	2 hard finely gritted white fabric, with light grey core, yellow brown glaze with combed horizontal line decoration and dots in brown, small body sherds 1 finely gritted oxidised with green glaze, small body sherd 1 Ebor, white slipped, small body sherd 1 moderately gritted, white splash glaze, green glaze, small body sherd 1 finely gritted, reduced splash glaze with oxidised internal surface, small body sherd 1 York glazed ware simple rim, light green glaze, small 1 York glazed ware, small body sherd 4 Brandsby type, green glaze, two with white margins, one of which has combed horizontal lines, small body sherds 1 Roman greyware, small body sherd 1 finely gritted white ware with buff slip, scrap 1 gritty ware sqaured rim, jar, small 1 finely gritted, oxidised splash glaze, abraded, ribbed body sherd, medium 1 Samian bowl rim, simple rim, abraded, small
3062	BF180	25	mid 13th/mid 14th century	1 sandy oxidised fabric, Beverley type?, yellow green glaze on both surfaces white slip underneath, grouped bands of incised horizontal lines, medium simple rim sherd, abraded 1 finely gritted, oxidised splash glaze, reduced internal fabric, rare with quartz inclusions, green brown glaze, small body sherds 2 moderately gritted, reduced green glazed ware, white margin, iron and quartz inclusions, small body sherds 1 finely gritted, reduced base, with buff surfaces, and slip on external surface, iron inclusions, abraded medium sherd 3 Brandsby type, green external glaze, 2 have rouletting decoration, one wavy combed decoration, white margins, small to medium sherds 1 Roman greyware rim, everted, abraded, small 1 gritty ware small body sherd 1 shelly ware, buff surfaces, small body sherd 1 moderately gritted, oxidised ware, bowl rim, burnishing and sooting on external surface, calcite inclusions, simple rolled rim, buff internal surface, small sherd 1 moderately gritted, oxidised ware splash glaze with dark grey internal fabric, medium body sherd

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 Samian carinated body sherd, abraded, medium sherd 1 Crambeck body sherd, abraded, small 1 Splashed Glazed ware with buff / pink fabric, yellow splashes, fine wall, small 1 mica dusted greyware, small body sherd 2 greyware with lattice decoration, small body sherd 1 finely gritted, oxidised ware with buff internal surface, dark grey internal fabric, base sherd, small 1 hard, finely gritted, reduced splash glaze, buff surfaces, brown glaze, over fired?, base sherd, medium 1 finely gritted, oxidised, splash glaze, base, reduced core, medium sherd 1 York glazed ware, vertical line decoration, green glaze external, large body sherd 1 York glazed ware, pink fabric with white margins, specks of yellow green glaze, small body sherd 1 Stamford type ware, yellow green glaze, horizontal comb lines, small body sherd
3064	BF179	12	mid 13th/mid 14th century	1 gritty ware jar rim, medium 1 BB ware body sherd with lattice decoration, small 1 Ebor flagon? base with foot ring, large sherd 4 Ebor body sherds, two with incised horizontal lines, small to medium sherds 1 Crambeck parchment ware, body sherd, small 1 splash glazed, finely gritted, oxidised with collared rim, small sherd 1 splash glazed, finely gritted, oxidised with reduced core, small sherd 1 splash glazed moderately oxidised with light yellow brown glaze and incised wavy line, small body sherd 1 Brandsby type rod handle, light yellow/buff fabric with reduced core
3067	BF284	34	2nd century late 3rd to early 5th century	1 Ebor white slipped mortaria, large sherd 9 greyware joining sherds from flagon, small to medium sherds, buff interior 1 Ebor white slipped strap handle with three grooves, medium sherd 1 Ebor white slipped strap handle with two grooves, small sherd 1 Ebor white slipped body sherd, small 2 colour coated roughcast, small body sherds, joining, reduced fabric 1 NVCC rim, small 2 greyware body sherds, small 1 burnished greyware, body sherd, medium 1 greyware with 90 degree lattice decoration, small body sherd 1 BB

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 pie dish with narrow lattice decoration and flaring rim, large sherd
				2 Samian rim, small sherds 1 Samian body sherd, small 1 Samian carinated body sherd, small 2 Amphora, one large burnt sherd, one small, both with buff fabric 1 calcite gritted ware, small body sherd with scored horizontal lines 1 Ebor red slipped strap handle with two deep grooves and swirl decoration on both sides, rough finish on internal 1 burnt Ebor ware body sherd 1 moderately gritted oxidised fabric with reduced core, unknown date, small sherd 1 stamped Samian dish, complete stamp is 'SILVI-OF' which is Silvius ii of Lezoux, dating to c. AD 125-145 1 stamped Samian scrap
3068	BF178	2	late 11th/mid 12th century	1 Samian bowl, simple rolled rim, carinated near base, large sherd 1 gritty ware, small body sherd
3071	BF177	25	2nd century	1 Samian decorated body sherd, abraded, small 1 Samian small body sherd 2 Samian rolled rim, small sherds 3 Ebor, small to medium body sherds 2 Ebor white slipped flagon, joining sherds, neck and handle, strap handle, two grooves, medium to large sherds 5 Ebor white slipped body sherds, small to medium 1 finely gritted, oxidised fabric, burnished external, small body sherd 1 roughcast with brown/black colour coat on both surfaces, beaker, small body sherd 1 scrap sandy oxidised fabric with buff external surface and sooting 2 BB ware with horizontal/vertical line decoration, small body sherd 1 white ware, small body sherd 1 Roman greyware, small body sherd 2 Roman greyware straight sided dish/bowl simple inverted rims, small to medium sherds 2 Oxidised . Small
3074	BF294	3	late 11th/mid12th century	1 finely gritted, reduced with oxidised surfaces, splash glaze, green glaze on external surface, small body sherd 1 gritty ware, small body sherd 1 Ebor, red slipped, base sherd, grey core, abraded, medium sherd

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3076	BF176	16	early 13th-mid 14th century	2 Ebor, flanged bowl? joining rim sherds, small 1 finely gritted, oxidised, Beverley type, everted rim, green brown glaze, red slip on rim?, abraded, medium sherd 2 York glazed ware body sherds, small 1 moderately gritted white splashed ware, self slipped external surface, green glaze external, buff internal surface, medium body sherd 1 finely gritted, reduced green glaze with calcite inclusions, small rim sherd 1 scrap reduced green glaze body sherd 2 greyware with buff internal surface, small body sherds 2 gritty ware, sooting on one sherd, small body sherds 1 moderately gritted, oxidised splash ware with reduced core, green brown glaze, small body sherd 1 handmade Anglo-scan ware, buff surfaces, moderate calcite inclusions, small to medium body sherd 1 Grey ware scrap 1 finely gritted, oxidised Beverley type with reduced core, unglazed base, ribbing on body, abraded, large sherd
3078	BF175	13	mid 13th/mid 14th century	1 greyware rolled rim, small 1 greyware body sherd, scrap 4 finely gritted, oxidised Beverley type, green or green brown glaze, small body sherds 2 gritty ware, small body sherds 1 Ebor ware, moderately gritted, red slipped, burnt, body sherd, medium to large 1 abraded shelly ware, oxidised and buff surfaces, small body sherd 1 moderately gritted, oxidised ware with brown glaze, small body sherd, Beverley type? 1 coarsely gritted oxidised ware, with buff core and external and internal pink fabric, yellow glaze, splashed glaze/glazed gritty ware? 1 splashed glaze body sherd, creamy fabric with light olive green glaze, rilled body, medium sherd
3079	BF293	13	2nd century	1 Samian body sherd, small 1 Ebor, abraded body sherd, small 2 moderately gritted, oxidised, calcite inclusions, small body sherds 1 Ebor strap handle with central groove, medium 1 coarsely gritted, oxidised base, buff and burnished external, with sooting, likely jar form, medium 2 Ebor rim and shoulder of flagon, joining, medium sherds, join with above handle?, evidence of handle scarring, flat topped rim, abraded ring neck 3 Ebor, red slipped, small body sherds 1 Ebor, neck and shouler, abraded, medium sherd

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 moderately gritted, oxidised, rim, straight sided, small
3080	BF174	10	13th-15th century with Roman	1 Beverley Type 1 ware pitcher with handle emanating from rim, large 2 finely to moderately gritted reduced fabric with buff external surface, splash glaze on base, large sherd 2 early York glazed ware body sherds, pink fabric, lightly incised horizontal lines, green/suspended glaze, small sherds 1 greyware scrap, incised lines 1 moderately gritted, reduced open fabric, Lincolnshire ware?, tubular bridge spout with pushed through hole decoration, green brown glazed, medium sherd 2 finely gritted, oxidised with reduced core, roughly made straight sided jar, with splash glaze on top of rim, large and very small sherd 1 finely gritted, reduced green glaze, medium body sherd
3081	BF173	11	mid 13th-mid 15th century	1 splashed glaze finely gritted oxidised thickened rim, medium sherd 1 splashed glaze finely gritted oxidised body sherd 1 abraded Samian base, medium 1 abraded Ebor ware, small 4 moderately gritted reduced ware, small body sherds, green glaze, two have buff internal surface 1 glazed finely gritted oxidised applied thin strip with notched decoration, green brown glaze 1 gritty ware body sherd, small 1 glaze tile?
3082	BF172	45	2nd century intrusive mid 11th-12th century	3 Roman greyware with lattice decoration, small body sherds 1 BB ware, small and abraded 3 burnished greyware, small body sherds 1 Crambeck painted parchment ware, small body sherd 1 imported colour coated ware, white fine fabric, dark red colour on both surfaces, wavy vertical line and dot decoration, small body sherd 2 rusticated greyware, small body sherds 2 amphora, medium sherds 9 Ebor, scrap to small body sherds 1 Ebor, white slipped strap handle with central groove, small 1 Ebor white slipped scrap 1 Ebor base, small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				3 Samian small body sherds 1 Samian dish flanged rim, small 6 Samian, simple rolled rim, likely dish, small to medium 1 Samian, simple rolled rim with decoration on external surface, small 4 Samian, decorated body sherds, including stag, small to medium 1 finely gritted, reduced with red surfaces, hard fired, Roman, base, small 1 finely gritted, reduced with red slip on both surfaces, small body sherd 1 moderately gritted, oxidised splash ware base, buff/brown external surface with sooting on underside of base, medium 1 moderately gritted, oxidised fabric, small body sherds 1 Samian, base with footring, stamped internal: 'SILVI.....OF', large sherd
3084	BF171	6	mid 13th/mid 14th century	1 Samian, simple rolled rim of bowl/dish, decorated 1 calcite gritted jar rim, hooked and lid seating (Huncliffe type) (5th century), medium sherd 1 BB1 ware, small body sherd 1 scrap splash glaze 1 finely gritted, hard fired, reduced fabric with dark red internal surface, abraded medium sherd 1 gritty Brandsbury type, oxidised with reduced core, stripe of over fired green glaze on white slip, medium body sherd
3092	BF170	89	intrusive late 12th/early 13th century late 2nd/early 3rd century	2 colour coated, native, Colchester?, joining small body sherds 2 Samian bases, joining, with foot ring, decorated on underside of base, external, likely Dragendorff form, small to medium sherds 1 Samian rim, Dragendorff 36 form type with decoration on rim, bowl, Central Gaul region, 2nd centry, small sherd 1 Samian, Dragendorff bowl rim with moulded decoration, small sherd 1 Samian, carinated bowl rim, medium sherd 1 Samian, plain rim of saucer like platter, small sherd 2 Samian, simple rolled rim, one decorated, small sherds 5 Samian, decorated small body sherd 4 Samian, small body sherds 1 Roman white ware cup mouthed flagon rim, small 2 Roman white ware, mica dusted, small body sherds 2 Roman white ware, small body sherds 9 Roman greyware, small to medium body sherds

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				2 burnished greyware body sherds, medium 2 greyware everted jar rim, small to medium sherds 13 Ebor, small to medium body sherd, sooting on 4 external surface
				8 rusticated grey ware, small to medium body sherds 1 Roman greyware base, large sherd 3 burnished greyware base, small to medium sherds 1 BB ware dish rim with flange, small 1 BB ware everted jar rim, small 1 Ebor jar base, burnished and sooted on external surface, medium sherd 1 Roman reduced with white slip, small body sherd 1 Ebor flask? rim, flat topped with narrow opening, medium sherd 1 Ebor everted jar rim, sooting external and internal, medium 7 Ebor with red slip, small body sherds 1 Ebor tazze rim, single frill at rim, large sherd 1 finely gritted, oxidised splash ware handle with thumb imprint, intrusive? small
				3 Roman reeded rim bowl with grooves at neck, oxidised fabric, buff fabric with a light orange core, coarse clay pellets in matrix, slightly open fabric, rim and body sherds, small to large sherds 5 Ebor base, one complete with shallow foot ring, two joining, medium sherds 1 Ebor flagon rim, medium sherd 1 Roman beaker base, with finely gritted, reduced fabric with red slip on both surfaces, large sherd 2 Ebor jar base, joining, sooted on external surface, small to medium sherds

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3094	BF169	33	mid 13th-mid 14th century	1 finely gritted, reduced splash glaze rim, lid seated?, thumb impression on squared rim, small sherd 1 gritty ware small body sherd, sooting external 1 moderately gritted oxidised coarseware, small body sherd, sooting external 1 gritty ware base, medium sherd 1 moderately gritted, reduced coarseware, black fabric, buff external surface, base, small sherd 1 York glazed ware, scrap 2 Ebor, white slipped, small body sherds 1 Crambeck parchement ware, small body sherd 1 finely gritted oxidised with reduced core splash ware, rim of bowl?, glaze on both surfaces 14 finely gritted oxidised splash ware small body sherds 2 Ebor, abraded small to medium body sherds 1 finely gritted, reduced splash ware rim, small and abraded, green glaze on all surfaces 1 rusticated greyware, small body sherd 1 Ebor, white slipped with a reduced core, ring necked flagon rim, small 1 calcite gritted ware, small body sherd 2 moderately gritty, oxidised splash ware, small body sherds 1 shelly ware, small body sherd, abraded
3095	BF168	4	2nd century	1 rusticated greyware body sherd, small 2 Ebor red slipped, body sherd, small 1 finely gritted, oxidised ware, buff surfaces, rare calcite inclusions
3096	BF167	11	mid 14th/mid 15th century	1 shelly ware, small body sherd 1 finely gritted, reduced splash ware with green glaze, small body sherd 2 finely gritted, oxidised splash ware, brown and green brown glaze, small to medium body sherds 1 glazed waster, small 1 Walmgate jug handle and rim, strap handle with two thumb imprints, medium 2 gritty Brandsby type, one body sherd, one large strap handle and rim, medim sherds 1 York glazed ware, small body sherd 1 oxidised over fired waster, small 1 finely gritted, light reduced fabric, buff/brown fabric, over fired abraded glaze, medium body sherd

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3100	BF166	59	intrusive mid 12th/mid 13th century late 1st/early 2nd century	1 rusticated greyware, small body sherd 4 Ebor, small body sherds 1 York white ware, stamford type, green external glaze, roulletted thumb strip, vertical, small body sherd 2 burnished greyware, one with vertical line decoration, small body sherds 2 Roman finely gritted oxidised fabric, self slipped, sooting on external surface, small body sherds 9 amphora, oxidised fabric, pink internal, cream or white external, small to large body sherds 1 Roman greyware jar everted rim, small 1 greyware carinated bowl, legionary style, with reeded rim, (late 1st-early 2nd) 1 slight everted bowl rim, with rilling, medium sherd 3 Roman greyware body sherds, small 2 Roman finely gritted, hard fired reduced ware with dark red surfaces, body sherds, small to medium 6 Roman finely gritted, slightly open, oxidised fabric, sooting on external surface, small body sherds 2 Roman finely gritted, slightly open, oxidised fabric bases, sooting and burning on external surface of one, along with large calcite inclusions, other is abraded but some evidence of burnishing on external surface
				2 Samian decorated base, Dragendorff 37, decorated bowl (AD 70-230) 1 Samian base, partial makers stamp - '.....AS..ILE?', small sherd, abraded/chipped at? 1 Samian base, shallow foot ring, tiny part of makers stamp present, but unclear, medium sherd, abraded/chipped at? 4 Samian small plain rims, scrap to small sherds 3 Samian decorated rim sherds, Dragendorff 30, decorated bowl (AD 40-230), small to large sherds 4 Samian decorated rim sherds, Dragendorff 37, small sherds 2 plain body sherds, likely Dragendorff 27, plain cup (AD 50-150), small sherds 6 decorated body sherds, decoration includes helmetted soldier/gladiator, lion like animal and large palm plants, small to medium sherds 1 amphora, reduced, moderately gritted, open fabric, gritty on internal, smoothed on external, large body sherd
3101	BF165	6	1st-mid 3rd century	1 Roman greyware body sherd, small 1 Ebor, everted rim, small 4 Ebor, small body sherds

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3102	BF164	18	late 11th-late 12th century	1 Ebor, white slipped small body sherd 1 gritty ware, scrap 1 Samian bowl, small rim sherd 1 BB ware, small body sherd 1 Ebor bowl rim, medium sherd 2 Ebor small body sherd 4 moderatey gritted, oxidised fabric, two very abraded, small body sherds 1 finely gritted, oxidised with a reduced core splash ware base,medium sherd 1 finely gritted, oxidised with a reduced core splash ware medium body sherd 1 calcite gritted jar with hooked rim and lid seating (Huntcliff type), medium sherd 2 moderately gritted, oxidised kiln material? 2 finely gritted, oxidised kiln material?
3103	BF163	20	2nd century intrusive 12th century	1 splashed glaze, moderately gritted, oxidised, lightly reduced centre 3 Ebor cup base, join, sooting on internal 1 Ebor body sherd, medium 1 Ebor bowl rim, small 3 greyware body sherds, medium 2 Samian, decorated, abraded, small 9 black burnished pie dish bowl, joining sherds, small to large
3104	BF162	8	4th century late11th-mid 12th century	2 gritty ware, small body sherd 1 Crambeck ware jar rim, small sherd 1 Beverley ware, small 1 sandy oxidised fabric with burnished surface, Roman, small sherd 2 rusticated grey ware with oxidised core, join, small sherds 1 Gritty ware, medium body sherd
3105	BF161	22	late 1st/early 2nd century	1 large sherd Ebor mortarium, red slip, form ME 8 body sherds Ebor ware, small to medium 1 large sherd amphora 1 medium body sherd greyware 1 base greyware, small 1 rusticated greyware, small body sherd 1 thick walled Ebor ware, body sherd medium 1 Ebor rim, small 1 Samian rim, small 3 Ebor jar rim, join 2 Ebor with reduced core and white slip, small 1 Ebor shallow platter? evidence of burning

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3106	BF160	16	mid 13th/mid 14th century	1 abraded Samian, small 1 buff fabric black burnished ware, with lattice decoration 2 over fired finely gritted oxidised splash glazed ware, small body sherds 1 finely gritted oxidised splash glazed ware, small body sherd 2 oxidised moderately gritted coarsewares, small 1 rim of oxidised gritty ware, jar 1 Beverley Type 1 abraded base 1 finely gritted reduced splash glazed tile? glaze down one edge 1 Roman grey ware with buff sandy fabric, rim 1 Ebor, rim, small sherd 1 glazed gritty ware, yellow glaze, body sherd, small 1 Roman white ware rim, Manchetter-Harthill fabric?, small 1 moderately gritted, oxidised glazed ware, small 1 red sandy ware, brown glaze, slip on internal and along edges, small
3107	BF159	4	mid 13th/mid 14th century	1 Beverley type, light green glaze, small body sherd 3 reduced Beverley type ware jug body sherds, small
3109	BF158	7	late 2nd/late 3rd 12th century	1 burnished grey ware rolled rim pie dish 1 moderately gritted splashed glaze ware, rim 2 gritty ware, small sherds 1 buff fabric flagon rim, small and abraded 1 brown fabric rim, black glazed, overfired? 1 buff fabric body sherd, small Roman
3110	BF157	28	12th century	1 Ebor white slip base, small 1 abraded white ware, small 2 Roman calcite gritted jar rim, small to medium 5 oxidised splash glazed, body sherds, small 2 colour coated body sherds, small 1 small greyware 1 Ebor body sherd 1 York ware jar rim, medium 1 gritty ware jar rim, small 4 gritty ware body sherds, small 1 York ware jar base, small 5 abraded coarsely gritted splash glazed, oxidised with reduced core, small to medium sherds 1 base of hard, reduced, moderately gritted fabric, small 1 oxidised moderately gritted scrap 1 Ebor ware small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3112	BF80	62	2nd century	3 Samian cup ref. Hartley no. 27. 1st/mid 2nd century 4 rusticated greyware including small jar 1st/early 2nd century 1 burnished greyware 1 Samian with moulded decoration 8 greyware jar 2 Amphora 29 Ebor including bowl, small jar rim, scratched base 3 Ebor jar including rim, sooted 7 Ebor with white slip 1 pale ware with white surfaces, small 1 parchment type, small 1 burnt Ebor flagon base 1 Ebor industrial jar with hole pushed through base
3114	BF79	3	13th century	1 York glazed jug with reduced core and vertical comb and dot decoration 1 fine oxidised ware with degraded glaze over edge 1 reduced green glaze with copper spots
3116	BF78	6	late 11th/12th century	2 York ware, small sherds 4 oxidised with reduced core, splashed fabric unglazed
3117	BF77	1	late 3rd/early 4th century	1 calcite gritted jar rim
3119	BF76	2	1st-4th century	1 oxidised coarsely gritted scrap 1 burnished greyware rim
3126	BF75	5	12th century	4 greyware 1 splashed glazed ware strap handle with central groove
3130	BF74	6	12th century	1 burnished greyware rim 3 splashed wares with decayed glaze 1 burnished greyware with buff internal surface 1 buff ware with reduced core unglazed
3131	BF73	18	12th century	2 Ebor 8 oxidised splashed includes collared rimmed pitcher and jar rim 2 coarse reduced splash ware 1 coarse white splash ware, tiny 1 pale reduced splash ware 1 burnished greyware with lattice decoration 1 local coarse greyware rim 1 burnished greyware 1 greyware

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3132	BF72	81	intrusive 12th / early 13th century Late 1st - 3rd century	8 Samian, 5 bowl rims including 2 with moulded decoration and one carenated body sherd 1 fine Ebor bowl with carenated body 1 Ebor flagon rim with handle attachment 1 sandy Ebor bowl rim 1 Ebor flagon handle 1 Ebor flagon body, large 1 Ebor bowl rim 19 Ebor body sherds 2 Ebor red slip, small 1 Ebor red external, white internal slip 3 Ebor type jar rims 1 Ebor bowl base 1 Ebor bowl with thumbed flanged rim 1 Ebor white slip, medium 2 splash glazed, small 1 Ebor bowl base, medium
				1 colour coated, small 2 Ebor with reduced core, one of which is base 4 Ebor type, hard with reduced core 3 Mortaria with reduced core and oxidised surfaces with white grits small to very large sherds 3 rusticated greyware 4 Crambeck type jars, one with flat top rim 3 fine black burnished including jar rim and one with rouletting decoration 11 light grey ware jar 1 fine greyware not burnished 1 burnished greyware jar rim with flat top 1 fine white ware with sooted exterior 1 mortaria grey fabric and brown surfaces very large sherd 1 very narrow necked cylindrical body sherd, with reduced core, oxidised external margin and light brown surfaces over fired?
3140	BF71	23	mid 13th/early 14th century mid 13th/early 14th century with Roman	1 Late Brandsby with incised wavy line decoretion small 2 White gritty ware inc square rim. small & medium 4 Splashed ware inc 2 reduced with degraded glaze & 1 oxidised 1 kiln furniture / tile 1 Grey burnished with wide lattice medium 5 Roman oxidised surfaces , reduced core small to large 1 Roman Greyware large 1 Ebor with white slip small 3 Ebor small 1 Roman Greyware small 1 Rusticated very small 2 Yorkware inc rim, sooted smalll & medium

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
3142	BF70	18	Post-medieval 12th/13th century	1 Samian bowl base, partial stamp 'W'? 2 Ebor with white slip, small sherds 1 post-medieval earthenware strap handle with central groove and remnants of green brown glaze 1 splashed 2nd/waster with mottled green glaze, small sherd 1 over-fired Beverley type with matte purple external surface 1 over-fired Beverley-type, small sherd 1 Roman greyware jar rim 5 medieval red ware includes simple rounded rim possibly from Beverley area 2 over-fired splash ware 1 medieval moderately gritted with light green glaze 1 bowl with bifid rim, over fired, medieval 1 splashed fabric, no glaze
3143	BF69	1	mid 11th-mid 13th century	1 moderately gritted, oxidised Beverley type? small base, sooting
3144	BF68	1	12th century	1 small sandy Beverley type
3145	BF67	8	12th century	1 stamford glazed handle with central groove, small sherd 1 Beverley type part of base, with pre-firing hole 2 York ware type, small 4 coarse splash ware
7003	BF39	5	14th century	2 York Glazed, jug, medium sherds 1 Humber type, medium sherd 1 purple glazed with oxidised fabric, small 1 white gritty, sooted, small
7005	BF40	2	mid- 17th century	2 early black glazed ware, joining, cup, medium to large sherds
7008	BF46	5	12th century	1 Splash glaze ware with moderately gritted white fabric, small 1 Ebor, small sherd 1 Roman coarseware with lightly oxidised fabric with white external margin and surface, small and abraded 1 black burnished ware, bowl rim, small 1 sandy Ebor, small
7009	BF47	11	2nd century	6 Amphora, medium to large sherds 2 Samian, small 1 Ebor flanged rim possibly from Mortaria, small 1 burnished greyware with narrow lattice decoration, medium 1 greyware jar S-shaped rim, large
7010	BF48	4	late 3rd/4th century	3 Crambeck parchment, small 1 Crambeck small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
7010	BF961	3	Late 2nd/early 3rd century	**>8mm <1>** 3 Ebor, small and scraps
7011	BF49	7	Late 3rd/4th century	3 Samian bowl, pedestal base, abraded, small 3 Crambeck grey, small and abraded 1 parchment Crambeck, small and abraded
7012	BF50	2	2nd century	2 Samian, plain, small, one simple rim
8002	BF589	2	16th century	2 Cistercian handles from drinking vessels. Medium sized sherds
8024	BF590	1	Late 14th/early 15th century	1 Hambleton. Small sherd
8054	BF591	1	2nd/3rd century	1 Roman Grey ware. Medium sized sherd
8058	BF592	2	2nd/3rd century	2 Roman Grey ware. Medium sized sherd
8067	BF593	1	Late 16th to early 18th century	1 Ryedale type. Large sherd
8069	BF594	10	2nd century	1 Ebor mortaria. Medium sized sherd 1 Ebor white slipped. Small sherd 1 Amphora. Medium sized sherd 1 Grey ware. Small sherd 1 Grey ware jar with rolled and hooked rim Large 3 Rusticated fine jar including two adjoining rim sherds. Small 2 Black Burnished type 1. Fine walled. Small
8070	BF380	3	2nd century	3 Samian including one with moulded decoration and one plain carinated. Small abraded sherds
8071	BF381	11	2nd century	2 Ebor flagon with white slip and lower handle scar. Medium sized sherds 1 Ebor with concretion on both surfaces. Medium sized sherd 1 Colour Coated beaker with rough cast external surface. Small 7 Samian including bowl with rolled rim. Small. Abraded
8072	BF382	32	Late 2nd century	2 Amphora. Large 8 Samian including 2 adjoining bowl rolled rims. Small, Abraded 4 Ebor with white slip flagon. Small to large 1 Ebor with white slip bowl with simple inturned rim.Small 1 White ware. Small 1 Ebor with white slip and external concretion. Small 3 Ebor mortaria with white slip decoration including large rim 1 Ebor with white slip. Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 Grey burnished jar rim with rows of fine horizontal rouletting and rib on shoulder. Medium
				3 Colour Coated with rough cast surfaces. Small 5 Grey burnished ware with light core similar to Crambeck types but coarser. Small 2 Grey ware jar including flat everted rim. Large.
8075	BF383	11	2nd century	1 Ebor with white slip flagon rim and neck. Large 3 Ebor with white slip. Small 2 Ebor. Small 2 Samian bowl with simple rolled rim. Small 1 Grey burnished with fine walls. Small 2 Grey coarse burnished including rim
8076	BF384	3	2nd century	1 Ebor. Small sherd 1 Samian. Medium sherd 1 Burnished beaker rim and shoulder with feint horizontal rouletting. Medium sized sherd
9252	BF295	4	12th century and late 1st/early 2nd century	**Pile 25 4.5-5m** 1 rusticated greyware, jar rim, large sherd (late 1st/2nd century) 1 local greyware jar base, medium sherd 1 Ebor with external red slip, medium sherd (late 1st/2nd century) 1 gritty ware, medium sherd
9262	BF296	2	Late 1st/early 2nd century	**Pile 26 5m** 1 Samian, rim, small 1 Ebor type, high fired, jar rim, small
9332	BF297	2	2nd century	**Pile 33 4-6m** 2 Samian bowl base, small
9412	BF298	2	mid- 2nd/mid- 3rd century	**Pile 41 4m** 1 Ebor, small 1 colour coated, with rouletted decoration, small
9462	BF301	1	late 1st/2nd century	**Pile 46 3-7m** 1 Samian cup base, fine, medium sherd
9471	BF299	5	late 14th century + late 14th century + with Roman	**Pile 47 3-7m** 1 purple glazed, large 1 Samian, with rouletting decoration, medium sherd 1 Ebor tazze, medium sherd 2 African red slip ware type including rim, with rouletting decoration, large (3rd/4th century)
9492	BF300	7	12th century	**Pile 49 7-9m** 3 Samian, one decorated, medium sherds 1 Ebor tazze rim, large sherd 1 Ebor, small 1 Roman oxidised, medium sherd 1 Splash ware, oxidised, medium sherd

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
9605	BF988	1	Late 16th to early 18th century	**BH1c 0.92m** 1 Ryedale straight sided jar with typical external rib at rim and internal glaze extending over the rim, sooted, large.
9606	BF989	6	Early Roman	**ES18 BH1C 2.20-64 >8mm** 1 Samian with moulded decoration, abraded, medium 5 Ebor with white slip, small to medium
9607	BF990	7	Late 12th/early 13th century with Anglo Scandinav	**ES19 BH1C >8mm** 1 York Glazed jug, medium 1 Gritty, small 1 Ebor with white slip, scrap 1 York ware type, small 2 coarsely gritted with chalk inclusions, small 1 Grey Burnished, small
9618	BF992	6	2nd/3rd century	**ES17 BH2 >8mm** 1 Ebor, small 3 Beverley Type 1 ware, splashed including 2 rims 1 Colour Coated, small 1 Coarse ware scrap
9618	BF991	1	Roman	**BH2 (3.44m)**, 1 fine sandy red ware with black burnished external surface, small
9620	BF996	7	Roman with intrusive medieval	**ES16 BH2 3.58-3.88m** 1 Ebor, scrap 3 White ware scraps 1 Grey ware rim, medium 1 York Glazed scrap 1 Colour Coated with oxidised fabric, small
9620	BF994	1	13th century	**BH2 <34> <8mm** 1 York Glazed/Brandsby scrap
9620	BF995	3	Roman	**BH2 <36>** 1 Ebor, sooted, small 2 coarse ware scraps
9620	BF993	1	Roman	**BH2 (4.18m),** 1 coarsely gritted Roman coarse ware lower wall and edge of base with lightly reduced core and buff/pink surfaces, small
9622	BF998	1	Late 11th/12th century	**BH2 <37> <8mm** 1 Splashed ware with reduced core and oxidised margins and sparse chalk inclusions, small
9627	BF999	1	Roman	**BH3 (2.68m)**, 1 Roman Grey ware, small.

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
9628	BF1000	1	Medieval & Roman	**BH3 <32> <2mm** 1 Glazed scrap
9628	BF1023	4	Roman and medieval	**BH3 <32> <8mm** 1 Grey Burnished, medium 2 Splashed, small 1 Ceramic Building material, large
9631	BF1024	2	Medieval	**BH3 <33> 4-8mm** 2 coarse ware scraps
9631	BF1001	5	12th century	**BH3 <33> <8mm** 3 coarse ware, small and medium 1 Splashed, small 1 Gritty ware, small
9633	BF1025	1	Post medieval	**BH3 <43> <2mm** 1 brown glazed scrap
9633	BF1003	2	late 12th/ early 13th century	B**H3 <28> <8mm** 1 Splashed reduced ware, small 1 Coarsely gritted, small
9633	BF1006	6	Roman	**BH3 <38> <8mm** 6 scraps including Grey Burnished, coarse and oxidised wares
9633	BF1005	6	Roman	**BH3 (7.52m)** 3 Ebor, small 2 Grey ware, small 1 Black Burnished, small
9633	BF1004	2	Post Medieval plus Roman	**BH3 <43> <8mm** 1 Grey Burnished ware, medium 1 coarse ware scrap
9637	BF1016	3	12th century	**BH3 <27> <8mm** 1 Splashed reduced, small 1 Grey Burnished, small 1 Gritty ware, small
9639	BF1007	4	Medieval and Roman	**ES20 BH4 2.47-3.28m >8mm** 1 Gritty, medium 1 oxidised coarse, scrp 1 Samian scrap 1 Burnished scrap

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
9642	BF1009	9	Roman	**ES <22> BH4 4-4.60m >8mm-4mm** 1 Colour Coated, scrap 1 White scrap1 Gritty, very small 2 Ebor type, small 1 Gritty 1 coarse oxidised with calcitic inclusion, very small 3 Grey,very small
9642	BF1008	2	Medieval	**ES<21> BH4 3.59-4mm >8mm** 1 York type ware, scrap 1 Grey ware scrap
9643	BF1010	3	12th/13th century and Roman residual	**BH4 <23> <8mm** 1 Reduced Green Glazed, small 1 Roman scrap 1 York ware type, small
9643	BF1026	1	Late 1st/2nd century	**BH4 <23> 4-8mm** 1 Samian scrap
9655	BF1011	1	Roman	B**H5B <31> 4-8mm** 1 Samian scrap
9657	BF1012	1	Roman	**BH6 <45> <8mm** 1 Grey coarse ware, small
9657	BF1013	2	Roman	**BH6 2.40** 2 Buff ware, small
19000	BF385	24	16th century, medieval and Roman	1 Cistercian drinking vessel with upper handle and ribbed upper body.Probably part of atwo handled cup (Brears Type 4 or 14) Medium 1 Cistercian drinking vessel with upper handle and ribbed upper body.Probably part of a tall two handled beaker (Brears Type 3) Medium. 1 post medieval earthen ware bowl with chestut glaze inside only. Large 1 Early York Glazed with copper coloured flecks. Small 1 Early York Glazed unglazed lower wall. Lightly sooted. Small 3 Roman White ware parchment type. Small 2 Roman buff/white ware. Small and large 1 Samianwith moulded decoration. Small. Abraded 1 Walmgate type drinking jug handle. Medium 1 Ebor flagon handle. Medium 2 Stamford unglazed jar rim. Small 6 Roman Grey. Small and medium 2 Hambleton. Small and medium 1 Colour Coated with pinkish fabric, shiny surface and rib. Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19001	BF386	26	Late 16th/early 18th century with Roman and mediev	3 York Glazed adjoining jug base with thumb indentations extending below the base to form a small foot. Medium 3 Ebor with white slip. Small 1 post medieval earthenware with buff fabric yellow and dark green glaze. Medium 1 York Glazed jug with rilled neck. Small 1 Roman Grey burnished ware jar base. Large 7 Ebor including ribbed sherds, one sooted. Small to large 1 Amphora. Large 1 Rusticated Grey ware. Small 1 Ryedale type base with internal glaze. Large 1 Black birnished 1 Crambeck Grey with fine walls. Large 4 Roman Grey with fine walls including a flat rimmed jar. Small 1 Cistercian/early Black ware bowl rim with fine shiny black glaze
19003	BF387	1	Late 13th/early 14th century	1 Brandsby. Small
19004	BF388	12	14th century	2 Ebor including one sooted. Small 4 Splashed ware with fine fabric with reduced core and .oxidised margins. Small 6 Finely gritted medieval jug with reduced fabric, green glaze and rows of roller stamped squares. Possibly from the Humber or North East. Small to large
19006	BF389	40	Late 2nd/early 3rd century CHK	1 fine white ware bowl base profile with pedestal footring. Large 1 Ebor fine burnished mortaria with band of white slip along rim and thinner line ibelow rim inside. Large 1 Rusticated Grey ware. Small 2 Grey ware with similar fabric to Rusticated ware. Small 1 Amphora. Large 13 Ebor. Small 3 Samian. Small. Abraded 3 Rusticated fine ware. Small 1 Black Burnished rim. Small 2 Grey ware with whitish slip. Small 10 Grey ware jar. Small to large 1 Grey burnished rim similar to BB1 above. Small 1 BB2. Small
19007	BF390	6	Late 2nd/early 3rd century	1 Samian with moulded wavy line decoration and horizontal rib. Small 2 Ebor white slipped including bowl rim. Small 1 Grey ware with slip/concretion inside. Small 1 Grey burnished jar base. Small 1 Grey ware. Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19008	BF391	7	Late 17th/early 18th century	1 post medieval Slip ware moulded bowl with feathered decoration. Large 1 post medieval earthenware with light green brown internal glaze. Large 1 later medieval/post medieval earthenware with reduced fabric, wide white external margin and dark green glaze. Large. Possible source in the North East 1 Grey ware. Large 1 Grey burnished. Small 1 Roman oxidised ware. Large 1 miscellaneous oxidised rim with row of stamped triangular indentations decorating the rim edge. Small
19009	BF392	7	Late 14th/early 15th century	2 Hambleton oxidised jar rim and handle. Small and large 1 Ebor. Small 3 Ebor white slip. Small 1 Ebor type CBM. Medium. Abraded
19011	BF393	7	12th/13th century and Roman	2 Green glazed white ware jug including rim and upper handle join. Possibly Roman 3rd century 1 Terra Sigillata. Small. Abraded 2 Ebor with sandy fabric. Burnt. Smallo, Abraded 1 Splashed ware. Small. Abraded 1 Roman coarse ware. Small. Abraded
19012	BF394	17	16th/17th century with 12th/13th and Roman	2 White ware flagon. Medium 1 Splashed ware with fine oxidised fabric. Small 1 Yellow glazed buff ware. Small 1 Splashed ware with pale reduced moderately gritted fabric. Large 1 Ebor with ine walls. Medium 2 Black Burnished type 2 rim. Small. Abraded 1 Oxidised ware beaker rim with white slip and fine walled with white slip and incised horizontal lines 3 Grey small 3 Grey burnished. Small 1 Roman coarse white ware. Medium 1 Splashed coarsely gritted oxidised ware. Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19020	BF395	26	Late 16th to early 17th century with Roman.	1 Cistercian small 1 Tin Glazed, small 1 Purple glazed small 1 Ryedale base, medium 1 Ryedale, straight sided jar rim with lid seat, small 1 Post Medieval Reduced Earthenware with external light green glaze, large 1 Post Medieval Oxidised Earthenware with external dark green glaze and ribs, medium 1 Ebor bowl base with white wavy line decoration on upper surface and white slip on external surface, medium 1 Roman Roughcast, very small 1 Roman White ware ,small 1 English Stoneware Frechen copy, small 1 Post-medieval Oxidised Earthen ware with light green brown glaze, small
				3 Samian including rim with carinated body, 1 base, 1 moulded with part of human figure and roundel with anthropomorphic decoration, small 2 Grey ware with narrow lattice and fine walls, small 1 Grey ware flagon handle, medium 1 Ebor with white slip, small 1 Ebor bowl base, small 1 Roman oxidised ware, small 1 Grey ware jar, medium 1 Grey Burnished, small 1 Grey ware with incised lines, small 1 Black Burnished jar rim, small 1 Roman Oxidised war with reduced surfaces, small
19022	BF396	8	Late 16th to early 18th centuryand Roman	1 Grey ware. Large 1 Reduced green glazed. Large 1 Roman Grey burnished. Small 1 post medieval earthenware thick rounded rim and light green glaze inside. Medium 2 Post med 2 Roman
19023	BF397	1	Late Roman	1 Calcite gritted. Small. Abraded
19031	BF398	4	Late 12th/early 13th century	3 moderately gritted oxidised ware bowl with square rim. Small to medium 1 miscellaneous oxidised flake. Small. Abraded
19033	BF399	3	Late 16th to early 18th century, medieval and Roma	1 Ryedale type with internal olive green glaze external sooting, large 1 Roman oxidised, sootes small 1 Roman reduced small
19034	BF400	1	Roman	1 Grey ware. Sooted. Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19035	BF1018	7	Roman	1 Ryedale small 2 Roman coarseware , sooted small 1 Colour coated with white fabric and rouletting small 3 greyware inc rim small
19039	BF402	1	Unknown	1 lightly oxidised fine ware. Large
19040	BF831	7	Anglo-Scandinavian/early medieval and early 2nd c	2 Shelley ware rim, medium 2 White ware. Large 2 Ebor mortaria including base. Medium and large 1 Rusticated. Medium
19041	BF403	4	Late 2nd/early 3rd century	2 Grey burnished. Small 1 Grey jar with incised horizontal line. Large 1 Ebor with white slip
19042	BF404	1	Mid/late 2nd century	1 Ebor flagon body with patches of white slip inside. Large
19047	BF405	3	Mid to late 2nd century	1 Ebor with white slip. Large 1 White ware with fine walls. Medium 1 Ebor type with white slipinside and external sooting. Small
19048	BF406	4	Early 2nd century	2 Samian. One with straight sides and one with curved wall. Small. Abraded 1 Grey burnished fine ware. Medium 1 Rusticated. Small
19050	BF832	5	Late 1st/early 2nd century	1 Samian with moulded decoration. Large 1 Black burnished type 2. Fine walled. 1 Ebor. Medium 1 Rusticated. Small 1 Ebor lid with soot over edge. Small
19054	BF407	4	Roman	1 Grey burnished ware jar base with white Crambeck type core. Large 1 Ebor. Small 1 Ebor type bowl with bifid upper rim surface and grey burnished internal surface. Medium 1 Ebor mortaria. Large

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19055	BF408	15	Late 12th/early 13th and Roman	1 Samian bowl with moulded decoration similar to [19050] but doesnt't join. Medium 1 Roman White ware with sandy fabric. Small 3 Splashed ware with fine oxidised fabric. Small 1 York Glazed with copper flecked shiny yellow glaze. Small 1 Ebor with white slip. Small 1 medieval Gritty ware with fine walls and squared rim. Sooted externally. Medium 1 coarsely grittede white ware. Small. Abraded 1 Splashed ware base with fine oxidised fabric and reduced core. Unglazed. Medium 1 Beverley Type 1 ware with splashed glaze, small 1 York ware with patchy soot externally. Small 1 Black Burnished type 2 fine walled. Small 1 Black Burnished type 2 pie dish rim. Medium 1 Ebor type base with fine walls. Small
19058	BF409	21	Mid 3rd century	3 NVCC jndented beaker with vertical applied thumbed strips join. Large and small 2 NVCC ?indented beaker with oxidised fabric and slip. Small 1 Ebor flagon with white slip. Small 1 Ebor bowl with white slip outside and painted strip inside. Small 4 Crambeck type beaker 3 Grey ware including one burnished. Small 1 Ebor. Small 1 Burnished ribbed. Small 5 Grey burnished. Small
19061	BF833	5	Late 1st/early 2nd century	2 Samian. Small. Abraded 1 Ebor. Small 2 Grey. Small. Abraded
19063	BF410	6	Mid 2nd century	1 Samian base. Small 2 Ebor with white slip. Small 1 Stamford unglazed type jar rim. Sooted on the outside and over the inside of the rim. Medium 1 Black Burnished type 2 with white concretion. Small 1 Grey ware.with white concretion. Small
19064	BF834	3	19th century and Roman	1 Pearl ware with blue ribbed band. Small 2 Ebor type. Small
19067	BF835	6	Medieval and late 1st/early 2nd century	1 Oxidised sandy ware with squared rim. Small 1 Ebor sandy with white slip. Small 1 Stamford unglazed type. Small 1 White ware flagon with very lightly oxidised fabric. Large 1 Samian. Medium 1 Ebor rim. Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19070	BF411	20	Late 12th/early 13th century but mainly Roman - La	1 Ebor including large flat flange rim with three ribs separated by two incised lines. Large 1 Ebor small flat flanged rim, Small 1 Samian. Medium 1 Dales type base. Large 1 Oxidised sandy ware with reduced core. Small 2 Splashed ware with moderately gritted oxidised fabric. Large 1 Ebor with white slip. Medium 1 NVCC INDENTED BEAKER. sMALL 1 Ebor flagon handle with white slip. Large 1 Black Burnished type 2. Very small 1 Ebor with white slip. Burnt, Small 1 NVCC indented beaker with oxidised fabric and slip 2 Stamford unglazed including sooted rim. Small and medium 1 fine Grey ware with line of raised applied dots. Import? CHK 1 Splashed oxidised fabric unglazed. Small 2 Grey burnished. Small 1 York ware. Small
19071	BF412	2	Unknown	1 Ebor with white slip and fine walls. Very small 1 overfired with reduced body.and white concretion on surfaces. Very small
19074	BF836	12	2nd century	1 Samian bowl base. Small. Worn 1 Samian rim. Very small. Abraded 1 Ebor with fine burnished surface. Small 1 Ebor with white slip. Very small 2 Ebor with white slip. Small. Abraded 1 fine Grey jar base. Large 1 Ebor with fine walls. Sooted. Medium 1 fine Grey. Very small 2 BB 2 type with fine horizontal lines 1 Medieval glazed small
19075	BF413	10	Late 11th/12th century with Roman	1 Splashed ware with moderately gritted oxidised fabric. Large 1 NVCC beaker with oxidised fabric and black slip. Small 1 Ebor rim with white slip. Small 2 Fine light Grey fabric jar 'S' shaped; shaped with high shoulder and inward sloping rim joins. ?Import. Small and large. 4 Grey ware. Small to large 1 White Gritty ware. Sooted. Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19075	BF939	31	Roman and 11th century>8m	**<24> >8mm** 7 Ebor type, very small 1Colour Coated scrap 2 Calcite Gritted, small 1 Calcite and vessicular, medium 3 York ware rim, small 1 'd' small 1 Oxidised with reduced core, small 5 Colour Coated, very small 1 Shelly scrap 9 Roman scraps
19081	BF414	13	Late 2nd/early 3rd century	5 Dales type. Small to large 2 NVCC with white slip and black slip. Small 1 Oxidised ware with black core. Small 5 Grey burnished including a small everted rim and a base. Small and medium.
19083	BF774	1	Early 3rd century+	1 Black Burnished type 2 with wide lattice decoration. Large
19084	BF775	30	Late 12th/early 13th century	2 Shelly Anglo-Scandinavian or medieval. Medium 1 North Yorkshire oxidised green glazed jug with incised wavy line decoration. Large 1 York Glazed ware. Small 6 medieval Gritty ware with buff fabric. Some lightly sooted. Small 1 Stamford unglazed. Some sooting. Small 1 Splashed with moderately gritted oxidised body. Ribbed. Medium 1 Splashed with coarsely gritted oxidised body. Medium 1 Splashed with finely gritted oxidised body. Small 1 medieval North Yorkshire type with oxidised fabric and yellow glaze with brown flecks. Small 2 York ware. Small 8 Splashed oxidised fabric unglazed. Small 3 Splashed with moderately gritted oxidised body1 micaceous stone. Small 1 Splashed with coarsely gritted oxidised body. Small 1 Grey. Large
19085	BF415	4	Roman or later	1 Samian simple rolled rim. Large 1 Samian with rib. Very small 1 Green Glazed Roman type with ribbed decoration and concretion inside. Small 1 Grey with concretion inside. Very small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19087	BF416	8	3rd century CHK	1 Grey ware. Large 1 Ebor. Small 1 Oxidised sandy ware rim. Soot on rim. Medium 1 Calcite gritted rim. Medium 1 Black Burnished type 1 rim. Medium 1 Grey ware base. Medium 2 fine Black Burnished. Medium
19088	BF417	5	Late 12th/early 13th century and Roman late 2nd ce	1 Splashed ware with fine reduced fabric. Very small 1 Ebor flagon handle. Large 1 Black Burnished. Small 2 Grey ware. Small and large
19090	BF418	21	Late 2nd/early 3rd century	1 Amphora. Large 2 Ebor with white slip. Small 1 Ebor. Small 2 Samian including one with moulded decoration. Small. Abraded 1 Black Burnished type 2. Medium 2 Grey. Small 1 Ebor with white slip. Medium 2 Samian bowl rim join with internal incised horizontal line. Medium 1 Samian with simple rim and straight inward leaning sides. Large 1 Black Burnished type 1 rim. Medium 2 Black Burnished type 2. Very small 1 Grey. Very small 1 Rusticated. Very small 3 Ebor with white slip and fine walls. Very small
19091	BF776	1	2nd century	1 Ebor flagon with white slip. Small
19092	BF419	22	Late 2nd century	3 Samian with moulded decoration. Small. Abraded 1 Splashed ware with moderately gritted oxidised body. Large 1 Stamford unglazedwith external sooteng. Large 1 Grey burnished. Very small 1 Black Burnished pie dish rim. Very small 4 Ebor. Very small 3 White ware flagon including a handle with three ribs. Small and Medium 1 Samian. Small. Abraded 1 Ebor. Small 1 Ebor mortaria. Medium. Very abraded 3 Black Burnished type 2 including one rim. Small 1 Grey flake. Small 1 coarsely gritted Grey ware. Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19093	BF420	39	Late 2nd century	2 Amphora. Large 4 Ebor with white slip and fine walls. Large and small 13 Ebor with white slip. Small to large 1 Ebor base. Medium. Very abraded 1 Ebor rim with fine walls and small rib inside the top of the rim. Small 1 NVCC beaker with roughcast surface and oxidised fabric. Small 4 BB type 2. Small to large 7 Grey including burnished jar base. Medium 1 Amphora. Large 2 Ebor including large sandy rim. Large 1 Oxidised Ebor type rim with black burnished external surface. Medium 1 Black Burnished. Small. Abraded 1 Grey burnished with lattice decoration. Small
19094	BF421	9	Late 12th/early 13th century with Roman late 2nd c	1 Splashed ware with coarse reduced fabric. Small 1 York ware type with similar fabric to coarse reduced Splashed ware. Small 1 Ebor with rusticated surface. Small 1 Ebor burnished. Very small 2 Ebor sooted. Small and medium 1 Black Burnished type 2. Medium 1 Grey. Small 1 unglazed Splashed ware type with coarse reduced fabric
19096	BF422	46	Late 2nd/early 3rd century	1 Ebor mortaria rim with white slip along the upper surface. Very large 1 Ebor large form with white slip. Large 2 Amphora with oxidised fabric and white slip. Large 1 NVCC with roughcast surface and oxidised fabric. Small 4 Ebor with white slip. Small to large 1 Ebor flagon handle. Medium 4 Ebor. Small 2 Samian including one carinated and one moulded sherd. Small 5 Oxidised ?flagon. Small and medium (2 bone rib. Small) 1 Oxidised flagon handle with reduced core. Medium

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				1 NVCC with white fabric and dark slip. Small 1 coarse white ware. Small 2 Grey burnished rim join. Large 1 Grey burnished base. Medium 1 Grey burnished. Large 1 Grey burnished rim. Large 1 B4 or B7 base with oxidised core. Medium 3 BB type 1 rim. Small and medium 1 BB1. Small 1 BB 1 carinated with narrow lattice decoration 1 Grey burnished with white inner surface. Small 7 Grey including rim and base. Small to medium 2 BB2 type. Small. Burnt 1 fine Grey. Burnt. Small
19097	BF423	30	Late 2nd century	2 Ebor flagon with white slip. Neck and handle join. Large 2 Ebor flagon body with white slip. Large 1 Ebor mortaria rim with white slip. Neck and handle join. Large 1 Ebor flagon neck with white slip. Very small 1 Ebor flagon base with drip of white slip inside. Medium 2 Ebor mortaria rim. Large 2 Ebor type roughcast. Small 4 Ebor. Small 1 Rusticated. Small 2 Grey jar. Small and large 1 NVCC with horizontal rouletting. Small 4 Grey burnished with wide lattice decoration. Medium 2 Grey burnished with lattice decoration. Small 1 Rusticated. Small 1 Black Burnished type 2. Medium 1 Crambeck type. Small 1 Black Burnished rim. Medium 1 Black Burnished. Small
19098	BF778	8	Late 2nd century	2 Black Burnished type 2 rims. Small 1 Ebor mortaria. Small 1 Ebor fine. Small 1 Samian rim with moulded decoration. Medium 2 Ebor with white slip. Small 1 Grey. Small.
19099	BF424	2	Late 2nd century	1 White ware.Small 1 Grey. Large

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19100	BF425	6	Late 12th/early 13th century and Roman late 2nd/ea	1 Splashed ware with moderately gritted oxidised fabric and lightly reduced core. Small 1 Ebor bowl with late sandy thick everted flat flange rim with sandy fabric. Large 1 Gritty ware with reduced core. Small 1 Splashed fabric unglazed. Medium 1 BB1. Small 1 BB 2. Small
19102	BF777	4	Late 2nd/early 3rd century	2 Ebor including one base. Small and medium 1 Black Burnished type 1. Abraded 1 Grey. Small. Abraded
19103	BF426	8	Late 2nd//early 3rd century	1 Oxidised burnished rim from a small vessel. The fabric is similar to B4 or B7 (Monaghan 1997) 3 Grey. Small 1 Oxidised Ebor type rim with traces of white slip. 1 Amphora. Large 1 Dales type. Small 1 Ebor. Small
19104	BF427	20	Late 2nd/early 3rd century	2 Amphora. Large 2 Ebor mortaria rim. Large 1 fine Grey with sooted external surface. Small 1 Samian with moulded decoration. Small. Abraded 1 coarse ware. Small 5 NVCC . Small. Abraded 3 Ebor with white slip. Small 1 Ebor. Medium 3 Grey. Small. Abraded 1 NVCC with white fabric and dark slip. Small. Abraded Mostly abraded apart from Amphora and mortaria
19105	BF428	10	Late 11th/12th century and Late 2nd century	2 White Gritty ware with classic square rim and fine hard fabric. Small 3 Stamford unglazed. Patch of sopot on outside. Small 1 Ebor with white slip. Small 1 White Gritty type sooted base. Small 1 Grey burnished rim. Medium 1 Ebor with traces of white slip and soot Large 1 York ware. Small
19107	BF429	14	11th century and late 2nd century	6 Ebor with white slip. Small to large 1 Ebor mortaria. Small. Abraded 1 Ebor. Small 1 Oxidised ware with grey surfaces. Small 1 Ebor with white slip and thumbed frill. Tazza or candlestick. Burnt inside and over the rim. Medium 1 Ebor with white slip. Burnt. Small 1 Grey ware squared rim with brown surfaces. Medium

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
				2 Stamford unglazed type. Sooted external surfaces. Small
19107	BF940	27	11th century and Roman	**<26> >8mm** 3 Samian scraps 1 Splashed Glazed ware with white gritty fabric 1 Grey with oxidised surfaces, small 6 Ebor with white slip 2 'd' type, sooted, medium 1 Grey ware jar base, large 1 fine Grey ware jar rim, large 7 Oxidised, small 2 Grey Burnished, small 3 Grey, small
19110	BF779	7	Late 11th/12th century and late 2nd/early 3rd cent	1 oxidised Gritty ware rim. Medium 1 Ebor type. Small 1 NVCC. Small. Abraded 1 Stamford unglazed. Small 1 White Gritty. Medium 1 Grey. Small 1 Grey with dark core and light margins. Small
19112	BF431	29	Late 3rd century	1 Ebor flagon base. Medium 11 Ebor white slip and concretion. Small to large 2 Ebor bowl rims from two seperate vesels.Large 1 Samian. Small 2 Calcite gritted including typical lid-seated rim. Large 1 Calcite gritted. Small 5 Oxidised with reduced core and sparse calcite Sooted. Small to medium 1 Black Burnished rim. Small 1 Calcite gritted with sparse grits. Small 1 Ebor type with sandy fabric. Burnt external surface. Small 2 Grey. Small to medium 1 Grey burnished. Small
19113	BF432	7	11th century and 2nd century	1 Samian base. Complete.Stamp [OSFSG] or similar. Mesium 2 Grey. Small 1 Ebor with sandy fabric. Medium 2 Ebor with white slip. Small and large 1 Stamford unglazed type. Medium
19114	BF780	8	3rd century	4 Ebor and base with footring. Small bowl rim Large and small 1 Rusticated. Medium 2 Grey. Small and large 1 Calcite gritted rim. Burnt. Small. Abraded

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19115	BF781	17	Late 2nd/early 3rd century	6 Samian including 3 rims join. Small to medium 1 NVCC beaker with white fabric and dark slip. Large 6 Ebor including white slipped and burnished including footring 2 Amphora. Large 1 Grey. Large 1 Grey burnished. Small .
19116	BF433	1	Late 2nd/early 3rd century	1 Grey burnished rim. Small
19122	BF782	9	Late 2nd/early 3rd centuey	4 Ebor including white slipped. Small to medium 1 Samian. Small 1 Rusticated. Small 2 Grey burnished rim join. Brown surfaces and hard fabric. Small 1 Grey burnished. Small
19122	BF941	12	Late 2nd/early 3rd	**<46> >8mm** 3 Ebor small, medium 1 White ware, small 4 Greyware small, medium 2 Grey Burnished ware small 1 Oxidised small 1 Samian scrap
19124	BF783	9	Late 2nd/early 3rd century	6 Ebor including base with footring. Small to medium 1 B4 or B7. Small 2 Grey burnished including base. Small
19124	BF942	12	3rd century	**SN47** 4 Ebor small 1 Calcite gritted very small 3 Lightly Oxidised very small 2 Greyware small 2 Grey burnished very small
19126	BF784	11	Late 11th/12th century and 3rd century	2 Ebor type with white slip. Small and medium 1 Ebor. Small 2 White Gritty. Small and medium 2 Stamford unglazed. Small 1 Grey flagon or jug handle. Medium 1 Calcite gritted. Small. Abraded 1 BB4 or BB7. Small 1 Gritty ware. Sooted. Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19128	BF785	9	Late 11th century and late 2nd/early 3rd century	1 Amphorahandle. Large 1 White Gritty ware. Small 1 Ebor flagon with white painted bands around the body. Large 1 Oxidised ware with light brown thin wash inside. Small 2 Grey. Small 2 Grey burnished. Small 1 Miscellaneous with flecks of shell and thick walls. Small
19131	BF786	21	Late 12th/early 13th century and Roman	2 Amphora. Large 1 Splashed ware with fine oxidised fabric. Large 1 Ebor rusticated. Small 1 Gritty ware rim. Medium 1 Ebor with white slip. Very small 2 Splashed ware with coarse reduced fabric and applied strip. Large 3 Splashed ware fabric unglazed. Small 2 .Splashed ware with coarse reduced fabric unglazed. Small 4 Grey burnished. Small 2 Oxidised ware with reduced surfaces. Small 2 Ebor with white slip. Medium
19133	BF787	10	Late 12th/early 13th century and late 2nd/early 3r	2 Samian rim and base. Large and small 1 medieval green glazed with reduced core and oxidised internal margin. Medium 1 NVCC rim with thick wall white fabric and dark slip. Medium 1 Splashed ware handle with reduced fine fabric and oxidised surfaces. Medium 1 Amphora. Large. Abraded 1 York ware type. Small 1 Oxidised ware. Sooted. Small 1 Grey ware rim. Small. Abraded 1 Oxidised fine sandy ware. Small
19134	BF788	8	Late 11th/12th century and 2nd century	1 Splashed pitcher rim and spout. Large. Draw 1 Amphora. Large 1 Ebor with white slip. Medium 1 Oxidised ware folded hard clay vessel. Slightly distorted. Large 1 White Gritty ware. Sooted externally. Small 1 Cistercian. Very small 1 Medieval 1 Post-med

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19135	BF789	10	Late 12th/early 13th century with late 2nd/early 3	1 Samian with moulded decoration. Medium. Abraded 1 Splashed ware with moderately gritted reduced fabric and applied strip. Very small 1 Ebor with white slip. Small 1 Splashed ware base with coarse reduced fabric. Unglazed. 1 fine Grey ware base. Splashes and concretions. Small 2 Grey ware with coarse fabric. Small 2 Grey ware including ribbed jug rim. Small and medium 1 NVCC. Very small
19136	BF790	5	12th century and Roman	1 Gritty ware. Sooted/ Small 1 White Gritty ware. Sooted. Small 2 Grey burnished. Small 1 Ebor sandy. Small All small and abraded
19136	BF943	13	Roman	**78mm <50>** 4 Ebor type, very small 2 Calcite Gritted including jar rim, small 3 Grey ware, small 1 Colour Coated with light fabric and dark surfaces, small 1 Oxidised, very small 1 Burnished, small 1 miscellaneous, very small
19137	BF791	2	2nd century	1 Samian with moulded decoration. Small 1 Ebor base with white slip. Small
19138	BF792	3	12th century and late2nd century	1 NVCC. Small 1 Ebor. Large 1 Gritty ware with lightly oxidised fabric. Very small
19139	BF793	4	3rd century	1 Amphora. Large 1 Samian base. Medium 1 Grey burnished. Small 1 Calcite gritted. Sparse grit. Medium
19140	BF1019	2	Roman	**<48> 4-8mm** 1 Greyware scrap 1 Ebor scrap

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19140	BF794	17	2nd century	2 Rusticated. Medium 3 Grey burnished. Small to large 1 Ebor with white slip. Sooted. Small 2 Grey rim. Small 7 Ebor. Small to medium 1 Grey ware with brown surfaces. Large 1 fine White ware. Small
19140	BF944	30	Roman	**<48> 8mm** 5 Grey ware jar, small and large 4 Rusticated, small 8 Ebor type, small 7 Grey Burnished, small 1 Samian scrap 1 Colour Coated, small 1 Oxidised, large 3 scraps
19141	BF795	3	Late 2nd/early 3rd century	1 Grey rim. Very large 1 Ebor. Very small 1 Oxidised ware with incised horizontal line. Small
19141	BF945	12	Roman	**<49>** 1 Grey jar rim, large 1 Grey Burnished, small 1 Rusticated, small 1 Colour Coated rim, small 3 Ebor, small 3 Grey, small 2 Oxidised scraps
19142	BF796	23	Late 2nd/early 3rd century	3 Samian rim join. Small 1 White ware possible flagon. Large 8 Ebor including some with white slip. Small to large 1 fine Grey. Small 5 Grey ware with concretions. Small to large 4 Grey burnished. Small to large 1 Grey rim burnished in and out. Medium
19148	BF797	7	Late 2nd/early 3rd century	1 Grey burnished rim. Large 2 Rusticated. Small 1 Oxidised ware with black burnishing outside. Medium 2 Ebor. Small and medium 1 Grey. Small
19149	BF801	3	Late 2nd/early 3rd century	2 Ebor with sandy fabric. Medium and larg3e 1 Grey coarse burnished fabric flat rimmed jar. Soot in line4 along outer rim edge. Large

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19151	BF798	16	Late 2nd century+	1 Ebor flat rim with sandy fabric. Very large 1 Ebor tazze or sepulchral vessel with fine walls and thumbed frilled edge. Medium 2 Ebor with flat rim with two incised lines on its upper surface forming a dip in between two ribs at either end of the rim surface. Medium 1 Ebor. Sooted. Small 3 Samian including base and moulded sherd. Small to medium. Abraded 2 Ebor. Small 1 Ebor with white slip. Small 1 Grey. Large 1 Grey burnished rim. Small 1 BB2. Very small 1 Grey with brown surfaces. Large 1 fine Grey sooted jar base. Medium
19151	BF946	14	Roman	**SN51** 3 Ebor scraps including 1 with white slip 1 Grey with oxidised slip inside, small 2 Ebor type, medium 6 Grey Burnished, small 2 Grey, small
19152	BF799	1	Late 2nd/early 3rd century	1 Grey ware rim with hard fabric and oxidised core. Medium
19155	BF800	2	Late 1st/2nd century	1 Samian. Small 1 Ebor. Small
19158	BF802	7	Late 2nd/early 3rd century	1 Ebor with fine walls and burnished surface.Small 1 Ebor with sandy fabric and thick flat rim. Small and medium 1 Samian rim. Fine. Small 1 Amphora. Medium 2 Oxidised ware with white slip. Small and medium 1 Grey burnished jar rim. Medium
19160	BF947	1	Late 2nd/3rd centrury	**SN61** 1 Grey ware, medium
19161	BF803	4	Early 2nd century	1 Samian. Small 1 Ebor mortaria. Small 1 Ebor white slip. Small 1 Rusticated with white concretion. Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19161	BF948	7	Roman	**<62>** 1 Rusticated, small 1 Samian, very small 1 Roman buff ware with oxidised external surface, medium 1 Ebor, small 1 Black Burnished, small 1 coarse grey ware with chalk inclusion, small 1 Grey ware, small
19162	BF804	24	Late 2nd/early 3rd century	2 Amphora including rim and handle. Large 2 Samian. Medium 2 Samian rolled rim. Small 2 Pearl ware flakes. Intrusive 2 Ebor handle with three ribs. Small 4 Ebor with sandy fabric. Small 7 Grey. Small to large 3 Rusticated. Small
19162	BF949	41	Late 2nd/early 3rd century	**<63> >8mm** 14 Ebor, small 19 Grey Burnished, small 1 Samian, very small 3 Rusticated, small 2 Grey, small 1 Colour Coated with oxidised fabric and dark surface, small 1 Lightly oxidised ware, very small
19163	BF809	29	Late 2nd/early 3rd century	4 Amphora. Large 2 Samian with moulded decoration. Small and large. Abraded 17 Ebor flagon with white slip including handle with five ribs. Small to large 1 Ebor mortaria rim Large 2 Ebor. Small 1 Ebor rusticated. Very small 1 Grey burnished. Small 1 BB1. Small
19164	BF810	10	Late 2nd/early 3rd century	2 Samian with moulded decoration. Medium and large. Abraded 2 Samian base and body. Small 1 White ware. Large 1 Ebor with white slip. Small 3 Ebor including rim. Small 1 Grey burnished with flange scar half way up the body. Medium
19165	BF811	6	Late 2nd/early 3rd century	1 Grey ware rim. Large 2 Ebor. Small 1 Grey ware with soft fabric and brown surfaces. Small 2 Grey ware. Medium and large

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19168	BF813	10	17th century and late 2nd/early 3rd century	1 Frechen bellarmine with face mask. Large 1 Amphora. Medium 2 BB2.base and rim. Small and medium 1 BB1 large base. Large 5 Ebor. Large
19170	BF812	11	Late 2nd/early 3rd century	1 Amphora. Large 1 Samian. Small 1 Ebor flagon handle with white slip. Medium 3 Ebor with white slip. Small 1 Oxidised ware. Small 1 Ebor with concretion inside. Medium 1 Grey burnished. Small 2 BB2. Small. Abraded
19172	BF807	29	Late 2nd/early 3rd century	1 Fine White ware flagon rim with long slender ribbed neck and strap handle. Large 2 Samian with moulded decoration. Medium 5 Samian. Small 6 Ebor bowl. Large and small 3 Ebor with white slip. Small and large 3 Ebor. Small 1 Rusticated. Small 2 NVCC with oxidised fabric and rows of rouletting join. Small 1 Grey ware with lightly oxidised surfaces.and hard fabric. Large 1 BB2. Small 1 Grey base. Large 1 Grey with oxidised core. Small 2 Grey burnished. Small
19172	BF950	20	Late 2nd/early 3rd century	**<64> >8mm** 1 Ebor flagon with white slip, medium 2 Samian, small 1 White ware, very small 3 Ebor, small 1 Oxidised bowl rim, medium 2 Colour Coated including 1 with rough cast surface, small 1 iSamian type with moulded rib and ovolo decoration, brownish coloration, small 2 Oxidised scraps with brown curfaces 2 Grey, very small 2 Gre6y Burnished, very small 1 soapy slightly vessicular, small 2 miscellaneous, scraps
19174	BF805	1	Late 1st to early/mid 2nd century	1 Grey ware covered . Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19176	BF815	30	Late 2nd/early 3rd century	1 Samian with fine walls and moulded decoration. Small 16 Ebor including one with tooled 'V' shapes over surface. Small to large 1 Oxidised ware with reduced core. Small 4 Grey ware with brown external surface. Small 6 Grey ware including a rim and 2 bases. Small to large 1 Rusticated. Small 1 Ebor. Large
19176	BF951	31	Roman	**<65> >8mm** 9 Ebor, small 1 coarse, small 6 Oxidised, small 1 White ware, small 1 Grey Burnished, small 1 Rusticated, small 12 Grey, small
19177	BF808	8	Late 2nd/early 3rd century	2 Grey burnished rim and body. Small 4 Ebor. Smalll to medium 2 Samian. Small
19178	BF816	17	2nd century	2 Amphora. Large 1 Samian base. Complete. Large 1 fine White ware. Large 2 Samian. Small 1 Ebor flagon handle with white slip. Medium 1 Ebor base burnished. Small 1 Ebor bowl base with thick walls. Very large 1 Ebor with white slip drip inside. Large 1 Ebor sandy base. Medium 1 Ebor fine base. Medium1 Ebor with white slip. Scrap 3 Rusticated. Small to medium 1 Buff with brown external surface. Medium 1 Grey ware. Medium
19180	BF806	4	Early 2nd century	1 Roughcast with oxidised fabric. Argonne type. 1 Ebor jar. Large 1 lightly oxidised fine ware. Small 1 Ebor with white slip. Medium

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19181	BF814	45	Mid 2nd century	3 Amphora. Large 1 Ebor mortaria with white slip. Large 4 Ebor flagon including base. Small to medium 1 Reduced with oxidised surfaces and white slip with watery iron wash inside. Medium 1 Oxidised ware flagon with thin reduced core and handle and traces of white slip. Possibly overfired Ebor type. Large 1 reduced ware flagon with upper handle scar under rim. Large 1 Grey crudely made burnished with incised horizontal lines. Small. Abraded 2 Samian rims. Medium and large 1 Oxidised fine ware with white slip and watery iron wash inside. Small 1 Amphora. Small 1 White ware mortaria rim. Large 10 Ebor flagon including 2 bases including one with a footring one rim with upper handle scar. Small to large 5 Ebor with white slip. Small to medium 1 Ebor with fine walls and bifid dged rim. Small 1 Samian with moulded wavy line decoration. Small 1 Grey. Small 1 Grey rim. Small. Abraded 3 fine oxidised roughcast including 1 reduced. Small 6 Ebor including 1 with white slip including simple rolled rim and incised lines. Small to large
19182	BF817	5	2nd century	4 Ebor including 1 with white slip. Small to large 1 Grey. Large
19183	BF818	24	2nd century	4 Oxidised hard fabric jar rim join. Large and medium 1 Amphora rim and body. Very large 11 Ebor. Small to large 1 Oxidised sooted unglazed. Large 1 Oxidised sooted. Small 5 Grey with external concretions. Small 1 Roman
19185	BF952	7	Late 2nd/3rd century	**<66> >8mm** 3 scraps 3 Grey Burnished, small 1 Colour Coated, medium
19186	BF953	2	Roman	**<67> >8mm** 1 Grey Burnished, medium 1 Ebor, very small
19187	BF819	3	2nd century	3 Ebor with white slip. Small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19188	BF820	21	2nd century	20 Ebor with white slip>small to large 1 Samian. Small
19188	BF954	22	2nd century	**<68> >8mm** 9 Ebor including 1 with moulded rib decoration, small and scraps 3 Ebor with white slip, small and scrap 7 Grey Burnished, very small and scraps 1 Oxidised scrap 2 Grey ware scraps
19190	BF821	1	2nd century	1 Ebor lid rim with white slip. Small
19191	BF822	10	2nd century	4 Ebor. Small 1 Ebor with white slip. Small 1 Samian with moulded decoration. Small 1 NVCC beaker base with oxidised fabric and dark slip 1 Rusticated with 'star' design. Small 2 Grey with similar fabric to Rusticated. Small All small
19191	BF955	22	Roman	**<69> >8mm** 8 Ebor type, mainly small 1 Grey ware jar rim, medium 3 Rusticated, small 1 Black Burnished bowl base, medium 6 Grey Burnished, small 1 Colour Coated beaker with oxidised fabric, small 2 Grey, small
19192	BF823	6	Late 1st/2nd century	3 Samian with moulded decoration join. Small and medium 2 Ebor small fine burnished form.Small 1 Grey. Small
19193	BF1020	3	Roman	**<70> 4-8mm** 3 Roman scraps
19193	BF824	16	Late 1st/early 2nd century	1 White ware jar with ribs at the shoulder. Medium 2 White ware bowl with scar where a flange may have protruded from the body. Large 4 Ebor with white slip. Small 3 Samian rim. Very small 1 Ebor mortaria with white slip. Very large 2 Ebor. Small 2 Rusticated with 'string' design. Small 1 fine Grey. Small
19193	BF956	8	Late 1st/2nd century	**<70> >8mm** 2 Ebor scraps 1 Rusticated, small 2 Grey Burnished, small 3 White ware, small

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19194	BF957	8	Roman and 11th/12th century	**SN71** 2 Ebor, small 1 Rusticated scrap 1 Torksey type scrap 1 Stamford unglazed type, small 1 burnt scrap 1 Grey ware, small 1 Splashed, medium
19195	BF827	11	Late 2nd/early 3rd century	1 Grey ware flat rim of a jar. Very large 1 Samian rim. Very small 1 fine Grey rim with vertical rows of applied dots. Medium 1 Grey burnished. Very large 1 Ebor flat base of jar or flagon. Large 1 Ebor flat base with white slip. Small 1 Grey. Medium 1 Ebor with white slip. Medium 1 Grey. Medium 1 Ebor with white slip. Medium 1 lightly oxidised with white slip jar with inward sloping rim. Medium
19196	BF828	4	Late 1st/early 2nd century	2 Samian rim body and edge of base with moulded decoration with winged human figure. Medium and large 2 Ebor with white slip. Heat altered exterior. Small
19197	BF825	2	Late 2nd/early 3rd century	1 Grey. Large 1 Ebor with white slip. Small
19199	BF826	4	Late 1st/early 2nd century	1 Samian rim. Medium 1 Grey. Small 1 Ebor. Small 1 fine reduced with patches of white slip and thin walls. Very small
19199	BF958	8	2nd century	**<7> >8mm** 3 Ebor, very small 2 Rusticated, small 1 White scrap 1 Grey, very small 1 Black Burnished
19200	BF829	7	Late 1st/early 2nd century	7 Ebor including jar rim. Some soots. Small to medium
19200	BF1027	1	Roman	**<73> 4-8mm** 1 Samian scrap

Table 17 Post-Roman pottery quantification by context				
Context	**Find**	**Quantity**	**Dating**	**Details**
19200	BF959	9	Late 1st/2nd century	**<73> >8mm** 5 Ebor, small and medium 2 Black Burnished, small 1 Grey Burnished, small 1 Rusticated scrap
19201	BF830	7	Mid/late 2nd century	1 Ebor with white slip and rouletted burnished surface. Small 2 Ebor with ribs. Medium 1 Samian. Small 1 Grey burnished jar base. Medium 1 Grey. Medium 1 Ebor with white slip
19201	BF960	22	12th century and Mid/late 2nd century+	**<74> >8mm** 1 Oxidised Gritty ware jar with square rim, small 1 Splashed, small 1 Splashed, sooted, small 2 Colour Coated with roughcast surfaces, abraded, small 1 Calcite Gritted, small 2 'd' type ware, small 4 Grey ware jar, including rim, small to medium 1 Rusticated, small 3 Oxidised hard, small and medium 2 Burnished, small 4 scraps
19201	BF1022	1	Roman	**<74> 4-8mm** 1 Samian scrap
19202	BF588	3	14th century and Roman	1 Grey 1 Beverley Type 1 ware, small 1 Humber rim All small
	Total	**4255**		

Table 18 Post-Roman Pottery Analysis of Wares			
Fabric	**Sherd Count**	**%**	**Dating**
Beverley	43	1.0	Late 11th to early 14th C
Brandsby	44	1.0	Late 13th to early 14th C
Cistercian	20	0.5	Late 15th to late 16th C
'd' ware	5	0.1	9th to 11th C
English Stoneware	3	0.1	Late 17th to 19th C
Post-medieval Earthenware	13	0.3	Late 16th to 19th C
Frechen	4	0.1	Mid 16th to late 17th C
Gritty	119	2.8	Late 11th to early 13th C
Hambleton	6	0.1	Late 14th to early 15th C
Humber	11	0.3	Late 13th to late 15th C
Lincolnshire	1	< 0.1	13th to 14th C
Oxidised	113	2.7	Generic
Pearl	3	0.1	Late 18th / 19th to 20th C
Purple Glazed	4	0.1	Late 14th to 16th C
Raeren	1	< 0.1	Late 15th to mid 16th C
Red Ware	8	0.2	Generic
Reduced Green Glazed	28	0.7	Late 12th to 16th C
Ryedale	15	0.4	Late 16th to early 18th C
Sandy Red	2	< 0.1	Late 13th to early 14th C
Shelly	9	0.2	Late 1st to late 14th C
Slipware	2	< 0.1	Late 17th to early 18th C
Splashed	1061	24.9	Late 11th to early 13th C
Stamford	22	0.5	9th to 12th C
Terracotta	1	< 0.1	Late 18th to 20th C
Tin Glazed	1	< 0.1	Late 17th to early 18th C
Torksey	2	< 0.1	Late 9th to 11th C
Torksey Type Greyware	1	< 0.1	Late 9th to 11th C
Walmgate	2	< 0.1	14th to 15th C
Yellow Glazed	7	0.2	Late 16th to late 17th C
York Ware	34	0.8	9th to 11th C
York Glazed	54	1.3	Late 12th to early 13th C
Yorkshire Red Ware	2	< 0.1	Late 13th to early 14th C
Sub-total	1641	38.6	
Roman (all)	2490	58.5	
Unidentified	124	2.9	
Total	**4255**	**100.0**	

Table 19 Post-Roman Pottery Weights										
Context	**Sherds No.**	**Weight (g)**	**Roman**		**Anglo-Scandinavian**		**Medieval**		**Post-medieval**	
			Sherd No.	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**
1019	9	262	3	214	1	5	3	12	2	31
1021	21	455					9	408	12	47
2026	3	299	1	5					2	294
2053	2	238							2	238
3000	7	215	2	125			1	71	4	19
3001	16	773	5	290			11	483		
3007	3	11							3	11
3011	2	17					2	17		
3013	4	18	2	6			2	12		
3019	1	6					1	6		
3020	1	2					1	2		
3023	5	98					4	88	1	10
3025	8	238	3	98			3	90	2	50
3026	189	3,137	157	2,912	3	10	29	215		
3027	35	360	19	138	2	10	14	212		
3029	23	713	12	560			11	153		
3031	14	280	8	112			4	59	2	109
3032	23	374	13	290			8	58	2	26
3033	4	111	2	60			2	51		
3037	64	2,329	58	2,229			6	100		
3038	10	426	1	11			8	393	1	22
3043	8	160	8	160						
3043	12	501					4	41	8	460
3045	8	99	3	20			5	79		
3047	6	129					6	129		
3048	75	1,778	56	1,446			19	332		
3050	47	1,770	34	1,138	1	184	12	448		
3052	847	18,611	14	1,071			833	17,540		
3053	73	766	73	766						
3055	40	786	12	600	1	10	27	176		
3056	27	782	4	20			23	762		
3057	31	971	9	189			22	782		
3058	22	590	4	114			18	476		
3060	17	208	3	31			14	177		
3062	25	442	6	112			19	330		
3064	12	399	7	190			5	209		
3067	34	962	33	954			1	8		
3068	2	40	1	35			1	5		
3071	25	334	25	334						

Table 19 Post-Roman Pottery Weights										
Context	**Sherds No.**	**Weight (g)**	**Roman**		**Anglo-Scandinavian**		**Medieval**		**Post-medieval**	
			Sherd No.	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**
3074	3	15	1	5			2	10		
3076	16	258	4	36			12	222		
3078	13	199	3	100			10	99		
3079	13	266	13	266						
3080	10	437	3	61			7	376		
3081	11	193	3	50			8	143		
3082	45	601	45	601						
3084	6	183	1	73			5	110		
3092	89	2,884	88	2,860			1	24		
3094	33	376	10	151			23	225		
3095	4	32	4	32						
3096	11	350					11	350		
3100	59	1,270	58	1,258			1	12		
3101	6	74	6	74						
3102	18	428	7	352			7	32	4	44
3103	20	499	19	496			1	3		
3104	8	52	6	42			2	10		
3105	22	853	22	853						
3106	16	162	4	100			11	52	1	10
3107	4	23					4	23		
3109	7	58	3	29			3	19	1	10
3110	28	258	18	138			10	120		
3112	62	1,687	62	1,687						
3114	3	108	1	62			2	46		
3116	6	51			6	51				
3117	1	65	1	65						
3119	2	12	2	12						
3126	5	74	4	47			1	27		
3130	6	151	2	24			4	127		
3131	18	162	6	74			12	88		
3132	81	2,874	81	2,874						
3140	23	452	13	303	2	20	8	129		
3142	18	448	4	302			14	146		
3143	1	20	1	20						
3144	1	3					1	3		
3145	8	73			3	17	5	56		
7003	5	74					5	74		
7005	2	116							2	116
7008	5	54	4	51			1	3		

Table 19 Post-Roman Pottery Weights										
Context	**Sherds No.**	**Weight (g)**	**Roman**		**Anglo-Scandinavian**		**Medieval**		**Post-medieval**	
			Sherd No.	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**
7009	11	1,225	11	1,225						
7010	4	18	4	18						
7010 <1> >8mm	3	6	3	6						
7011	7	36	7	36						
7012	2	7	2	7						
8002	2	20							2	20
8024	1	6					1	6		
8054	1	28	1	28						
8058	2	20	2	20						
8067	1	125							1	125
8069	10	134	10	134						
8070	3	40	3	40						
8071	11	94	11	94						
8072	32	1,444	32	1,444						
8075	11	405	11	405						
8076	3	34	3	34						
9252 pile 25 4.5-5m	4	106	4	106						
9262 pile 26-5m	2	20	2	20						
9332 pile 33 4-6m	2	52	2	52						
9412 pile 41 - 4m	2	28	2	28						
9462 pile 46 3-7m	1	12	1	12						
9471 pile 47 3-7m	5	145	4	114					1	31
9492 pile 49 7-9m	7	128	6	94			1	34		
9605 BH1C - 0.92m	1	22							1	22

Table 19 Post-Roman Pottery Weights										
Context	**Sherds No.**	**Weight (g)**	**Roman**		**Anglo-Scandinavian**		**Medieval**		**Post-medieval**	
			Sherd No.	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**
9606 ES18 BH1C 2.20-64 >8mm	6	34	6	34						
9607 ES19 BH1C >8mm	7	20	2	7			5	13		
9618 ES17 BH2 >8mm	6	33	2	11			4	22		
9618 BH2 - 3.44m	1	5	1	5						
9620 BH2 - 4.18m	1	14	1	14						
9620 AS16 BH2 3.58 - 3.88m	7	13	6	12			1	1		
9620 BH2 <34> >8mm	1	1					1	1		
9620 BH2 <36>	3	11	1	9			2	2		
9622 BH2 <37> >8mm	1	5					1	5		
9627 BH3 - 2.63m	1	2	1	2						
9628 BH3 <32> <2mm	1	1					1	1		
9628 BH3 <32> <8mm	4	67	1	12			3	55		
9631 BH3	5	22					5	22		

Table 19 Post-Roman Pottery Weights										
Context	**Sherds No.**	**Weight (g)**	**Roman**		**Anglo-Scandinavian**		**Medieval**		**Post-medieval**	
			Sherd No.	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**
<33> <8mm										
9631 BH3 <33> 4-8mm	2	1					2	1		
9633 BH3 - 7.52	6	40	4	20			2	20		
9633 BH3 <28> <8mm	2	20					2	20		
9633 BH3 <38> <8mm	6	7	6	7						
9633 BH3 <43> <8mm	2	14	2	14						
9633 BH3 <43> <2mm	1	1							1	1
9637 BH3 <27> <8mm	3	8	1	2			2	6		
9639 ES20 BH4 2.47-3.28m	4	13	2	6			2	7		
9642 ES<21> BH4 3.59 - 4mm >8mm	2	3	1	2	1	1				
9642 ES <22> BH4 4-4.60m >8mm - 4mm	9	18	7	14			2	4		
9643 BH4	3	3	1	1	1	1	1	1		

Table 19 Post-Roman Pottery Weights										
Context	**Sherds No.**	**Weight (g)**	**Roman**		**Anglo-Scandinavian**		**Medieval**		**Post-medieval**	
			Sherd No.	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**
<23> <8mm										
9643 BH4 <23> 4-8mm	1	1	1	1						
9655 BH5B <31> 4-8mm	1	1	1	1						
9657 BH6 <45> <8mm	1	5	1	5						
9657 BH6 2.40	2	9	2	9						
19000	24	372	14	125	2	15	5	126	3	106
19001	26	1,535	20	1,293			4	63	2	179
19003	1	3					1	3		
19004	12	108	2	20			10	88		
19006	40	940	40	940						
19007	6	62	6	62						
19008	7	132	4	69			1	16	2	47
19009	7	162	6	61			1	101		
19011	7	39	1	6			6	33		
19012	17	272	13	166			3	16	1	90
19020	26	416	17	201					9	215
19022	8	180	4	82					4	98
19023	1	11	1	11						
19031	4	50					4	50		
19033	3	71	2	26					1	45
19034	1	3	1	3						
19035	7	74	6	60					1	14
19039	1	34	1	34						
19040	7	220	5	190			2	30		
19041	4	74	4	74						
19042	1	28	1	28						
19047	3	46	3	46						
19048	4	31	4	31						
19050	5	94	5	94						
19054	4	190	3	145			1	45		

Table 19 Post-Roman Pottery Weights										
Context	**Sherds No.**	**Weight (g)**	**Roman**		**Anglo-Scandinavian**		**Medieval**		**Post-medieval**	
			Sherd No.	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**
19055	15	119	11	99			4	20		
19058	21	139	21	139						
19061	5	37	5	37						
19063	6	56	6	56						
19064	3	17					2	14	1	3
19067	6	78	2	62	1	4	3	12		
19070	20	277	17	223	1	15	2	39		
19071	2	7	1	3			1	4		
19074	12	112	11	107			1	5		
19075	10	155	9	131			1	24		
19075 <24> >8mm	31	67	31	67						
19081	13	210	13	210						
19083	1	30	1	30						
19084	30	216	7	60	2	20	21	136		
19085	4	41	4	41						
19087	8	124	8	124						
19088	5	78	4	76			1	2		
19090	21	137	21	137						
19091	1	10	1	10						
19092	22	196	21	178			1	18		
19093	39	620	39	620						
19094	9	73	6	60			3	13		
19096	46	1,156	46	1,156						
19097	30	464	30	464						
19098	8	53	8	53						
19099	2	21	2	21						
19100	6	1,155	3	1,143			3	12		
19102	4	58	4	58						
19103	8	61	8	61						
19104	20	410	20	410						
19105	10	97	6	62			4	35		
19107	14	186	14	186						
19107 <26> >8mm	27	127	26	117			1	10		
19110	7	41	6	39	1	2				
19112	29	432	29	432						
19113	7	132	7	132						

Table 19 Post-Roman Pottery Weights										
Context	**Sherds No.**	**Weight (g)**	**Roman**		**Anglo-Scandinavian**		**Medieval**		**Post-medieval**	
			Sherd No.	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**
19114	8	198	8	198						
19115	17	585	17	585						
19116	1	9	1	9						
19122	9	60	9	60						
19122 <46> >8mm	12	49	12	49						
19124	9	134	9	134						
19124 SN47	12	133	12	133						
19126	11	118	8	92	1	5	2	21		
19128	9	430	9	430						
19131	21	375	10	222			11	153		
19133	10	198	7	140			3	58		
19134	8	268	6	144			1	122	1	2
19135	10	164	8	154			2	10		
19136	5	32	3	15			2	17		
19136 <50> >8mm	13	29	13	29						
19137	2	14	2	14						
19138	3	32	3	32						
19139	4	177	4	177						
19140	17	248	17	248						
19140 <48> 4-8mm	2	1	2	1						
19140 <48> >8mm	30	190	30	190						
19141	3	141	3	141						
19141 <49>	12	45	12	45						
19142	23	325	23	325						
19148	7	120	7	120						
19149	3	108	3	108						
19151	16	281	16	281						
19151 <51>	14	37	14	37						
19152	1	24	1	24						
19155	2	7	2	7						
19158	7	151	7	151						

Table 19 Post-Roman Pottery Weights										
Context	**Sherds No.**	**Weight (g)**	**Roman**		**Anglo-Scandinavian**		**Medieval**		**Post-medieval**	
			Sherd No.	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**
19160 <61>	1	11	1	11						
19161	4	34	4	34						
19161 <62>	7	31	7	31						
19162	24	591	22	590					2	1
19162 <63> 8mm	41	88	41	88						
19163	29	644	29	644						
19164	10	169	10	169						
19165	6	138	6	138						
19168	10	397	9	347					1	50
19170	11	161	11	161						
19172	29	775	29	775						
19172 <64> >8mm	20	48	20	48						
19174	1	9	1	9						
19176	30	351	30	351						
19176 <65> >8mm	31	79	31	79						
19177	8	64	8	64						
19178	17	1,665	17	1,665						
19180	4	94	4	94						
19181	45	915	45	915						
19182	5	156	5	156						
19183	24	884	24	884						
19185 <66> >8mm	7	12	7	12						
19186 <67> >8mm	2	8	2	8						
19187	3	29	3	29						
19188	21	458	21	458						
19188 <68> >8mm	22	42	22	42						
19190	1	5	1	5						
19191	10	61	10	61						

Table 19 Post-Roman Pottery Weights										
Context	**Sherds No.**	**Weight (g)**	**Roman**		**Anglo-Scandinavian**		**Medieval**		**Post-medieval**	
			Sherd No.	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**	**Sherd No.**	**Weight (g)**
19191 <69> >8mm	22	91	22	91						
19192	6	59	6	59						
19193	16	690	16	690						
19193 <70> 4-8mm	3	1	3	1						
19193 <70> >8mm	8	9	8	9						
19194 SM71	8	209	6	145			2	64		
19195	11	452	11	452						
19196	4	76	4	76						
19197	2	49	2	49						
19199	4	28	4	28						
19199 <72> >8mm	8	10	8	10						
19200	7	56	7	56						
19200 <73> 4-8mm	1	1	1	1						
19200 <73> >8mm	9	25	9	25						
19201	7	114	7	114						
19201 <74> 4-8mm	1	1	1	1						
19201 <74> >8mm	22	98	21	95			1	3		
19202	3	27	1	5	1	5	1	17		

Table 20 Minimum Number of Vessels (MNV) and Estimated Vessel Equivalents (EVES) by Base								
Base No.	**Fabric**	**Form**	**NOSH (No.)**	**Radius (mm)**	**EVES (%)**	**MNV (No.)**	**Weight (g)**	**Comments**
1	Splashed ware	Pitcher	4	90	62	1	380	
2	Splashed ware	Pitcher	6	90	90	1	796	

Table 20 Minimum Number of Vessels (MNV) and Estimated Vessel Equivalents (EVES) by Base								
Base No.	**Fabric**	**Form**	**NOSH (No.)**	**Radius (mm)**	**EVES (%)**	**MNV (No.)**	**Weight (g)**	**Comments**
3	Splashed ware	Pitcher	10	85	80	1	691	
4	Splashed ware	Pitcher	8	90	83.5	1	554	
5	Splashed ware	Pitcher	9	90	110	2	474	
6	Splashed ware	Pitcher	12	90	14	1	278	
7	Splashed ware	Pitcher	13	80	144	2	654	
9	Splashed ware	Pitcher	5	90	127	1	756	
11	Splashed ware	Pitcher	15	90	91	1	551	Heavily reduced core
12	Splashed ware	Pitcher	4	70	49	1	63	
13	Splashed ware	Pitcher	4	70	47	1	180	Overfired
13	Splashed ware	Pitcher	1	80	17	1	118	
16	Splashed ware	Pitcher	1	80	20	1	102	Over-heated base and lower wall
8	Splashed ware	Jug	7	60	57	1	302	
10	Splashed ware	Jug	2	60	12	1	27	
14	White Gritty	Jar	3	80	32	1	119	
15	Gritty	Jar	3	100	87	1	98	
10	Humber ware	Jug	1	60	12	1	14	
	Totals		**108**		**1134.5**	**20**	**6157**	
	Splashed Pitchers		**93**		**934.5**	**15**	**5597**	
	Splashed Jugs		**9**		**69**	**2**	**329**	
	Gritty Ware Jars		**6**		**119**	**2**	**217**	
	Humber Jugs		**1**		**12**	**1**	**14**	
	Totals		**108**		**1134.5**	**20**	**6157**	

Table 21 Minimum Number of Vessels (MNV) and Estimated Number of Vessels Equivalents (EVES) by Rim								
Base No.	**Fabric**	**Form**	**NOSH (No.)**	**Radius (mm)**	**EVES (%)**	**MNV (No.)**	**Weight (g)**	**Comments**
17	Splashed ware	Pitcher	2	75	30	1	94	Spouted
9	Splashed ware	Jar	1	70	18	1	47	Square rim lightly reduced core
10	Splashed ware	Jar	5	65	55	1	61	Everted rim. Glaze over break
11	Splashed ware	Jar	1	80	9	1	17	Bifid/square rim
12	Splashed ware	Jar	1	80	8	1	16	Short bifid/collar
13	Splashed ware	Jar	13	60	10	1	10	Flat top hammer head rim
14	'd' ware	Jar	1	70	15	1	8	Residual
14	York ware	Jar	2	90	9	1	28	Residual
14	Buff Gritty ware	Jar	1	90	9	1	19	Residual
15	White Gritty ware	Jar	4	85	11	1	78	Square rim, slightly reduced core
	Totals		**77**		**856**	**21**	**2653**	
	Splashed ware Pitcher	**Pitcher**	**48**		**712**	**12**	**2369**	
	Splashed ware Jar	**Pitcher**	**21**		**100**	**5**	**151**	
	Other wares Jar	**Pitcher**	**8**		**44**	**4**	**133**	
	Totals		**77**		**856**	**21**	**2653**	

Table 22 CBM by form in relation to period				
Period	**Form**	**15No. of sherds**	**Weight in grams**	**% of total weight**
Roman	Bessalis	1	100	0.03
	Brick	306	54385	18.08
	Flue	17	2035	0.68
	Imbrex	58	7445	2.47
	Other	2	1825	0.61

Table 22 CBM by form in relation to period				
Period	**Form**	**15No. of sherds**	**Weight in grams**	**% of total weight**
	Tegula	52	12705	4.22
	Tessera	1	10	0.00
Medieval	Brick	26	30320	10.08
	Curved	36	5530	1.84
	Crested	6	1350	0.45
	Decorated floor	4	1425	0.47
	Flange	135	37245	12.38
	Other	3	1575	0.52
	Peg	101	26550	8.83
	Plain	438	71789	23.87
	Plain glazed floor	6	1750	0.58
	Ridge	104	14705	4.89
Post-medieval	Brick	22	18865	6.27
	Pan	1	175	0.06
	Paver	2	8000	2.66
Modern	Brick	3	525	0.17
Other	Unknown	726	2500	0.83

Table 23 CBM in relation to context		
Context	**Dating**	**Forms present**
1019	13-16th	Peg, Plain, Roman brick
1020	16-18th	Post-medieval brick, Roman brick
1021	13-16th	Peg, Plain, Roman brick
2026	1-4th	Roman brick
2028	13-16th	Plain, Ridge
2029	13-16th	Plain
2032	16-18th	Plain, Post-medieval brick
3000	16-18th	Box flue, Decorated floor, Post-medieval brick, Peg, Plain glazed floor, Tegula
3001	17th+?	Flange, Paver?, Peg, Plain, Roman brick
3012	13-16th	Plain
3013	13-16th	Plain
3017	16-18th	Post-medieval brick
3023	16-18th	Curved, medieval brick Post-medieval brick, Peg, Plain
3025	14-16th	Decorated floor, Flange, Imbrex, Peg, Plain, Ridge, Tegula
3026	13-16th	Flange, Plain, Roman brick, Ridge,
3027	13-16th	Flange, Peg, Plain, Ridge, Tegula
3029	13-16th	Curved, Flange, Peg, Plain, Ridge
3031	13-16th	Peg. Plain, Roman brick, Ridge, Tegula
3032	13-16th	Roman brick, Ridge, Ridge?
3033	13-16th	Peg, Plain
3037	13-16th	Ridge
3038	13-16th	Crested, Flange, Peg, Ridge

Table 23 CBM in relation to context		
Context	**Dating**	**Forms present**
3043	14-16th	Peg, Plain glazed floor, Plain, Ridge
3045	l11-e13th	Flange
3047	13-16th	Flange, Plain
3048	14-16th	Box flue, Curved?, Flange, Imbrex, Peg, Plain glazed floor, plain, Roman brick, Ridge, Tegula
3050	13-16th	Flange, Imbrex, Plain, Tegula
3052	13-16th	Box flue, Curved, Curved?, Flange, Flange?, Imbrex, other, Peg, Plain, Ridge, Roman brick, Tegula
3053	1-4th	Box flue, Imbrex, Roman brick
3055	13-16th	Crested, Flange, Peg, Plain, Roman brick, Ridge, Tegula
3056	13-16th	Curved, Curved?, Flange, Peg, Ridge
3057	13-16th	Flange, Imbrex, Plain, Ridge, Tegula
3058	13-16th	Curved, Flange, Peg, Plain, Plain?, Ridge
3060	13-16th	Flange, Peg, Plain
3062	14-16th	Crested, Flange, medieval brick, Peg, Plain, Ridge
3064	13-16th	Plain, Ridge
3068	13-16th	Plain
3071	1-4th	Roman brick
3072	13-16th	Imbrex, Plain
3076	13-16th	Ridge, Tegula
3078	1-4th	Imbrex, Roman brick, Tegula
3080	13-16th	Flange, Peg, Plain, Roman brick, Ridge
3081	13-16th	Peg
3084	13-16th	Peg, Plain
3092	1-4th	Roman brick
3094	l11-e13th	Curved?, Flange, Imbrex, Roman brick, Ridge
3095	1-4th	Roman brick, Tegula
3096	13-16th	Peg, Plain
3100	1-4th	Roman brick, Tegula
3104	13-16th	Peg, Ridge
3106	13-16th	Flange, Plain, Ridge
3107	13-16th	Medieval brick, Peg, Plain
3110	Roman	Box flue, Imbrex, Post-medieval brick (intrusive sherd), Tessera
3112	1-4th	Imbrex, Roman brick
3114	14-16th	Medieval brick
3116	1-4th	Imbrex
3119	13-16th	Plain
3123	13-16th	Peg, Plain
3126	13-16th	Plain, Roman brick
3131	13-16th	Curved. Curved?, Flange, Imbrex, Plain, Ridge
3132	1-4th	Bessalis, Imbrex, Roman brick, Tegula
3140	13-16th	Plain, Ridge
3142	13-16th	Other, Plain, Ridge
3144	13-16th	Plain, Roman brick

Table 23 CBM in relation to context		
Context	**Dating**	**Forms present**
3145	13-16th	Peg, Plain, Roman brick, Tegula
3149	1850+	Brick, Post-medieval brick, Plain
3157	13-16th	Plain
4015	13-16th	Peg
6000	l11-e13th	Curved?, Flange
7005	14-16th	Medieval brick, Plain
7007	14-16th	Medieval brick
7008	1-4th	Tegula
7009	1-4th	Roman brick
7011	1-4th	Roman brick
7012	1-4th	Tegula
8003	16-18th	Paver, Post-medieval brick
8004	13-16th	Plain
8005	13-16th	Peg, Plain
8016	14-16th	Medieval brick
8017	14-16th	Medieval brick
8054	13-16th	Peg, Plain
8070	1-4th	Roman brick
8071	1-4th	Roman brick
8072	1850+?	Brick?, Post-medieval brick?, Roman brick
8075	1-4th	Roman brick
8076	1-4th	Roman brick
9029	14-16th	Medieval brick
9600	14-16th	Medieval brick
9601	13-16th	Plain
9606	?	Unknown
9608	?	Unknown
9609	14-16th	Medieval brick, Peg, Plain
9616	14-16th	Medieval brick, Plain
9618	1-4th	Imbrex, Unknown
9619	?	Unknown
9620	13-16th	Plain, Unknown
9621	13-16th	Plain, Unknown
9622	13-16th	Plain
9627	13-16th	Plain, Roman brick, Unknown
9631	?	Unknown
9632	13-16th	Plain, Unknown
9633	13-16th	Plain, Ridge, Unknown
9634	2nd-3rd	Unknown
9639	?	Unknown
9642	13-16th	Plain, Roman brick, Unknown
9643	1-4th	Roman brick, Unknown
9644	1-4th	Roman brick
9657	?	Unknown

Table 23 CBM in relation to context		
Context	**Dating**	**Forms present**
19000	1850+	Brick, Other, Plain, Roman brick
19001	16-18th	Box flue, Imbrex, Post-medieval brick, Peg, Plain glazed floor, Plain, Tegula, Tegula?
19002	13-16th	Imbrex, Plain, Roman brick
19004	13-16th	Plain, Roman brick
19006	13-16th	Plain, Roman brick
19007	1-4th	Box Flue, Roman brick
19008	17th+	Medieval brick, Pan, Post-medieval brick, Plain
19012	1-4th	Box flue, Box flue?, Imbrex, Roman brick
19019	16-18th	Medieval brick, Post-medieval brick, Plain, Roman brick
19020	16-18th	Post-medieval brick, Plain, Roman brick,
19022	14-16th	Medieval brick, Plain
19025	16-18th?	Post-medieval brick?
19031	13-16th	Plain
19032	14-16th	Medieval brick, medieval brick?, Plain, Roman brick
19033	13-16th	Flange, Imbrex, Plain, Roman brick
19039	16-18th	Decorated floor, Peg, Plain, Roman brick
19040	1-4th	Box flue?
19041	1-4th	Roman brick
19045	1-4th	Roman brick
19047	13-16th	Plain
19048	1-4th	Roman brick
19054	1-4th	Box flue, Roman brick
19055	13-16th	Peg, Plain, Roman brick, Ridge, Tegula
19058	1-4th	Roman brick
19061	1-4th	Roman brick
19063	13-16th	Plain, Roman brick
19064	1-4th	Roman brick
19070	1-4th	Roman brick
19071	13-16th	Plain
19074	1-4th	Imbrex, Roman brick
19075	1-4th	Roman brick, Unknown
19081	1-4th	Imbrex, Roman brick, Tegula
19084	13-16th	Imbrex, Plain, Tegula
19086	1-4th	Roman brick
19087	1-4th	Tegula
19090	1-4th	Roman brick, Tegula
19092	1-4th	Roman brick
19093	1-4th	Roman brick
19094	13-16th	Plain, Roman brick
19096	1-4th	Imbrex, Roman brick, Tegula
19097	1-4th	Roman brick
19100	13-16th	Plain
19103	1-4th	Roman brick
19104	1-4th	Roman brick

Table 23 CBM in relation to context		
Context	**Dating**	**Forms present**
19105	1-4th	Roman brick
19107	1-4th	Imbrex, Roman brick, Unknown
19110	1-4th	Imbrex, Roman brick
19112	1-4th	Box flue, Roman brick, Tegula
19113	1-4th	Roman brick
19114	1-4th	Roman brick, Tegula
19115	1-4th	Box flue, Imbrex, Roman brick, Tegula
19122	1-4th	Imbrex, Roman brick, Unknown
19124	1-4th	Roman brick, Unknown
19125	13-16th	Plain
19126	1-4th	Roman brick
19127	13-16th	Plain, Roman brick
19128	1-4th	Imbrex, Roman brick
19131	1-4th	Imbrex, Roman brick
19133	13-16th	Imbrex, Roman brick
19135	l11th-e13th	Flange, Roman brick
19136	13-16th	Peg, Ridge, Unknown
19137	1-4th	Roman brick
19139	1-4th	Roman brick, Tegula
19140	1-4th	Roman brick, Unknown
19141	1-4th	Roman brick, Tegula, Unknown
19151	1-4th	Roman brick, Tegula, Unknown
19160	?	Unknown
19161	?	Unknown
19162	1-4th	Roman brick, Unknown
19163	1-4th	Roman brick
19164	1-4th	Roman brick
19170	1-4th	Roman brick
19171	13-16th	Imbrex, Plain, Roman brick
19172	1-4th	Roman brick, Unknown
19174	1-4th	Roman brick
19176	1-4th	Roman brick
19178	1-4th	Box Flue, Imbrex, Roman brick
19180	1-4th	Roman brick, Tegula
19181	1-4th	Box Flue, Roman brick, Tegula
19182	1-4th	Tegula
19183	1-4th	Roman brick, Tegula
19185	1-4th	Roman brick, Unknown
19188	1-4th	Tegula, Unknown
19190	1-4th	Roman brick
19191	1-4th	Roman brick, Tegula, Unknown
19192	1-4th	Roman brick
19193	1-4th	Roman brick

Table 23 CBM in relation to context		
Context	**Dating**	**Forms present**
19194	13-16th	Imbrex, Roman brick, Unknown
19195	14-16th	Box Flue, Other, Roman brick
19196	1-4th	Tegula
19197	1-4th	Imbrex, Roman brick
19199	?	Unknown
19200	?	Unknown
19201	1-4th	Tegula, Unknown
19202	13-16th	Plain, Roman brick

Table 24 Summary of features present on the Roman CBM					
	Bessalis	**Box flue**	**Tegula**	**Imbrex**	**Brick**
Thickness range in mm	49	13-21	15-35	13-27	14-67
Smoothed with cloth	-	-	4	26	2
Smoothed with fingers	-	-	1	-	-
Thumb groove/grooves by flange	-	-	7	-	-
Knife trimmed arris/base	-	-	4	-	-
Wire trimmed base	-	-	1	-	3
Upper /lower cut away	-	-	10	-	-
Combed keying	-	3	-	-	2
Finger drawn keying	-	-	-	-	2
Grip marks	-	-	-	-	2
Vent	-	5	-	-	-
Pierced by firing holes	-	-	-	-	1
Indented border	-	-	-	-	1
Legionary stamp	-	-	-	2	-
Signature marks	-	-	-	-	7
Rain or hob nail boot marks on surface	-	-	-	-	2
Reduced	-	2	5	10	61
Oxidised	-	-	-	1	1
Vitrified/Blown/Overfired	-	-	-	1	8
Opus signinum/mortar on upper surface	-	-	-	-	2
Sooted from use	-	3	1	2	2
Evidence of re-use prior to deposition	-	-	1	1	23

Table 25 Roman CBM fabrics				
Fabric	**No. of sherds**	**Weight in g**	**% of total volume**	**Forms present**
R1	5	1325	1.7	Roman brick
R2	1	400	0.5	Tegula
R5?	1	300	0.4	Roman brick
R9	136	18855	24.1	Box flue, Imbrex, Roman brick, Tegula
R10	34	6445	8.2	Box flue, Imbrex, Roman brick, Tessera
R11	247	49740	63.7	Bessalis, Box flue, Imbrex, Other, Roman brick, Tegula
R12	3	550	0.7	Roman brick, Tegula
R18	9	515	0.7	Roman brick

Table 26 Summary of features present on the medieval roofing tiles					
	Curved	**Flanged**	**Peg/ plain**	**Crested**	**Ridge**
Thickness range in mm	12-22	10-30	9-25	14-17	12-34
Breadth range in mm	116	232-276	195-202	-	136
Flange height in mm	-	20-43	-	-	-
Smoothed with cloth lengthways	15	71	176	-	37
Soothed with a cloth lengthways the across the short end	2	2	37	4	-
Soothed with a cloth widthways at the upper end	-	-	5	-	1
Smoothed with a cloth lengthways then on a diagonal	-	1	2	-	-
Smoothed with a cloth random directions	-	-	4	1	-
Finger smoothing lengthways	-	1	-	-	-
Smoothed with cloth then fingers	-	-	1	-	-
Finger groove by flange	-	3	-	-	-
Peg/nail holes	11	6	-	-	-
2 peg holes per tile	-	-	3	-	-
Mark left by hole punch handle around the peg-hole	-	-	1	-	-
Knife trimmed arris/base	-	7	1	-	-
Grip marks/thumb prints	-	-	12	-	1
Tally mark	-	-	3	-	-
Accidental surface marks	-	-	5	-	1
Indented border	-	-	25	-	-
Dog paw print	-	-	5	-	-
Glaze	5	2	12	1	10
Rain marks on surface	-	-	-	-	-
Reduced	9	46	69	-	33
Oxidised	-	-	-	-	1

Table 26 Summary of features present on the medieval roofing tiles					
	Curved	**Flanged**	**Peg/ plain**	**Crested**	**Ridge**
Vitrified/Blown/Overfired	2	-	21	-	8
Wasters	-	-	7	-	1
Evidence of re-use	2	7	53	-	-

Table 27 Medieval CBM fabrics				
Fabric	**No. of sherds**	**Weight in g**	**% of total volume**	**Forms present**
F3	2	750	0.39	Plain glazed floor
F9	1	300	0.16	Plain glazed floor
F10	2	475	0.25	Plain glazed floor
F11	2	825	0.43	Decorated floor
F13	1	125	0.07	Decorated floor
F15?	1	225	0.12	Plain glazed floor
F18	1	475	0.25	Decorated floor
M1	342	58690	30.53	Crested, Curved, Flanged, Peg, Plain, Ridge
M2	72	14394	7.49	Curved, Flanged, Peg, Plain, Ridge
M3	73	11640	6.05	Crested, Curved, Flanged, Peg, Plain, Ridge
M4	106	19235	10.01	Crested, Curved, Flanged, Peg, Plain, Ridge
M6	1	125	0.07	Plain
M7	14	2840	1.48	Flanged, Peg, Plain
M8	2	285	0.15	Flanged, Plain
M9	12`	1460	0.76	Flanged, Peg, Plain, Ridge
M11	34	8190	4.26	Other, Peg, Plain, Ridge
M12	3	535	0.28	Flanged, Plain, Ridge
M13	3	475	0.25	Plain, Ridge
M14	1	50	0.03	Plain
M17	1	1350	0.70	Medieval brick
M18	6	1355	0.70	Peg, Plain
M21	1	50	0.03	Peg
M22	2	3050	1.59	Medieval brick
M25	1	310	0.16	Medieval brick
M27	15	4405	2.29	Peg, Plain
M28	7	740	0.38	Plain, Ridge
M30	8	10375	5.40	Medieval brick
M31	1	250	0.13	Medieval brick
M35	1	2500	1.30	Medieval brick
M37	6	2150	1.12	Medieval brick
M39	1	75	0.04	Ridge
M40	6	450	0.23	Flanged, Peg, Plain

Table 27 Medieval CBM fabrics				
Fabric	**No. of sherds**	**Weight in g**	**% of total volume**	**Forms present**
M41	2	600	0.31	Peg
M42	1	100	0.05	Plain
M43	3	7010	3.65	Medieval brick
M46	1	2550	1.33	Medieval brick
M50	1	100	0.05	Plain
M54	4	805	0.42	Plain, Ridge
M58	1	25	0.01	Plain
M59	1	100	0.05	Peg
M60	3	860	0.45	Plain
M67	5	1640	0.85	Peg, Plain
M68	1	75	0.04	Peg
M69	103	29445	15.32	Curved, Flanged, Other, Peg, Plain, Ridge
M70	2	775	0.40	Medieval brick

Table 28 Stone flags and tesserae by context	
Context	**Dating**
3026	Stone roof flag?
3032	Stone roof flag?
3050	Stone roof flag?
3052	Stone roof flag?
3055	Stone roof flag?
3062	Stone roof flag?
3094	Stone roof flag?
3110	Tesserae
3116	Tesserae
3119	Stone roof flag?
3126	Stone roof flag?
3128	Stone roof flag?
3142	Stone roof flag?
8071	Stone roof flag?
9642	Stone peg, Stone roof flag?
19001	Stone roof flag?
19008	Stone roof flag?
19012	Stone roof flag?
19054	Stone roof flag?
19063	Stone roof flag?
19070	Stone roof flag?
19075	Stone roof flag?
19081	Stone roof flag?
19083	Stone roof flag?
19086	Stone roof flag?
19096	Stone roof flag?

Table 28 Stone flags and tesserae by context	
Context	**Dating**
19112	Stone roof flag?
19115	Stone roof flag?

Table 29 Architectural fragment catalogue			
AF no.	**Context**	**Dating**	**Description**
1	3001	1200+	Magnesian limestone block. Four faces surviving (F1-4) other two sides broken off. F1 = interior elevation very smoothly dressed surface. F2 = exterior elevation with claw tooling all over, 2 teeth per 10mm in drafts diagonal to the bed. F2-3 = sides both with a quarter circular area of fine grooves as if worn or cut with a fine bladed saw. Rest of F2 very rough. F5 is a broken side, clearly reworked with occasional chisel or punch marks in random directions. Remaining side broken off and very rough. Small area of modern concrete on F2. Ashlar originally, clearly re-worked.
2	3001	1350-1540	Magnesian limestone block. Heavily moulded. Four faces surviving (F1-6). F1 = base with mortar adhering, unclear if mortar is original or later from re-use. F2 = top. F3-6 = side elevations. F3 heavily moulded with rebates, chamfers and a quirk. F5 = heavily moulded with chamfers, rolls and hollows. Clearly a springer as the mouldings splay out at the top to accommodate either another springer or the arch above. Fine drag tooling lines on the dressed surfaces. Thick mortar on F3 implies re-use. This should be retained
3	3062	1200+	Small fragment of magnesian limestone, part of one surface (F1) present with claw tooling, 5 teeth per 10mm.
4	3000	1350-1540	Magnesian limestone mullion. Two faces present (F1-2) representing the sides of the block, top and basal ends broken off. Each face has internal and external slightly hollow curves with a central slot for the glazing. Drag tooling on all surfaces.
5	3043	1350-1540	Magnesian limestone mullion. Part of 3 faces (F1-3) surviving, F1 is base or top, F2-3 the sides. Very fine claw tooling on F2-3 with 6 teeth per 10mm, coarser claw tooling on F1 with 3 teeth per 10mm. Traces of a socket to house the glazing on F2
6	3043	1350-1540	Magnesian limestone mullion, 2 faces (F1-2) present all other surfaces broken off. Each face is a side of the block with a fillet and hollow curve. No tooling survives
7	19000	Victorian	Sandstone with occasional small flecks of mica. Highly complex design with multiple facets. Three original sides survive all of which have a pair of narrow ribs on the centre base of the block which spring outwards on a V shape to join the ribs of the adjacent side. The ribs were clearly originally faceted but this has largely eroded off. Very badly battered. Sandstone is rarely used in medieval York for carved decoration, which may suggest that this is a Victorian piece. Corbel/springer
8	19022	1350-1540	Magnesian limestone block, F1 = side, F2 = front elevation, F3 = side, F4 = top or base of block. Claw tooling on F1 and F3 with 4.5 teeth per 10mm. Very battered not worth retaining. Mullion

Table 29 Architectural fragment catalogue			
AF no.	**Context**	**Dating**	**Description**
9	19039	1350-1540	Small Magnesian limestone fragment from the junction of a horizontal and vertical element of window tracery. Too small to merit retention. Tracery.
10	8092	medieval	Magnesian limestone block, four faces survive other sides broken off. F1 and F3 are opposing sides, F2 is the soffit, F4 = top. Reused with mortar on F1 F3 and broken surfaces. Striated tooling on all four surfaces. Voussoir.
11	8092	medieval	Magnesian limestone block, three faces survive other sides broken off. F1 was the base, F2 the chamfered external surface and F3 one end of the block. Both F1 and F3 would have been hidden from view when in sue, while F2 would have been an elevation. Striated tooling on all three surfaces. Reused with mortar on all three faces and broken surfaces. Plinth.
12	3025	1200+	Magnesian limestone block, four faces survive other sides broken off. F1 was the base or top, F2 the end, F3 the top or base and F4 the original elevation. F1-F3 would have been hidden from view when in sue, while F4 would have been an elevation. Claw tooling on all surfaces with 4 teeth per 10mm. Mason's mark on F4 in the shape of a St Julian Cross but horizontal/vertical as opposed to at 45 degrees. Ashlar. Unfortunately, this was broken when removed from site and was so damaged that it was not retained.
13	3025	13th	Complex magnesian limestone block forming the basal springer block of a blind arcade. Portions of two adjacent arches being present. Eight sides survive, F1-2 are the side and back of the left hand arch, F3-5 the remaining sides of this arch of which F3-4 continue the full surviving height of the block which F5 is a plan side above the point where the two arches diverge. F6 is the base, F7 the side of the right hand arch and F8 the top. F3-4 decorated with a series of quirks, rebates, rolls, fillets and hollow rolls, all deeply undercut. Exceptionally fine claw tooling on all surfaces, 5 teeth per 10mm. F8 also has striated tooling. Some chipping and damage. Clearly subjected to later damage with drilled holes all over (F1 with three F2 with one, F3 with five and F4 with one) ranging from 7mm -17mm in diameter.
14	3025	12th to 13th	Large walling block with integral capital at one end. Five original faces survive, F1-2 are opposing sides, F3 an end, F4 the top and F5 the base. One end is broken off. Most of F1 has broken off. F1 has an integral rebated recess at one end which houses a waterleaf capital with a roll at the base. This capital forms the full width of F3, but is badly damaged here. F2 has a much deeper recess with a chamfer along the upper edge and a rebate at one end and the waterleaf capital at the opposing end of the recess. Striated tooling on F2, F4 and F5. Some mortar on the capital on F2.

Table 30 Building stone catalogue

(FGSS = Fine grained sandstone, OOLS = Oolitic limestone, MGLS = Magneisan limestone, MSS = Micaceous sandstone)

Context	Stone type	Date	Description
3025	FGSS (S7)	Roman	No original surfaces
3025	OOLS (S1)	Roman	Sliver of building stone, no original surfaces
3025	OOLS (S1)	Roman	Sliver of building stone, no original surfaces
3043	FGSS (S7)	Roman	Sliver of building stone, no original surfaces
3055	CGSS (S12)	Roman	Vey battered original form impossible to determine
3062	MGLS (S2)	Medieval	Magnesian limestone fragment, one face survives with very faint claw tooling
3082	Tufa	Roman	Small irregular fragment
3082	OOLS (S1)	Roman	Irregular fragment
3082	Tufa	Roman	Irregular fragment
3082	OOLS (S1)	Roman	Irregular fragment
3082	OOLS (S1)	Roman	Irregular fragment
3110	MGLS (S2)	Medieval	Magnesian limestone, small fragment with D shaped cross section, both ends and back broken off. Possibly a tiny portion of and architectural fragment
3130	MSS (S9)	Roman	Sliver of building stone, no original surfaces, very abraded
8054	MGLS (S2)	?	Irregular fragment
9604	MGLS (S2)	Medieval	Irregular fragment. From 4.94m depth in BH1B.
9631	MGLS (S2)	Medieval	Irregular fragment
9652	MGLS (S2)	Medieval	Two adjoining badly battered column shaft fragments 92mm in diameter. Too battered to determine if attached originally. Too battered to merit AF number. 2-3m depth in BH5B
9652	MGLS (S2)	Medieval	Badly battered column shaft fragments 92mm in diameter. Too battered to determine if attached originally. Too battered to merit AF number. 2-3m depth in BH5B
19020	MGLS (S2)	?	Irregular fragment
19020	OOLS (S1)	Roman	One original surface
19031	Chalk (S11)	Roman	Irregular fragment
19035	FGSS(S7)	Roman	Irregular fragment
19035	OOLS (S1)	Roman	Irregular fragment
19035	OOLS (S1)	Roman	Irregular fragment
19055	FGSS(S7)	Roman	Irregular fragment
19104	OOLS (S1)	Roman	One original surface
19104	OOLS (S1)	Roman	One original surface
19107	MGLS (S2)	?	Irregular fragment
19125	FGSS(S7)	Roman	Irregular fragment
19126	FGSS(S7)	Roman	One original surface
19126	LS (S3)	?	Irregular fragment
19133	OOLS (S1)	Roman	One original surface
19148	FGSS (S7)	Roman	One original surface

Table 31 Mortar descriptions				
Type	**Description**	**Weight in grams**	**No of fragments**	**% of total**
A	A very coarse grained off-white coloured lime mortar with very frequent coarse inclusion. The inclusions comprise pebbles up to 9x4mm in size and rounded quartz grains up to 4x3mm in size.	18604	299	32.79
B	A coarse lime mortar with pebble inclusions up to 9x2mm in size and coarse grains of rounded quartz up to 4x2mm in size. This is similar to the Mortar A, but lighter in colour and slightly less coarse with frequent as opposed to very frequent inclusions	16698	321	29.43
AB	A as basal layer with B above	1925	7	3.39
C	Sandy coarse light pink with occasional pebble inclusions up to 7x3mm in size and frequent smaller pebbles and rounded quartz.	3299	27	5.81
D	Slightly pink mortar backing with frequent rounded quartz inclusions and occasional pebble inclusions up to 2x2mm in size.	515	13	0.91
E	Fine lime based mortar. Much finer than any other at the site Frequent exceptionally fine quartz and exceptionally fine black inclusions of uncertain type.	50	1	0.09
F	Grey-white coloured mortar, very soft and crumbly, with rare inclusions of rounded quartz up to 12x6mm in size and very frequent rounded quartz up to 2x2mm in size.	2720	52	4.79
G	Very hard white mortar, frequent very fine quartz and occasional small rounded pebbles up to 1mm across. One fragment of grog 12x10mm in size.	1325	2	2.35
H	White grey mortar with frequent very fine angular quartz.	1040	4	1.83
I/J	Mortar I. Pink mortar with occasional fragments of limestone up to 2x1mm, moderate fine rounded quartz. Mortar J similar but whiter mortar with occasional fragments of limestone up to 2x1mm, moderate fine rounded quartz. I and J were present as two superimposed layers on just one fragment	45	1	0.08
K	Slightly pink mortar with moderate fragments of limestone up to 3x15mm in size. No small inclusions.	10	1	0.02
L	Hard pale grey mortar with frequent exceptionally fine quartz inclusions.			
?	Recovered from boreholes and samples. These items were too small to accurately assess the mortar type.	10350	1926	18.24
Plaster	Plaster	150	3	0.26

Table 32 Summary of mortar/plaster types (P = Plaster, F = Flat, C= Corrugated, I = Irregular)							
Type	**Mortar**	**Plaster**	**No. of painted**	**Opposing Surfaces**	**Weight in grams**	**No of fragments**	**% of total volume**
1a	A	None	None	F/F	13216	245	23.29

Table 32 Summary of mortar/plaster types

(P = Plaster, F = Flat, C= Corrugated, I = Irregular)

Type	Mortar	Plaster	No. of painted	Opposing Surfaces	Weight in grams	No of fragments	% of total volume
1b	A	None	None	F/C	3020	25	5.32
1c	A	None	None	Missing	2028	27	3.57
2a	B	Yes	None	F/F	7052	190	12.43
2b	B	Yes	None	F/C	3335	44	5.88
2c	B	Yes	None	Missing	676	37	1.19
2d	B	Yes	None	F/F	225	3	0.40
3a	B	None	None	F/F	853	15	1.50
3b	B	None	None	F/C	150	3	0.26
4a	A and B	Yes	None	F/C	735	3	1.30
4b	A and B	None	None	C/F	425	1	0.75
4c	A and B	Yes	None	F/F	50	1	0.09
4d	A	Yes	None	C/F	2315	12	4.08
4e	A and B	None	None	F/F	100	1	0.18
4f	A and B	None	None	F/C	340	2	0.60
5	B	Yes	None	F/F	412	3	0.73
6	Plaster	Yes	None	Varies	150	3	0.26
7a	B	Yes	8	F/F	1285	8	2.26
7b	B	Yes	8	F/C	910	7	1.60
7c	B	Yes	1	F?C	125	1	0.22
8	IJ	Yes	1	F/F	45	1	0.08
9a	C	Yes	5	F/F	1035	10	1.82
9b	C	Yes	6	F/F	279	6	0.49
10	C	Yes	10	F/F	1985	11	3.50
11	D	Yes	5	F/F	515	13	0.91
12	E	Yes	None	F/F	50	1	0.09
13a	F	Yes	None	F/F	2145	28	3.78
13b	F	No	None	F/F	550	23	0.97
14	G	No	None	?	1325	2	2.34
15	H	No	None	?	1040	4	1.83
16	K	No	1	?	10	1	0.02
17	G	Yes	1	F/F	10	1	0.02
?	?	No	None	?	10020	1923	17.66
Moulded	D	Yes	None	Varies	330	3	0.58

Table 33 Mortar, plaster and painted plaster by context

(? = small fragments from boreholes/environmental samples of uncertain type)

Context	Types present	Weight in grams	No of fragments
3000	17	10	1
3019	14, 15	1145	2
3026	2b, 2d, 4d, , 7b	825	8
3037	7b, 7c	180	2
3043	16	10	1
3055	1a, 1c	425	3
3057	8, 9a	50	2
3070	1a	75	1
3082	1a, 1b, 1c, 2a, 2b, 2c, 2d, 3a, 3b, 4a, 4b, 4c, 4d, 4e, 4f, 5, 6, 7a, 7b,	34299	574
3088	15	820	3
3103	2a, 2b, 2c, 71, 9a, 9b, 10, 11, moulded	4455	41
3149	14	400	1
8072	13b	355	9
8075	13	1875	23
8076	6	25	1
9151	?	50	16
9606	?	50	20
9607	?	5	25
9619	?	60	30
9620	?	10	9
9642	?	95	22
19008	12	50	1
19020	6, 13b	95	2
19075	?	280	70
19092	9b	44	3
19093	1a	10	1
19096	10	10	1
19122	?	1400	150
19124	?	100	45
19136	?	410	80
19140	?	250	13
19141	?	370	60
19142	1a, 13b	40	3
19161	?	75	3
19162	?	450	50
19172	1a, 1c, 3b, 13b, ?	1940	158
19176	1a, 9a, 9b, ?	315	57
19178	13b	25	1
19185	?	50	15
19186	?	350	130
19188	1a, 1c, 2a, ?	4078	769
19191	?	700	200

Table 33 Mortar, plaster and painted plaster by context

(? = small fragments from boreholes/environmental samples of uncertain type)

Context	Types present	Weight in grams	No of fragments
19193	13a	60	2
19194	2b, 13a, ?	260	11
19195	13a	75	1
19197	9	20	1
19199	?	10	20
19200	?	5	1
19201	?	50	16

Table 34 Summary of Roman mortar and plaster groups

(Letters refer to the mortar types on Table 32)

Group	Sequence of mortars/plasters	Types	Weight in grams	No. of fragments
1	C, plaster + paint, C, plaster + paint	9a, 9b, 10	3299	27
2	D, plaster +paint	11	515	13
3	Plaster		355	4
4	F, plaster	13a	2145	28
5	A, B, plaster +paint (plus variations)	1a, 1b, 1c, 2a, 2b, 2c, 2d, 3a, 3b, 4a, 4b, 4c, 4d, 4e, 5, 7a, 7b, 7c	37252	628
6	Plaster	6	50	1
7	F	13b	550	23

Table 35 Details of the Roman painted plaster

Type	Description of the paint	No. of Frags
7a	Red paint over the whole surface, which in one case is streaky.	2
	White background, a red stripe in excess of 9mm wide above and splashes of red paint.	1
	A black stripe 4.8mm wide above a white background with splashes of black paint (possibly originally have been additional stripes at 90 degrees) on the white background.	1
	A broad streaky red stripe in excess of 45mm wide above a white background.	1
	A white background with a small area of red paint above.	1
	A splash or red paint on a white background.	1
	A faded red stripe 21mm wide on a white background.	1
7b	A stripe of red paint in excess of 15mm wide on a white background.	1
	A stripe of red paint in excess of 20mm wide on a white background.	1
	Two small area of red, one possibly a stripe in excess of 4mm wide, the other a splash of red 3x1.5mm in size (2 adjoining fragments).	1
	Small areas of red paint above a white background.	4
7c	White background and a stripe of red paint in excess of 47mm wide above.	1
9a	Red with a small stripe of grey above the red.	1

Table 35 Details of the Roman painted plaster		
Type	**Description of the paint**	**No. of Frags**
	Cream/ochre colour.	1
	An area of grey paint.	2
	A black stripe 23mm wide.	1
9b	Red surface	3
	Cream/ochre colour.	3
10	Cream/ochre background with a thin red stripe 4mm wide.	1
	Five adjoining fragments with a stripe of red paint in excess of 51mm wide, then a stripe of white paint 5mm wide above the straight edge of the red stripe. The area above the white stripe had an ochre background above which was a second red stripe, parallel to and 92mm away from the main area of red. A small patch of green 6mm away from the thin red stripe. Another non-adjoining fragment was clearly part of this design.	2
	Red paint over the whole surface.	1
	Cream/ochre background with two small areas of bright green, possibly leaves	1
11	Creamy-white plaster with part of a red stripe 3mm wide above.	1
	Grey paint above creamy-white plaster.	1
	Three adjoining fragments. Creamy-white plaster with a green leaf design present. Above the leaf is a trellis design above. The trellis has a straight border in red 4mm wide, beneath which is a diagonal grid pattern with three surviving red stripes 2mm wide in one direction and two red stripes 4mm wide on the opposing diagonal. At the junction of each stripe is a black dot.	1
	Creamy-white plaster possibly a small area of grey paint above.	1

Table 36 Building materials by phase

(Op. sig. = opus signinum, Pa. Plaster = Painted Plaster, Mo/plaster = mortar and plaster,

Residual material in red, intrusive material in blue)

Phase	Phase date	Material	Weight (g)	Sherd count	Forms present
3	L1st / 2nd century	Op. Sig.	75	1	Opus signinum
5	L1st / E2nd century	CBM	2450	15	Bessalis?, Imbrex, Roman brick, Tegula, Unknown
		Mortar	55	17	Mortar
		Daub	345	4	Daub
6	2nd century	CBM	2860	8	Imbrex, Roman brick
7	L1st / 2nd century	CBM	52	3	Roman brick, Unknown
		Mortar	10	20	Mortar
		Plaster	25	1	Plaster
8	2nd century	CBM	3685	62	Box flue, Imbrex, Other, Roman brick, Tegula, Unknown
		Mortar	35	9	Type 13a
		Mo/Plaster	4255	53	Type 2a, 2b, 2c, 9a, 10, 11, 13a and ?
		Pa. plaster	2395	15	Types 7a, 9a, 9b, 10 and 11

Table 36 Building materials by phase

(Op. sig. = opus signinum, Pa. Plaster = Painted Plaster, Mo/plaster = mortar and plaster,

Residual material in red, intrusive material in blue)

Phase	Phase date	Material	Weight (g)	Sherd count	Forms present
9	L1st / 2nd century	CBM	4150	86	Roman brick, Tegula, Unknown
		Mortar	700	200	?
		Mo/Plaster	60	2	Type 13a
10	M2nd / E3rd	CBM	2010	7	Roman brick, Tegula
11	M2nd / E3rd	CBM	760	12	Box flue, Roman brick, Tegula, Unknown
		Mortar	4288	823	?, Types 1a and 1c
		Mo/Plaster	75	1	Type 2a
		Pa. plaster	30	2	Types 9a and 9b
12	2nd / 3rd	CBM	1415	23	Roman brick, Unknown. Includes intrusive modern brick?, flange, plain and ridge (7 sherds)
		Stone roof	25	1	Stone peg?
		Stone	625	5	Oolitic limestone, Tufa
		Mortar	20589	447	Types 1a, 1b, 1c, 3a, 3b, 4f and 13b
		Mo/Plaster	14890	288	Types 2a, 2b, 2c, 2d, 4a, 4b, 4c, 4d, 4e, 5 and 13b
		Pa. plaster	1890	13	Types 7a and 7b
		Plaster	50	1	Type 6
		Op. Sig.	210	1	Opus signinum
13	L2nd / 3rd	CBM	7279	239	Imbrex, Roman brick, Tegula, Unknown
		Mortar	3055	467	? and Type 1a
		Mo/Plaster	30	2	Type 13b
14	3rd	CBM	14950	60	Box flue, Imbrex, Roman brick, Tegula
		Op. Sig.	20	1	Opus signinum
16	M2nd / 3rd	CBM	1775	10	Box flue, Imbrex, Roman brick
		Stone roof	25	1	Stone peg?
Roman	-	Stone	425	1	Magnesian limestone
		Daub	25	5	Daub
18	L11th /E13th	CBM	1535	56	Box flue, Peg, Roman brick, Ridge, Tegula, Unknown
		Stone roof	635	5	Micaceous sandstone
		Mortar	410	80	?
		Op. Sig.	160	6	Opus signinum
		Daub	30	25	Daub

Table 36 Building materials by phase

(Op. sig. = opus signinum, Pa. Plaster = Painted Plaster, Mo/plaster = mortar and plaster, Residual material in red, intrusive material in blue)

Phase	Phase date	Material	Weight (g)	Sherd count	Forms present
19	L12th /E13th	CBM	5400	72	Box flue, Flange, Imbrex, Peg, Plain, Roman brick, Tegula, Unknown
		Stone roof	1110	5	Micaceous sandstone
		Tessera	220	14	Oolitic limestone and micaceous sandstone
		Pa. Plaster	10	1	Type 10
		Op. Sig.	230	9	Opus signinum
		Stone	725	2	Magnesian limestone
20	M11th/M13th	CBM	8335	110	Box flue, Imbrex, Plain, Roman brick, Tegula, Unknown
		Stone roof	1495	10	Micaceous sandstone
		Mortar	290	81	Mortar
		Plaster	44	3	Type 9b
		Daub	110	9	Daub
		Op. Sig.	330	3	Opus signinum
		Stone	50	2	Oolitic limestone
21	M11th/M13th	CBM	1875	13	Imbrex, Roman brick
		Mo/Plaster	25	1	Type 13b
		Op. Sig.	55	3	Opus signinum
		Stone	30	1	Oolitic limestone
22	M11th/M13th	CBM	12095	56	Box flue, Curved, Decorated floor tile, Flange, Imbrex, Medieval brick, Peg, Plain, Post-medieval brick, Roman brick, Tegula
		Stone	1145	6	Oolitic limestone, Fine grained sandstone, Limestone
24	M13th/M14th	CBM	6390	59	Curved, Flange, imbrex, Other, Peg, Plain, Roman brick, Ridge
		Stone roof	60	2	Micaceous sandstone, Magnesian limestone
		Op. Sig.	13	2	Opus signinum
		Stone	20	1	Micaceous sandstone
25	M13th/M14th	CBM	300	2	Plain, Roman brick
		Stone roof	160	3	Micaceous sandstone
26	M13th/M14th	CBM	14530	82	Box flue, Crested, Curved, Flange, Imbrex, Peg, Plain, Plain-glazed floor, Roman brick, Ridge, Tegula
		Mo/Plaster	5	1	Type 9a
		Pa. Plaster	45	1	Type 8

Table 36 Building materials by phase

(Op. sig. = opus signinum, Pa. Plaster = Painted Plaster, Mo/plaster = mortar and plaster, Residual material in red, intrusive material in blue)

Phase	Phase date	Material	Weight (g)	Sherd count	Forms present
		Op. Sig.	10	1	Opus signinum
27	M13th/M14th	CBM	9390	28	Medieval brick, Peg, Plain
28	14th?	CBM	275	2	Plain, Ridge
		Mortar	75	1	Type 1a
		Pa. Plaster	18	2	Types 7b and 7c
29	14th	CBM	96534	425	Box flue, Crested, Curved, Flange, Imbrex, Other, Peg, Plain, Roman brick, Ridge, Tegula
		Stone roof	890	4	Micaceous sandstone
		Op. Sig.	100	1	Opus signinum
		Mortar	425	3	Types 1a and 1c
		Stone	650	2	Coarse grained sandstone, Magnesian limestone
		Daub	100	1	Daub
30	By the 14th	CBM	1660	11	Flange, Plain, Roman brick
31	14th	CBM	3115	34	Peg, Plain, Roman brick, Tegula
		Plaster	75	1	Plaster
		Stone	125	1	Fine grained sandstone
32	14th	CBM	11380	19	Flange, Imbrex, Medieval brick, Peg, Plain, Roman brick, Ridge
33	15th/16th	CBM	3875	9	Modern brick, Post-medieval brick, Plain
34	medieval	CBM	700	5	Peg, Plain, Tegula
		Stone	300	1	Magnesian limestone
BH	Medieval	Stone roof	100	2	Micaceous sandstone
		Mortar	220	106	?
		Daub	50	9	Daub
		Stone	1805	3	Magnesian limestone
36	16-17th	CBM	12530	37	Crested, Flange, Paver, Post-medieval brick, Peg, Plain, Plain glazed floor tile, Roman brick, Ridge, Tegula
		AFs	-	2	AF5-6
		Stone roof	15	1	Micaceous sandstone
		Mo/Plaster	10	1	Type 16
		Op. Sig.	75	1	Opus signinum
		Stone	5	1	Fine grained sandstone
37	16-18th	CBM	10235	37	Decorated floor tile, Flange, Imbrex, Medieval brick, Post-medieval brick, Peg, Plain, Roman brick

Table 36 Building materials by phase

(Op. sig. = opus signinum, Pa. Plaster = Painted Plaster, Mo/plaster = mortar and plaster, Residual material in red, intrusive material in blue)

Phase	Phase date	Material	Weight (g)	Sherd count	Forms present
		AFs	-	1	AF9
		Stone	110	3	Chalk, Fine grained sandstone, Oolitic limestone
38	17th	CBM	585	5	Box flue, Post-medieval brick, Roman brick
39	Early 18th	CBM	7185	55	Medieval brick, Post-medieval brick, Plain, Roman brick
		AF	-	1	AF8
		Stone	125	2	Magnesian limestone, Oolitic limestone
		Mo/plaster	20	1	Type 13b
?	Post-medieval	CBM	5505	11	Peg, Plain, Post medieval brick, Roman brick
		Mortar	2365	7	Types 14 and 15
?	Post-medieval or modern	CBM	17955	38	Flange, Medieval brick, Paver, Post-medieval brick, Peg, Plain, Roman brick, Unknown
		AFs	-	2	AF1-2
41	Modern	CBM	10940	34	Box flue, Brick, Imbrex, Other, Pan, Post-medieval brick, Peg, Plain glazed floor tile, Plain, Roman brick, Tegula
		AFs	-	4	AF4 and 7
		Stone roof	660	2	Micaceous sandstone
		Mo/Plaster	50	1	Type 12
		Pa. Plaster	10	1	Type 17
		Op. Sig.	25	1	Opus signinum
?	Modern	CBM	6015	24	Box flue, Curved, Decorated floor tile, flange, post-medieval brick, Peg, Plain gazed floor, Plain, Roman brick, Ridge, tegula
		Mortar	50	16	?
		Daub	30	14	Daub

Table 37 Residuality by weight in grams in relation to historical periods

(Residual material in red, intrusive in blue)

	Roman	L11-M13th	M13-16th	Post-medieval	Modern	Total volume
Roman CBM	39425	19600	9130	7845	4385	80385
Roman stone frags.	675	1200	595	175	0	2645
Roman stone roofing	100	3230	1110	15	660	5115
Roman mortar/plaster	52432	779	730	20	0	53961

Table 37 Residuality by weight in grams in relation to historical periods (Residual material in red, intrusive in blue)						
	Roman	**L11-M13th**	**M13-16th**	**Post-medieval**	**Modern**	**Total volume**
Opus signinum	340	775	23	75	25	1238
Curved and Flanged		1495	39905	800	475	42675
13-16th CBM		7525	105824	28475	7130	148954
14-16th brick		325	11310	7225	600	19460
Post-medieval brick				19895	6595	26490

Table 38 Residuality as a % of the total volume for selected forms in relation to historical periods (Residual material in red, intrusive material in blue)						
	Roman	**L11-M13th**	**M13-16th**	**Post-medieval**	**Modern**	**Total %**
Roman CBM	49	24.4	11.4	9.8	5.5	100
Roman stone frags.	25.5	45.4	22.5	6.6	0	100
Roman stone roofing	2	63.1	21.7	0.3	12.9	100
Roman mortar/plaster	97.17	1.44	1.35	0.04	0	100
Opus signinum	27.5	62.6	1.9	6.1	2	100
Curved and Flanged		3.5	93.5	1.9	1.1	100
13-16th CBM		5	71	19	5	100
14-16th brick		1.6	58.1	37.1	3.1	100
Post-medieval brick				75	25	100

Table 39 Percentage of gnawed to ungnawed bones (teeth are excluded)					
Gnawed?	**1**	**2**	**3**	**4**	**TOTAL**
Gnawed		1	17	4	22
Not gnawed	24	30	245	62	360
% Gnawed	**0.00%**	**3.20%**	**6.50%**	**6.10%**	**5.80%**

Table 40 Number of Identified Specimens (NISP) from hand-collected bone												
	LC1st–2nd		**C2nd–EC3rd**			**MC2nd–EC3rd**				**C3rd and later**		
Species	**3**	**5**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**16**	**TOTAL**
Cattle	3	1	1	6	1	1	5	20	32	5	6	81
Sheep/Goat	2	6	1	3			4	7	19	1	10	53
Sheep				1			1	3	5			10
Pig		2	1	2			8	21	26	2	7	69
Dog									1		1	2
Red deer											1	1
Chicken/ Pheasant/ Guinea fowl					1		2	4	9	5	2	23

Table 40 Number of Identified Specimens (NISP) from hand-collected bone												
	LC1st–2nd		C2nd–EC3rd			MC2nd–EC3rd				C3rd and later		
Species	**3**	**5**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**16**	**TOTAL**
Chicken/ Guinea fowl									1		2	3
Chicken/ Pheasant					1		1					2
Goose								1		2		3
Mallard									1			1
Raven								1				1
Crow/Rook								2				2
Bird									1			1
Large mammal	2	6	1	6			7	16	29	7	10	84
Medium mammal	2		1	4			6	10	26		7	56
Unidentified	1			1			1	7	18		11	39
TOTAL	**10**	**15**	**5**	**23**	**3**	**1**	**35**	**92**	**168**	**22**	**57**	**431**

Table 41 Number of Identified Specimens (NISP) from environmental residues								
	LC1st–2nd	C2nd–EC3rd			MC2nd–EC3rd			
Species	**5**	**7**	**8**	**9**	**11**	**12**	**13**	**TOTAL**
Cattle	6		1		1	4	7	19
Sheep/Goat	2		3		6	6	19	36
Sheep					1		2	3
Pig	1	1	3	1	6	2	16	30
Horse						1		1
Chicken/ Pheasant/ Guinea fowl	1	1			2	3	13	20
Chicken/ Guinea fowl			1		1			2
Bird	6		1		1		11	19
Mallard					1			1
Crane							1	1
House Mouse							1	1
Mouse/Vole					2		1	2
Large mammal	11		2	1	6	10	41	71
Medium mammal	14	3	3	6	11	12	46	95
Small mammal			1				4	5
Unidentified	386	169	307	161	988	339	2296	4646
TOTAL	**427**	**174**	**322**	**169**	**1026**	**377**	**2461**	**4956**

Table 42 Mandibular ageing data							
		Neonatal	**Juvenile**	**Immature**	**Subadult**	**Adult**	**Elderly**
Cattle							
Period 1	Phase 5					1	
Period 2	Phase 9					1	
Period 3	Phase 10					1	
Sheep/Goat							
Period 1	Phase 5				2		
Period 3	Phase 11				1		
	Phase 12			1			
	Phase 13			1			
Pig							
Period 1	Phase 5			1	1		
Period 3	Phase 11				1		
	Phase 12				1		
	Phase 13		1		2		

Table 43 Minimum Number of Elements (MNE) for cattle, sheep and pigs			
Element	**Cattle**	**Sheep**	**Pig**
Horn Core	1	1	
Axis/atlas	2	1	1
Maxilla		1	8
Mandible	2	4	6
Scapula	3	2	6
Humerus	2	2	2
Radius	1	3	2
Ulna	2	1	2
Pelvis	4	7	5
Femur	2	4	1
Tibia	1	10	2
Astragalus	3		
Calcaneus	1		2
Metacarpal	3	2	3
Metatarsal	3	2	2
1st Phalanx	3	3	2
2nd Phalanx	3	1	
3rd Phalanx	2		

Table 44 Detailed information on bones from Contexts C3026 and C19137				
	Species	**Element**	**Taphonomy**	**TOTAL**
Context 3026	Cattle	Head: Skull fragments, Lower incisor Spine: Atlas Upper Limbs: Scapula, Humerus (Distal, fused, 2 x Pelvis (fused) Lower Limb:2 x Radius (Proximal, fused; Distal, unfused), Tibia (Distal, fused) Feet: Calcaneus (F), 2 x PH1 (both fused), PH2 (fused)	Butchery	**14**
	Sheep/Goat	Head: Mandible (Immature), upper molar Spine: Axis Upper Limbs: Scapula (Proximal, fused) Pelvis, Humerus (Distal, fused), Lower Limb: 2 x Tibia Feet:	Dog gnawing	**8**
	Pig	Head: 2 x Frontal bones, Mandible (Subadult) Spine: Upper Limbs: Scapula (Fused), Pelvis (fused) Humerus (Distal, fused), Femur (Distal, unfused) Lower Limb: Ulna (Proximal, unfused) Feet: 2 x Metacarpal, 2 x metatarsal (all fused at proximal, unfused at distal)		**12**
	Bird	Goose – Furcula; Chicken – Synsacrum, carpometacarpus; Raven - Ulna		**4**
	Other	Large mammal – 6 long bone fragments, 3 vertebrae, 3 ribs; Medium mammal – 2 vertebrae, 1 rib; Unidentifiable – 4 fragments	Butchery	**19**
Context 19137	Cattle	Head: Horn Core, Mandible Spine: Upper Limbs: Humerus, Femur, Pelvis Lower Limb: Feet: Astragalus, 2 x MC (1 unfused at distal end), 3rd phalanx	Butchery	**9**
	Sheep/Goat	Head: Spine: Upper Limbs: Lower Limb: Ulna, Tibia (Distal, unfused) Feet:	Dog gnawing	**2**
	Pig	Head: Spine: Upper Limbs: Femur Lower Limb: Feet:	Dog gnawing	**1**
	Bird	Chicken - Sternum		**1**
	Other	Large mammal – 2 x Long bone fragments; Medium mammal – 2 x Long bone fragments, 1 Rib; Unidentified – 3 fragments		**8**

Table 45 Summary of fish remains

Period	Phase	Context	Sample	Marine						Freshwater			Migratory		
				Herring	Sprat	Spanish mackerel	Gurnard	Flatfish	Skate /ray	European chub	Carp family	Pike	European eel	Unidentified	Total
Roman	5	19200	73			1					1		1		3
		19201	74										1	2	3
	7	19199	72											1	1
	9	19193	70								5			1	6
	11	19176	65	2	1	2					10	1	5		21
		19188	68							2	5		5		12
		19191	69								1				1
	13	19122	46								3			2	5
		19140	48	1									1	2	4
		19151	51	2									1		3
11th–13th century	18	19136	50	6							2		6	14	28
	19	19107	26			1							3	1	5
	20	19075	24	6	2		1		1		2		7	29	48
Unknown		BH3	43	1											1
		BH4	23	2				1					2	1	6
Total				**20**	**3**	**4**	**1**	**1**	**1**	**2**	**29**	**1**	**32**	**53**	**147**

Table 46 Avian eggshell by context				
Context	**Sample number**	**Fraction**	**Count**	**Weight (g)**
19176	65	2–4mm	9	0.7
19188	68	2–4mm	5	0.3
19191	69	2–4mm	8	0.7
TOTAL	-	-	22	1.7

Table 47 Summary of terrestrial molluscs from the Guildhall, York. MNI = minimum number of individuals. HC = hand collected							
Period	**Phase**	**Context**	**Sample**	**Fraction**	**MNI**	**Species**	**Common name**
Roman	13	19122	46	2-4mm	1	Unidentified	
	13	19124	#	#	1	Oxychilidae	Glass snail species
	13	19140	#	2-4mm	1	Oxychilidae	Glass snail species
	#	1951	HC	#	1	Oxychilidae	Glass snail species
Medieval	19	19107	26	>8mm	1	Oxychilidae	Glass snail species
	20	19075	24	4-8mm	1	Oxychilidae	Glass snail species
Post-medieval	36	3031	HC	#	2	*Cornu aspersum*	Common garden snail

Table 48 Summary of marine invertebrates							
Phase	**Date**	**Context**	**Oyster**	**Cockle**	**Mussel**	**Limpet**	**Total**
5	2nd C	19200	2		1		3
		19201			1		1
8		19194	3				3
		19195	2				2
9		19193	1				1
11	Late 2nd – Early 3rd C	19176	28	1	81		110
		19187	2				2
		19188	17	1	44		62
		19191	5	2	23		30
12		3026				1	1
		8072	4				4
		19172	12		2		14
13		19122	4				4
		19137	3				3
		19138	1				1
		19139	1				1
		19141	9				9

Table 48 Summary of marine invertebrates							
Phase	**Date**	**Context**	**Oyster**	**Cockle**	**Mussel**	**Limpet**	**Total**
		19151	13		3		16
		19161	1				1
		19170	4				4
		19185	1				1
		19186	2				3
14	3rd C	19115	1				1
16	Roman	3053	2				2
18	Late 11th – Early 13th C	19103	1				1
		19112	8				8
		19113	2				2
		19136	14		2		16
19	Late 11th – Early 13th C	3109	1				1
		3110	3				3
		3116	2				2
		19092	1				1
		19096	16				16
		19099	4				4
		19106	2				2
		19107	14				14
		19135	3				3
		19183	1				1
20	Late 12th – Early 13th C	19012	7				7
		19061	2				2
		19063	1				1
		19070	4				4
		19074	3				3
		19075	5				5
		19081	2				2
		19085	10				10
		19087	2				2
		19090	12				12
		19093	21		8		29
		19094	2				2
		19097	3				3
		19104	5				5
		19180	2				2
		19181	17				17
		19182	1				1
21	Mid-11th – Mid-13th C	19131	1				1
		19178	6				6
22	Mid-11th – Mid-13th C	3025	2				2
		19040	2				2
		19042			1		1
		19047	2				2

Table 48 Summary of marine invertebrates							
Phase	**Date**	**Context**	**Oyster**	**Cockle**	**Mussel**	**Limpet**	**Total**
		19126	1				1
		19128	1				1
24	Mid-13th – Mid-14th C	3094	3				3
		3102	1				1
		3106	1				1
26	Mid-13th – Mid-14th C	3048	4				4
		3056	1				1
		3057	2				2
29	Medieval	3050	6				6
		3052	1				1
		3055	2				2
		3062	3				3
30		3047	1				1
31	14th – 16th C (grave fills)	19006	18				18
		19055	3				3
		19058	3		1	1	5
		19076	1				1
34	Probable medieval	8054	1				1
36	16th C (grave fills)	3031	7				7
		3038	1				1
		3043	3				3
37	Post-medieval	19031	1				1
		19032	2				2
		19034	1				1
		19035	1				1
		19171	14				14
38		19168	3	1			4
39		8002	1				1
		19019	1				1
		19020	5	3			8
		19022		1			1
40	Modern	19001	8	1			9
0	Unstratified	19000	2				2
	Not phased	1019	1				1
		1020	2				2
		1021	12	2			14
		2029	1				1
		3000	2	1			3
		3013	1				1
		19007	7				7
		Pile #56	2				2
Total			**433**	**13**	**167**	**2**	**616**

Table 49 Infestations observed on European flat oyster shells		
Surface feature	**Valve count**	**%**
Barnacle	11	2.5%
Barnacle scar	26	6.0%
Sponge	20	4.6%
Annelid worm tubes	9	2.1%
Bryozoa	29	6.7%
Polydora burrow	89	20.6%
Oyster attached	40	9.2%

Table 50 Size estimation for oyster valves from the Guildhall, York, minimum number of valves (MNV)							
	Very small	**Small**	**Medium**	**Large**	**Very Large**	**Very small**	
	<4.5cm	**4.6-6cm**	**6.1-7.5cm**	**7.6-10cm**	**>10 cm**	**<4.5cm**	**Total**
Oyster	19	98	96	38	6	19	257

Table 51 Quantification of marine species at the Guildhall, York, by minimum number of valves (MNV) and minimum number of individuals (MNI). L = left valve; R = right valve							
	Bivalves						**Gastropods**
	Oyster		**Mussel**		**Cockle**		**Limpet**
	L	**R**	**L**	**R**	**L**	**R**	
MNV	165	137	1	3	7	1	N/A
MNI	165		3		7		2

Table 52 Skeletal Preservation					
Context Number	**Skeleton Number**	**Preservation**	**Completeness**	**Fragmentation**	**Surface Condition**
19023	SK1	Fair	11-30%	Low	Grade 1
19024	SK2	Good	11-30%	Low	Grade 1
19056	SK3	Good	11-30%	Low	Grade 1
19060	SK4	Good	31-50%	Low	Grade 2
19065	SK5	Poor	11-30%	High	Grade 1
19068	SK6	Fair	11-30%	Moderate	Grade 1
19072	SK7	Good	11-30%	Low	Grade 1
19077	SK8	Poor	5-10%	High	Grade 1
19203	SK9	Fair	11-30%	High	Grade 2
8058	SK10	Fair	11-30%	Moderate	Grade 1

Table 53 Skeletal Demographic Attributes, Stature and Pathology					
Context Number	**Skeleton Number**	**Sex**	**Age**	**Stature (cm)**	**Pathology**
19023	SK1	Male	Mature Adult (45+)	2.32 x 47.1 + 64.41 ± 3.27 cm = 176.508 ±3.27cm	Skeletal Pathology: Slight osteophytes on right fibula proximal interior side
19024	SK2	Male	Middle Adult (35-44)	3.08 x 32.3 + 70.45 ± 4.05 cm = 169.934 ± 4.05cm	
19056	SK3	Not Recordable	Adult Unspecified (18+)	Based on Tibia if male 2.42 x 35.6 + 75.79 ± 3.37 cm = 165.502 ± 3.37cm or if female 2.90 x 35.6 + 59.24 ± 3.66 cm = 162.48 ± 3.66cm	
19060	SK4	Not Recordable	Adolescent (12-17 years)		
19065	SK5	Male	Adult Unspecified (18+)		Dental pathology: opacity, enamel hypoplasia Other Comment: two fragments of cremated bone also found possible animal
19068	SK6	Not Recordable	Adult Unspecified (18+)	Based on radius if male 3.78 x 21.3 + 79.01 ± 4.32 = 159.524 ± 4.32cm or if female 4.74 x 21.3 + 54.93 ± 4.24 = 155.892 ± 4.24cm	
19072	SK7	Male	Middle Adult (35-44)		Dental Pathology: calculus, periodontal disease, enamel hypoplasia, AMTL, carie Skeletal Pathology: ectocranial porosity in the form of 'orange peel-like porosity' present on the frontal and parietal bones of the skull Metabolic: criberia orbitalia on the eye orbits stage 3 (anaemia) Two above conditions may be linked either anaemia or possibly scurvy
19077	SK8	Not Recordable	Young/Prime Adult (18-25/26-34)		Metabolic: rickets displayed a 'flute' like flaring of sternal rib end
19203	SK9	Probable Female	Young Adult (18-25)		Dental Pathology: AMTL, calculus, carie, small fissures. Developmental defect as lower

Table 53 Skeletal Demographic Attributes, Stature and Pathology					
Context Number	**Skeleton Number**	**Sex**	**Age**	**Stature (cm)**	**Pathology**
					3rd molars unerupted whilst upper 3rd molars are fully erupted
8058	SK10	Not Recordable	Mature/ Older Adult (45+/60+)	Based on radius if male 3.78 x 24.3 + 79.01 ± 4.32 = 170.864 ± 4.32cm or if female 4.74 x 24.3 + 54.93 ± 4.24 = 170.112 ± 4.24cm	Skeletal Pathology: severe osteophytes observed on a single vertebra body, along with bony spurs occurring on the right radial tuberosity associated with degenerative joint disease Metabolic: osteoporosis on the pelvis and sacrum Trauma: Myositis ossificans of new bone growth observed adjacent to the linea aspera on the right and left femur, being more severe on the left femur, also observed on the right radius along the interosseous crest and on the right and left pelvis around the ischial tuberosity

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 8055	Bag 1 = 623g	Bag 1 = 10	Femur	Right	Proximal	-	Adult	48mm	
HB 8055			Femur	Right	Distal		Adult		
HB 8055			Femur	Left	Distal		Adult		Eburnation on the patellar surface, lipping around the margin of the lateral epicondyle
HB 8055			Femur	Left	Distal		Adult		
HB 8055			Femur	Left	Shaft (towards distal)		Adult		
HB 8055			Femur	Left	Shaft (towards proximal)		Adult		
HB 8055			Tibia	Left	Distal and shaft		Adult		
HB 8055			Ulna	Left	Complete		Adult		
HB 8055			Ulna	Right	Complete		Adult		
HB 8055			Radius	Left	Proximal and shaft		Adult		
HB 8055	Bag 2 = 258g	Bag 2 = 8	Pelvis	Right	illium, acetabulum, ishium	Female	Older Adult		
HB 8055			Pelvis	Right	Illium, acetabulum	Possible Female	Prime Adult		
HB 8055			Femur		Frag of shaft		Adult?		
HB 8055			Femur		Frag of shaft		Adult?		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 8055			Femur		Frag of shaft		Adult?		
HB 8055			Radius/ulna		Frag of shaft		Adult?		
HB 8055			Ulna		Frag of shaft towards the proximal end		Adult?		
HB 8055			Further frag ??				Adult?		
HB 8055	Bag 3 = 1.307kg	Bag 3 = 7	Femur	Right	Distal and shaft		Adult		Bowing- rickets --- Publication Photo
HB 8055			Femur	Left	Part of distal and shaft		Adult		
HB 8055			Tibia	Left	Complete		Adult	393mm length	
HB 8055		MNI 4	Tibia	Left	Complete (broken in two)		Adult		
HB 8055			Tibia	Left	Proximal and shaft		Adult		
HB 8055			Tibia	Left	Shaft and distal		Adult		
HB 8055	Bag 4 = 417g	Bag 4 = 70	Fragmented skull (67 frags)			Male	Adult		
HB 8055			Atlas vertebra		Complete		Adult		Bony spurs around the oval articulation for the dens
HB 8055			Rib		Shaft towards the lateral end				

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 8055			Pelvis		Small fragment of illiac crest		Adult		
HB 8055									
HB 8085	1 Bag = 46g	1 Bag = 7	Vertebra	N/A	Body,		Adult		
HB 8085			Rib	Left	Frag of head and neck		Adult		
HB 8085			Rib		Shaft frag		Adult		
HB 8085			Rib		Shaft frag		Adult		
HB 8085			Rib		Shaft frag		Adult		
HB 8085			Humerus		Shaft frag		Adult		
HB 8085			Humerus		Shaft frag		Adult		
HB 8085									
HB 8022	1 Bag = 5g	1 Bag = 1	Metacarpal 1st				Adult		Trauma - break --- Publication Photo
HB 8022									
HB 19000	1 Bag = 44g	1 Bag = 5	Patella	Right	Complete		Adult		
HB 19000			Hand Phalanx	Left?	Complete		Adult		
HB 19000			Long bone frag		Shaft small frag		Adult		
HB 19000			Skull frag		Small frag		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 19000			Mandible	Right	Frag of mandible with dentition = RI1, RC, RPM1-2, RM1-2	Male	Adult		Minor calculus, minor periodontal disease, hypoplasia
HB 19001	1 Bag = 1.367kg	1 Bag = 153	Atlas (vertebra)		Complete		Adult		
HB 19001			Axis (vertebra)		Complete		Adult		
HB 19001			6 vertebra (cervical)						
HB 19001			Vertebra		Body		Adult		
HB 19001			Manubrium		Near complete		Adult		
HB 19001			Scapula	Right	Acromion		Adult		
HB 19001			Scapula	Right	Parat of acromion and glenoid cavity		Adult		
HB 19001			Scapula	Right	Part of glenoid cavity and coracoid process		Adult		
HB 19001			Cavicle	Right	Distand and shaft	Female?	Adult		
HB 19001			Humerus	Right	Head and shaft		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 19001			Humerus	Left	Head and shaft		Adult		
HB 19001			Humerus	Left	Shaft, part of distal		Adult		
HB 19001			3x rib frags	Right	Heads		Adult		
HB 19001			5x rib frags		Shaft		Adult		
HB 19001			1x metatarsal		Head and shaft		Adult		
HB 19001			Femur	Left	Proixmal, shaft and distal, missing head and condyles		Adult		
HB 19001			Tibia	Left	Shaft		Adult		
HB 19001			Tibia	Right	Shaft		Adult		
HB 19001			94x skull frags			Male	Adult		
HB 19001			Maxilla	Right	Frag no teeth insitu		Adult		
HB 19001			Maxilla		Frag no teeth insitu		Adult		
HB 19001			Maxilla	Left	Teeth present = RI2, RM1-2		Adult		Slight calculus, possible peridontal disease slight
HB 19001			Mandible	Right		Female	Older Adult		No dentition AMTL to the right M1-3, traces of sockets on ther teeth but no teeth actually present

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 19001			Mandible		Broken in three - Teeth present - RPM1, RM1, RM3 erupting, LM1-2	Male	Young adult		
HB 19001			23 x loose teeth						Traces of calculus, heavy wear, hypoplasia, carie
HB 19004	1 Bag = 136g	1 Bag = 11	3 x lumbar vertebra, 1x lumbar process				Adult		
HB 19004			2x unidentifed small frags				Adult?		
HB 19004			Radius	Right	Broken into three frags		Adult		
HB 19004			Ulna	Right	Broken into two frags		Adult		
HB 19006	1 Bag = 476g	1 Bag = 41	Humerus	Left	Complete		Adult		
HB 19006			6x ribs	RIght	Head and shaft		Adult		
HB 19006			6x ribs	Left	Head and shaft		Adult		
HB 19006			10 x ribs		Shaft		Adult		
HB 19006			Sternum		Frag of corpus sterni		Adult?		
HB 19006			Manubrium		Frag		Adult?		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 19006			2 x small unidentified frags				Adult?		
HB 19006			Clavicle	Left	Complete but broken in two	Male?	Adult		
HB 19006			Scapula	Left	Glenoid cavity, acomion, part of coracoid process		Adult		
HB 19006			Scapula		Frag of acomion		Adult		
HB 19006			Scapula		Frag of lateral axillary border?		Adult		
HB 19006			Vertebra C1				Adult		
HB 19006			1x cervical vertebra				Adult		
HB 19006			6 x thoracic vertebra				Adult		
HB 19007	1 Bag = 16g	1 Bag = 1	Frag of skull	Left	Supraorbital margin	Male??	Adult		
HB 19008	1 Bag = 52g	1 Bag = 8	1x rib		Shaft		Adult		
HB 19008			1x lumbar vertebra		Complete		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 19008			1 x cervical vertebra		Body		Adult		
HB 19008			1 x cervical/ thoracic vertebra		Body		Adult		
HB 19008			1x carpal	Left	Complete - capitate		Adult		
HB 19008			Metacarpal 1	Left			Adult		
HB 19008			Metacarpal 5	Left	Complete		Adult		
HB 19008			1x hand phalanx				Adult		
HB 19014	1 Bag = 102g	1 Bag = 12	2x lumbar vertebra		Complete		Adult		Traces of schmorls nodes
HB 19014			1 x ribs	RIght	Head		Adult		
HB 19014			2 x ribs		Sternum end		Adult		
HB 19014			2 x ribs		Shaft		Adult		
HB 19014			Clavicle	Right	Distal and shaft	Male?	Adult		
HB 19014			Metatarsal 1	Right	Complete		Adult		
HB 19014			Metatarsal 4	Right	Complete		Adult		
HB 19014			Metatarsal 4	Left	Complete		Adult		
HB 19014			Metatarsal 5	Left	Complete		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 19020	1 Bag = 12g	1 Bag = 3	1x skull frag		Small frag		Adult?		
HB 19020			1 x radius/ulna		Small frag of shaft		Adult?		
HB 19020			1 x rib	Left	Head		Adult?		
HB 19035	Bag 1 = 659g	Bag 1 = 7	Radius	Left	Complete	Female?	Adult		
HB 19035			Ulna		Shaft		Adult	224mm length	
HB 19035			Femur	Left	Proximal and shaft		Adult	45mm head	
HB 19035			Femur	Left	Shaft		Adult		
HB 19035			Femur	Right	Distal end		Adult		
HB 19035			Femur	Left	Shaft		Adult		
HB 19035			Femur	Right	Part of proximal and shaft		Adult		
HB 19035	Bag 2 = 508g	Bag 2 = 8	Femur	Right	Distal and shaft		Adult		
HB 19035			Femur	Left	Proximal and shaft		Adult	43mm head	
HB 19035			Femur	Right	Proximal		Adult	43mm head	
HB 19035			Femur	Right	Shaft		Adult		
HB 19035			Pelvis? Unfused		Frag		Non-Adult		
HB 19035			Pelvis Unfused		Illium frag		Non-Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 19035			1 x frag unidentified				Adult?		
HB 19067	1 Bag = 8g	1 Bag = 2	1 x rib		Shaft small frag		Adult		
HB 19067			Fibula	Left	Proximal	Female?	Adult		
HB 19068	1 Bag = 9g	1 Bag = 2	Metatarsal 1st	Right	Complete	Female?	Adult		
HB 19068			1 x hand phalanx		Complete		Adult		
HB 19071	1 Bag = 120g	1 Bag = 1	Femur	Left	Head and shaft		Adult	40mm head	
HB 19076	Bag 1 = 325g	Bag 1 = 20	1x rib	Right	Head and shaft		Adult		
HB 19076			3 x ribs		Shaft		Adult		
HB 19076			Radius	Left	Complete		Adult	266mm length	
HB 19076			Ulna	Left	Complete		Adult	288mm length	
HB 19076			Tibia	Left	Distal and shaft		Adult		
HB 19076			Tibia	Right	Distal		Adult		
HB 19076			Calcaneus	Right	Complete		Adult		
HB 19076			Calcaneus	Left	Frag		Adult		
HB 19076			Talus	Right	Complete		Adult		
HB 19076			Talus	Left	Complete		Adult		
HB 19076			Cuboid	Left	Complete		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 19076			Navicular	Left	Complete		Adult		
HB 19076			Medial, intermediate, lateral cuniform	Left	Complete		Adult		
HB 19076			Metatarsal 1st	Left	Complete		Adult		
HB 19076			Metatarsal 2nd	Left	Complete		Adult		
HB 19076			Metatarsal 2nd	Right	Complete		Adult		
HB 19076	Bag 2 = 99g	Bag 2 = 24	7 x small frags unidentifed				Adult?		
HB 19076			4 x ribs		Shaft		Adult		
HB 19076			1 lumbar vertebra		part of body		Adult		Traces of schmorls nodes
HB 19076			6x pelivs frags		Illium		Adult		
HB 19076			2 x carpals - lunar, scaphoid	Left			Adult		
HB 19076			4 x metacarpals - navicular, cuboid, medial and intermediate cuniform	Left			Adult		
HB 19076			Fibula	Left	Distal		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 19085	1 Bag = 3g	1 Bag = 1	1 x rib				Adult		
HB 8069	1 bag = 161g	5	Tibia	Left	Mid shaft		Adult		Healed PNB
HB 8069			Tibia	Right	Mid shaft		Adult		Healed PNB
HB 8069			Tibia	Right	Mid shaft fragment		Adult		
HB 8069			Fibula	Left	Mid shaft fragment		Adult		
HB 8069			Thoracic vertebrae		Body only		Adult		Schmorl's node
HB 1021	2 bags = 970g	41	Femur	Left	Proximal		Adult		
HB 1021			Femur	Right	Distal and shaft		Adult		
HB 1021			Femur		Mid shaft fragment		Adult		
HB 1021			Femur		Mid shaft fragment		Adult		
HB 1021			Femur?		Shaft fragment?		Adult		
HB 1021			Tibia	Right	Mid shaft fragment		Adult		
HB 1021			Tibia	Left	Distal fragment		Adult		
HB 1021			Tibia		Distal fragment		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 1021			Humerus	Right	Mid Shaft		Adult		
HB 1021			Humerus	Right	Distal and shaft fragment		Adult		
HB 1021			Fibula		Shaft fragment		Adult		
HB 1021			Radius	Left	Shaft fragment		Adult		
HB 1021			1st rib	Right	Almost complete		Adult		
HB 1021			Ribs x 3	Left	Part of head and shaft		Adult		
HB 1021			Ribs x 4		Shaft fragments		Adult		
HB 1021			Thoracic vertebrae		Complete		Adult		
HB 1021			Lumbar vertebrae		Part of head and superior articular facet		Adult		
HB 1021			Vertebra		Part of body fragment		Adult		
HB 1021			Pelvis	Left	Part of acetabulum, auricular surface	Female?	Adult: 30-34 (Lovejoy)		
HB 1021			Pelvis	Left	Fragment of sciatic notch		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
					and auricular surface				
HB 1021			Pelvis		Fragment of illium		Adult		
HB 1021			Pelvis x 2		Small fragments		Adult		
HB 1021			Skull: Zygomatic	Right	Complete		Adult		
HB 1021			Skull: cramium x 3		Fragments		Adult		
HB 1021			Skull: temporal x 2	Right and Left	Fragments including mastoid process	Male?	Adult		
HB 1021			Skull frag x 1		Small fragment		Adult		
HB 1021			Mandible	Right		Male	Adult		No teeth in socket, evidence of abcess on the right m1-3 with bone porosity and extra bone growth
HB 1021			Tooth: loose right lower pm possible associated with mandible	Right			Adult		
HB 1021			Metacarpals - 5th	Right			Adult		
HB 1021			Metacarpal - 3rd	Right			Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 1021			Metacarpal				Adult		
HB 1021			Metatarsal - 3rd	Right			Adult		
HB 1019	1 bag = 6g	1	Skull: pariatal		Fragment of pariatal striae		Adult		
HB 2026	1 bag = 6g	1	Long bone		Shaft fragment		Adult		
HB 3000	1 bag = 1.025kg	28	Femur	Right	Part of distal and shaft		Adult		
HB 3000			Femur	Left	Shaft towards the distal		Adult		
HB 3000			Femur	Right	Shaft towards the proximal		Adult		
HB 3000			Femur	Left	Part of proximal and shaft		Adult		
HB 3000			Femur		Head - unfused		Non-Adult		
HB 3000			Tibia	Right	Almost complete, broken in two		Older Adult		Osteoporosis
HB 3000			Humerus	Right	Complete		Adult	Length: 300mm; Head: 35mm	
HB 3000			Humerus	Right	Proximal and shaft		Adult	Head: 41mm	
HB 3000			Humerus		Head		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 3000			Radius	Right	Proximal and upper shaft		Adult		
HB 3000			Radius	Right	shaft		Adult		
HB 3000			Long bone frags x 3				Adult		
HB 3000			Thoracic vertebrae		Body		Adult		Osteoporosis
HB 3000			Ribs x 2	Right	Shaft towards proximal end		Adult		
HB 3000			Ribs x 2		Shaft		Adult		
HB 3000			Cranium frag				Adult		
HB 3000			Cranium frag		Parietal		Adult		
HB 3000			Skull frags x 2				Adult		
HB 3000			Unidentified frag				Adult		
HB 3000			Mandible	Left		Female?	Older Adult		Left I1-2, C tooth missing out of socket, Left PM1-2 present in socket with heavy wear and slight calculus, LM1-3 AMTL bone porous; Right I1-2 and C missing out of socket
HB 3000			Loose tooth: canine	Right	Complete		Adult		Enamel hypoplasia

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 3000			Metatarsal - 2nd	Right	Shaft and distal end		Adult		
HB 3025	Bag 1 = 1.031kg (and 2g of bone dust)	71 (includes some really small fragments)	Femur	Left	Head and upper shaft		Adult	Head: 46mm	
HB 3025			Femur	Right	Head and upper shaft		Adult	Head: 38mm	
HB 3025			Femur	Left	Distal and shaft		Adult		
HB 3025			Femur	Left	Upper shaft fragment		Adult		
HB 3025			Femur	Left	Mid shaft		Adult		
HB 3025			Femur	Left?	Mid Shaft		Adult		
HB 3025			Femur		Head fragment		Adult		
HB 3025			Tibia	Right	Proximal and shaft broken in two		Adult		
HB 3025			Tibia	Right	Proximal and upper shaft		Adult		
HB 3025			Tibia	Left	Mid shaft		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 3025			Humerus	Right	Distal and shaft		Adult		
HB 3025			Pelvis	Right	Illium, auricular surface, acetabulum (fragment broken in two) - unfused		Non-Adult		
HB 3025			58 smaller bone frags unidentified				Adult		
HB 3025	Bag 2 = 424g	99	Ribs: Heads x 11	Right	Including 1st and 12th		Adult		
HB 3025			Ribs: Ends x 2	Right			Adult		
HB 3025			Ribs: frags x 3	Right			Adult		
HB 3025			Ribs: Heads x 8	Left	Including 1st		Adult		
HB 3025			Ribs: Ends x 1	Left			Adult		
HB 3025			Ribs: Frags x 5	Left			Adult		
HB 3025			Ribs: Ends x 5				Adult		
HB 3025			Ribs: frags x 19				Adult		
HB 3025			7 Cervical				Adult		Bony lipping around the superior facets
HB 3025			8 thoracic				Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 3025			5 lumbar				Older Adult		Evidence of osteophytes, compression fracture, osteoporosis
HB 3025			Frag C1		superior facet		Adult		
HB 3025			Vertebra x 6 frags (thoracic)		Body frags		Adult		
HB 3025	Bag 3 = 1.302kg	176	Sternum		Body broken in two		Adult		
HB 3025			Clavicle x 2	Right			Adult		
HB 3025			Clavicle x2	Left			Adult		
HB 3025			Clavicle lateral end	Right			Adult		
HB 3025			Sacrum		Fragment		Adult		
HB 3025			Scapula	Left	Glenoid cavity, acromion		Adult		
HB 3025			Scapula	Right	Glenoid cavity, coracoid process		Adult		
HB 3025			Scapula	Right	Glenoid cavity, coracoid process		Adult		
HB 3025			Scapula	Left	Glenoid cavitiy, coracoid process		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 3025			Scapula	Right	Acromion		Adult		
HB 3025			Scapula	Left	Inferior angle		Adult		
HB 3025			Scapula		Acromion frag		Adult		
HB 3025			Pelvis	Right	Auricular surface, acetabulum	Female	Older Adult - 56-60 (lovejoy)		
HB 3025			Pelvis	Left	Auricular surfacem and part of surrounding illium	Female	Adult - 40-44 (lovejoy)		
HB 3025			Pelvis	Right	Acetabulum frag		Adult		
HB 3025			Pelvis	Right	Ishial tuberosity, part of acetabulum		Adult		
HB 3025			Pelvis	Left?	Ishial tuberosity frag		Adult		
HB 3025			Pelvis	Right	Pubic bone	Male	Adult (Phase 3, Brooks and Suchey 1990), stage 7-8 35-39, 39-44 (Todd)		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 3025			Pelvis	Left?	Pubic bone frag	Male?	Adult (Phase 4, Brooks and Suchey 1990), Stage 9 44-50 Todd 1920)		
HB 3025			Pelvis x 1				Adult		
HB 3025			Metacarpal - 5th	Right	Complete		Adult		
HB 3025			Humerus	Left	Distal frag		Adult		
HB 3025			Radius		Head		Adult		
HB 3025			Tibia		Proximal frag		Adult		
HB 3025			Metacarpal - lunar	Right?	Complete		Adult		
HB 3025			Metacarpal? 2/3rd?		Complete		Non-Adult	26mm	
HB 3025			Mandible		Complete (broken in three)	Male	Adult 35-40 (Brothwell 1981)		Teeth present: RM1-3, LPM1-2, LM1-2 (remaining teeth lost post-mortem)
HB 3025			Mandible		Almost complete, right mandibular	Female	Adult		Teeth present: LM3; AMTL R&L M1 (remaining teeth lost post-mortem); LM3 small carrie on occulsal surface 1mm, advanced tooth wear and slight calculus

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
					condyle not present				
HB 3025			Mandible		Front	Female	Older Adult		Post-deposition damage but evidence of AMTL on the RM1-3, possibly extends into the frontal teeth more but damaged so cannot fully confirm
HB 3025			Mandible	Right	Frag		Adult		AMTL to RM1-3, post-depositional damage to fragment
HB 3025			Maxilla	Right	Frag		Adult		Teeth lost post-mortem, signs of abess around the RPM1-2
HB 3025			Skull: temporal	Left	incomplete	Male?	Adult		
HB 3025			Skull: temporal	Left	incomplete	Female	Adult		
HB 3025			Skull: temporal	Right	incomplete	Male?	Adult		
HB 3025			Skull: temporal	Right	incomplete	Male	Adult		
HB 3025			Skull: temporal	Right	incomplete	Male	Adult		
HB 3025			Skull: temporal	Right	incomplete		Adult		
HB 3025			Skull: temporal	Right	Mastoid process	Male?	Adult		
HB 3025			Skull: temporal		Auditory meatus		Adult		
HB 3025			Skull: temporal		Frag		Adult		
HB 3025			Skull: temporal		Frag		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 3025			Skull: frontal	Left	Supraorbital margin frag	Male	Adult		
HB 3025			Skull: frontal	Right	Supraorbital margin frag	Male	Adult		
HB 3025			Skull: frontal	Right	Supraorbital margin frag	Female	Adult		
HB 3025			Skull: frontal		Supraorbital margin frag		Adult		
HB 3025			Skull: Zygomatic	Right			Adult		
HB 3025			Skull: occipital		Frag		Adult		
HB 3025			Skull: parietal x 3		Frags		Adult		
HB 3025			Skull: parietal x 29		Frags		Adult		
HB 3025			Skull x 17		Frags		Adult		
HB 3025			Skull		Partially complete: frontal and pariatals		Adult		Criberia orbitalis
HB 3025			Ear bones x 2	Left	incus, malleus		Adult		
HB 3025			Ear bones x 2	Right	incus, malleus		Adult		
HB 3025			Ear bone x 1		incus		Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 3025			Loose teeth x 23				Adult		Loose teeth with evidence of slight calculus, severe wear, opacity, horizontal hypoplasia
HB 3025			Small frags x 50		Fragmented	Female	Adult		
HB 3025			Pig tooth x 1						
HB 3031	1 bag = 239g	126	Humerus head	left			Adult	Head: 45mm	
HB 3031			Humerus frag	left	Distal		Adult		
HB 3031			Humerus frag		Shaft towards the proximal end		Adult		
HB 3031			Humerus frag x 2		Mid shaft		Adult		
HB 3031			Long bone frags x 3		Shaft frags		Adult		
HB 3031			Vertebra x 3 (two thoracic, one cervical)		Almost complete		Adult		Osteophytes on thoracic
HB 3031			Vertebra - thoracic		Body		Adult		Osteophytes
HB 3031			Vertebra frags x 8		spinous processes, transverse processes, articular facets				

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 3031			Skull: zygomatic	Left			Adult		
HB 3031			Skull frags x 2				Adult		
HB 3031			Scapula frag		Coracoid process		Adult		
HB 3031			Scapula frag		Scapula spine fragment		Adult		
HB 3031			Scapula frag		Acromion fragment		Adult		
HB 3031			Scapula frags x 3				Adult		
HB 3031			Rib heads x 6				Adult		
HB 3031			Ribs x 2	Right	Head and shaft		Adult		
HB 3031			Ribs x 3	Left	Head		Adult		
HB 3031			Ribs x 2	Right	Shaft		Adult		
HB 3031			Ribs x 1	Left	Shaft		Adult		
HB 3031			Ribs x 20		Shaft fragments		Adult		
HB 3031			Rib x 1		Shaft fragment		Non-Adult		
HB 3031			Small Frags x 56				Adult		
HB 3031			Femur		Distal frag - unfused		Non-Adult		
HB 3031			Metacarpal?		Fragment		Non-Adult		

Table 54 Disarticulated Remains									
Context Number	**Total bag Weight (g)**	**Fragment Count**	**Element**	**Side**	**Proximal, Distal, Shaft or Area**	**Sex**	**Age**	**Measurements**	**Pathology**
HB 3031			Pig tooth						
HB 3032	1 bag = 174g	15	Skull		Frontal and parietals partly fragmented	Female	Adult <35yrs		
HB 3032	1 bag = 312g	51	Skull: temporal	Left	Fragment	Female?	Adult <35yrs		
HB 3032			Skull: temporal	Right	Fragment		Adult		
HB 3032			Skull: frontal x 3		Fragments	Female?	Adult		
HB 3032			Skull: parietal x 29		Fragments		Adult		
HB 3032			Skull: occipital		Fragment		Adult		
HB 3032			Skull: internal bones x10		Fragments		Adult		
HB 3032			Mandible		Incomplete	Female?	Adult		Tooth present: only RPM1 heavy wear; Tooth lost post-mortem RI1-2,RC, LI1-2, LC, LPM1; AMTL to RPM2, RM1-3, LPM2, LM1-3
HB 3032			C2 vertebra				Adult		Slight bony spurs on the dens
HB 3032			Vertebra: cervical		Frag of superior facet		Adult		
HB 3032			Bone frags x 3		Fragmented		Adult		
HB 3052	1 bag = <1g	1	Rib?		Fragment		Adult		
Total	12.248kg	1,017 frags							

Table 55 Small Find List									
Set	**Phase**	**Context**	**Context Dating**	**SF**	**Material**	**Object**	**Extent**	**No.**	**X-Ray**
1040	13	19162	Roman	294	Iron	Bar	Fragment	1	9644
1038	12	3026	Roman	73	Iron	Brooch	Fragment	1	9430
1038	12	3026	Roman	51	Copper Alloy	Buckle Plate	Incomplete	1	9435
1038	12	3026	Roman	53	Copper Alloy	Buckle Plate	Incomplete	1	9435
1027	11	19187	Roman	213	Copper Alloy	Buckle Plate	Complete	1	9550
1038	12	3026	Roman	50	Copper Alloy	Chain	?Complete	1	9435
1038	12	3026	Roman	71	Iron	Clench Bolt	Complete	3	9429
1038	12	3026	Roman	72	Iron	Clench Bolt	Complete	1	9429
1009	6	3112	Roman	110	Iron	Corrosion Product		1	9432
1008	5	3132	Roman	43	Copper Alloy	Earscoop	Complete	1	9435
1033	13	19151	Roman	244	Jet or Shale	Finger Ring	Complete	1	9548
1035	13	19164	Roman	188	Iron	Hasp or Staple	Fragment	1	9554
1038	12	3026	Roman	71	Iron	Hooked Implement	Fragment	1	9429
1012	5	19200	Roman	215	Copper Alloy	Hooked Suspension Mount	Incomplete	1	9550
1012	5	19201	Roman	300	Iron	Hooked Terminal	Fragment	1	9644
1015	8	3103	Roman	66	Copper Alloy	Indeterminate	Fragment	1	9435
1016	9	3100	Roman	65	Copper Alloy	Key	Incomplete	1	9435
1013	8	8075	Roman	195	Copper Alloy	Key Handle	Complete	1	9550
1030	12	8072	Roman	194	Iron	Knife?	Fragment	1	9554
1009	6	3112	Roman	68	Copper Alloy	Mirror	Fragment	1	9435
1038	12	3026	Roman	73	Copper Alloy	Mount	Fragment	1	9430
1051	14	19115	Roman	208	Copper Alloy	Object	Fragment	1	9550
1015	8	3103	Roman		Bone	Pin	Complete	1	
1035	13	19170	Roman	162	Iron	Punch?	?Complete	1	9552

Table 55 Small Find List									
Set	**Phase**	**Context**	**Context Dating**	**SF**	**Material**	**Object**	**Extent**	**No.**	**X-Ray**
1038	12	3026	Roman	53	Copper Alloy	Ring	Fragment	1	9435
1016	9	3100	Roman	65	Copper Alloy	Ring	Fragment	1	9435
1038	12	3026	Roman	54	Copper Alloy	Rivet	Complete	1	9435
1023	10	3092	Roman	62	Copper Alloy	Seal Box Lid?	Incomplete	1	9435
1020	9	19193	Roman	214	Copper Alloy	Sheet	Fragment	1	9550
1031	12	19172	Roman	295	Iron	Sheet	Fragment	1	9644
1018	8	19194	Roman	220	Lead	Sheet	Fragment	1	
1012	5	19200	Roman	283	Lead	Sheet	Fragment	1	
1040	13	19142	Roman	186	Iron	Sheet and lead melt	Fragment	1	9554
1023	10	3092	Roman	100	Iron	Shovel?	Incomplete	1	9434
1049	16	3053	Roman	87	Iron	Slag		1	9432
1038	12	3026	Roman	73	Iron	Strip	Fragment	1	9430
1038	12	3026	Roman	50	Copper Alloy	Stud	Incomplete	1	9435
1023	10	3092	Roman	61	Copper Alloy	Vessel Repair	Complete	1	9435
1028	11	19176	Roman	282	Copper Alloy	Wire	Fragment	1	9643
1049	16	3053	Roman	45	Copper Alloy	Buckle Plate	Complete	1	9435
1068	20	19097	Medieval	176	Iron	Bar	Fragment	1	9553
1084	20	19063	Medieval	204	Copper Alloy	Belt Mount	Fragment	1	9550
1152	31	19067	Medieval	205	Copper Alloy	Buckle Frame?	Fragment	1	9550
1138	34	8055	Medieval	217	Lead	Came	Fragment	1	
1121	29	3052	Medieval	46	Copper Alloy	Chape	Incomplete	1	9438
1113	26	3048	Medieval	84	Iron	Chisel?	Fragment	1	9431
1197	22	3025	Medieval	70	Iron	Clench Bolt	Complete	1	9429
1124	30	3047	Medieval	82	Iron	Clench Bolt	Complete	1	9431
1124	30	3047	Medieval	82	Iron	Clench Bolt	Fragment	1	9431
1122	29	3050	Medieval	85	Iron	Clench Bolt	Complete	1	9431

Table 55 Small Find List

Set	Phase	Context	Context Dating	SF	Material	Object	Extent	No.	X-Ray
1121	29	3052	Medieval	86	Iron	Clench Bolt	Complete	2	9431
1111	26	3057	Medieval	89	Iron	Clench Bolt	Complete	2	9432
1159	29	3062	Medieval	91	Iron	Clench Bolt	Complete	1	9432
1090	24	3102	Medieval	105	Iron	Clench Bolt	Complete	2	9433
1063	19	19135	Medieval	184	Iron	Clench Bolt	Complete	1	9554
1122	29	3050	Medieval	28	Antler	CMW	Complete	1	
1091	24	3130	Medieval	113	Iron	Curved Iron Bar	Fragment	1	9433
1060	19	3110	Medieval	108	Iron	Curved Object	?Complete	1	9432
1122	29	3050	Medieval	47	Copper Alloy	Finger Ring	Complete	1	9435
1159	29	3069	Medieval	60	Copper Alloy	Finger Ring	Incomplete	1	9435
1153	31	19071	Late Medieval	206	Copper Alloy	Indeterminate	Fragment	1	9550
1121	29	3052	Medieval	56	Copper Alloy	Indeterminate	Fragment	1	
1068	20	19181	Medieval	193	Iron	Indeterminate		1	9556
1073	20	19110	Medieval	182	Iron	Knife	Fragment	1	9554
1197	22	3025	Medieval	52	Copper Alloy	Lace Tags	Complete	2	9435
1108	27	3096	Medieval	102	Iron	Latchlifter	Complete	1	9432
1111	26	3057	Medieval	23	Bone	Mount	Fragment	1	
1158	29	3055	Medieval	33	Copper Alloy	Mount	Complete	1	9435
1083	20	19011	Medieval	198	Copper Alloy	Mount	Fragment	1	9550
118	29	3029	Medieval	24	Bone	Needle or Pin	Fragment	1	
1129	21	3052	Medieval	55	Copper Alloy	Object	Fragment	1	9435
1115	26	3076	Medieval	120	Bone	Ossified Cartilage	Complete	1	
1063	19	19096	Medieval	177	Iron	Pin	Complete	1	9553
1090	24	3102	Medieval	44	Copper Alloy	Ring	Complete	1	9435
1095	22	19047	Medieval	173	Iron	Ring	Fragment	1	9553
1106	27	3107	Late Medieval	107	Copper Alloy	Rivet	Complete	1	9432

Table 55 Small Find List

Set	Phase	Context	Context Dating	SF	Material	Object	Extent	No.	X-Ray
1092	24	3094	Medieval	101	Iron	Rod	Fragment	1	9432
1064	19	19099	Medieval	178	Iron	Rod	Complete	1	9554
1063	19	19107	Medieval	281	Copper Alloy	Shaft	Fragment	1	9643
1088	24	3104	Medieval	106	Iron	Shears	Fragment	1	9433
1083	20	19011	Medieval	143	Iron	Sheet	Fragment	1	
1112	26	3058	Medieval	57	Copper Alloy	Sheet Metal	Fragment	1	9435
1112	26	3058	Medieval	58	Copper Alloy	Sheet Metal	Fragment	1	9435
1159	29	3069	Medieval	59	Copper Alloy	Sheet Metal	Fragment	1	9435
1092	24	3094	Medieval	63	Copper Alloy	Sheet Metal	Fragment	1	9435
1108	27	3096	Medieval	64	Copper Alloy	Slag	Complete	1	9435
1075	20	19070	Medieval	175	Iron	Spoon Bit	Fragment	1	9553
1121	29	3052	Medieval	86	Iron	Staple	Fragment	1	9431
1107	27	3098	Medieval	103	Iron	Staple	Complete	1	9432
1063	19	19107	Medieval	155	Iron	Strip	Fragment	1	9552
1158	29	3055	Medieval	34	Lead Alloy	Strip	Fragment	1	9435
1197	22	3025	Medieval	25	Antler	Waste	Complete	1	
1059	19	3116	Medieval	31	Antler	Waste	Complete	1	
1061	19	3109	Medieval	121	Antler	Waste	Complete	1	
1060	19	3110	Medieval	122	Antler	Waste	Complete	1	
1106	27	3107	Late Medieval	30	Antler	Waste	Complete	1	
1118	29	3027	Medieval	26	Antler	Waste	Complete	1	
118	29	3029	Medieval	27	Antler	Waste	Complete	1	
1122	29	3050	Medieval	119	Antler	Waste	Complete	1	
1097	22	19042	Medieval	224	Antler	Waste	Complete	1	
1071	20	19048	Medieval	225	Antler	Waste	Complete	3	
1084	20	19063	Medieval	226	Antler	Waste	Complete	1	

Table 55 Small Find List

Set	Phase	Context	Context Dating	SF	Material	Object	Extent	No.	X-Ray
1075	20	19070	Medieval	227	Antler	Waste	Complete	1	
1077	20	19074	Medieval	229	Antler	Waste	Complete	2	
1111	26	3057	Medieval	29	Antler	Wedge	Complete	1	
1193	36	3043	EPMED	128	Stone	Mortar	Fragment	1	
1195	36	3032	EPMED	76	Iron	Bar	Fragment	1	9429
1154	39	19009	Post-medieval	197	Copper Alloy	Belt Fitting	Complete	1	9550
1154	39	19009	Post-medieval	196	Copper Alloy	Brooch	Complete	1	9550
1194	36	3033	Post-medieval	78	Iron	Clench Bolt	Fragment	1	9430
1176	36	3045	Post-medieval	81	Iron	Clench Bolt	Complete	4	9431
1206	39	19019	Post-medieval	199	Copper Alloy	Indeterminate	Fragment	1	9550
1202	37	19035	Post-medieval	171	Iron	Knife	Fragment	1	9553
1183	38	19174	Post-medieval	211	Copper Alloy	Lace Tag	Complete	1	9550
1196	36	3031	Post-medieval	74	Iron	Nail	Fragment	4	9430
1195	36	3032	Post-medieval	76	Iron	Nail	Fragment	1	9429
1195	36	3032	Post-medieval	77	Iron	Nail	Fragment	1	9430
1193	36	3038	Post-medieval	79	Iron	Nail	Fragment	1	9430
1176	36	3045	Post-medieval	81	Iron	Nail	Fragment	3	9431
1205	39	19007	Post-medieval	141	Iron	Nail	Complete	1	9551
1181	37	19031	Post-medieval	144	Iron	Nail	Complete	1	9551
1194	36	3033	Post-medieval	78	Iron	Nails		2	9430
1193	36	3043	Post-medieval	80	Iron	Nails	Complete	4	9430
1196	36	3031	Post-medieval	49	Copper Alloy	Pin	Fragment	1	9435
1183	38	19101	Post-medieval	207	Copper Alloy	Pin shaft	Fragment	1	9550
1181	37	19031	Post-medieval	201	Copper Alloy	Sewing Pin	Complete	1	9550
1202	37	19035	Post-medieval	202	Copper Alloy	Sewing Pin	Complete	1	9550
1186	38	19168	Post-medieval	210	Copper Alloy	Sewing Pin	Complete	1	9550

Table 55 Small Find List

Set	Phase	Context	Context Dating	SF	Material	Object	Extent	No.	X-Ray
1183	38	19174	Post-medieval	212	Copper Alloy	Sewing Pin	Complete	1	9550
1193	36	3043	Post-medieval	48	Copper Alloy	Sewing Pins	Complete	2	9435
1180	37	19033	Post-medieval	218	Lead	Sheet	Fragment	1	
1179	37	19039	Post-medieval	203	Copper Alloy	Strip	Fragment	1	9550
1183	38	19174	Post-medieval	164	Iron	Strip	Fragment	1	9553
1174	33	3150	Post-medieval	42	Copper Alloy	Stylus	Complete	1	9435
1176	36	3045	Post-medieval	118	Antler	Waste	Complete	1	
1182	37	19171	Post-medieval	228	Antler	Waste	Complete	1	
1214	41	19001	Modern	170	Iron	Blade?	Fragment	1	9553
1210	41	19021	Modern	200	Copper Alloy	Sewing Pin	Complete	1	9550
	U/S	3000	Unstratified	69	Iron	Clench Bolt	Complete	1	9429
	U/S	3000	Unstratified	69	Iron	Lock Mechanism	Fragment	2	9429
		BH1C	Unstratified	303	Copper Alloy	Object	Fragment	1	9644
		BH3	Unstratified	305	Iron	Ring	Fragment	1	9644
1216		19000	Unstratified	169	Iron	Sheet	Fragment	1	9553
		BH1C	Unstratified	301	Lead	Sheet	Fragment	1	
	U/S	3000	Unstratified	36	Copper Alloy	Strip	Complete	1	9435
	U/S	3001	Unstratified	35	Lead Alloy	Waste	Complete	1	

Table 56 Roman Frit Objects Catalogue				
Small Find number	**Context**	**Phase**	**Description**	**Weight (g)**
SF21	3092	10	Melon bead. Shallow gadroons; cylindrical perforation deformed at one end. Retaining small patches of turquoise glaze but otherwise much abraded. Length 9mm, diameter 12mm, perforation diameter 5mm.	1
SF20	3048	26	Melon bead; approximately one quarter extant. Regular gadroons; interior of perforation has concavity. Retains very small traces of turquoise glaze. Length 17mm.	-

Table 57 Roman Vessel Glass Catalogue				
Small Find number	**Context**	**Phase**	**Description**	**Weight (g)**
SF16	3026	12	Body fragments (2). Mould blown. Blue/green. Largest fragment retaining one rice grain pellet, broken at edge of two other curved mouldings, one possibly parallel, other at an angle. Second fragment retains part of two rice grain pellets set at angle to each other and edges of two other mouldings between them. Dimensions 18 x 7mm, 13 x 8mm, wall thickness 1.5mm.	3.8
SF13	3029	19	Jug or jar; lower body and base fragment. Deep blue. Lower body sloping into open pushed-in base ring. Inner part of base ring and base missing. Base diameter 60mm, wall thickness 3mm, present height 20mm.	4.8
SF11	3055	29	Jug or jar (?); two joining lower body fragments (?). Blue/green. Convex-curved side broken at edge (?) of open pushed in base ring. Dimensions 37 x 26mm, wall thickness 1.5mm.	3.3
SF259	19181	20	Body fragment. Mid yellow/brown. Slightly convex-curved; one rib. Dimensions 22 x 21mm, wall thickness 1.5mm.	1.9
SF32	3102	24	Base fragment. Blue/green. Solid base ring; base missing; side grozed; some probably deliberate chipping on the underside of the base. Base diameter c. 55mm.	1.9
SF17	3050	29	Bottle; rim and neck fragment. Blue/green. Rim bent out, up, in and flattened; cylindrical neck. Rim diameter 50mm, present height 15mm.	9.8
SF254	19101	38	Hemispherical cup; rim and side fragment. Pale green; small bubbles; strain cracks. Straight rim, edge cracked off and not ground; Slightly convex-curved side. Abraded band below rim edge and three bands on upper body. Dimensions 27 x 24mm, wall thickness 1.5mm, present height c. 25mm. Weight 1.5g.	1.5
SF255	19135	19	Conical beaker; rim and side fragment. Pale green; small bubbles. Curved rim, edge cracked off and not	0.6

Table 57 Roman Vessel Glass Catalogue				
Small Find number	**Context**	**Phase**	**Description**	**Weight (g)**
			ground; straight side sloping in. Rim diameter c. 80mm, wall thickness 1mm, present height 15mm.	

Table 58 Roman Window Glass Catalogue				
Small Find number	**Context**	**Phase**	**Description**	**Weight (g)**
SF6	3109	19	Fragment. Light green, Cast matt/glossy. Two edges grozed to meet at 90°, one curved. Dimensions 31 x 29mm, area 8cm^2.	6.2
SF14	3048	26	Two joining fragments. Blue/green. Cast matt/glossy. 12cm^2.	12.7

Table 59 Coin Catalogue

Small Find Number	Context	Ruler/ Denomination	Catalogue Reference	Description	Legend	Date of issue
SF2	7009	Hadrian *silver denarius*	RIC 118b	Diam: 18mm Wt: 1.6g Axis: 7 Wear: W/W	Obv: IMP CAESAR TRAIAN HADRIANVS AVG Rev: PM TRP [COS III] Concordia seated left, holding patera and resting left elbow on statue of Spes, cornucopia beneath seat	AD119-122
SF37	3055	*Ae3*		Diam: 20mm Wt: 2.8g Axis: - Wear: EW/EW	Illegible ?radiate bust	C3
SF38	3052	Divus Constantius I *Ae4*	RIC VII Trier 206	Diam: 15mm Wt: 1.2g Axis: 12 Wear: W/W	Obv: [DIVO CONSTANTINO OPT IMP] laureate veiled bust Rev: [REQVIES] OPT MER emperor seated left on curule chair	318
SF39	3043	Nuremberg Jetton	as Mitchiner, 1988: nos. 1070, 1072	Diam: 24mm Wt: 1.3g Axis: - Wear: VW/VW	Obv: Shield of France with three fleurs de lis, surmounted by crown Rev: Imperial orb within a tressure of three arches and three angles fictitious legends...BOVERB../...BVERB....	1500–25
SF40	3051	Valens *Ae3*	as LRBC II 82	Diam: 17mm Wt: 2.3g Axis: 11 Wear: VW/VW	Obv: DN VALEN [S PF AVG] Rev: S]ECVRITAS REIPVBLI[CAE	365–378
SF41	3029	William I silver penny	Spink1256; North 847	Diam: 23mm Wt: 1.0g Axis: 1 Wear: W/W	Obv: +WILLELM REX Rev: +WILFRED ON CNTLI Profile right, cross and trefoils Canterbury mint	1080–83
SF67	3110	House of Constantine *Ae4*	-	Diam: 14mm Wt: 0.9g	Obv: Rev: [gloria exercitvs]	c330–337

Table 59 Coin Catalogue						
Small Find Number	**Context**	**Ruler/ Denomination**	**Catalogue Reference**	**Description**	**Legend**	**Date of issue**
				Axis: Wear: VW/VW		
SF209	19135	Valerian *Antoninianus*	as e.g. RIC74	Diam: 20mm Wt: 2.2g Axis: 1 Wear: VW/VW	Obv: IMP CP LIC VALER[IANUS AVG] Rev: personification Radiate bust	253–257
SF216	19202	House of Valentinian *Ae3*	-	Diam: 17mm Wt: 2.6g Axis: 12 Wear: W/W	Obv: Rev: victory walking l with wreath and palm	365–75
SF221	19027	Hans Krauwinckel II Nuremberg Jetton	as Mitchiner, 1988: no. 1545	Diam: 21mm Wt: 1.1g Axis: 1 Wear: W/W	Obv: HANNS KRAVWINCKEL IN NVR Rev: GOTES REICH BLEIBT EWICK	1586–1635

Table 60 Charred and mineralised plant macrofossils Preservation: + = poor, ++ = moderate, +++ = good. Key: m = mineralised						
	Context Number	**19201**	**19151**	**19082**	**19136**	**19075**
	Phase	**5**	**13**	**18**	**18**	**20**
	Sample Number	**<74>**	**<51>**	**<25>**	**<50>**	**<24>**
	Context Type	Dump	Dump	Pit [19095]	Dump	Pit
	Sample Volume (L)	**20**	**40**	**10**	**40**	**40**
	Number of Individuals per Litre	**<1**	**<1**	**10**	**3**	**16**
	Preservation	**++**	**+++**	**+++**	**++**	**+++**
Taxonomic Identification	**English Name**					
Cereals						
Triticum sp. L.	Wheat caryopsis	-	-	-	2	2
Triticum/ Hordeum	Wheat/ barley caryopsis	-	-	4	1	14
Hordeum sp. L.	Barley caryopsis	-	-	7	-	43
Hordeum vulgare L.	Hulled barley caryopsis	-	-	52	12	380
	Hulled barley caryopsis germinated	-	-	2	-	30
Hordeum/ Avena	Barley/ oat caryopsis	-	-	-	1	7
Secale cereale L.	Rye caryopsis	-	-	1	-	3
cf. *Secale cereale* L.	cf. Rye caryopsis	-	-	-	-	2
Secale/ Triticum	Rye/ Wheat caryopsis	-	1m	-	-	-
Avena sp. L.	Oat caryopsis	-	-	5	18	36
	Oat caryopsis germinated	-	-	-	2	-
cf. *Avena* sp. L.	cf. Oat caryopsis	-	-	9	10	16
Cerealia indet.	Indeterminate cereal caryopsis	-	-	4	4	57 (1m)
	Indeterminate cereal rachis	-	-	-	1	-
	Straw fragment	-	-	-	1	-
	Total Cereals	**-**	**1**	**84**	**52**	**591**

Table 60 Charred and mineralised plant macrofossils

Preservation: + = poor, ++ = moderate, +++ = good. Key: m = mineralised

	Context Number	**19201**	**19151**	**19082**	**19136**	**19075**
	Phase	**5**	**13**	**18**	**18**	**20**
	Sample Number	**<74>**	**<51>**	**<25>**	**<50>**	**<24>**
	Context Type	Dump	Dump	Pit [19095]	Dump	Pit
	Sample Volume (L)	**20**	**40**	**10**	**40**	**40**
	Number of Individuals per Litre	**<1**	**<1**	**10**	**3**	**16**
	Preservation	**++**	**+++**	**+++**	**++**	**+++**
Taxonomic Identification	**English Name**					
Other Cultivars/ Wild						
Corylus avellana L.	Hazelnut shell fragment	-	-	1	1	12
Brassica/ Sinapis	Cabbage/ Mustard	-	-	-	1	-
Brassica nigra (L.) W.D.J. Koch	Black mustard	-	-	-	2m	-
Linum usitatissimum L.	Flax	-	2m	-	-	-
Lathyrus/ Pisum	Sweatpea/ Pea	-	-	-	-	1
Prunus domestica L.	Common plum	-	1	-	-	-
Malus/ Pyrus	Apple/ Pear	-	1m	-	14m	-
Crataegus monogyna Jacq.	Hawthorn	-	1	-	-	-
Sambucus nigra L.	Elder	-	2m	-	1m	1m
Indet.	Indeterminate fruit	-	1m	-	-	-
	Total Other Cultivars/ Wild	**-**	**8**	**1**	**19**	**14**
Weeds of Arable/ Disturbed Ground						
Papaver sp. L.	Poppy	-	-	1	-	-
Chenopodium album L.	Fat hen	-	-	2	-	-
Spergula arvensis L.	Corn spurrey	-	-	1	-	2
POLYGONACEAE	Knotweed family	-	-	-	1	-

Table 60 Charred and mineralised plant macrofossils Preservation: + = poor, ++ = moderate, +++ = good. Key: m = mineralised						
	Context Number	**19201**	**19151**	**19082**	**19136**	**19075**
	Phase	**5**	**13**	**18**	**18**	**20**
	Sample Number	**<74>**	**<51>**	**<25>**	**<50>**	**<24>**
	Context Type	Dump	Dump	Pit [19095]	Dump	Pit
	Sample Volume (L)	**20**	**40**	**10**	**40**	**40**
	Number of Individuals per Litre	**<1**	**<1**	**10**	**3**	**16**
	Preservation	**++**	**+++**	**+++**	**++**	**+++**
Taxonomic Identification	**English Name**					
Rumex acetosella L.	Sheep's sorrel	-	-	-	-	1
Malva sp. L.	Mallow	-	-	-	1	-
FABACEAE	Small wild legume	-	-	-	-	3
Vicia sp. L.	Vetch	-	-	-	2	-
LAMIACEAE	Mint family	-	-	-	1	-
Galeopsis tetrahit L.	Common hemp-nettle	-	-	-	1m	-
Galium sp. L.	Bedstraw	-	-	-	-	4
Anthemis sp. L.	Chamomiles	-	-	1	-	-
POACEAE	Large wild grass	-	-	3	14 (1m)	7
	Small wild grass	-	-	2	-	1
Avena/ Festuca	Oat/ Fescue	-	-	-	4	-
Festuca sp. L.	Fescue	-	-	1	-	3
Festuca/ Bromus	Fescue/ Brome	-	-	-	1	-
Bromus sp. L.	Brome	-	-	1	14	12
Weeds of Wet/ Damp Ground						
Ranunculus acris L.	Meadow buttercup	-	3m	-	-	-
Persicaria lapathifolia (L.) Gray	Pale persicaria	-	-	-	1	-

Table 60 Charred and mineralised plant macrofossils Preservation: + = poor, ++ = moderate, +++ = good. Key: m = mineralised						
	Context Number	**19201**	**19151**	**19082**	**19136**	**19075**
	Phase	**5**	**13**	**18**	**18**	**20**
	Sample Number	**<74>**	**<51>**	**<25>**	**<50>**	**<24>**
	Context Type	Dump	Dump	Pit [19095]	Dump	Pit
	Sample Volume (L)	**20**	**40**	**10**	**40**	**40**
	Number of Individuals per Litre	**<1**	**<1**	**10**	**3**	**16**
	Preservation	**++**	**+++**	**+++**	**++**	**+++**
Taxonomic Identification	**English Name**					
Polygonum aviculare L.	Knotgrass	-	-	-	1	-
Rumex crispus L.	Curled dock	-	-	-	-	1
Eleocharis sp. R. Br.	Spike-rushes	2m	-	-	3m	-
Eleocharis palustris (L.) Roem. & Scult.	Common Spike-rush	-	2m	-	3m	-
Isolepis setacea (L.) R. Br.	Bristle Club-rush	1m	4m	-	2m	-
Carex sp. L.	Sedge lenticular	-	-	1	1	-
	Sedge triangular	-	-	1	-	3
Carex dioica L.	Dioecious sedge	1m	-	-	-	-
Carex flacca Schreb.	Glaucous sedge	-	-	-	-	3
	Total Weeds of Wet/ Damp Ground	**4**	**9**	**2**	**11**	**7**
Indeterminate Plant Macros						
Indet.	Indeterminate weed seed	-	1m	-	6	1m
	Total Weed Seeds	**4**	**10**	**14**	**57**	**41**
	Total Charred Plant Macrofossils	**4**	**19**	**99**	**128**	**646**

Table 61 Waterlogged plant macrofossils from borehole samples

Preservation: + = poor, ++ = moderate, +++ = good

	Feature Group	**11th-13th Century**								**2nd-3rd Century**	**11th-13th Century**
	Sample Number	**<35>**	**<37>**	**<32>**	**<33>**	**<27>**	**<39>**	**<40>**	**<38>**	**<41>**	**<21>**
	Borehole	**2**		**3**							**4**
	Depth	**5 - 5.5**	**5.5 - 6**	**3 - 3.5**	**3.6 - 4**	**4.5 - 5**	**4 - 4.5**	**6.6 - 7**	**7.5 - 8**	**8.5 - 9**	**3.59 - 4**
	Context	**9621**	**9622**	**9628**	**9631**	**9632**	**9632**	**9633**	**9633**	**9634**	**9642**
	Sample Volume (L)	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.2**	**0.5**	**0.5**	**0.5**
	Preservation	**++**	**+++**	**+++**	**+++**	**++**	**+++**	**+++**	**+++**	**++**	**++**
Taxonomic Identification	**English Name**										
Edible Plants											
Ficus carica L.	Fig	6	8	-	4	1	-	-	-	-	-
Rubus fruticosus L.	Bramble	-	1	2	-	3	1	-	4	1	-
Fragaria vesca L.	Strawberry	-	3	-	-	-	-	-	-	-	-
Prunus domestica L.	Common plum	-	-	-	-	-	-	-	-	1	-
Sambucus nigra L.	Elder	5	3	-	4	10	3	3	13	-	30
Herbs and Nuts											
Corylus avellana L.	Hazelnut shell fragment	2	4	3	-	-	3	4	39	1	-
Brassica rapa L.	Turnip	1	7	-	3	-	3	4	2	-	2
Linum usitatissimum L.	Flax	-	-	-	-	-	-	-	-	1	-
Anethum graveolens L.	Dill	-	-	-	-	-	-	-	1	-	-
Daucus carota L.	Carrot	-	-	1	-	-	-	-	-	-	-

Table 61 Waterlogged plant macrofossils from borehole samples Preservation: + = poor, ++ = moderate, +++ = good											
	Feature Group	**11th-13th Century**								**2nd-3rd Century**	**11th-13th Century**
	Sample Number	**<35>**	**<37>**	**<32>**	**<33>**	**<27>**	**<39>**	**<40>**	**<38>**	**<41>**	**<21>**
	Borehole	**2**		**3**							**4**
	Depth	**5 - 5.5**	**5.5 - 6**	**3 - 3.5**	**3.6 - 4**	**4.5 - 5**	**4 - 4.5**	**6.6 - 7**	**7.5 - 8**	**8.5 - 9**	**3.59 - 4**
	Context	**9621**	**9622**	**9628**	**9631**	**9632**	**9632**	**9633**	**9633**	**9634**	**9642**
	Sample Volume (L)	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.2**	**0.5**	**0.5**	**0.5**
	Preservation	**++**	**+++**	**+++**	**+++**	**++**	**+++**	**+++**	**+++**	**++**	**++**
Allium sp. L.	Onion	-	-	-	-	-	-	-	-	1	-
Indet.	Indeterminate nut shell fragment	-	-	-	-	1	-	-	-	-	-
Wild Plants on Arable/ Disturbed Ground											
Papaver somniferum L.	Opium poppy	-	1	-	-	-	2	-	-	-	-
Urtica dioica L.	Common nettle	1	53	1	3	-	4	-	2	2	3
Chenopodium album L.	Fat hen	7	14	7	30	6	19	23	10	7	-
CARYOPHYLLACEAE	Pink family	1	-	-	-	-	-	1	-	-	-
Stellaria media (L.) Vill.	Common chickweed	-	-	-	-	-	-	-	1	4	-
Stellaria graminea L.	Lesser stitchwort	1	-	-	-	-	1	-	1	3	-
Stellaria/ Silene	Chickweed/ Campion	-	-	-	-	-	2	-	-	-	-
Spergula arvensis L.	Corn spurrey	-	2	-	1	-	-	-	-	-	-
Silene vulgaris Garcke	Bladder campion	-	1	-	-	-	1	-	-	-	-

Table 61 Waterlogged plant macrofossils from borehole samples

Preservation: + = poor, ++ = moderate, +++ = good

	Feature Group	**11th-13th Century**								**2nd-3rd Century**	**11th-13th Century**
	Sample Number	**<35>**	**<37>**	**<32>**	**<33>**	**<27>**	**<39>**	**<40>**	**<38>**	**<41>**	**<21>**
	Borehole	**2**		**3**							**4**
	Depth	**5 - 5.5**	**5.5 - 6**	**3 - 3.5**	**3.6 - 4**	**4.5 - 5**	**4 - 4.5**	**6.6 - 7**	**7.5 - 8**	**8.5 - 9**	**3.59 - 4**
	Context	**9621**	**9622**	**9628**	**9631**	**9632**	**9632**	**9633**	**9633**	**9634**	**9642**
	Sample Volume (L)	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.2**	**0.5**	**0.5**	**0.5**
	Preservation	**++**	**+++**	**+++**	**+++**	**++**	**+++**	**+++**	**+++**	**++**	**++**
Agrostemma githago L.	Corncockle	-	-	-	1	-	-	-	-	-	-
Fallopia convolvulus (L.) Á. Löve	Black-bindweed	-	-	-	-	-	-	-	-	3	-
Malva sp. L.	Mallow (fruit with perianth)	-	-	-	-	-	-	-	-	1	-
Malva sylvestris L.	Common mallow	14	32	1	868	45	172	178	49	-	179
Viola sp. L.	Violet	-	-	2	-	-	-	-	-	1	-
Potentilla sp. L.	Cinquefoils	1	1	-	-	-	-	2	1	-	-
Potentilla reptans L.	Creeping cinquefoil	-	-	-	-	-	-	-	-	1	-
Agrimonia eupatoria L.	Agrimony (fruit)	-	-	-	-	-	2	-	-	-	-
Aethusa cynapium L.	Fool's parsley	-	-	-	1	-	-	1	-	-	-
cf. *Aethusa cynapium* L.	cf. Fool's parsley	-	-	-	-	1	-	-	-	-	-
Hyoscyamus niger L.	Henbane	1	-	3	-	19	1	3	1	1	-
Ballota nigra L.	Black horehound	-	-	-	-	-	-	-	-	-	7

Table 61 Waterlogged plant macrofossils from borehole samples

Preservation: + = poor, ++ = moderate, +++ = good

	Feature Group	**11th-13th Century**								**2nd-3rd Century**	**11th-13th Century**
	Sample Number	**<35>**	**<37>**	**<32>**	**<33>**	**<27>**	**<39>**	**<40>**	**<38>**	**<41>**	**<21>**
	Borehole	**2**		**3**							**4**
	Depth	**5 - 5.5**	**5.5 - 6**	**3 - 3.5**	**3.6 - 4**	**4.5 - 5**	**4 - 4.5**	**6.6 - 7**	**7.5 - 8**	**8.5 - 9**	**3.59 - 4**
	Context	**9621**	**9622**	**9628**	**9631**	**9632**	**9632**	**9633**	**9633**	**9634**	**9642**
	Sample Volume (L)	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.2**	**0.5**	**0.5**	**0.5**
	Preservation	**++**	**+++**	**+++**	**+++**	**++**	**+++**	**+++**	**+++**	**++**	**++**
Lamium album L.	White Dead-nettle	-	-	9	-	6	-	-	-	-	-
Galeopsis sp. L.	Hemp-nettle	-	-	-	-	-	1	-	-	1	-
Galeopsis angustifolia Ehrh. ex Hoffm.	Red Hemp-nettle	-	3	-	1	-	-	-	-	-	-
Galeopsis tetrahit L.	Common hemp-nettle	-	-	-	-	-	-	2	1	-	-
Prunella vulgaris L.	Self-heal	-	1	-	-	1	3	-	1	9	1
Plantago lanceolata L.	Ribwort plantain	-	-	-	-	-	-	-	-	2	-
Euphrasia/ Odontites	Eyebrights/ Bartsias	-	-	-	-	-	-	-	-	1	-
Campanula sp. L.	Bellflower	-	-	-	-	-	3	-	-	-	-
Valerianella dentata (L.) Pollich	Narrow-fruited cornsalad	-	1	-	1	1	-	-	-	-	-
ASTERACEAE	Daisy family	-	-	1	-	-	2	1	-	-	-
Arctium minus (Hill) Bernh.	Lesser burdock	-	-	-	-	-	-	-	-	-	3
Arnoseris minima (L.) Schwigg & Körte	Lamb's Succory	-	2	-	-	-	-	-	-	-	-

Table 61 Waterlogged plant macrofossils from borehole samples

Preservation: + = poor, ++ = moderate, +++ = good

	Feature Group	**11th-13th Century**								**2nd-3rd Century**	**11th-13th Century**
	Sample Number	**<35>**	**<37>**	**<32>**	**<33>**	**<27>**	**<39>**	**<40>**	**<38>**	**<41>**	**<21>**
	Borehole	**2**		**3**							**4**
	Depth	**5 - 5.5**	**5.5 - 6**	**3 - 3.5**	**3.6 - 4**	**4.5 - 5**	**4 - 4.5**	**6.6 - 7**	**7.5 - 8**	**8.5 - 9**	**3.59 - 4**
	Context	**9621**	**9622**	**9628**	**9631**	**9632**	**9632**	**9633**	**9633**	**9634**	**9642**
	Sample Volume (L)	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.2**	**0.5**	**0.5**	**0.5**
	Preservation	**++**	**+++**	**+++**	**+++**	**++**	**+++**	**+++**	**+++**	**++**	**++**
Sonchus oleraceus L.	Smooth sow-thistle	-	6	-	-	-	17	1	-	-	-
Crepis biennis L.	Rough Hawk's-beard	5	8	-	2	-	7	5	9	-	-
Carduus sp. L.	Thistles	-	-	-	1	-	-	-	-	-	-
Centaurea cyanus L.	Cornflower	-	5	-	1	-	3	-	2	-	-
Hieracium sp. L.	Hawkweed	-	-	-	-	-	-	-	-	-	1
Inula conyzae (Griess.) Meikle	Ploughman's-spikenard	-	-	-	-	-	4	-	-	-	-
Anthemis sp. L.	Chamomiles	-	-	-	-	-	1	-	-	-	-
Anthemis cotula L.	Stinking mayweed	1	3	-	-	-	31	1	2	-	2
Anthemis arvensis L.	Corn chamomile	5	23	-	-	7	73	7	21	2	6
Chrysanthemum segetum L.	Corn marigold	-	-	-	-	-	5	-	1	-	-
Wild Plants Common to Wet Environs											
Ranunculus sp. L.	Buttercup	1	4	4	5	3	1	-	10	7	1

Table 61 Waterlogged plant macrofossils from borehole samples

Preservation: + = poor, ++ = moderate, +++ = good

	Feature Group	**11th-13th Century**								**2nd-3rd Century**	**11th-13th Century**
	Sample Number	**<35>**	**<37>**	**<32>**	**<33>**	**<27>**	**<39>**	**<40>**	**<38>**	**<41>**	**<21>**
	Borehole	**2**		**3**							**4**
	Depth	**5 - 5.5**	**5.5 - 6**	**3 - 3.5**	**3.6 - 4**	**4.5 - 5**	**4 - 4.5**	**6.6 - 7**	**7.5 - 8**	**8.5 - 9**	**3.59 - 4**
	Context	**9621**	**9622**	**9628**	**9631**	**9632**	**9632**	**9633**	**9633**	**9634**	**9642**
	Sample Volume (L)	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.2**	**0.5**	**0.5**	**0.5**
	Preservation	**++**	**+++**	**+++**	**+++**	**++**	**+++**	**+++**	**+++**	**++**	**++**
Ranunculus bulbosus-type	Bulbous buttercup-type	-	-	-	-	-	-	-	-	3	-
Ranunculus acris L.	Meadow buttercup	3	5	1	11	1	8	5	8	48	2
Montia fontana L.	Waterblinks	-	-	-	-	-	-	-	-	1	-
Persicaria sp. L.	Knotweed	-	-	-	-	-	-	-	-	1	-
Persicaria lapathifolia (L.) Gray	Pale persicaria	1	2	-	7	-	11	3	1	2	-
Polygonum aviculare L.	Knotgrass	-	4	-	2	5	-	4	-	15	-
Rumex sp. L.	Dock	-	-	-	2	-	-	-	-	-	-
Rumex acetosa L.	Common sorrel	-	-	-	2	-	-	-	2	-	-
Rumex crispus L.	Curled dock	-	1	-	-	1	2	-	-	4	-
Lycopus europaeus L.	Gypsywort	-	-	-	-	-	1	-	-	-	-
Galium palustre L.	Common marsh-bedstraw	-	-	-	-	-	-	-	-	1	-
Alisma plantago-aquatica L.	Water-plantain	-	-	-	3	-	-	-	-	-	-
Potamogeton sp. L.	Pondweed	-	-	-	-	-	-	-	1	-	-

Table 61 Waterlogged plant macrofossils from borehole samples

Preservation: + = poor, ++ = moderate, +++ = good

	Feature Group	**11th-13th Century**								**2nd-3rd Century**	**11th-13th Century**
	Sample Number	**<35>**	**<37>**	**<32>**	**<33>**	**<27>**	**<39>**	**<40>**	**<38>**	**<41>**	**<21>**
	Borehole	**2**		**3**							**4**
	Depth	**5 - 5.5**	**5.5 - 6**	**3 - 3.5**	**3.6 - 4**	**4.5 - 5**	**4 - 4.5**	**6.6 - 7**	**7.5 - 8**	**8.5 - 9**	**3.59 - 4**
	Context	**9621**	**9622**	**9628**	**9631**	**9632**	**9632**	**9633**	**9633**	**9634**	**9642**
	Sample Volume (L)	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.2**	**0.5**	**0.5**	**0.5**
	Preservation	**++**	**+++**	**+++**	**+++**	**++**	**+++**	**+++**	**+++**	**++**	**++**
Carex spp.	Sedge lenticular	2	2	-	6	3	7	4	6	30	-
	Sedge triangular	2	1	3	-	1	-	-	-	4	1
Carex dioica L.	Dioecious sedge	-	-	-	-	-	-	-	-	10	-
Carex hirta L.	Hairy sedge	-	-	-	-	-	-	-	-	10	-
Carex flacca Schreb.	Glaucous sedge	4	7	8	4	7	1	3	6	12	-
Carex distans-type L.	Distant sedge-type	-	3	-	3	-	2	4	3	-	-
Carex buxbaumii Wahlenb.	Club sedge	-	-	-	-	-	23	-	-	-	-
Wild Plants in Wooded Environs											
Urtica urens L.	Small nettle	1	2	6	-	1	1	8	10	2	-
Silene dioica (L.) Clairv.	Red campion	-	-	-	1	-	2	-	-	-	-
Solanum dulcamara L.	Bittersweet	-	3	36	1	-	3	-	3	8	-
Carex divulsa Stokes	Grey sedge	1	2	2	1	-	-	4	2	-	-
Indeterminate Plant Macros											

Table 61 Waterlogged plant macrofossils from borehole samples

Preservation: + = poor, ++ = moderate, +++ = good

	Feature Group	**11th-13th Century**								**2nd-3rd Century**	**11th-13th Century**
	Sample Number	**<35>**	**<37>**	**<32>**	**<33>**	**<27>**	**<39>**	**<40>**	**<38>**	**<41>**	**<21>**
	Borehole	**2**		**3**							**4**
	Depth	**5 - 5.5**	**5.5 - 6**	**3 - 3.5**	**3.6 - 4**	**4.5 - 5**	**4 - 4.5**	**6.6 - 7**	**7.5 - 8**	**8.5 - 9**	**3.59 - 4**
	Context	**9621**	**9622**	**9628**	**9631**	**9632**	**9632**	**9633**	**9633**	**9634**	**9642**
	Sample Volume (L)	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.2**	**0.5**	**0.5**	**0.5**
	Preservation	**++**	**+++**	**+++**	**+++**	**++**	**+++**	**+++**	**+++**	**++**	**++**
	Indeterminate weed seed	-	-	-	-	-	3	-	-	-	1
Indet.	Indeterminate bud	-	-	-	-	-	-	1	2	-	-
Total Waterlogged Plant Macrofossils		**66**	**219**	**90**	**969**	**124**	**429**	**272**	**429**	**201**	**240**

Table 62 Charcoal Preservation: + = poor, ++ = moderate, +++ = good. Key: rw = roundwood													
	Context Number	**19201**	**19194**	**19193**	**19176**	**19191**	**19124**	**19140**	**19141**	**19151**	**19161**	**19162**	**19075**
	Phase	**5**	**8**	**9**	**11**	**11**	**13**	**13**	**13**	**13**	**13**	**13**	**20**
	Sample Number	**<72>**	**<71>**	**<70>**	**<65>**	**<69>**	**<47>**	**<48>**	**<49>**	**<51>**	**<62>**	**<63>**	**<24>**
	Context Description	**Dump**	**Dump**	**Build-Up**	**Build-Up**	**Build-Up**	**Dump**	**Dump**	**Dump**	**Build-Up**	**Build-Up**	**Build-Up**	**Dump**
	Sample Volume (L)	**10**	**20**	**20**	**40**	**40**	**20**	**40**	**40**	**40**	**10**	**40**	**40**
	Preservation	**+++**	**+++**	**+++**	**+++**	**+++**	**++**	**+++**	**+++**	**+++**	**+++**	**+++**	**+++**
	Average Ring Number per Wood Fragment	4	8	6	4	6	3	5	5	6	3	4	2
***Pinus sylvestris* L.**	**Scot's Pine**	-	-	-	1	-	-	1	-	-	-	-	-
***Taxus baccata* L.**	**Yew**	-	-	-	1	-	-	-	-	-	-	-	-
Quercus sp. L.	Oak	78 rw:1	98 rw:2	94	77 rw:2	83 rw:4	91	70	96	75	86	69	81 rw2
Betulaceae	**Birch Family**	-	-	-	-	-	-	1	-	-	-	-	-
***Betula* sp. L.**	**Birch**	-	-	-	-	7 rw:3	-	-	-	4	-	-	-
***Alnus* sp. L.**	**Alder**	4	2	5	9 rw:6	-	-	12	3	1	-	-	2rw
***Corylus avellana* L.**	**Hazel**	6	-	-	-	1rw	1	-	-	3	6 rw:2	3	3 rw:2
Populus/ Salix	**Poplar/ Willow**	-	-	-	-	-	-	-	-	6	-	18	2

Table 62 Charcoal Preservation: + = poor, ++ = moderate, +++ = good. Key: rw = roundwood													
	Context Number	**19201**	**19194**	**19193**	**19176**	**19191**	**19124**	**19140**	**19141**	**19151**	**19161**	**19162**	**19075**
	Phase	**5**	**8**	**9**	**11**	**11**	**13**	**13**	**13**	**13**	**13**	**13**	**20**
	Sample Number	**<72>**	**<71>**	**<70>**	**<65>**	**<69>**	**<47>**	**<48>**	**<49>**	**<51>**	**<62>**	**<63>**	**<24>**
Maloideae	**Apple sub family; hawthorn, whitebeam, rowan, apple, pear**	3	-	-	6	6	2 rw:1	11	-	2	3	-	3
Prunoideae	**Plum-type; plums, cherries**	4	-	-	4 rw:1	-	-	-	-	-	-	5	-
***Fraxinus excelsior* L.**	**Ash**	3	-	3	-	3	-	-	-	4	-	2	-
***Acer campestre* L.**	**Field Maple**	-	-	-	-	-	1rw	-	-	3	-	-	2
***Ulmus* sp. L.**	**Elm**	-	-	-	-	-	-	5	-	-	-	-	-
Indet.	**Indeterminate**	1	-	-	-	-	2	-	-	3	-	-	2
Indet. knotwood	**Indeterminate Knotwood**	2	-	-	-	-	3		1		3	1	3
Indet. Bark	**Indeterminate Bark Fragment**	1	-	-	-	-	-	-	-	-	2	1	
	Radial Cracks	6	15	13	10	12	11	20	24	22	9	7	8

Table 62 Charcoal Preservation: + = poor, ++ = moderate, +++ = good. Key: rw = roundwood													
	Context Number	**19201**	**19194**	**19193**	**19176**	**19191**	**19124**	**19140**	**19141**	**19151**	**19161**	**19162**	**19075**
	Phase	**5**	**8**	**9**	**11**	**11**	**13**	**13**	**13**	**13**	**13**	**13**	**20**
	Sample Number	**<72>**	**<71>**	**<70>**	**<65>**	**<69>**	**<47>**	**<48>**	**<49>**	**<51>**	**<62>**	**<63>**	**<24>**
	Post-Depositional Sediment	-	-	1	-	-	-	-	2	8	-	-	-
	Vitrified	2	30	20	18	21	16	10	11	9	16	-	2
	Distorted	1	-	-	-	-	3	-	-	1	3	-	1

APPENDIX 5: RADIOCARBON DATING

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

12 January 2021

Laboratory Code	SUERC-96138 (GU56798)
Submitter	Kristina Krawiec Trent & Peak Archaeology Unit 1 Holly Lane Chilwell Nottingham NG9 4AB
Site Reference	6019
Context Reference	BH3 <41>, 8.50-9.00m
Sample Reference	TPA_246
Material	charred grain : Wheat
$\delta^{13}C$ relative to VPDB	-21.9 ‰
Radiocarbon Age BP	1852 ± 25

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

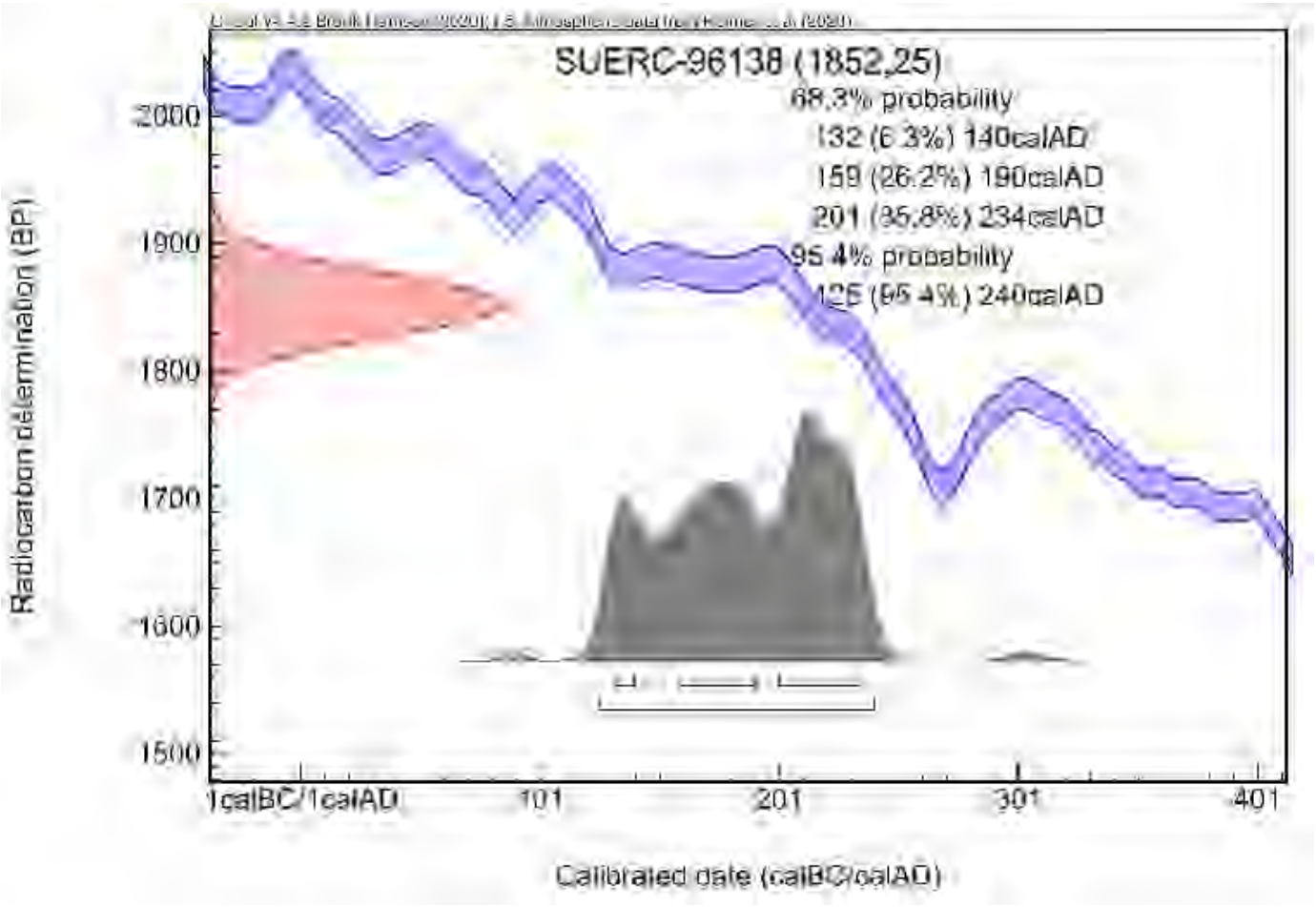
For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : [redacted]

Checked and signed off by :

The University of Glasgow, charity number SC004401

The University of Edinburgh is a charitable body,
registered in Scotland, with registration number SC005336



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal20 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*
† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

12 January 2021

Laboratory Code	SUERC-96142 (GU56799)
Submitter	Kristina Krawiec Trent & Peak Archaeology Unit 1 Holly Lane Chilwell Nottingham NG9 4AB
Site Reference	6019
Context Reference	BH3 <42>, 8.00-8.50m
Sample Reference	TPA_247
Material	charred grain : Barley
$\delta^{13}C$ relative to VPDB	-24.7 ‰
Radiocarbon Age BP	1934 ± 23

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

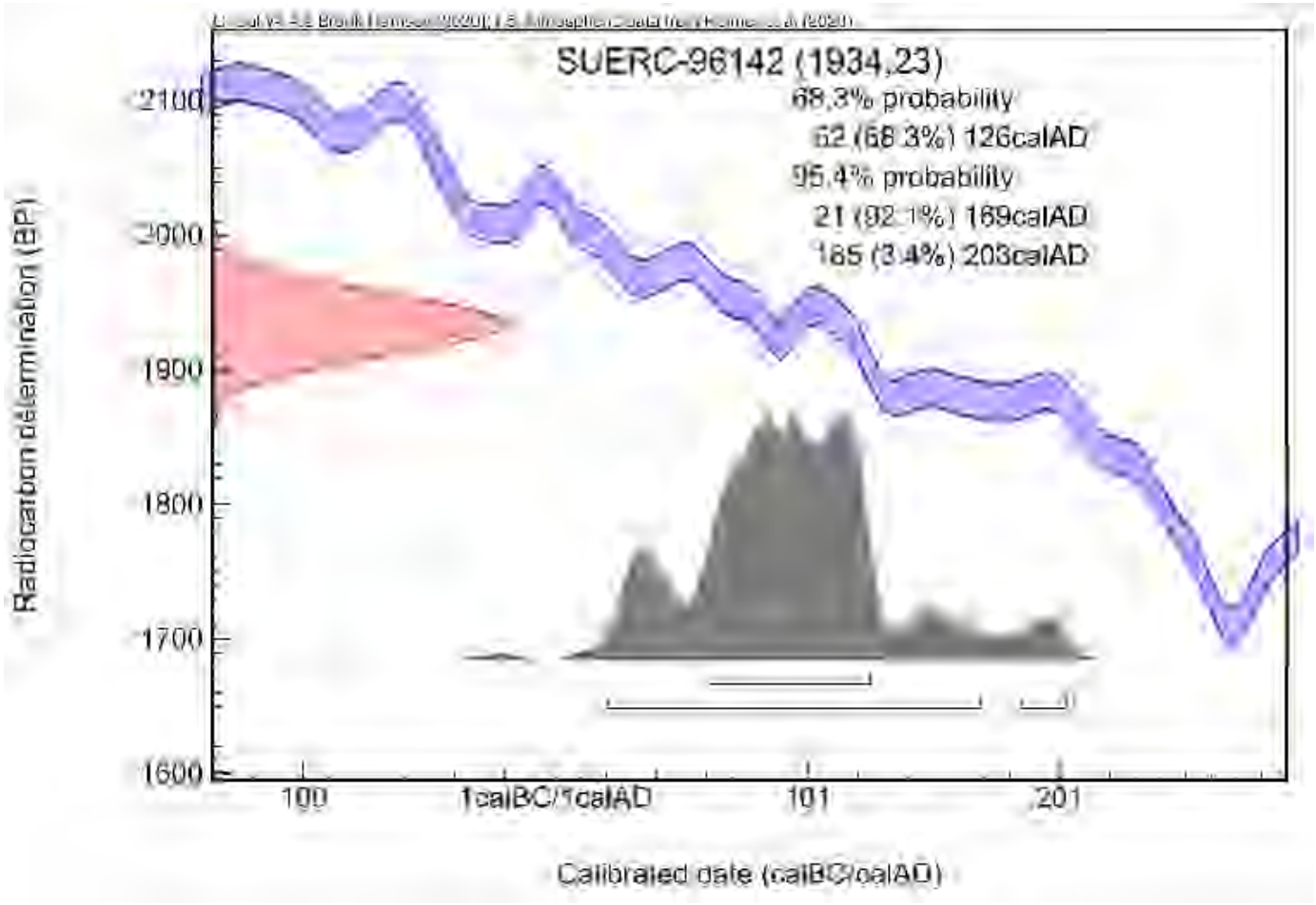
For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : [redacted]

Checked and signed off by :

The University of Glasgow, charity number SC004401

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal20 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*

† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

12 January 2021

Laboratory Code	SUERC-96143 (GU56800)
Submitter	Kristina Krawiec Trent & Peak Archaeology Unit 1 Holly Lane Chilwell Nottingham NG9 4AB
Site Reference	6019
Context Reference	BH3 <38>, 7.50-8.00m
Sample Reference	TPA_248
Material	charred grain : Barley
$\delta^{13}C$ relative to VPDB	-23.3 ‰
Radiocarbon Age BP	915 ± 24

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

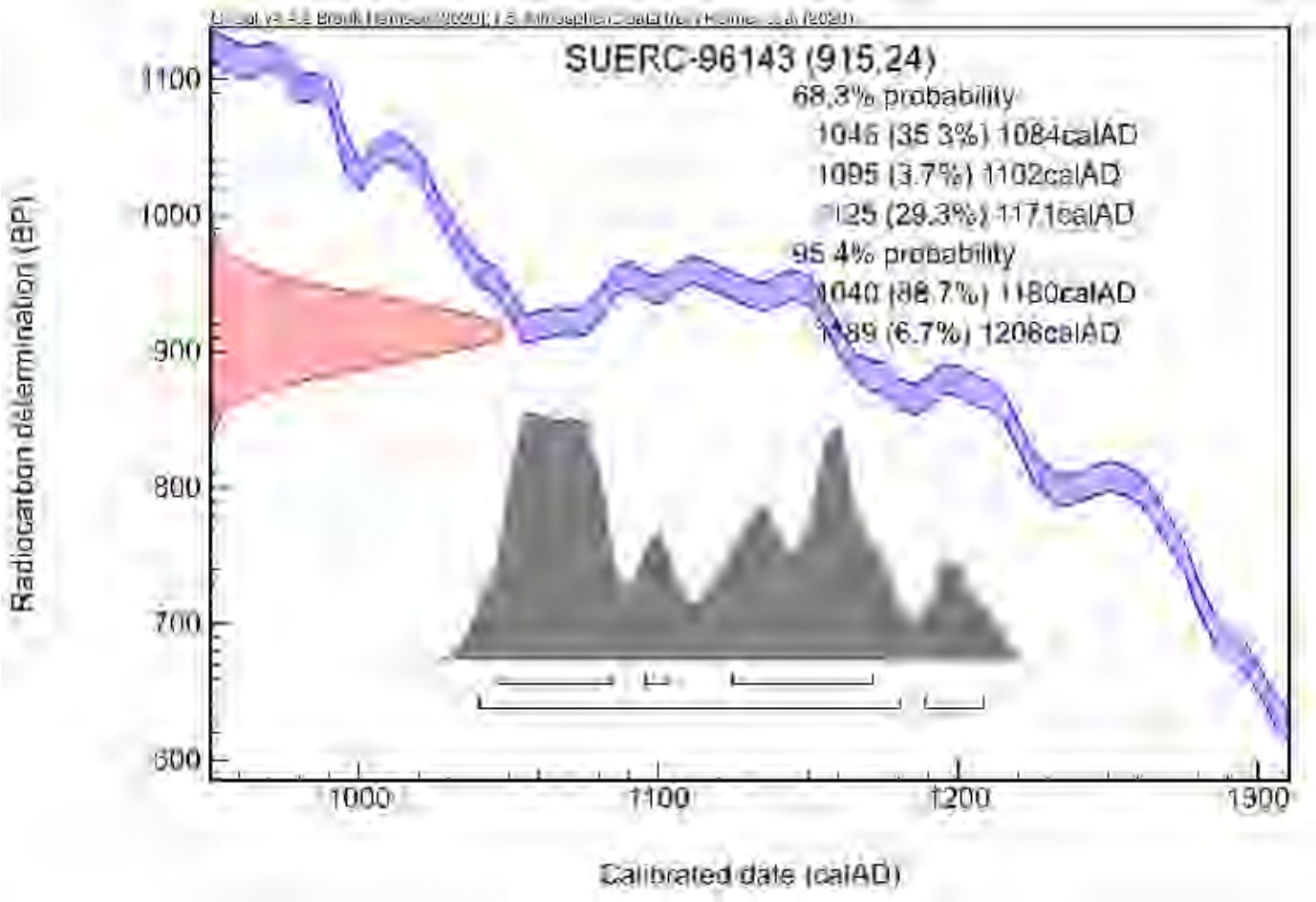
For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : [redacted]

Checked and signed off by :

The University of Glasgow, charity number SC004401

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal20 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*
† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

12 January 2021

Laboratory Code	SUERC-96144 (GU56801)
Submitter	Kristina Krawiec Trent & Peak Archaeology Unit 1 Holly Lane Chilwell Nottingham NG9 4AB
Site Reference	6019
Context Reference	BH3 <40>, 6.00-6.70m
Sample Reference	TPA_249
Material	waterlogged : Corylus avellana nutshell
$\delta^{13}C$ relative to VPDB	-26.5 ‰
Radiocarbon Age BP	816 ± 23

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

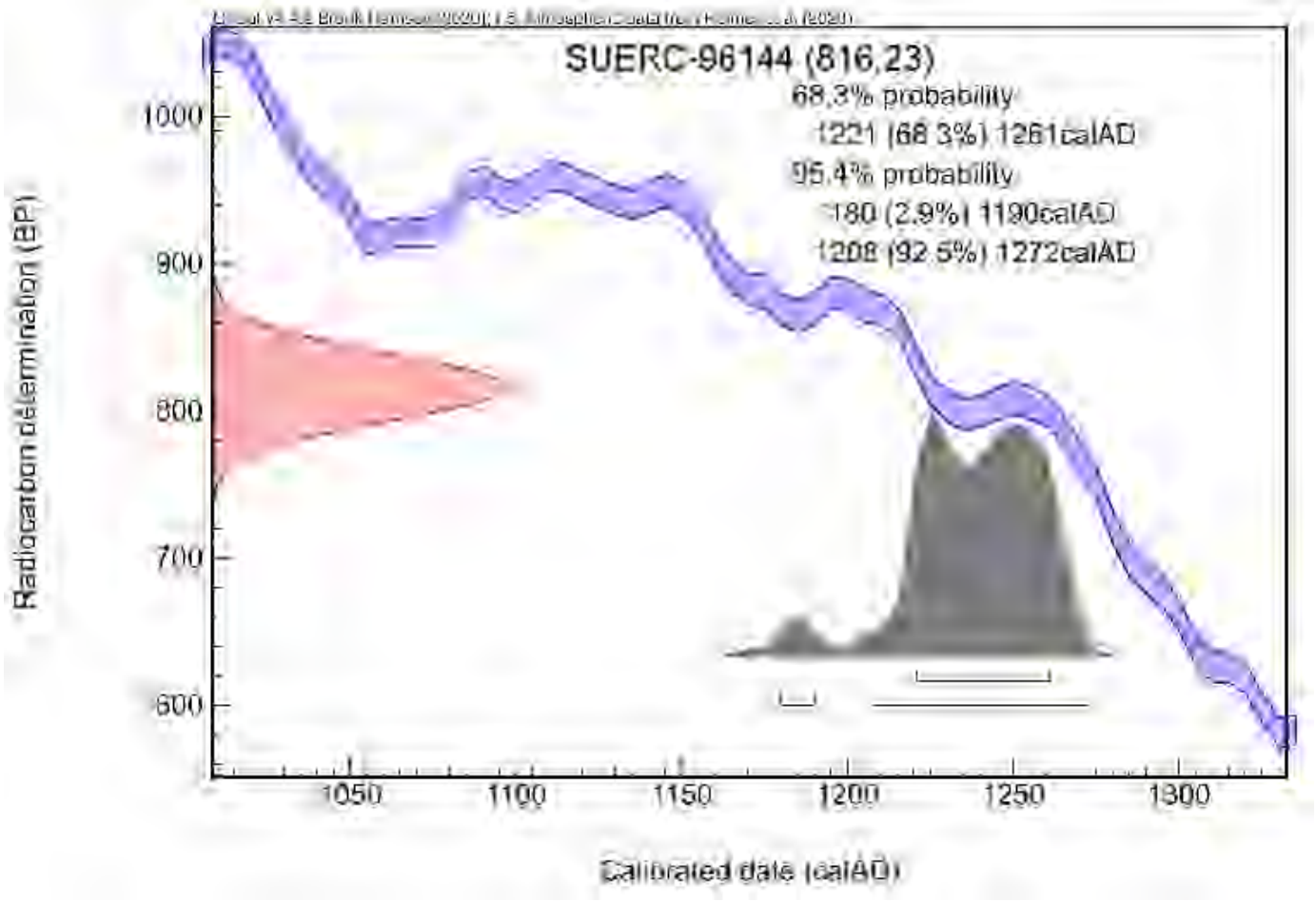
For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : [redacted]

Checked and signed off by :

The University of Glasgow, charity number SC004401

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal20 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*

† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

12 January 2021

Laboratory Code	SUERC-96145 (GU56802)
Submitter	Kristina Krawiec Trent & Peak Archaeology Unit 1 Holly Lane Chilwell Nottingham NG9 4AB
Site Reference	6019
Context Reference	BH3 <43>, 7.00-7.50m
Sample Reference	TPA_250
Material	waterlogged : Corylus avellana wood
$\delta^{13}C$ relative to VPDB	-24.2 ‰
Radiocarbon Age BP	1935 ± 24

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

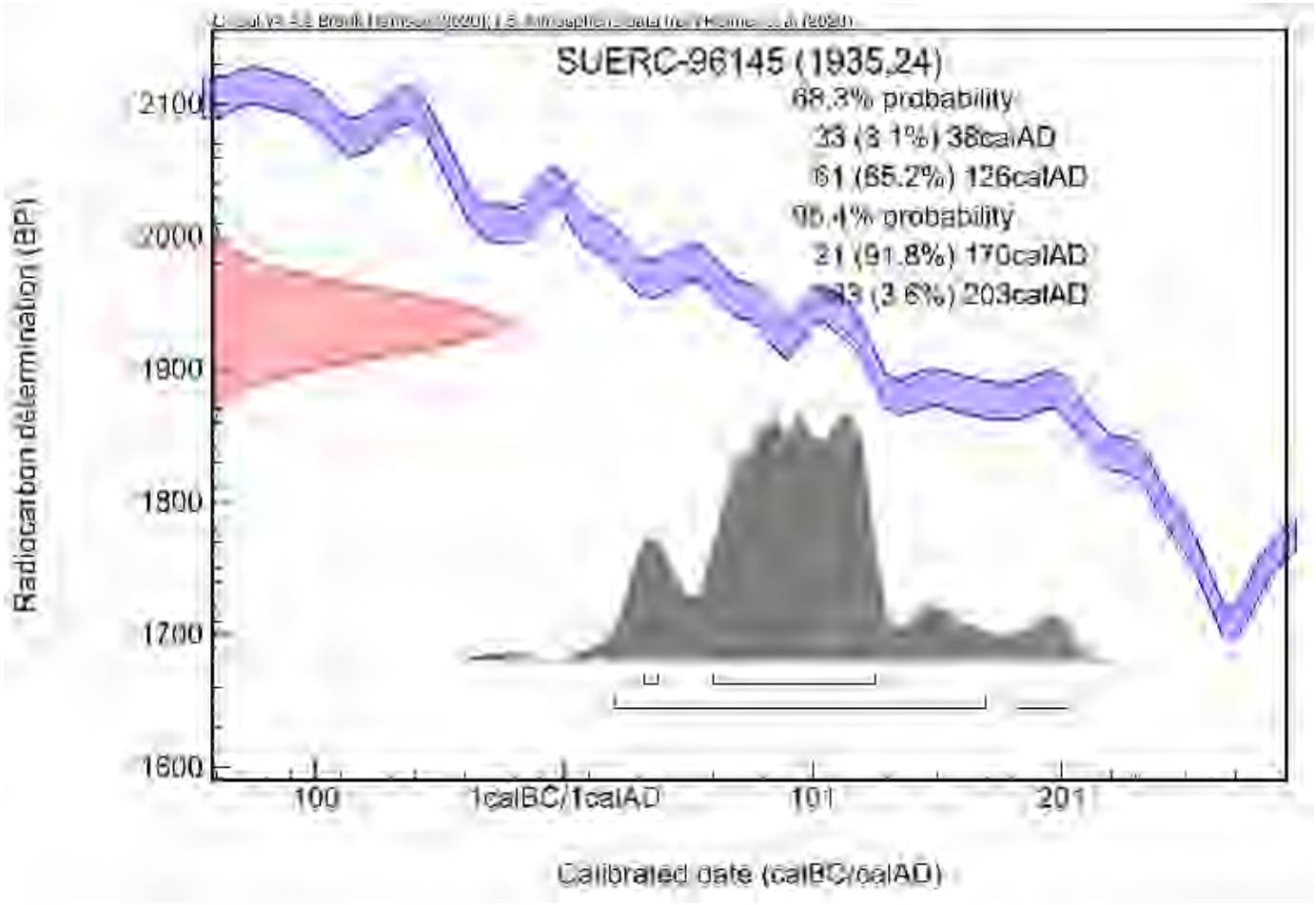
For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : [redacted]

Checked and signed off by :

The University of Glasgow, charity number SC004401

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal20 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*

† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

12 January 2021

Laboratory Code	SUERC-96146 (GU56803)
Submitter	Kristina Krawiec Trent & Peak Archaeology Unit 1 Holly Lane Chilwell Nottingham NG9 4AB
Site Reference	6019
Context Reference	BH3 <28>, 5.50-6.00m
Sample Reference	TPA_251
Material	charred grain : Wheat
$\delta^{13}C$ relative to VPDB	-23.5 ‰
Radiocarbon Age BP	902 ± 24

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

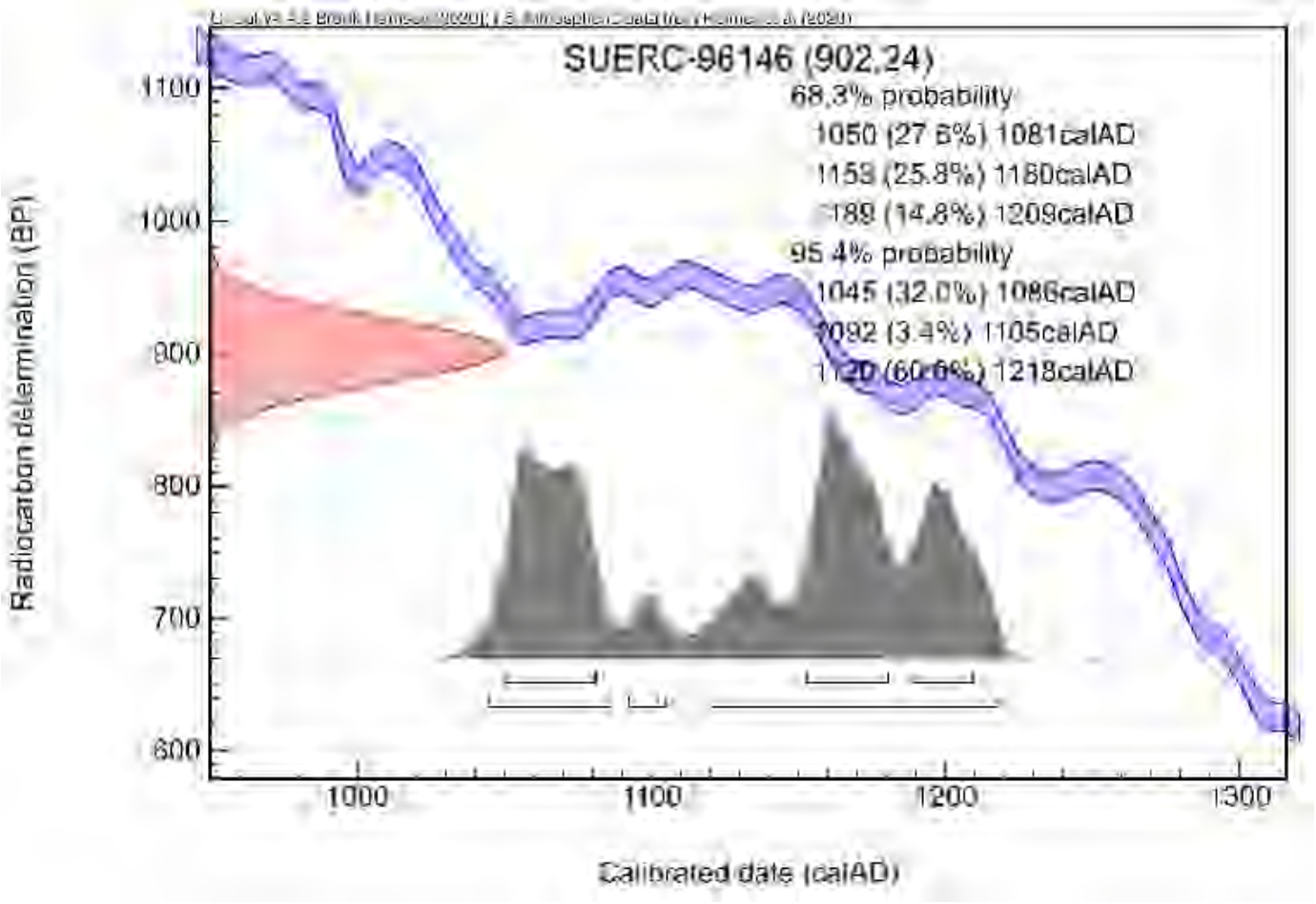
For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by :

Checked and signed off by :

The University of Glasgow, charity number SC004401

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal20 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*

† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

23 November 2022

Laboratory Code	SUERC-107242 (GU62377)
Submitter	Victoria Owen York Archaeology Unit 1 Holly Lane Beeston Nottingham NG9 4AB
Site Reference	York, Guildhall
Context Reference	SK2 19024
Sample Reference	TPA_458
Material	Bone : Human

$\delta^{13}C$ relative to VPDB	-19.5 ‰	**$\delta^{34}S$ relative to VCDT**	11.6 ‰
$\delta^{15}N$ relative to air	11.0 ‰	**C/S ratio (Molar)**	519
C/N ratio (Molar)	3.4	**N/S ratio (Molar)**	154

Radiocarbon Age BP 529 ± 26

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

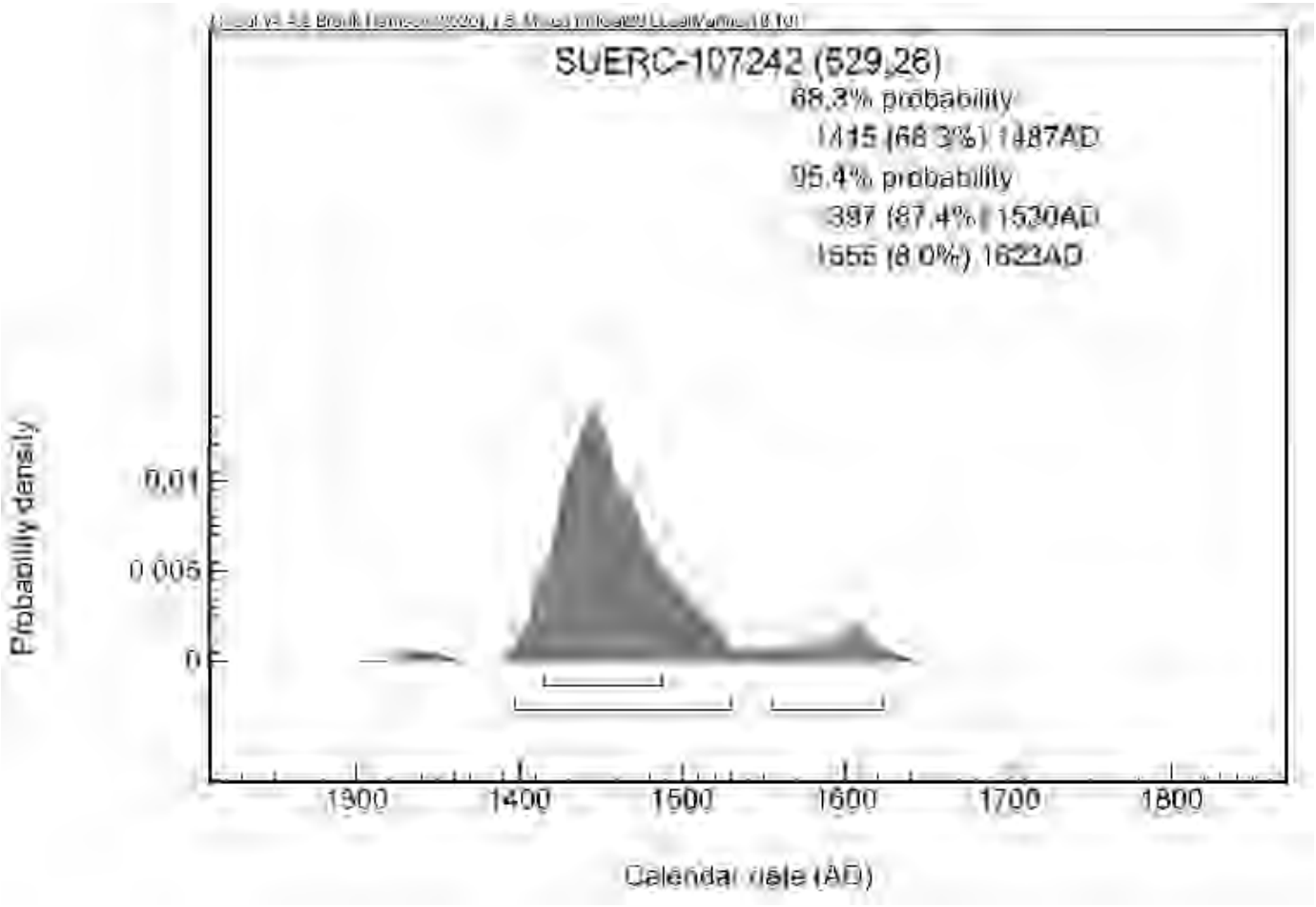
For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : [redacted]

Checked and signed off by : [redacted]

The University of Glasgow, charity number SC004401

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using a mix of the IntCal20† and Marine20‡ calibration curves.

Human bone collagen with a $\delta^{13}C$ value above -20‰, accompanied by a raised $\delta^{15}N$ value, is taken to indicate a marine component in the diet. The percentage contribution of this marine component is calculated using end-members of -21.0‰ (fully terrestrial) and -12.5‰ (fully marine) with an uncertainty of 10% applied.

The $\delta^{13}C$ value of -19.5‰ gives a 18% marine contribution (±10%).

A regional marine offset (ΔR) of -150 ± 52 years has been used in the calibration.

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*
† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*
‡ Heaton et al. (2020) *Radiocarbon 62(4) pp.779-820*

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

23 November 2022

Laboratory Code	SUERC-107243 (GU62378)
Submitter	Victoria Owen York Archaeology Unit 1 Holly Lane Beeston Nottingham NG9 4AB
Site Reference	York, Guildhall
Context Reference	SK1 19023
Sample Reference	TPA_459
Material	Bone : Human

$\delta^{13}C$ relative to VPDB	-19.0 ‰	**$\delta^{34}S$ relative to VCDT**	-10.6 ‰
$\delta^{15}N$ relative to air	13.5 ‰	**C/S ratio (Molar)**	536
C/N ratio (Molar)	3.3	**N/S ratio (Molar)**	160

Radiocarbon Age BP 548 ± 26

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

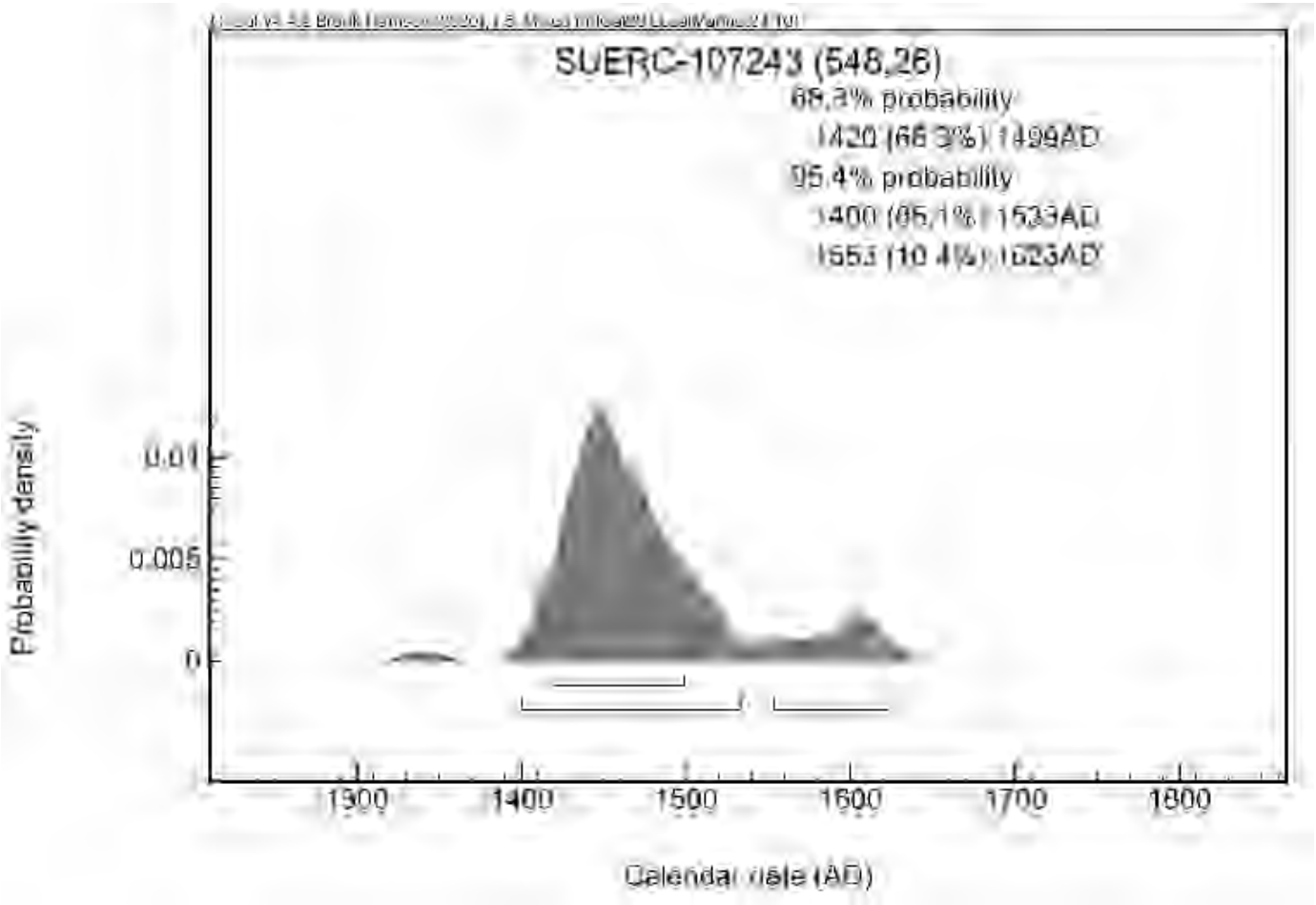
For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : [redacted]

Checked and signed off by : [redacted]

The University of Glasgow, charity number SC004401

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using a mix of the IntCal20† and Marine20‡ calibration curves.

Human bone collagen with a $\delta^{13}C$ value above -20‰, accompanied by a raised $\delta^{15}N$ value, is taken to indicate a marine component in the diet. The percentage contribution of this marine component is calculated using end-members of -21.0‰ (fully terrestrial) and -12.5‰ (fully marine) with an uncertainty of 10% applied.

The $\delta^{13}C$ value of -19.0‰ gives a 24% marine contribution (±10%).

A regional marine offset (ΔR) of -150 ± 52 years has been used in the calibration.

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*
† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*
‡ Heaton et al. (2020) *Radiocarbon 62(4) pp.779-820*

APPENDIX 6: ROMANO-BRITISH POTTERY FABRIC DESCRIPTIONS

The fabric of the pottery was first examined by eye and sorted into fabric groups on the basis of colour, hardness, feel, fracture, inclusions and manufacturing technique. Samples of the sherds were further examined under an x30 binocular microscope to verify these divisions. The size of the sample was as large as was felt necessary for each fabric group. National fabric collection codes are given wherever possible (Tomber and Dore 1998).

Colour: narrative description only

Hardness: after Peacock 1977

soft - can be scratched by finger nail

hard - can be scratched with penknife blade

very hard - cannot be scratched

Feel: tactile qualities

smooth - no irregularities

rough - irregularities can be felt

sandy - grains can be felt across the surface

leathery - smoothed surface like polished leather

soapy - smooth feel like soap

Fracture: visual texture of fresh break, after Orton 1980.

smooth - flat or slightly curved with no visible irregularities

irregular - medium, fairly widely spaced irregularities

finely irregular - small, fairly closely spaced irregularities

laminar - stepped effect

hackly - large and generally angular irregularities

Inclusions:

Type: after Peacock 1977

Frequency: indicated on a 4-point scale - abundant, common, sparse and very sparse where abundant is a break packed with an inclusion and very sparse is a break with only one or two of an inclusion.

Sorting: after Tomber and Dore 1998

Shape: angular - convex shape, sharp corners

sub-angular - convex shape, sharp to rounded corners

rounded - convex shape, no corners

sub-rounded - convex shape, rounded to no corners

Size: after Orton 1980

Size: subvisible - only just visible at x30 and too small to measure

fine - 0.1-0.25mm

medium - 0.25-0.5

coarse - 0.5-1mm

very coarse - over 1mm

Amphora

BAT AM1	Baetican. Tomber and Dore 1998, 84, BAT AM 1
BAT AM2	Baetican. Tomber and Dore 1998, 85, BAT AM 2
BAT AM3	Baetican. Tomber and Dore 1998, 84, BAT AM 3
BAT AM	Baetican. Tomber and Dore 1998, 84-85, BAT AM
CAD AM	Cadiz. Tomber and Dore 1998, 87, CAD AM
CAM AM	Campanian. Tomber and Dore 1998, 88, CAM AM 1
GAL AM	Gaulish. Tomber and Dore, 1998, 93-94, GAL AM 1
NAF AM	North African. Tomber and Dore 1998, 101, NAF AM 1
P&W AM 47	Aegean? Tomber and Dore 1998, 109, P&W AM 47 (Peacock & Williams Class 47)
S-Spanish	Spain. Medium, orange to pale brown fabric. Hard, rough surface, with finely irregular fracture. Ill-sorted, abundant fine rounded quartz, common medium sub-rounded red-brown, common fine sub-angular white, sparse medium elongated vesicles, and very sparse mica inclusions. Southern Spain. Similar to Cadiz fabrics.
Unid.	Unidentified. Fine, pale brown fabric. Soft, rough, with finely irregular fracture. Well-sorted, abundant fine rounded lime dominates sparse medium sub-rounded red-brown and black, sparse medium sub-rounded quartz, and very sparse gold mica inclusions.

Samian

South Gaulish

LGF SA	La Graufesenque. Tomber and Dore 1998, 28

Central Gaulish

LEZ SA	Lezoux. Tomber and Dore 1998, 31-32
LMV SA	Les Martres-de-Veyre. Tomber and Dore 1998, 30
SAM CG	Central Gaulish samian

East Gaulish

HGB SA	Heiligenberg. Tomber and Dore 1998, 37
MAD SA	La Madeleine. Tomber and Dore 1998, 38.

RHZ SA	Rheinzabern. Tomber and Dore 1998, 39
SIN SA	Sinzig. Tomber and Dore 1998, 40
TRI SA	Trier. Tomber and Dore 1998, 41
SAM EG	East Gaulish samian.

Other fine wares

C18/roughcast	Possibly Ebor
CNG BS	Central Gaulish Black-slipped ware. Tomber and Dore 1998, 50
D0	Miscellaneous mica-dusted
LNC CC	Tomber and Dore 1998, 118
C24/MOS BS	Moselkeramik (Trier) Black-slipped ware. Tomber and Dore 1998, 60
W1	Ebor White-slipped ware
W2	Ebor White-slipped ware

Mortaria

MCAN WS	Cantley White-slipped ware. Tomber and Dore 1998, 194
MCTR WS	Catterick Vicinity White-slipped ware. Tomber and Dore 1998, 195
M3	Ebor oxidised ware
M3/M8	Ebor oxidised ware with reduced core
M4	Ebor White-slipped ware
M8	Ebor reduced ware
M9	?Ebor White-slipped ware
MAH WH	Mancetter-Hartshill White ware. Tomber and Dore 1998, 189
MNOG WH4	North Gaulish White ware 4. Tomber and Dore 1998, 75
MVER WH	Verulamium-region White ware. Tomber and Dore 1998, 154

Coarse wares

Burnished wares

B1/DOR BB1	(South-East) Dorset Black-burnished ware 1. Tomber and Dore 1998, 127
B1/SOW BB1	South-West Black-burnished ware 1. Tomber and Dore 1998, 129
B10	Black-burnished-type ware 1.
B2/BB2	Black-burnished ware 2. Includes COL BB 2 (Tomber and Dore 1998, 131) and COO BB 2 (Tomber and Dore 199, 166)
B6	Misc. BB2-type

Calcite-gritted wares

K0/grog	Calcite and shell-tempered.

K1	East Yorkshire Calcite-gritted/Huntcliff ware
K2	Knapton ware

Shell-tempered wares

H0	Dales-type Shelly ware
DAL SH	Dales Shelly ware. Tomber and Dore 1998, 157

Reduced burnished wares

B7	South Yorkshire BB2-type
B7/R	Rusticated
B11/CRA RE-TYPE	Early Crambeck Reduced ware-type?
B12/CRA RE	Crambeck Reduced ware. Tomber and Dore 1998, 197
B14	A dense grey fabric, hard and smooth with dark grey surface and medium grey core and inner surface. Abundant medium, subangular and angular quartz with sparse, medium black and grey rounded inclusions. Yorkshire. Leary (2013, Heslington East)
B14/R	Rusticated
B16/B17	Holme-on-Spalding-Moor Reduced ware. Tomber and Dore 1998 (HSM RE)
B19	Additional fabric for brownish grey ware. Brownish grey ware with darker grey surfaces and brown core, often eroded. Rather soft with powdery feel. Moderate, medium subangular quartz and fine brown, iron-rich inclusions. Yorkshire. Leary (2013, Heslington East)
B19/R	Rusticated

Reduced wares

G1	Ebor reduced ware
G1v	Ebor? reduced ware variant
G1/R	Ebor rusticated ware
G2	Grey ware
G2/R	Rusticated grey ware
G4	As G1, with high iron content
G4/R	Rusticated grey ware
G5	As G1, with high chalk content
G6	Miscellaneous sandy grey ware
G7	South Yorkshire Grey ware. Leary (2013, Heslington East)
G8	Coarse sandy grey ware
G8	Coarse sandy grey ware

R1 Near-local early rustic ware

R2 Local rustic ware

DER CO Derbyshire Coarse ware. Tomber and Dore 1998, 125

Reduced fine wares

F4 Fine dark grey, buff-brown core

Oxidised wares

E1 Ebor 1

E2 Ebor 2

E3 Ebor 3

O0/buff Fine fabric with dark grey to black core, pale brown-yellow margins and pinkish-brown surfaces. Hard, smooth, with fine fracture. Well-sorted, abundant fine rounded quartz, sparse fine and medium sub-angular red-brown, and very sparse mica inclusions.

O0/OF7 Coarse, orange fabric. Hard, smooth, with irregular fracture. Ill-sorted, abundant coarse sub-angular quartz and some fine rounded quartz, sparse fine sub-angular lime, common fine rounded vesicles, and sparse mica inclusions.

O0/OF12 Fine, orange fabric. Hard, rough, with smooth fracture. Well-sorted, abundant subvisible lime and some coarse lime, abundant subvisible quartz, common fine elongated vesicles, sparse fine rounded brown-black, and sparse mica inclusions.

O1/OF2 Fine, orange fabric. Hard, smooth, with smooth fracture. Ill-sorted, common subvisible quartz, common medium sub-rounded iron-rich, sparse coarse sub-angular black, common fine elongated vesicles, and common mica inclusions.

O1/OF9 Medium fabric, reduced core with brown margins and surfaces. Hard, rough, with irregular fracture. Well-sorted, abundant fine and medium sub-round quartz inclusions; sandy fabric with 'cod's roe' type composition.

O1/OF10 Fine fabric, reduced core with pale brown margins and surfaces. Hard, smooth, with smooth fracture. Well-sorted, abundant fine rounded quartz and sparse coarse rounded quartz, common fine sub-rounded vesicles, sparse medium sub-round iron-rich, and very sparse mica inclusions.

O1/OF11 Fine fabric, reduced core with pale brown margins and surfaces. Hard, smooth, with smooth fracture. Well-sorted, abundant fine rounded quartz. Sparse sine sub-round iron-rich, and common mica inclusions.

White-slipped oxidised wares

W0 Miscellaneous oxidised white-slipped

W1 Ebor 1, white-slipped

W2 Ebor 2, white-slipped

White wares

P0	Miscellaneous white or cream
PO/WF3	Fine fabric with grey to orange core, white margins, and surfaces. Hard and dense, smooth, with finely irregular fracture. Ill-sorted, common fine and medium sub-angular grey and white rock, common fine rounded vesicles, sparse fine sub-rounded red-brown, sparse fine and medium sub-rounded lime, and sparse mica inclusions.
P2/CRA WH	Crambeck White
P3/P8	Off-white, sandy fabric. Verulamium region?
P6	Fine, grey-white fabric. Hard, smooth, with irregular fracture. Well-sorted, abundant fine rounded quartz, and sparse fine and medium sub-angular iron-rich inclusions.
P7	Mancetter-Hartshill White ware. Tomber and Dore 1998, 189
P9	Fine, pale brown fabric. Soft, smooth, with irregular fracture. Abundant subvisible quartz, sparse coarse sub-rounded red-brown, and very sparse fine angular gold mica inclusions.
NOG WH 4	Tomber and Dore 1998, 75
VER WH	Verulamium-region white ware. Tomber and Dore 1998, 154

APPENDIX 7: OYSTER SIZE ESTIMATION

Table 63 Oyster size estimation		
Diameter	**Size category**	**Size code**
<4.5cm	Very small	VS
4.6-6cm	Small	S
6.1-7.5cm	Medium	M
7.6-10cm	Large	L
10cm+	Very large	VL

York Archaeological Trust

York Archaeological Trust undertakes a wide range of urban and rural archaeological consultancies, surveys, evaluations, assessments and excavations for commercial, academic and charitable clients. We manage projects, provide professional advice and fieldwork to ensure a high quality, cost effective archaeological and heritage service. Our staff have a considerable depth and variety of professional experience and an international reputation for research, development and maximising the public, educational and commercial benefits of archaeology. Based in York, Sheffield, Nottingham and Glasgow the Trust's services are available throughout Britain and beyond.

© York Archaeological Trust

York Archaeological Trust, Cuthbert Morrell House, 47 Aldwark, York YO1 7BX

Phone: +44 (0)1904 663000 Fax: +44 (0)1904 663024

Email: archaeology@yorkat.co.uk Website: https://www.yorkarchaeology.co.uk

© 2024 York Archaeological Trust for Excavation and Research Limited
Registered Office: 47 Aldwark, York YO1 7BX
A Company Limited by Guarantee. Registered in England No. 1430801
A registered Charity in England & Wales (No. 509060) and Scotland (No. SCO42846)